



# ATAL BHUJAL YOJANA (Atal Jal)

**State : Maharashtra**

**Department : Ground Water Surveys And  
Development Agency**

## HYDROGEOLOGICAL REPORT

**BLOCK : Tasgaon**

**DISTRICT : Sangli**

**YEAR : 2020**

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*Towards partial fulfilment of requirements for Disbursement of  
Incentive under DLI -1*

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DATE OF DISCLOSURE: ...25/11/2020

# HYDROGEOLOGICAL REPORT

(YEAR : 2019-20)

<b>STATE</b>	:	Maharashtra
<b>DISTRICT</b>	:	Sangli
<b>BLOCK/TALUKA</b>	:	Tasgaon
<b>BLOCK/TALUK HQs</b>	:	Tasgaon

<b>A GENERAL INFORMATION</b>							
1.	Geographical area (Ha) : 79,866.23						
2.	No. of Gram Panchayats : 68						
3.	No. of towns : 1						
4.	No. of villages : 68						
5.	Population (2011) : <table border="1" style="margin-left: 20px;"> <tr> <th>Male</th> <th>Female</th> <th>Total</th> </tr> <tr> <td>1,08,687</td> <td>1,04,769</td> <td>2,13,456</td> </tr> </table>	Male	Female	Total	1,08,687	1,04,769	2,13,456
Male	Female	Total					
1,08,687	1,04,769	2,13,456					
6.	Rainfall (mm) (Average) : <table border="1" style="margin-left: 20px;"> <tr> <th>Monsoon</th> <th>Non-monsoon</th> <th>Annual</th> </tr> <tr> <td>440.85</td> <td>208.87</td> <td>649.72</td> </tr> </table>	Monsoon	Non-monsoon	Annual	440.85	208.87	649.72
Monsoon	Non-monsoon	Annual					
440.85	208.87	649.72					
7.	River basin : 1 Basin (Krishna)						
8.	Major soil types : Black Soil						

<b>B LAND USE</b>	
1.	Forest area (Ha) : 3928.7
2.	Cultivable area (Ha) : 74987.33
3.	Net sown area (Ha) : 57791.40
4.	Gross cropped area (Ha) : 63160.6

<b>C CROPPING PATTERN (As in 2019-20)</b>																																					
1.	Major crops grown : <table border="1" style="margin-left: 20px;"> <tr> <th>Kharif</th> <th>Rabi</th> <th>Summer</th> <th>Perennial</th> </tr> <tr> <td>Maiz</td> <td>Jawar</td> <td>Maiz</td> <td>Sugarcane</td> </tr> <tr> <td>Jawar</td> <td>Wheat</td> <td>Groundnut</td> <td></td> </tr> <tr> <td>Millet</td> <td>Maiz</td> <td></td> <td></td> </tr> <tr> <td>Toor</td> <td>Gram</td> <td></td> <td></td> </tr> <tr> <td>Moong</td> <td>Karadai</td> <td></td> <td></td> </tr> <tr> <td>Groundnut</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Soyabean</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Uarad</td> <td></td> <td></td> </tr> </table>	Kharif	Rabi	Summer	Perennial	Maiz	Jawar	Maiz	Sugarcane	Jawar	Wheat	Groundnut		Millet	Maiz			Toor	Gram			Moong	Karadai			Groundnut				Soyabean					Uarad		
	Kharif	Rabi	Summer	Perennial																																	
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	Uarad																																				

<b>D IRRIGATION FACILITIES (As in 2019-20)</b>											
1.	Net irrigated area (Ha) : 7049.9										
2.	Gross irrigated area (Ha) : 8902.4										
3.	Area under irrigation (Ha) (Source-wise) : <table border="1" style="margin-left: 20px;"> <tr> <th>DW</th> <th>BW/TW</th> <th>Tanks/Ponds</th> <th>Canals</th> <th>Others</th> </tr> <tr> <td>6583</td> <td></td> <td>348.0</td> <td>118.9</td> <td>0.00</td> </tr> </table>	DW	BW/TW	Tanks/Ponds	Canals	Others	6583		348.0	118.9	0.00
DW	BW/TW	Tanks/Ponds	Canals	Others							
6583		348.0	118.9	0.00							
<b>E GEOLOGY &amp; HYDROGEOLOGY</b>											
1.	Predominant rock type : Hard Rock (Basalt)										
2.	Major geological formations : Basalt (Deccan Trap)										

3.	Important water-bearing formations	:	Fractured Jointed Basalt
4.	Status of coverage under NAQUIM	:	Not Covered.

<b>F GROUND WATER CONDITIONS</b>								
1.	No. of wells used for Water Level (WL) monitoring.	:	<b>Open wells</b>			<b>BW/TW/ PZ</b>		
			CGWB	SGWD	Total	CGWB	SGWD	Total
			2	3	5			
2.	Monitoring mechanism (Nos.)	:	<b>Manual</b>		<b>DWLR</b>		<b>Telemetry</b>	
			CGWB	SGWD	CGWB	SGWD	CGWB	SGWD
			2	3				
3.	Monitoring frequency	:	<b>Agency</b>	<b>No. of times monitored/year</b>				
			CGWB	4				
			SGWD	4				
4.	Period of water level data availability.	:	<b>Agency</b>	<b>Period of WL data availability (From - To)</b>				
				<b>From (year)</b>		<b>To (year)</b>		
			CGWB	2015		2019		
			SGWD	2015		2019		
5.	Water level range (m.bgl)	:	<b>Minimum/Village</b>			<b>Maximum/Village</b>		
	Pre-monsoon (Year 2019)		7.7/shirgaon			11.7/Kumathe		
	Post-monsoon (Year 2019)		4.6/ shirgaon			8.1/ Kumathe		
6.	Seasonal WL fluctuation range (m)	:	<b>Minimum/ Village</b>			<b>Maximum/ Village</b>		
			3.1/Shirgaon			4.4/Yogewadi		

<b>G GROUND WATER QUALITY</b>								
1.	No. of wells used for Water Quality (WQ) monitoring.	:	<b>Open Wells</b>			<b>BW/TW/ PZ</b>		
			CGWB	SGWD	Total	CGWB	SGWD	Total
			2	3	5			
2.	Monitoring frequency	:	<b>Agency</b>	<b>No. of times monitored/year</b>				
			CGWB	2				
			SGWD	2				
3.	Period of water quality data availability	:	<b>Agency</b>	<b>Period of WQ data availability (Years)</b>				
			CGWB	2015-19				
			SGWD	2015 to 2019				
4.	Parameters analysed	:	<b>Agency</b>	<b>Parameters Analysed</b>				
			CGWB	Temperature, pH, EC, TDS, Total Hardness, Alkalinity, Calcium, Chloride, Nitrate, Sulphate, Fluoride, Iron.				
			SGWD	Temperature, pH, EC, TDS, Total Hardness, Alkalinity, Calcium, Chloride, Nitrate, Sulphate, Fluoride, Iron.				
5.	Known ground water quality issues, if any	:	There are no serious or drastic issues of the GW quality except some sporadic increased levels of the nitrates during year 2019-20					

<b>H. GROUND WATER RESOURCES</b>						
1.	Latest assessment year		2017			
2.	Assessment Unit		Watershed			
3.	Annual extractable GW resource (ha.m)		13493.83			
4.	Current annual GW extraction (ha.m)		7500.62			
5.	Net GW availability for future use (ha.m)		7080.96			
6.	Stage of GW extraction (%)		55.58			
7.	Category of block/taluk/(2017)		Safe			
8.	Category of block/taluk/ in previous assessments		2013	2011	2009	2004
			Safe	Safe	Safe	Safe

<b>I WATER-RELATED SCHEMES</b>				
1.	Schemes with a bearing on ground water, being implemented in the block / taluk.			
	Centrally Sponsored /Central Sector Schemes		i)	Jal Jeevan Mission
			ii)	MGNREGA
				PMKSY
	State Schemes		i)	Dr. Babasaheb Ambedkar Krushi Swavalamban Yojana

<b>J GROUND WATER RELATED ISSUES</b>				
1.	Ground water related issues of the block/			
	i) Issues related to GW availability	:	1) The area of the taluka is draught prone with less rainfall recharge. 2) Increased number of bore wells with increased depth. 3) In absence of adequate rainfall, the non-command zone faces more scarcity of water; while, in case of the command areas, the rotations of the lift irrigation schemes govern the short-term availability of the groundwater to the wells.	
	ii) Issues related to GW quality	:	1) A poor quality area with respect to the water is present at places in taluka	
	iii) Other issues if any.	:	--	

TABLE-01

## BASIC DATA OF WATER LEVEL (WL)/WATER QUALITY (WQ) WELLS LOCATIONS

## STATE-MAHARASHTRA, DISTRICT-SANGLI, TALUKA-TASGAON

Sl. No	Well No.	Village Name	Long.	Lat.	Type of well (DW/BW/TW/PZ)	Reduced Level (m.amsl)	Aquifer tapped	Height of measuring point (m.agl)	Depth (m.bgl)	Diameter (m)	Purpose of monitoring (WL / WQ / WL & WQ)	Monitoring mechanism (Manual/ DWLR/ Telemetry)	Agency
1	W165736074391201	Kumathe	74.6533056	16.9603056	DW	578	VAB	0	13	3.2	WL	Manual	SGWD
2	W170624074340501	Shirgaon Visapur	74.5680556	17.1066667	DW	587	VAB	0	13	3.1	WL	Manual	SGWD
3	W170017074431201	Yogewadi	74.5111111	17.0436944	DW	636	VAB	0	10.4	3	WL	Manual	SGWD

TABLE-01-Continued

Sl. No	Well No.	Village Name	Long.	Lat.	Type of well (DW/BW/TW/PZ)	Reduced Level (m.amsl)	Aquifer tapped	Height of measuring point (m.agl)	Depth (m.bgl)	Diameter (m)	Purpose of monitoring (WL WQ / WL & WQ)	Monitoring mechanism (Manual/ DWLR/ Telemetry)	Agency
1	W170656074351501	Visapur	74.5875	17.1156	DW	603.3	VB		15		WL & WQ	Manual	CGWB
2	W171142074402401	Ped	74.6733	17.195	DW	720	VB		12		WL & WQ	Manual	CGWB

**TABLE-02****WATER LEVEL (WL) DATA OF MONITORING WELLS-SGWD****STATE-MAHARASHTRA, DISTRICT-SANGLI, TALUKA-TASGAON**

Sr.No.	Well ID	Well Type	Village	May-15	Oct-15	May-16	Oct-16	May-17	Oct-17	May-18	Oct-18	May-19	Oct-19
1	W165736074391201	DW	Kumathe	13	6.55	13	8	13	9.5	11.6	10.4	11.7	8.1
2	W170624074340501	DW	Shirgaon Visapur	7.6	4.9	7.6	4.7	7.2	6.8	8	7	7.7	4.6
3	W170017074431201	DW	Yogewadi	7.5	7.7	9.6	8.2	8.7	5.5	8.5	9.2	9.6	5.2

**TABLE-02-Continued****WATER LEVEL (WL) DATA OF MONITORING WELLS-CGWB****STATE-MAHARASHTRA, DISTRICT-SANGLI, TALUKA-TASGAON**

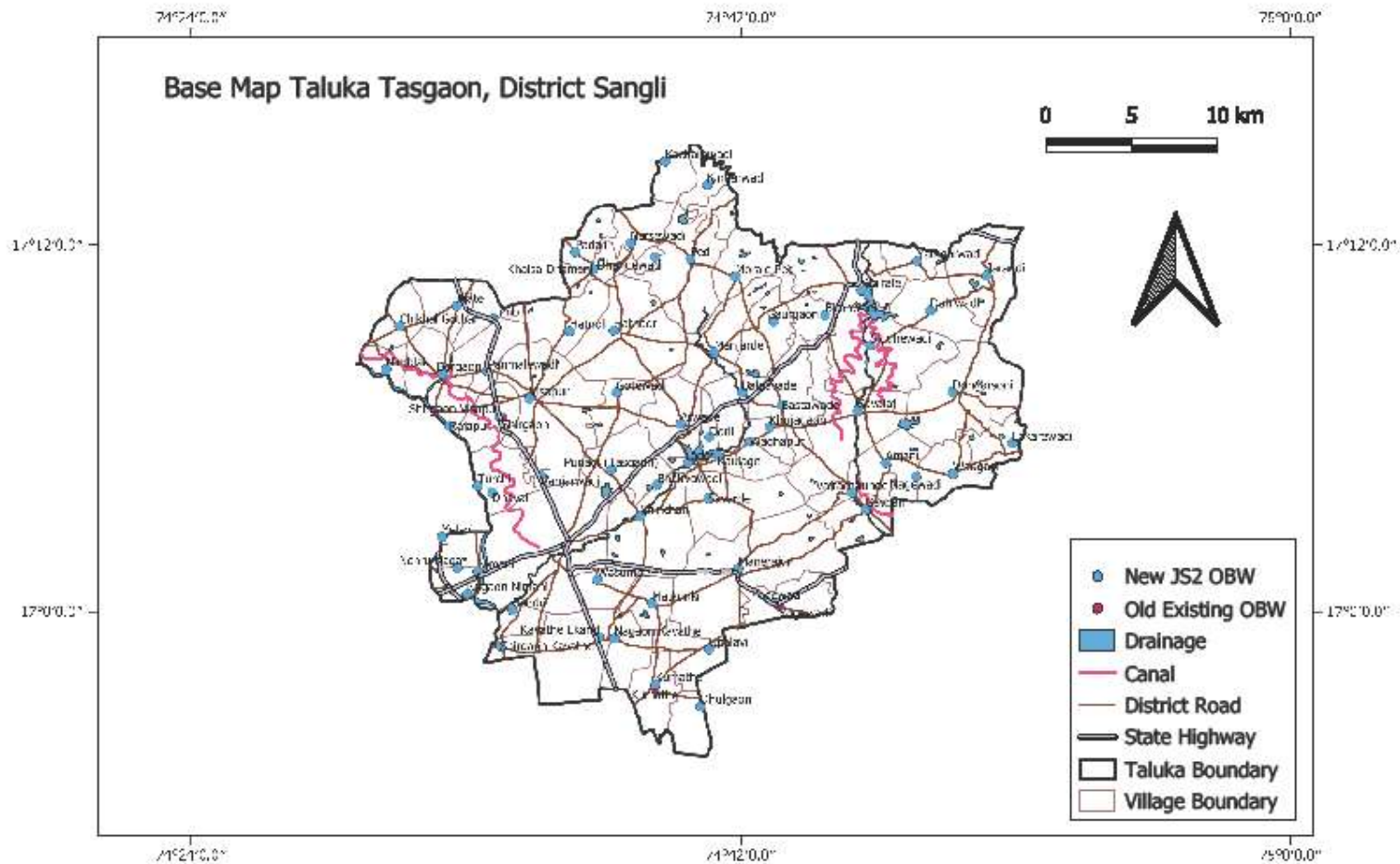
Sr.No.	Well ID	Well Type	Village	May-15	Nov-15	May-16	Nov-16	May-17	Nov-17	May-18	Nov-18	May-19	Nov-19
1	W170656074351501	DW	Visapur	1.5	3.7	1.55	1.3	2.1	1.9	1.1	1.1	1.94	1.9
2	W171142074402401	DW	Ped	4.65	3.15	2.6	2.25	5.7	2				

TABLE-03- Continued

WATER QUALITY (WQ) DATA OF MONITORING STATIONS-SGWD																		
STATE-MAHARASHTRA, DISTRICT-SANGLI, TALUKA-TASGAON																		
Sr. No.	Name of Village	Type of Source	Year	Sample Testing Date	Temp	pH	EC	TDS (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Total Hardness (mg/L)	Iron (mg/L)	Ca (mg/L)	Mg (mg/L)	Remark
1	YOGEWADI	HANDPUMP	16-17	06.12.2016	23	7	1838	1176	260	380	0.7	140	0	450	0.00	NA	NA	UNFIT
2	YOGEWADI	HANDPUMP	17-18	03.05.2017	39	7	2605	1667	320	560	0.3	211	255	400	0.00	NA	NA	UNFIT
3	YOGEWADI	HANDPUMP	17-18	15.01.2018	24	8	2492	1595	200	520	0.4	155	230	520	0.00	NA	NA	UNFIT
4	YOGEWADI	HANDPUMP	18-19	09.05.2018	39	8	3025	1936	490	330	0.1	177	85	1000	0.31	NA	NA	UNFIT
5	YOGEWADI	Hand Pump with Duel Pump	18-19	09.05.2018	39	8	2617	1675	390	330	0.0	180	91	790	0.11	NA	NA	UNFIT
6	YOGEWADI	HANDPUMP	18-19	08.01.2019	25	8	1767	1131	464	316	0.9	36	44	407	0.22	NA	NA	FIT
7	YOGEWADI	HANDPUMP	19-20	25.06.2019	29	8	1175	763	273	29	0.9	42	38	504	0.19	NA	NA	FIT

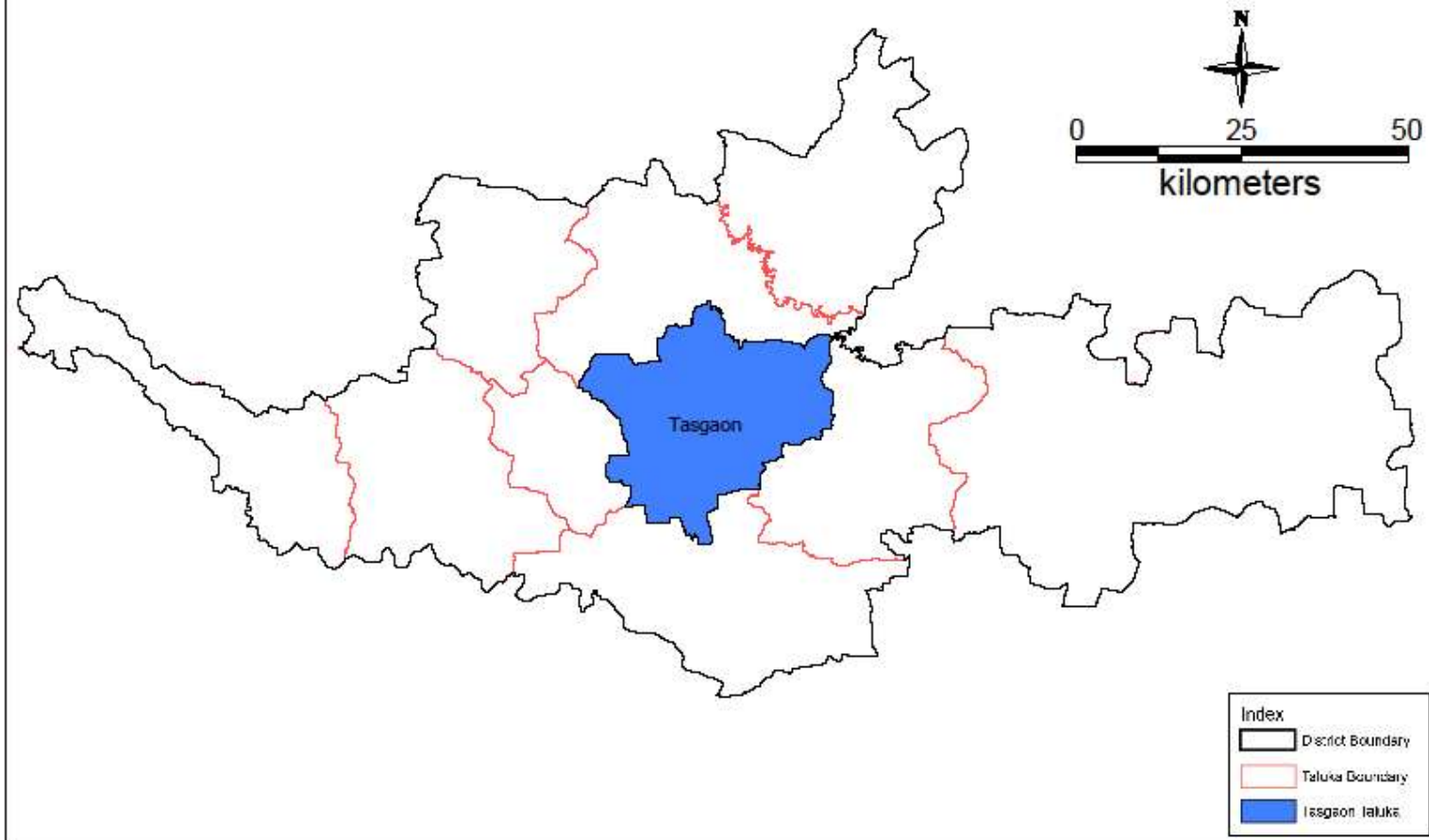
TABLE-03- Continued

WATER QUALITY (WQ) DATA OF MONITORING STATIONS-CGWB																	
STATE-MAHARASHTRA, DISTRICT-SANGLI, TALUKA-TASGAON																	
Sr.No.	Well No./Locaton	Well Type	Village	Date of Testing	Temp	EC (µS/cm)	pH	Ca	Mg	Na	K	HCO3	CL	SO4	NO3	F	
1	W170656074351501	DW	Visapur	21-05-2016		591	8.7	58	21.71	36	2.3	215	49	2	7	0.23	
2	W170656074351501	DW	Visapur	21-05-2015													
3	W170656074351501	DW	Visapur	21-05-2015													
4	W170656074351501	DW	Visapur	21-05-2017		1061	8	37	70.67	81	11.6	416	83	55	15	0.14	
5	W170656074351501	DW	Visapur	21-05-2015		710	8	102	15.93	59	3.3	397	46	43	12	0.09	
6	W171142074402401	DW	Ped	21-05-2015		591	8	70	29.26	41	0.68	329	53	60	14	0.17	
7	W171142074402401	DW	Ped	21-05-2016		553	8.2	66	20.5	17	0.6	254	23	4	7	0.33	
8	W171142074402401	DW	Ped	21-05-2017		442	8.3	61	13.81	25	1	226	21	1	8	0.23	
9	W171142074402401	DW	Ped	21-05-2015													

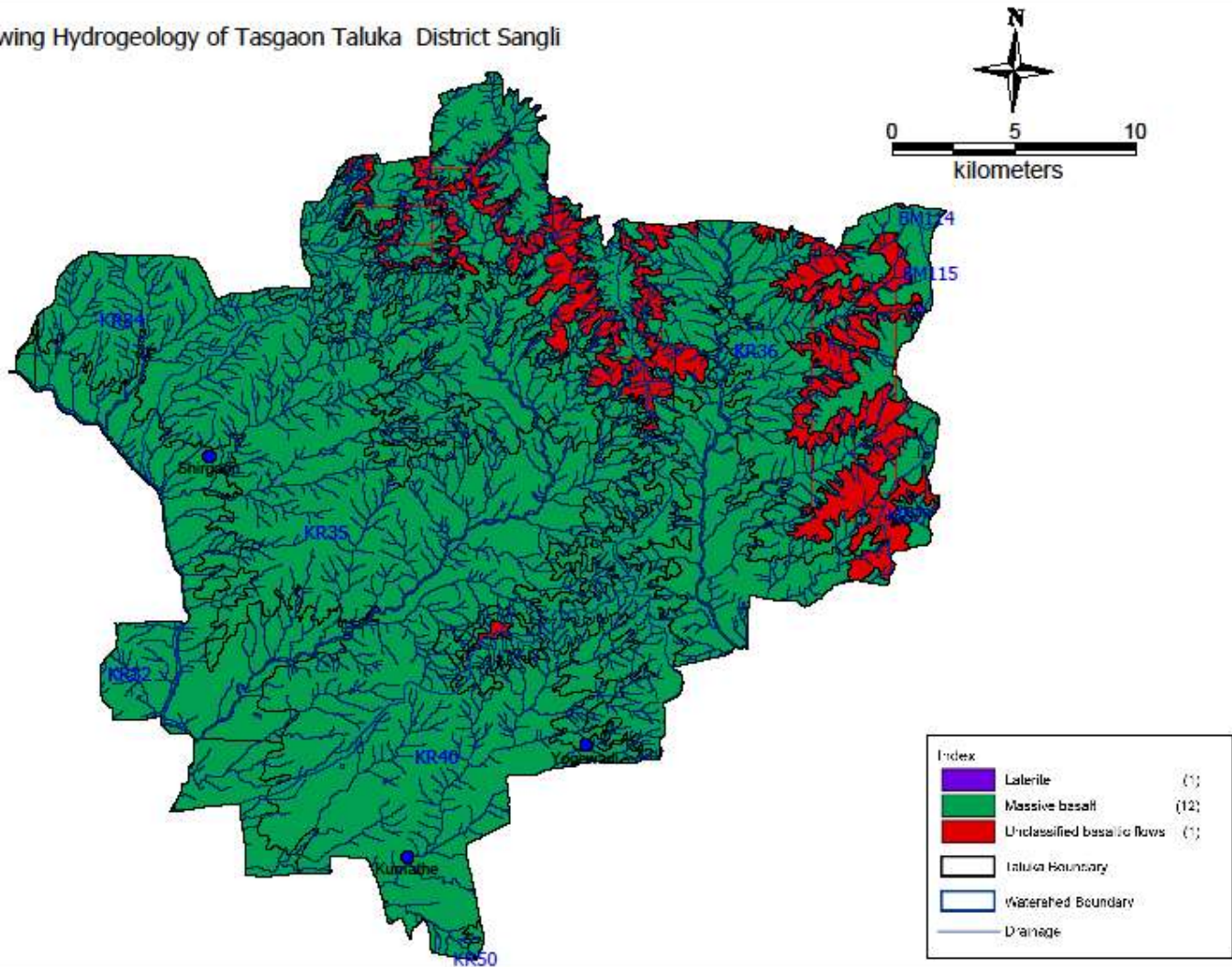


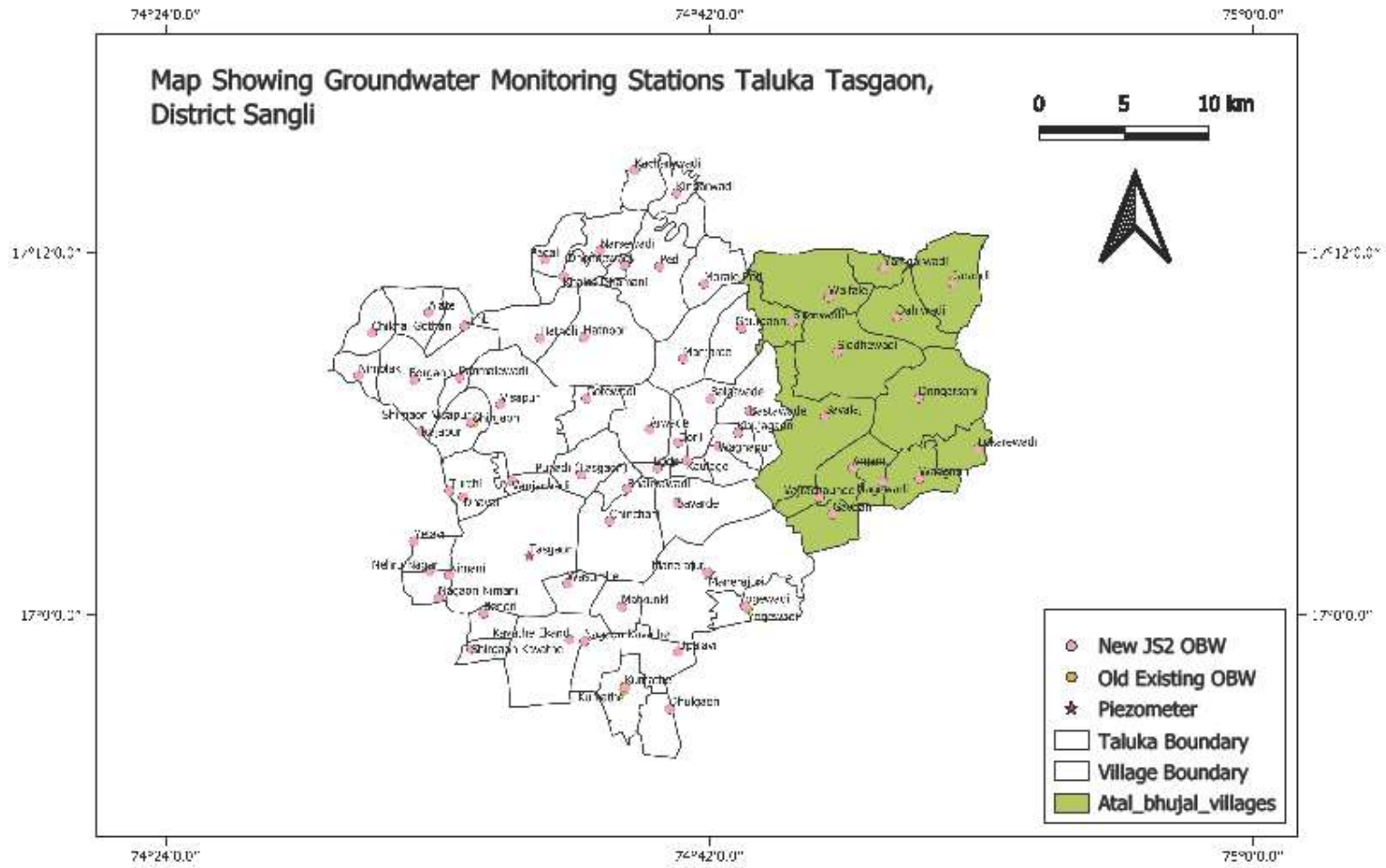


A Map Showing Location Of Tasgaon Taluka in District Sangli

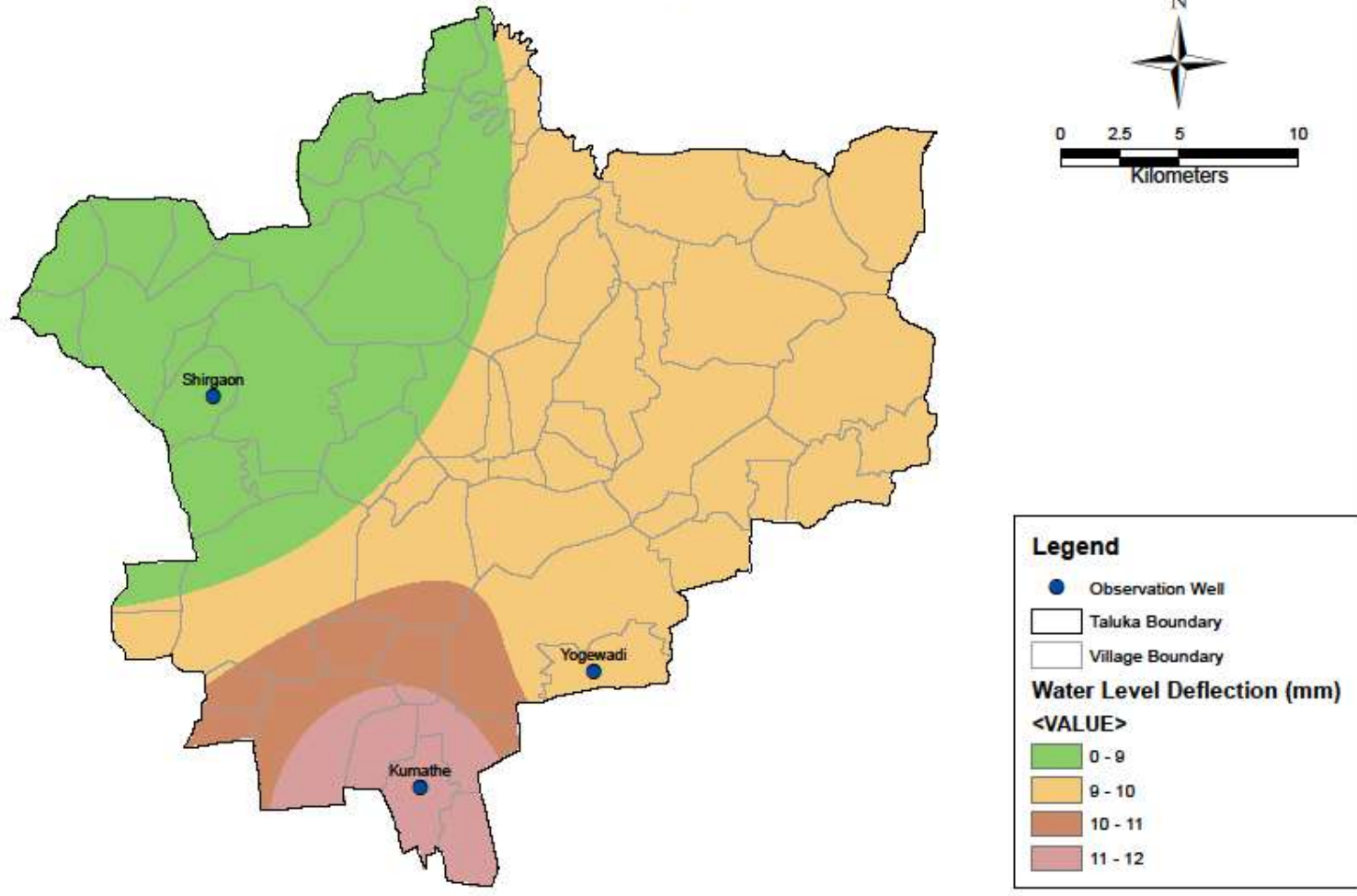


A Map Showing Hydrogeology of Tasgaon Taluka District Sangli

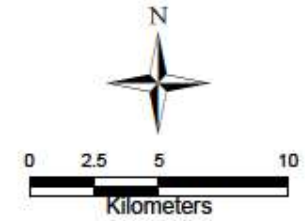
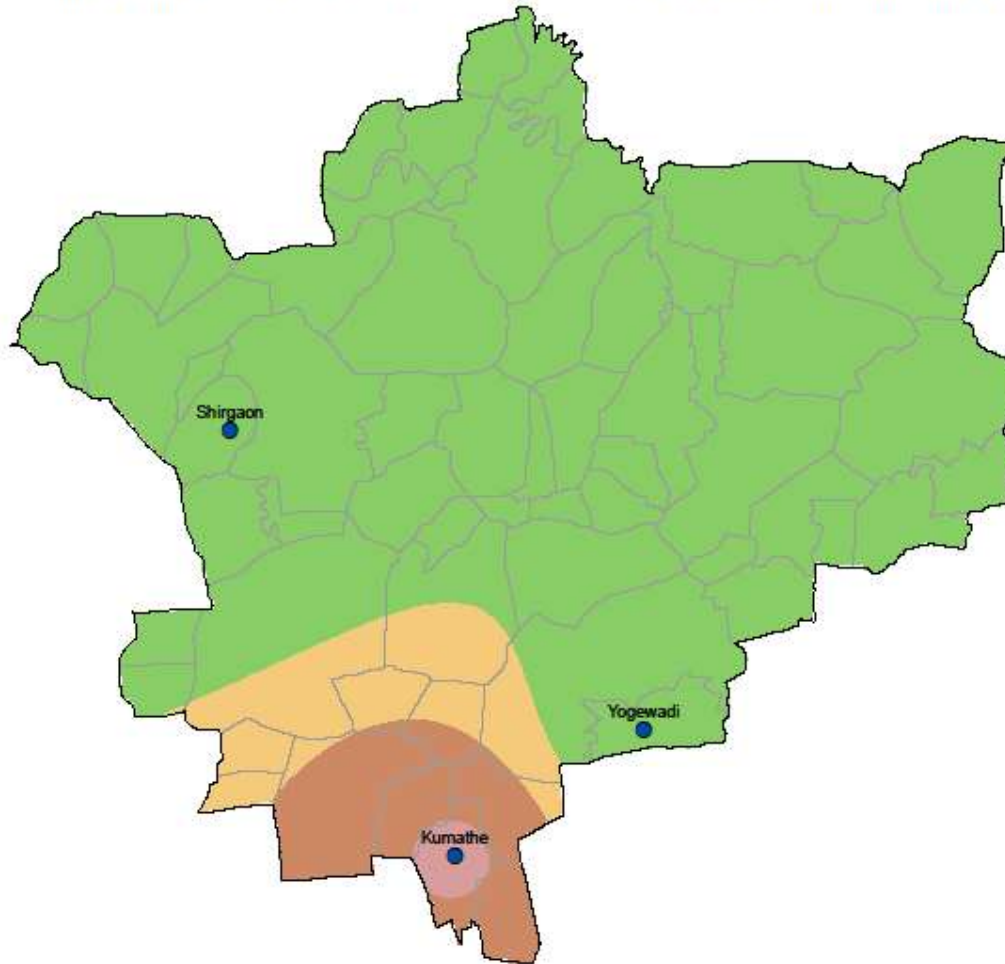




A Map Showing Water Level Deflection May 2019 Taluka Tasgaon District Sangli



A Map Showing Water Level Deflection October 2019 Taluka Tasgaon District Sangli



**Legend**

● Observation Well

□ Taluka Boundary

□ Village Boundary

**Water Level Deflection (mm)**

<VALUE>

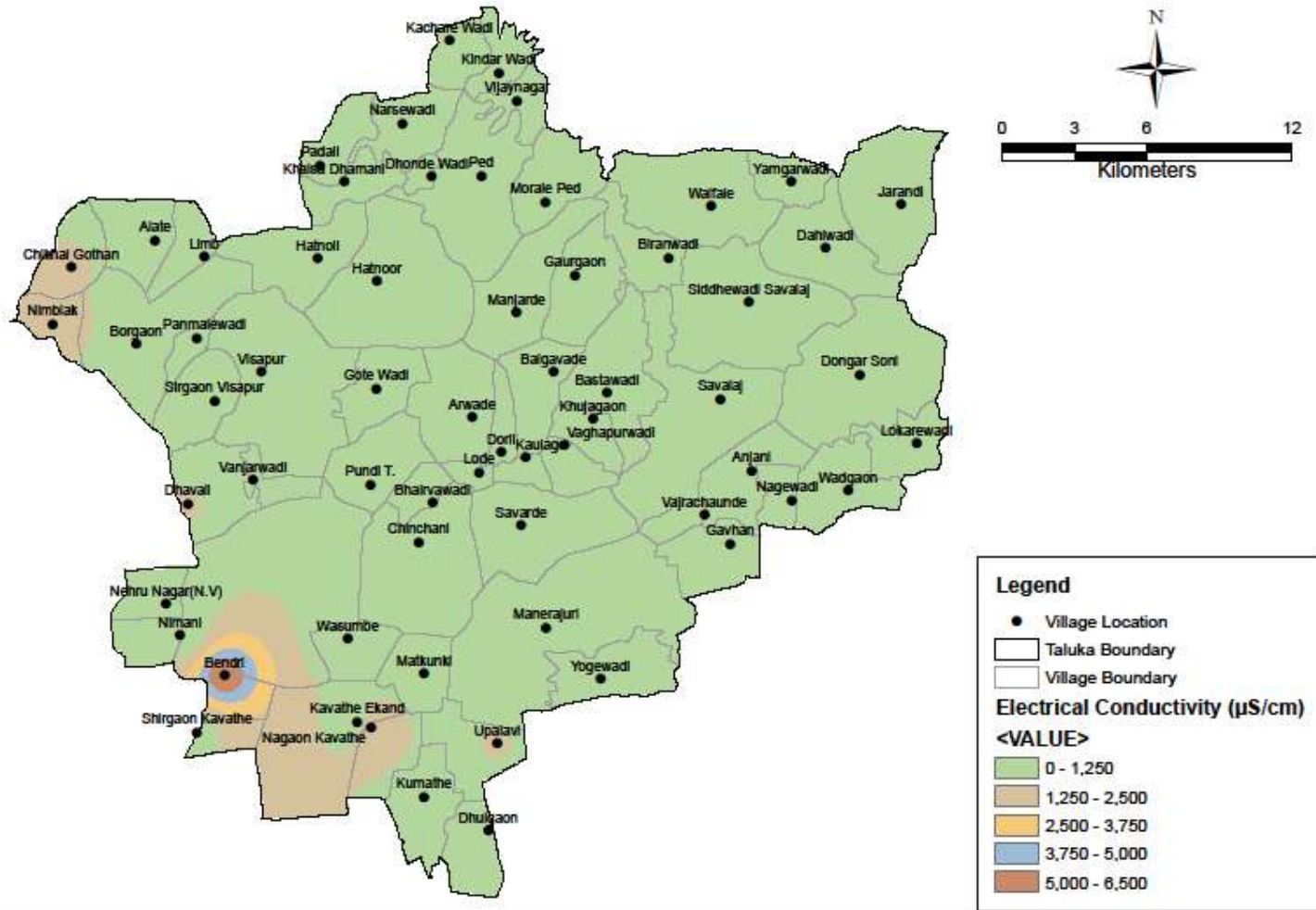
0 - 6

6 - 7

7 - 8

8 - 9

A Map Showing Distribution of Electrical Conductivity ( Premonsoon) in Year 2019 Taluka Tasgaon, District Sangli



A Map Showing Distribution of Electrical Conductivity ( Postmonsoon) in Year 2019 Taluka Tasgaon, District Sangli

