

**AGRICULTURAL ENGINEERING DEPARTMENT**  
**SPECIAL AREA DEVELOPMENT PROGRAMME**  
**DIVISION : AED,EE(AE),SADP,MADURAI**  
**SUB-DIVISION :AED,AEE(AE),SADP,DINDIGUL**

**1. Title of the project : Special Area Development Programme (SADP)**

**2. Objectives of the project**

The hilly terrain of western ghats which lies in Reddiarchatram,Athoor,Shanarpatti, Dindigul,Ottanchatram, palani and Kodaikanal blocks are indentified for implementation of the Project “Special area development programme” which are backward areas with vast regional imbalances. The backwardness is mainly due to higher Incidence of poverty, less Per Capita Income and Unemployment which is mainly due to lack of ground water and low rainfall.

In these blocks, the core and predominant economic activity is Agriculture Sector. More than 50% of the total work force of the population is involved in agriculture as Cultivators and Agricultural labourers. Improving Agriculture sector would require, improving farm productivity; and one of the major factors influencing farm productivity is availability of Ground Water in irrigated agriculture. Depleting ground water levels, reduces the cropping area and there by less employment opportunities for farm labourers. Any positive development in ground water recharge, sustains area under cropping, thus generate employment opportunities that increase per capita income, prevent migration of labour force and ultimately improve Human Development Index (**HDI**).

As natural replenishment of ground water reservoir is a slow process and is often unable to keep pace with the excessive and continued exploitation of ground water resources in the identified blocks. This has resulted in declining ground water levels and depletion of ground water resource. Recharging efforts thro' Rain Water Harvesting, are basically aimed at augmentation of the natural movement of surface water into ground water reservoir through suitable measures. Occurrence of rainfall in these areas is mostly limited to a very shorter period in a year. The natural recharge to ground water reservoir is restricted to this period only. Rain Water Harvesting techniques aim at extending the recharge period in the post-monsoon season as long as possible. This results in enhanced sustainability of ground water sources during the lean season.

Enhanced sustainability of ground water sources leads to better prospects for Agriculture and also drinking water requirement.

- Construction of Land slide protection wall to arrest soil erosion and to avoid landslide nearby the gullies.
- Construction of various types of Check dams to arrest the runoff and to harvest the excess rain during rainy season.
- Enhance the productivity to the high land farmers and to sustain the farmers in agriculture.

**3.Implementing Department** : Agricultural Engineering Department – Special Area Development Programme (SADP),Madurai Division

**4.Outlay of the Project :**

Sl.No	FS Details	Year	FS Date of Sanction	No of works	Outlay Rs.in Lakhs
1	FS-I	2016-17	8.2.2017&1 7.3.2017	318	426.733
2	FS-II	2016-17	17.3.2017	93	98.625
3	FS-I	2017-18	19.3.2018	72	319.25
		Total		483	844.608

**5.Project Location** :

For the Year 2016-17

District : Dindigul

Block (s) : Kodaikanal, Reddiarchatram, palani

For the Year 2017-18

District : Dindigul

Block (s) : Kodaikanal, Reddiarchatram, Ottanchatram

**6.Present Status and Problems bore commencement of the Project :**

Key indicators for backwardness and regional disparities are being addressed through various activities under SADP. Unsustainable Agriculture due to ground water depletion is one of the core problems still existing which needs to be addressed to improve better living of the people. Even though this problem is being addressed thro' various initiatives, lot of Gap filling also needs to be done.

In these identified blocks, the predominant and core economic activity is Agriculture and allied sectors. More than half of the population depends on Agriculture. The people involved in agricultural activities consist of mainly small cultivators and agricultural labourers (mainly women labourers). Any factor having a negative impact on Agriculture sector needs to be addressed immediately.

This area depends on Monsoon for rain. Monsoon rainfall is now becoming unreliable. This leads to dependence of ground water more. Continued and excessive withdrawal of ground water, leads to faster depletion of ground water reservoir without enough replenishment. Declining sources of irrigation reduces the farm productivity and the agriculture sector is slowly becoming unsustainable.

Most of the above mentioned area and area under other crops (including perennial crops) depend on irrigated agriculture, mostly on ground water. There are number of open wells and tube wells in this area thro' which ground water is drawn for irrigation. Details are as below.

Reduced farm income and less profitable agriculture (due to depletion of ground water sources) force the cultivators either to reduce the area under cultivation or abandon farming. Any problem in agriculture sector directly reduces the income of Agricultural Labourers. This forces migration of labour force, even though scheme like MNRGES partly reduces this. Direct impact of this problem on Income, Poverty and Employment has detrimental effects on Health & Education, thus having a significant effect on quality of living.

#### **Nature of the problem**

- (1) Soil erosion problem resulting in excess removal of top soil
- (2) Soil erosion in the water ways ,Landslide nearby gullies
- (3) Low productivity and gradual migration from agriculture.
- (4) Water scarcity for agriculture and drinking water

Due to excess runoff during rainy season there will be landslides nearby gullies. Simultaneously the standing crops in the field will also be damaged. Hence, there will be a reduction in yield and in sometimes total crops will be lost. Hence, the income of the farming community and the agricultural labourers will be affected.



## **7. Impact of the Scheme :**

As we are proposing Rain Water Harvesting Structures to improve productivity in the core economic activity of the targeted area and the implementing agency is going to be involved in the development of other aspects of agriculture in this area even after completion of the above project, the project is a viable and sustainable one.

Agriculture is the main industry in the selected micro watershed area. Nearly 1920 hectares of agricultural land was cultivated by various crops. The major crops namely coffee, banana, orange, avacoda, garlic, potato, beans and chow chow lay a vital role in the farmer's income. Due to excess runoff during rainy season not only top soil removal but also the crops in the field will also be affected. Hence, there is a loss of both land and crop for the farmers. There by the farmers felt very difficult in their agricultural activities.

By constructing Landslide production wall the landslide and crop loss during rainy season will be minimised. Thus, the farmer's income will be increased. Hence the project is viable.

## **8. Soil and Water Problems Rectified and benefited details :**

a) Conservation and harvesting of surplus monsoon runoff in ground water reservoir which otherwise was going un-utilized outside the watershed/ basin and to sea.

b) Rise in ground water levels due to additional recharge to ground water. In case where continuous decline of ground water level was taking place, a check to this and/or the intensity of decline subsequently reduces. The energy consumption for lifting the water also reduces.

c) The ground water structures in the benefitted zone of artificial structures gains sustainability and the wells provide water in lean month when these were going dry. The domestic wells will become sustainable and many of the areas become tanker free.

d) The cropping pattern in the benefitted zone will undergo marked change due to recharge of ground water and cash crops will start growing. Orchards which went dry earlier due to ground water scarcity may rehabilitate and new plantation be grown.

e) Green vegetation cover may increase in the zone of benefit and also along the structures due to additional availability of soil moisture.

f) The quality of ground water may improve due to dilution.

### **9.Performance of the indicators**

Besides the direct measurable impacts, the artificial recharge scheme will generate indirect benefit in terms of decrease in soil erosion, improvement in fauna and flora, influx of migratory birds, etc. Besides, the social and economic status of farmers of benefitted zone will also substantially improve due to increase in crop production and also assured employment for agricultural labourers.

### **10.Outcome of the Project**

1. Soil erosion and removal of fertile top soil will be avoided.
2. Landslides nearby the gullies will be avoided.
3. Farming practices can be done in the right time.
4. Farmers shall receive assured yield.
5. Agricultural labourers will get employment.
6. Migration of labours from one place to other will be avoided
7. Ground water potential will be improved by artificial recharge of construction of major and minor checkdams

## SADP 2017-18 WORKS

<b>Name of Work</b>	<b>Upper Reach Gablon Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadaku</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>69(3)</b>	<b>GPS Co ordinates</b>	<b>10.450637</b>	<b>77.729318</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Upper Reach Gablon Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadakadu</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>81</b>	<b>GPS Co ordinates</b>	<b>10.445665</b>	<b>77.721763</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Lower Reach Major Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadakadu</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>69(2)</b>	<b>GPS Co ordinates</b>	<b>10.454461</b>	<b>77.726788</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Upper Reach Gabion Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadakadu</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>20</b>	<b>GPS Co ordinates</b>	<b>10.455291</b>	<b>77.732517</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Upper Reach Gablon Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadakadu</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>61(1)</b>	<b>GPS Co ordinates</b>	<b>10.448965</b>	<b>77.728467</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Upper Reach Minor Checkdam</b>	<b>Block</b>	<b>Reddlyarchatram</b>	
<b>Revenue Village</b>	<b>Kodalvavi</b>	<b>Micro watershed code</b>	<b>4B2A2a1b2e2</b>	
<b>SF.No</b>	<b>202</b>	<b>GPS Co ordinates</b>	<b>10.42205</b>	<b>77.78123</b>



Before



BGL



AGL



Completion



<b>Name of Work</b>	<b>Upper Reach Minor Checkdam</b>	<b>Block</b>	<b>Reddlyarchatram</b>	
<b>Revenue Village</b>	<b>Ammapatti</b>	<b>Micro watershed code</b>	<b>4B2A2a1b1b</b>	
<b>SF.No</b>	<b>33</b>	<b>GPS Co ordinates</b>	<b>10.417348</b>	<b>77.875598</b>

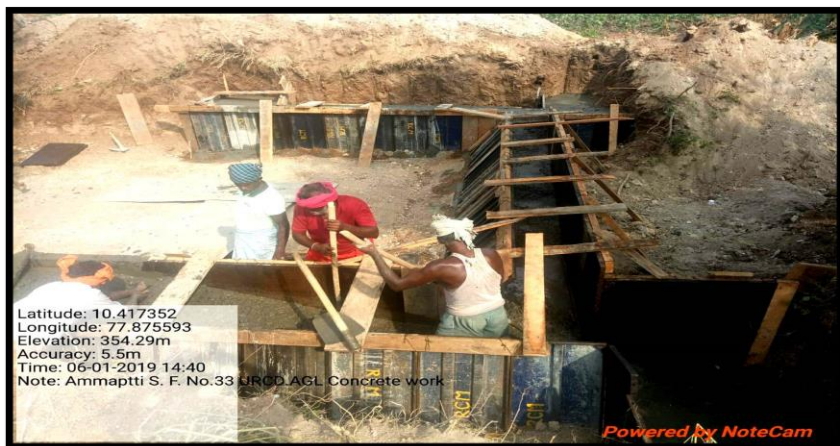


*Before*



*Foundation*

*BGL*



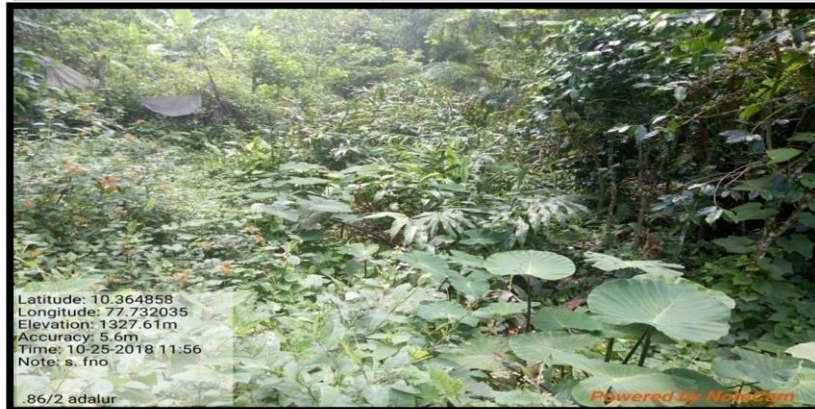
*AGL*



*AGL-Stage 2*



<b>Name of Work</b>	<b>Upper Reach Minor Checkdam</b>	<b>Block</b>	<b>Reddlyarchatram</b>	
<b>Revenue Village</b>	<b>Adalur</b>	<b>Micro watershed code</b>	<b>4B2A2a5d2</b>	
<b>SF.No</b>	<b>86/1</b>	<b>GPS Co ordinates</b>	<b>10.364858</b>	<b>77.732035</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Middle Reach Medium Checkdam</b>	<b>Block</b>	<b>Reddiyarchatram</b>	
<b>Revenue Village</b>	<b>Adalur</b>	<b>Micro watershed code</b>	<b>4B2A2a5d2</b>	
<b>SF.No</b>	<b>86/1</b>	<b>GPS Co ordnates</b>	<b>10.365657</b>	<b>77.732207</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Middle Reach Medlum Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Periyur</b>	<b>Micro watershed code</b>	<b>4B2A2a7c1e</b>	
<b>SF.No</b>	<b>480</b>	<b>GPS Co ordinates</b>	<b>10.333457</b>	<b>77.680529</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Middle Reach Medium Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Periyur</b>	<b>Micro watershed code</b>	<b>4B2A2a7c1e</b>	
<b>SF.No</b>	<b>482</b>	<b>GPS Co ordlnates</b>	<b>10.332149</b>	<b>77.683101</b>



Before



BGL



AGL



Completion



<b>Name of Work</b>	<b>Middle Reach Medium Checkdam</b>	<b>Block</b>	<b>Reddiyarchatram</b>	
<b>Revenue Village</b>	<b>Kodalvavi</b>	<b>Micro watershed code</b>	<b>4B2A2a1b2e2</b>	
<b>SF.No</b>	<b>189</b>	<b>GPS Co ordinates</b>	<b>10.422267</b>	<b>77.782992</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Lower Reach Major Checkdam</b>	<b>Block</b>	<b>Reddiyarchatram</b>	
<b>Revenue Village</b>	<b>Kodalvavi</b>	<b>Micro watershed code</b>	<b>4B2A2a1b2e2</b>	
<b>SF.No</b>	<b>187</b>	<b>GPS Co ordinates</b>	<b>10.424104</b>	<b>77.785976</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Middle Reach Medium Checkdam</b>	<b>Block</b>	<b>Reddiyarchatram</b>	
<b>Revenue Village</b>	<b>Adalur</b>	<b>Micro watershed code</b>	<b>4B2A2a5d2</b>	
<b>SF.No</b>	<b>86/1</b>	<b>GPS Co ordinates</b>	<b>10.365657</b>	<b>77.732207</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Lower Reach Major Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Periyur</b>	<b>Micro watershed code</b>	<b>4B2A2a7b7</b>	
<b>SF.No</b>	<b>373</b>	<b>GPS Co ordinates</b>	<b>10.345439</b>	<b>77.696423</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Lower Reach Major Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Periyur</b>	<b>Micro watershed code</b>	<b>4B2A2a7b7</b>	
<b>SF.No</b>	<b>356</b>	<b>GPS Co ordinates</b>	<b>10.343864</b>	<b>77.699642</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Lower Reach Major Checkdam</b>	<b>Block</b>	<b>Ottanchatram</b>	
<b>Revenue Village</b>	<b>Vadakadu</b>	<b>Micro watershed code</b>	<b>4B2A3c7d2</b>	
<b>SF.No</b>	<b>20</b>	<b>GPS Co ordinates</b>	<b>10.45426</b>	<b>77.73019</b>



*Before*



*BGL*



*AGL*



*Completion*



**SADP 2016-17**

<b>Name of Work</b>	<b>Middle Reach Medium Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>K.C.Patti</b>	<b>Micro watershed code</b>	<b>4B2A2a7b8a</b>	
<b>SF.No</b>	<b>317</b>	<b>GPS Co ordinates</b>	<b>10.333241</b>	<b>77.709057</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Gablon Checkdam</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Pachalur</b>	<b>Micro watershed code</b>	<b>4B2A2a7c1a</b>	
<b>SF.No</b>	<b>581</b>	<b>GPS Co ordinates</b>	<b>10.333241</b>	<b>77.709057</b>



*Before*



*BGL*



*AGL*



*Completion*



<b>Name of Work</b>	<b>Gablon Retaining Wall</b>	<b>Block</b>	<b>Kodalkanal</b>	
<b>Revenue Village</b>	<b>Pachalur</b>	<b>Micro watershed code</b>	<b>4B2A2a7c1a</b>	
<b>SF.No</b>	<b>569</b>	<b>GPS Co ordinates</b>	<b>10.364691</b>	<b>77.671487</b>



*Before*



*BGL*



*AGL*



*Completion*