

**NRDWP (SUSTAINABILITY) PROGRAMME 2011-12**  
**SUCCESS STORY**

**VILLAGE: SELSURA**

**TALUKA: KALAMNURI**

**DISTRICT HINGOLI**

**Introduction:**

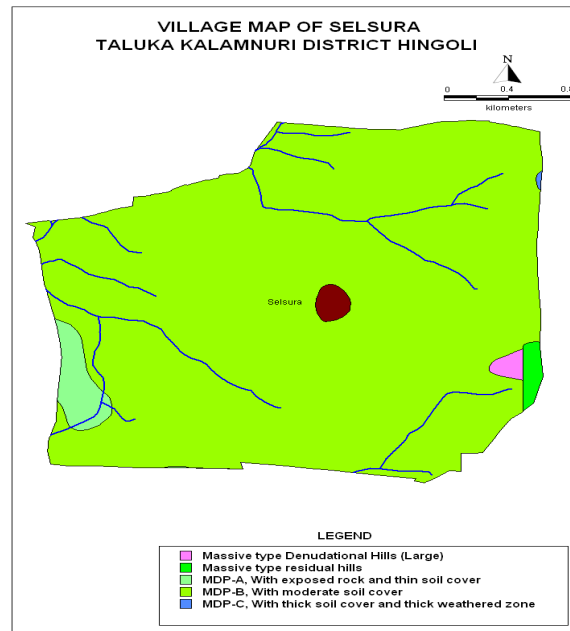
Village Selsura is located at a distance of 10Km from Taluka headquarter and about 35Km from district headquarter. It is bounded by 19°40'40" N latitude and 77°14'10" E longitude. It falls under survey of India Toposheet 56E/2. Watershed of village is PPG-6 .

Village is covered by Massive basalt flows. Flows are moderately weathered.

The area exhibits undulating topography. It was observed that slope direction is towards south west side. It is a moderately dissected plateau (MDP). The village area is not a command area. There were no hot weather crops in village area, only kharip and rabbi are the two crop seasons.

**Preproject scenario:**

Village receives drinking water from Dugwell, Borewell with Handpump and Powerpump. There is one dug wells which is source of pipe water supply to village. There are four dug wells in gaathan to cater the needs of village. According to villagers pws dug well is seasonal, and it did not yield sufficient water, where as HP and PP are also seasonal. Details of drinking water sources are given below. It was observed that population of village is **1569** souls and accordingly their requirement per day in summer is **31.38klpd** and available drinking water in summer was only **27klpd**. It was observed that villagers do not receive adequate water supply in summer. Water table in surrounding well goes below 15m this was mainly due to the lithology, poor jointing pattern, and meager recharge conditions. Villagers had to depend upon private bore wells but that too did not cater sufficiently. Water was supplied by requisition of borewells. Load shading too act as catalyst in water scarcity. Wells in the area are seasonal.



Sr. No	Type of Source	Depth m	Dia mm	SWL (s) m	SWL(w) M	No.	Yield(s) LPD	Yield(w) LPD
1	Bore wells with HP	60	150	45	17	4	12000	18000
2	BW with PP	60	150	45	15	1	5000	15000
3	Dug well	10	05 M	Dry	7	4	Nil	10000
4	PWS DW	15	06	14.5	09	1	10000	40000
TOTAL						8	27000LPD	83000LPD

### Projects implemented:

**1) CNB:** Village area exhibits dendritic drainage pattern. There is a nala flowing towards southeast direction at about 600m distance from gaothan. The nala is not perennial. It was necessary to stop the runoff in stream in the village area, so that the residence time of water could be increased and thus recharge will increase.

**2) Bore Blast Technique:** Formation is devoid of joints. Area exhibits massive basalt formation. Hence to develop secondary porosity near the pws dug well, bore blast technique was implemented.

**3) Recharge Shaft:** Two recharge shafts were taken near the pws dug well so that the deeper aquifer could be directly recharged.

### Postproject scenario:

It was observed that run off in the nala was impounded after rain. Storage in bandhara was about 3.00 Ham. Due to blasting in bore wells, development of connectivity/fractures between well and adjacent stream could be observed. Water levels suddenly developed just after good rains which was not the case earlier. Water levels in Wells down streams of bandhara also developed. SWL observed during march was about 10-13 m which use to be below 15 m earlier. This solved the problem of supply of drinking water from private borewells and stopped requisition of private bore wells.

## SUCCESS STORY

**VILLAGE: RENKAPUR**

**TALUKA: BASMAT**

**DISTRICT HINGOLI**

### **Introduction:**

Village Renkapur is located at a distance of 20km from taluka headquarter and about 75Km from district headquarter Hingoli. It is bounded by 19<sup>0</sup>14'50" N latitude and 77<sup>0</sup>07'15" E longitude. It falls in survey of India Toposheet 56E/3 and quadrant B-3. Watershed of village is GV-94B.

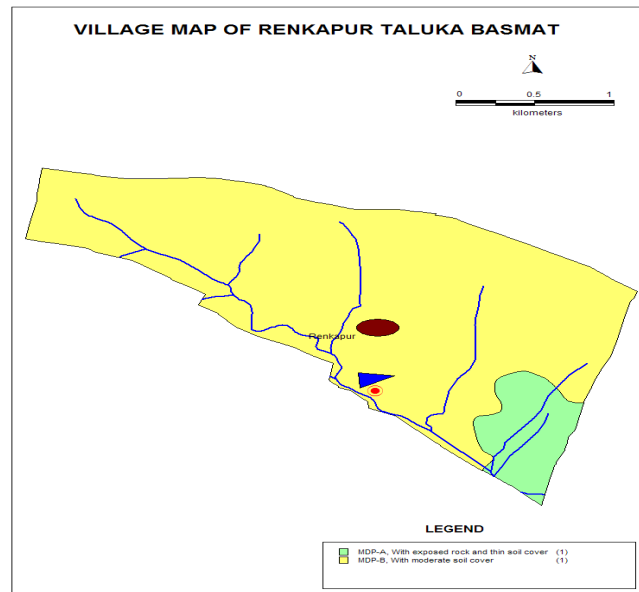
Village is covered by moderately weathered vesicular basalt. Aquifer is moderately weathered and zeolitic, which is followed by massive basalt.

The area exhibits flat topography. It was observed that slope direction is towards south west side. Thick blanket of BC soil could be observed everywhere. It is a Undissected pleatue (UDP). The village area is a command area. Sugercane is a hot weather crop in village area, kharip and rabbi are the two major crop seasons.

### **Preproject scenario :**

Village receives drinking water from dugwells and borewells with HandPump and PowerPump. There is one dug wells which is source of piped water supply to village. There are no dug wells in gaathan to cater the needs of village. According to villagers pws dug well did not yield sufficient water during summer i.e after March, where as HP and PP are also seasonal. Details of drinking water sources are given below. It was observed that population of village is **756** souls and accordingly their

requirement per day in summer is **15.12klpd** and available drinking water in summer was only **12 klpd**. It was observed that villagers do not receive adequate water supply in summer. There was short fall of **3Klpcd** i.e **4lpcd** for next 70 days i.e **28kltr**. Water table in surrounding well goes below 15mtr.this was mainly due to heavy pumping by power pumps, cash crops and traditional irrigation practices. Villagers had to depend upon private bore wells or water was supplied by tanker in year 2007- 2008- 2009 but that too did not cater sufficiently. Wells in the area are seasonal.



Sr. No	Type of Source	Depth	Dia mm	SWL (s) m	SWL(w) m	No.	Yield(s) LPD	Yield(w) LPD
1	BW with HP	60	150	45	17	4	2000	21000
2	BW with PP	60	150	45	15	1	10000	22000
3	Dug well	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	PWS DW	15	06	14.5	09	1	Nil	44000
TOTAL						8	12000LPD	87000LPD

**Project implemented:**

**1) FARM POND:** Village area exhibits sub parallel drainage pattern. PWS dugwell is located adjacent to gaathan. To develop recharge conditions near dug well, surface impounding of water was the only suitable solution. It was decided to construct a Farm pond of capacity **600m<sup>3</sup>**, which is supposed store a volume **6 lac liter** of water. Considering **25** percent recharge, approximately **1.5 lac liters** i e **21.5 Klpd** would be available in the form of groundwater.

**2) Recharge Shaft:** Two recharge shafts were taken near the pws dug well so that the deeper aquifer could be directly recharged. Remaining 10klpd is expected from direct recharge through these shafts.

**After implementation:**

After completion of project and after rains it was observed that good amount of water is stored in farm pond. Water level in well was also in equilibrium state during month of Feb to June. Yield of well have increased. This was clearly due to recharge through Farm pond. Village became tankerfree.

## SUCCESS STORY

**VILLAGE: CHINCHOLI**

**TALUKA: HINGOLI**

**DISTRICT HINGOLI**

### **Introduction:**

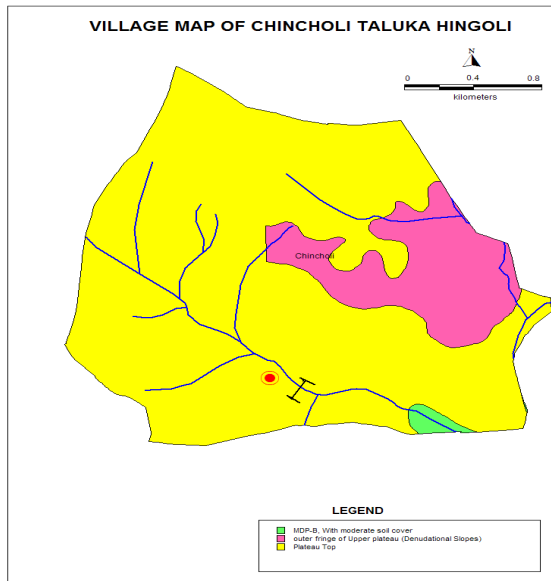
Village Chincholi is located at a distance of 20km from district headquarter Hingoli. It is bounded by 19°46'30" N latitude and 77°14'55" E longitude. It falls in survey of India Toposheet 56E/1 and quadrant C-3. Watershed of village is PPG-6.

Village is covered by moderately weathered massive basalt. Aquifer is moderately weathered massive basalt, which is followed by massive basalt.

The area exhibits undulating topography. It was observed that slope direction is towards south east side. Thin layer of 1 to 2 m BC soil is observed in the village area. It is a Moderately dissected plateau (MDP). The village area is not a command area. There is no hot weather crop in village area; kharip and rabbi are the two major crop seasons.

### **Preproject scenario:**

Village receives drinking water from Dugwell and Borewell with Handpump and Powerpump. There is one dug wells which is source of piped water supply to village.



There is one dug wells in gaathan to cater the needs of village. According to villagers pws dug well did not yield sufficient water during summer i.e after March, where as HP and PP are also seasonal. Details of drinking water sources are given below. It was observed that population of village is **1238** souls and accordingly their requirement per day in summer is **24.76klpd** and available drinking water in summer was only **20 klpd**. It was observed that villagers do not receive adequate water supply in summer. There was short fall of **4Klpd** i.e **4lpcd** for next 70 days i.e

**28kltr**. Water table in surrounding well goes below 15m .this was mainly due to heavy pumping by power pumps, cash crops and traditional irrigation practices. Villagers had to depend upon private bore wells but that too did not cater sufficiently. Wells in the area are seasonal.

Sr. No	Type of Source	Depth m	Dia mm	SWL (s) m	SWL(w) m	No.	Yield(s) LPD	Yield(w) LPD
1	BW with HP	60	150	45	17	4	5000	21000
2	BW with PP	60	150	45	15	1	10000	22000
3	Dug well	10	5m	Nil	5m	1	Nil	5000
4	PWS DW	13	07	12.5	09	1	5000	35000
TOTAL						8	20000LPD	83000LPD

### Projects implemented:

**1) RECHARGE TRENCH/FARM POND:** Village area exhibits sub parallel drainage pattern. PWS dugwell is located adjacent to gaathan. To develop recharge conditions near dug well, surface impounding of water was the only suitable solution. It was decided to construct a Farm pond of capacity **600m<sup>3</sup>**, which is supposed to store a volume **6 lac liter** of water. Considering **20** percent recharge, approximately **1.2 lac liters** i.e **175 Klpd** would be available in the form of groundwater.

**2) Recharge Shaft:** Two recharge shafts were taken near the pws dug well so that the deeper aquifer could be directly recharged. Remaining 10klpd is expected from direct recharge through these shafts.

**3) CNB:** Village area exhibits dendritic drainage pattern. There is a nala flowing towards southeast direction at about 600m distance from gaathan. The nala is not perennial. It was necessary to stop the runoff in stream in the village area, so that the residence time of water could be increased and thus recharge will increase

### Post project scenario:

After completion of project and after rains it was observed that good amount of water is stored in farm pond. Water level in well was also in equilibrium state during month of February. Yield of well have increased. Approximately 1.5 Ham water got impounded in CNB which increased the recharge to well. Water level which use to be below 12 have rise to 10 mtr i.e there was rise by 3mtr in month of Feb. This was clearly due to recharge through Farm pond.



RECHARGE TRENCH AT CHINCHOLI TALUKA HINGOLI



**CEMENT BANDHARA** AT CHINCHOLI



WATER LEVEL IN PWS WELL CHINCHOLI