CONSTRUCTION OF WATER HARVESTING FARM PONDS USING COIR GEO-TEXTILES:

Importance of Water:

Water is an important natural resource and is the very basis of our life. We use water for drinking, irrigation, industry, transport and for the production of hydro-electricity. Water is a cyclic resource which can be used again and again after cleaning. The best way to conserve water is its judicious use.

A large quantity of water is used for irrigation and there is an urgent need for proper water management in irrigation sector. Over-irrigation through canals has led to water-logging in western Uttar Pradesh, Punjab, Haryana and Hirakud command area. Seepage along the canals can be checked by lining them. The over-draft by tube-wells has resulted in lowering of water table in a number of villages in Haryana, Punjab and western Uttar Pradesh.

In arid areas, wherever water has been brought for irrigation, saline and alkaline tracts have emerged, rendering the soil infertile. Wasteful use of water should be checked. Sprinkler irrigation and drip irrigation can play a crucial role in conserving scarce water resources in dry areas. Drip irrigation and sprinkles can save anywhere between 30 to 60 per cent of water.

Only 0.5 per cent—nearly half of this in Maharashtra—is under drip irrigation and 0.7 per cent under sprinklers. There is large-scale pollution of water as a result of industrialization and urbanization. This trend has got to be checked.

Although one-eighth of India is declared as food prone, there are several thousand villages in India which do not have potable drinking water. The basins should be treated as one unit for planning water utilization. Dry farming should be practiced in dry areas. The experimentation under the National Watershed Development Programme for Rainfed Agriculture is being carried on since 1986-87.

There is a great demand of water in industries and the industrial sector offers great opportunities to conserve water. The economy in water-use in this sector will have two benefits. Firstly, the saved water may be used to meet the demand in other sectors. Secondly, the effluents thrown in the water bodies will be less.

Water in most industries is used for cooling purposes, thus, it is not necessary to use fresh potable water. Instead, the recycled water may be used for this purpose. By using the recycled water over and over again, fresh water can be conserved.

Demand of water for domestic use can also be reduced. For example, in most urban areas about 12.5 litres of water is used in one flushing. In some cities cisterns requiring only 5 to 7 litres of water in one flushing are now used.
Thus if each urban individual adopts smaller cisterns, the amount of water consumption for flushing can be reduced to half. Similarly, if raw water is used for cleaning, gardening, etc., a lot of fresh potable water can be saved. Water used in kitchen sink, wash basin and in bathroom can be collected into a tank and reused for flushing toilet and gardening also.

**Rain Water Harvesting:**

Rain water harvesting is one of the most effective methods of water management and water conservation. It is the term used to indicate the collection and storage of rain water used for human, animals and plant needs. It involves collection and storage of rain water at surface or in sub-surface aquifer, before it is lost as surface run off. The augmented resource can be harvested in the time of need.

Artificial recharge to ground water is a process by which the ground water reservoir is augmented at a rate exceeding that under natural conditions of replenishment. The collected water is stored and pumped in a separate pipe distribution. This is a very useful method for a developing country like India in reducing the cost and the demand of treated water and also economizing the treatment plants operation, maintenance and distribution costs.

**Need:**

i. To overcome the inadequacy of surface water to meet our demands.
ii. To arrest decline in ground water levels.
iii. To enhance availability of ground water at specific place and time and utilize rain water for sustainable development.
iv. To increase infiltration of rain water in the subsoil this has decreased drastically in urban areas due to paving of open area.
v. To improve ground water quality by dilution.
vi. To increase agriculture production.
vii. To improve ecology of the area by increase in vegetation cover etc.

**Advantages:**

i. The cost of recharge to sub-surface reservoir is lower than surface reservoirs.
ii. The aquifer serves as a distribution system also.
iii. No land is wasted for storage purpose and no population displacement is involved.
iv. Ground water is not directly exposed to evaporation and pollution.
v. Storing water under ground is environment friendly.
vi. It increases the productivity of aquifer.
vii. It reduces flood hazards.
viii. Effects rise in ground water levels.
ix. Mitigates effects of drought.
x. Reduces soil erosion.
The New Delhi-based Centre for Science and Environment estimates that merely capturing the rain water and run off on 2 per cent of India’s land area could supply 26 gallons of water per person.

As such much effort is to being made to popularize the concept of rain water harvesting at the grass roots level.

**Potential Areas:**

i. Where ground water levels are declining on regular basis.

ii. Where substantial amount of aquifer has been de-saturated.

iii. Where availability of ground water is inadequate in lean months.

iv. Where due to rapid urbanization, infiltration of rain water into subsoil has decreased drastically and recharging of ground water has diminished.

**Methods and Techniques:**

The methods of ground water recharge mainly are:

**Urban Areas:**

Roof top rain water/storm runoff harvesting through

(i) Recharge Pit

(ii) Recharge Trench

(iii) Tube-well

(iv) Recharge Well

**Rural Areas:**

Rain water harvesting through

(i) Gully Plug

(ii) Contour Bund

(iii) Gabion Structure

(iv) Percolation Tank

(v) Check Dam/Cement Plug/Nala Bund

(vi) Recharge Shaft

(vii) Dug-well Recharge

(viii) Ground Water Dams/Subsurface Dyke

**In India some of the States made water harvesting Compulsory:**

**Tamil Nadu:**

Tamil Nadu was the first state to make Rainwater Harvesting compulsory for every building to avoid groundwater depletion. The scheme was launched in 2001 and has been implemented in all rural areas of Tamil Nadu. We can see posters all over Tamil Nadu including Rural areas to
Geo-textiles:
Recognition of coir for sustainable vegetation and erosion control arises from the fact that it is an abundant, renewable natural resource with an extremely low decomposition rate and a high strength compared to other natural fibers. Coir is woven into thick textiles which are applied like blankets on the ground in erosion prone areas. Geo-textiles made from coir are durable, absorb water, resist sunlight, facilitate seed germination, and are 100% biodegradable. These blankets have high strength retention and a slow rate of degradation meaning they last for several years in field applications.

Environmental benefits:
Coir is a material which is widely used to overcome the problem of erosion. When woven into geo-textiles and placed on areas in need of erosion control it promotes new vegetation by absorbing water and preventing top soil from drying out. Coir geo-textiles have a natural ability to retain moisture and protect from the sun's radiation just like natural soil, and unlike geo-synthetic materials, it provides good soil support for up to three years, allowing natural vegetation to become established.

Advantages of Coir Geo textile (Coir Bhoovastra):
- a) The high tensile strength of coir fiber protect steep surface from heavy flows and debris movement. Easy to install and huge contour the soil surface due to its heavy weight and ability to absorb water
- b) Totally Biodegradable, 100% natural and provided nutrients.
- c) Water absorbent, thus act as mulch on the surface and as a wick in the soil mantle.
- d) Environmentally friendly and aesthetically pleasing and nonpolluting.
- e) Provides excellent microclimate for plant establishment and healthy growth.
- f) The thick and protruding fibers from the yarn render an extra protection against soil erosion and Provide roughness to the surface floor and hold the soil particles in place.
- g) The intersecting strands move independently of one another in the coir geo textile thereby allaying fear of Wild life entrapment.
- h) The coir geo textile gives the grass plenty of room to grow and at the same time provides large number of "CHECK DAMS" per square meter of soil media, Due to high resistance to salt water action, the coir geo-textiles remains virtually unaffected when used against wave lap erosion,
- i) During the manufacturing process of coir yarn, no chemicals are used.
- j) Holds the seeds and saplings in place.
- k) Allows sunlight to pass through.
Construction of Water Harvesting Ponds using Coir Geo-textiles:

Construction of water harvesting ponds using coir geo-textiles is a unique technology. The known advantages of coir geo-textiles we constructed the water harvesting pond using coir geo-textiles at Krishi Vignan Kendra, Gadag. Now it is becoming very popular in Karnataka state and PWD department constructing water harvesting ponds using coir geo-textiles in all inspection bungalows.

Advantages:

- It is totally a green technology.
- Material is fully eco-friendly.
- No use of steel, cement and sand.
- Low water evaporation.
- Water percolates inside the ground easily.
- Ground water table increases.
- Coir fibre holds the water molecules for long time so that surface water table increases.
- Nearby dry bore-wells re-charges.
- Length, width and depth can be change as per the requirements.
- Easy construction, maintenance and cost effective.

Laying of coir geo-textiles at sides of the wall and fixing of co-co logs at the edges and bottom corners of the pond:
Farm pond is under construction using coir geo-textiles:
TO WHOMSOEVER IT MAY CONCERN

This is to certify that Karnataka State Coir Cooperative Federation Limited is the Enterprise of Govt. of Karnataka. They are into manufacture of all types of coir products including coir mat, corridor mat, tufted mat, yarns, ropes, matting, geo-textiles etc. They are under taking turn key projects for manufacturing of coir geo-textiles including its laying for different purposes like construction of roads, embankments and water harvesting farm ponds.

They successfully constructed a water harvesting pond (Krishi Honda) at K.H.PATIL KRISHI VIGYAN KENDRA Hulkoti, Gadag District, Karnataka State. The measurement is 25m X 25m X 3.5m of length, width and depth and total storage capacity is 8.00 lakhs liters of water.

The inauguration of the water harvesting pond has been done under the guidance of Shri D.R.Patil former MLA of Gadag Taluk along with a massive group of farmers who had come from neighboring villages. The farmers are coming from various villages appreciated the efforts after seeing this water harvesting pond.

The major advantages of this water harvesting pond are as follows.

1. No use of cement, stone, sand and iron. Used only coir geo-textiles material and it is bio-degradable, environmental friendly.
2. Coir fibre is having the inherent property of holding water molecules for long time. Hence water cannot be evaporated early so that surface water recharges quickly.
3. Water easily percolates inside the ground through the coir geo-textiles, hence the ground water recharges quickly. Therefore the nearby bore-wells recharges easily.
4. The side walls of the pond is fully covered by coir geo-textiles material, it helps to hold the soil without any sliding and it helps to stabilize the soil naturally.
5. The side walls of the pond is fully covered by coir geo-textiles material and it helps to climb the animals without any slippage.
6. The construction technology of this type of water harvesting pond using coir geo-textiles is very cost effective and economical compared to use of stone, steel and cement.
7. This type of water harvesting ponds can be constructed in farmer's field, urban areas and forest area for the purpose of animals to drink water.

We congratulate Karnataka State Coir Cooperative Federation Limited for taking up immediate step to construct such a huge water harvesting pond at our site and it helps us to educate our farmers to use this technology in their fields. We wish them all the success.

Date: 16.11.2016

Dr. L.G.Hiregoudar
Programme Coordinator & Head
To,
The Executive Engineer,
National Highway Division,
Karwar.

Sir,

Sub: Strengthening from Km.33.00 to 48.00 and Construction of retaining wall from Km.55.00 to 56.00 L/s (selected reaches of Km.55.060 to 55.245) of NH-63 on Ankola-Gooty (Job No.NH-63/KNT-2016.17-820) ——

Regarding approval to Data Rate for Installation of Coir Geotextile mat with vegetation to road side to prevent Land slide including soil erosion (Retaining wall).

Ref: Dr. Arunkumar, Managing Director, Karnataka State Coir Co-operative Federation Ltd., (Govt. of Karnataka Enterprises) # 953/A, 2nd Main, 4th Block, Rajajinagar, Bengaluru-10, letter Dated.25-06-2018.

Adverting to the above subject, Dr. Arunkumar, Managing Director, Karnataka State Coir Co-operative Federation Ltd., (Govt. of Karnataka Enterprises), Bengalurus' vide reference cited above has submitted Data Rate for Installation of Coir Geotextile mat with grooving vegetation on road side to prevent Land-slide including soil erosion (Retaining wall). The proposal received in this office is forwarded herewith. It is hereby instructed to verify the enclosed Data Rate as per procedure for exection of the said item and to submit with your specific recommendation for approval to the competitive rate.

Encl: Data rate & letter.

Yours faithfully,

For Superintending Engineer,
National Highways Circle, Dharwad

Copy along with enclosures are forwarded to the Assistant Executive Engineer, NH Sub division, Karwar for information and immediate needful action.

Copy forwarded to the Dr. Arunkumar, Managing Director, Karnataka State Coir Co-operative Federation Ltd., (Govt. of Karnataka Enterprises) # 953/A, 2nd Main, 4th Block, Rajajinagar, Bengaluru-10 for information and to depute the concerned to Division office for explaining your worked Data Rate.
GOVERNMENT OF KARNATAKA
PD/MNG/FLOOD DAMAGE/WORK ORDER/KDGFR 18-15/2018-19/TCH: 1135

Office of the Executive Engineer,
Project Division, Mangalore,
Dated: 8/03/2019

WORK ORDER

To:
Managing Director,
Karnataka State Coir Co-Operative Federation Limited
District Industries Centre Building,
III Floor, 1 Cross, Rajajinagar Industrial Estate,
Rajajinagar,
Bangalore

Sir,

Sub: Agreement in schedule of contract for the work of Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21)

In Pursuant to signing of the contract agreement for the construction: Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21) Contract Price of Rs.99,50,000.00 (Rupees Ninety Nine Lakh Fifty Thousand only), you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents. The work should be completed within 90 days from the handing over of the site.

Yours faithfully,
Sd/-
Executive Engineer,
Project Division,
Mangalore.

1. Copy Submitted to Chief Operating Officer, Karnataka Rural Road Development Agency, Bangalore for kind information
2. Copy submitted to Superintending Engineer, Panchayath Raj Engineering Circle, Mangalore for Kind information
3. Copy to the Account Superintendent, Project Division, Mangalore along with original agreement.
4. Copy to the Assistant Executive Engineer, Project Sub-division, Madikeri along with the copy of the agreement for necessary action. The date of handing over site to contractor shall be intimated immediately.
5. Copy to file along with copy of agreement.
To:  
Managing Director,
Karnataka State Coir Co-Operative Federation Limited
District Industries Centre Building,
III Floor, I Cross, Rajajinagara Industrial Estate,
Rajajinagara,
Bangalore

Sir,
Sub: Agreement in schedule of contract for the work of Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21)

In Pursuant to signing of the contract agreement for the construction: Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21) Contract Price of Rs.99,50,000.00 (Rupees Ninety Nine Lakh Fifty Thousands only), you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents. The work should be completed within 90 days from the handing over of the site.

Yours faithfully,
Sd/-
Executive Engineer,
Project Division,
Mangalore.

1. Copy Submitted to Chief Operating Officer, Karnataka Rural Road Development Agency, Bangalore for kind information
2. Copy submitted to Superintending Engineer, Panchayath Raj Engineering Circle, Mangalore for Kind information
3. Copy to the Account Superintendent, Project Division, Mangalore along with original agreement.
4. Copy to the Assistant Executive Engineer, Project Sub-division, Madikeri along with the copy of the agreement for necessary action. The date of handing over site to contractor shall be intimated immediately.
5. Copy to file along with copy of agreement.
<table>
<thead>
<tr>
<th>No.</th>
<th>Scheme</th>
<th>Scheme Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NGRNY-Av</td>
<td>Belgaum - Kogwaad Taluk, Belgaum-Dist</td>
</tr>
<tr>
<td>2</td>
<td>NGRNY-Av</td>
<td>Haveri - Kogenaull to Kumumuru Road in Bapudji-Taluk, Mahesh</td>
</tr>
<tr>
<td>3</td>
<td>NGRNY-Av</td>
<td>Haveri - Kogenaull to Kumumuru Road in Bapudji-Taluk, Mahesh</td>
</tr>
<tr>
<td>4</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>5</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>6</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>7</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>8</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>9</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>10</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Scheme</th>
<th>Scheme Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NGRNY-Av</td>
<td>Belgaum - Kogwaad Taluk, Belgaum-Dist</td>
</tr>
<tr>
<td>2</td>
<td>NGRNY-Av</td>
<td>Haveri - Kogenaull to Kumumuru Road in Bapudji-Taluk, Mahesh</td>
</tr>
<tr>
<td>3</td>
<td>NGRNY-Av</td>
<td>Haveri - Kogenaull to Kumumuru Road in Bapudji-Taluk, Mahesh</td>
</tr>
<tr>
<td>4</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>5</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>6</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>7</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>8</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>9</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>10</td>
<td>NGRNY-Av</td>
<td>Belgaum - Vysakhwadi (Taluk of Belgaum - Dist)</td>
</tr>
<tr>
<td>No</td>
<td>Scheme</td>
<td>Dist</td>
</tr>
<tr>
<td>----</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>227</td>
<td>U.K.</td>
</tr>
<tr>
<td>2</td>
<td>216</td>
<td>U.K.</td>
</tr>
<tr>
<td>3</td>
<td>217</td>
<td>U.K.</td>
</tr>
<tr>
<td>4</td>
<td>218</td>
<td>U.K.</td>
</tr>
<tr>
<td>5</td>
<td>219</td>
<td>U.K.</td>
</tr>
<tr>
<td>6</td>
<td>220</td>
<td>U.K.</td>
</tr>
<tr>
<td>7</td>
<td>221</td>
<td>U.K.</td>
</tr>
<tr>
<td>8</td>
<td>222</td>
<td>U.K.</td>
</tr>
<tr>
<td>9</td>
<td>223</td>
<td>U.K.</td>
</tr>
<tr>
<td>10</td>
<td>224</td>
<td>U.K.</td>
</tr>
<tr>
<td>11</td>
<td>225</td>
<td>U.K.</td>
</tr>
<tr>
<td>12</td>
<td>226</td>
<td>U.K.</td>
</tr>
<tr>
<td>Name of Road Work</td>
<td>KM</td>
<td>Tq.</td>
</tr>
<tr>
<td>-------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Homamill Road</td>
<td>59.25</td>
<td>59.93</td>
</tr>
<tr>
<td>Tq.1 - Ramagondan</td>
<td>0.75</td>
<td>0</td>
</tr>
<tr>
<td>Tq.2 - Ramagondan</td>
<td>4.4</td>
<td>0</td>
</tr>
<tr>
<td>Tq.3 - Ramagondan</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Tq.4 - Ramagondan</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Tq.5 - Ramagondan</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Tq.6 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.7 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.8 - Ramagondan</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Tq.9 - Ramagondan</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Tq.10 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.11 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.12 - Ramagondan</td>
<td>0.4</td>
<td>0</td>
</tr>
<tr>
<td>Tq.13 - Ramagondan</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tq.14 - Ramagondan</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Tq.15 - Ramagondan</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Tq.16 - Ramagondan</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Tq.17 - Ramagondan</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Tq.18 - Ramagondan</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Tq.19 - Ramagondan</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.20 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.21 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Tq.22 - Ramagondan</td>
<td>0.5</td>
<td>0</td>
</tr>
</tbody>
</table>

**Name of Road Work**
1. Homamill Road
2. Ramagondan (Tq.1)
3. Ramagondan (Tq.2)
4. Ramagondan (Tq.3)
5. Ramagondan (Tq.4)
6. Ramagondan (Tq.5)
7. Ramagondan (Tq.6)
8. Ramagondan (Tq.7)
9. Ramagondan (Tq.8)
10. Ramagondan (Tq.9)
11. Ramagondan (Tq.10)
12. Ramagondan (Tq.11)
13. Ramagondan (Tq.12)
14. Ramagondan (Tq.13)
15. Ramagondan (Tq.14)
16. Ramagondan (Tq.15)
17. Ramagondan (Tq.16)
18. Ramagondan (Tq.17)
19. Ramagondan (Tq.18)
20. Ramagondan (Tq.19)
21. Ramagondan (Tq.20)
22. Ramagondan (Tq.21)
23. Ramagondan (Tq.22)

**Equipment**
- Tq.1 - Ponda
- Tq.2 - Ponda
- Tq.3 - Ponda
- Tq.4 - Ponda
- Tq.5 - Ponda
- Tq.6 - Ponda
- Tq.7 - Ponda
- Tq.8 - Ponda
- Tq.9 - Ponda
- Tq.10 - Ponda
- Tq.11 - Ponda
- Tq.12 - Ponda
- Tq.13 - Ponda
- Tq.14 - Ponda
- Tq.15 - Ponda
- Tq.16 - Ponda
- Tq.17 - Ponda
- Tq.18 - Ponda
- Tq.19 - Ponda
- Tq.20 - Ponda
- Tq.21 - Ponda
- Tq.22 - Ponda

**Remarks**
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
- Haidari
GOVERNMENT OF KARNATAKA

Office of the Executive Engineer,
Project Division, Mangalore,
Dated: 8/03/2019

WORK ORDER

To:
Managing Director,
Karnataka State Coir Co-Operative Federation Limited
District Industries Centre Building,
III Floor, I Cross, Rajajinagar Industrial Estate,
Rajajinagar,
Bangalore

Sir,

Sub: Agreement in schedule of contract for the work of Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21)

In Pursuant to signing of the contract agreement for the construction: Permanent restoration and Construction of retaining wall along Kalur Ayyappa To Galibeedu road (using coir technology) in the selected reaches of in Madikeri Taluk, Kodagu District Package No KDGFR 18-15 (Package No KN 18-21) Contract Price of Rs.99,50,000.00 (Rupees Ninety Nine Lakh Fifty Thousands only), you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents. The work should be completed within 90days from the handing over of the site.

Yours faithfully,
Sd/-
Executive Engineer,
Project Division,
Mangalore.

1. Copy Submitted to Chief Operating Officer, Karnataka Rural Road Development Agency, Bangalore for kind information
2. Copy submitted to Superintending Engineer, Panchayath Raj Engineering Circle, Mangalore for Kind information
3. Copy to the Account Superintendent, Project Division, Mangalore along with original agreement.
4. Copy to the Assistant Executive Engineer, Project Sub-division, Madikeri along with the copy of the agreement for necessary action. The date of handing over site to contractor shall be intimated immediately.
5. Copy to file along with copy of agreement.
GOVERNMENT OF KARNATAKA  
(Public Works, Port and Inland Water Transport Dept.)  
BAGALKOT DIVISION, BAGALKOT - 587 103.

: Issue of Notice to proceed with the work :  

Date: 04 JUL 2019

To,
Managing Director,  
Karnataka State Coir-Co-Operative Federation Limited,  
District Industries Centre Building,  
III Floor, I Corner Rajajinagar Industrial Estate,  
Rajajinagar,  
Bangalore.

Dear Sirs,

Pursuant to your furnishing the requisite Security deposit as stipulated in ITT Clause 24.1 and signing of the contract agreement for the work Stabilization of cutting surface of rock in Kagawad-Kaladagi- SH-53 road from Km 60.42 to 60.90 in Jamakhandi Taluka of Bagalkot Dist. (General) Under 3054-SH Maintenance 2018-19 teproc work indent No: 104706. For the Contract Price of Rs. 1900180.80 you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents. (Vide agreement no.PW/DBGK/TA/PB-5/3054/KW1/2018-19 dated):

Stipulated date for completion of the work:

Yours faithfully,

Executive Engineer,  
P&W,P & I WT Dept Divn Bagalkot.

Copy submitted to Chief Engineer, C & B (North) Dharwad for favour of kind information.
Copy submitted to Superintending Engineer, P&W and P & I WT Dept. Belgaum Circle Belagavi for favour of kind information.
Copy forwarded to Executive Engineer, P&W, P & I WT Dept Quality Assurance Division Belagavi for kind information.
Copy forwarded to Assistant Executive Engineer, PW, P & I WT Dept. Quality Assurance Sub Division Belagavi for information.
Copy forwarded to Assistant Executive Engineer, PWP, and IWT Dept Sub Division Jamakhandi for information.

Executive Engineer,  
P&W,P & I WT Dept Divn Bagalkot.
Kalur road photos:
CONSTRUCTION OF WATER HARVESTING PONDS USING COIR GEO-TEXTILES:
Rural Road Construction Using Coir Geo-Textiles:
MINING DUMPS STABILIZATION USING COIR GEO-TEXTILES:

EXIST CONDITION OF DUMPS IN SREE GAVISIDDESHWARA MINES & POOJA DURING STARTING OF WORK

INSTALLATION OF COIR MAT, WATERING & BROADCASTING OF SEED TO DUMPS IN SREE GAVISIDDESHWARA MINES
VEGETATION STARTS ON LAID COIR MAT IN SREE GAVISIDDESHWARA MIN ES DUMPS

MAKING TERMINATION TRENCH IN M's BHOMI & M's BHARTEH BOXITE MINES DUMPS
AT RINGEWADI, KOLHAPUR