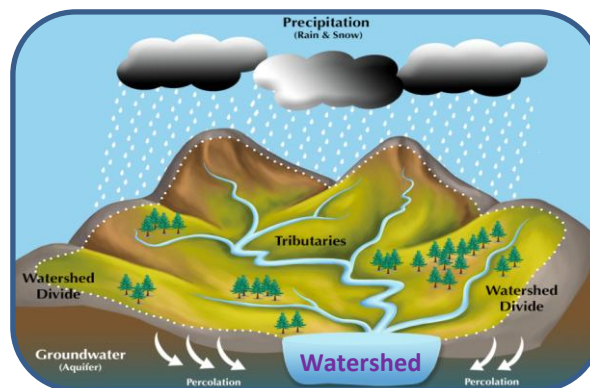


# Government of Telangana – Forest Department



## SITE SUITABILITY ANALYSIS FOR WATER HARVESTING STRUCTURES USING REMOTE SENSING & GIS

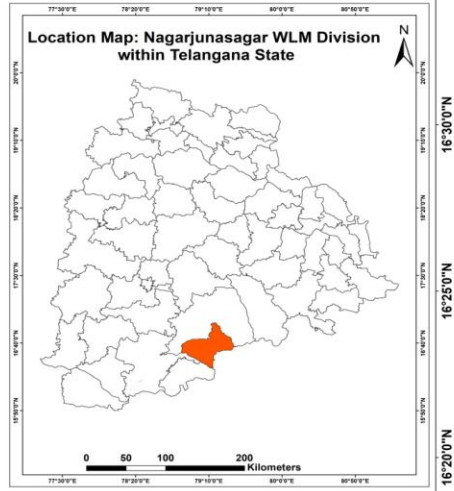
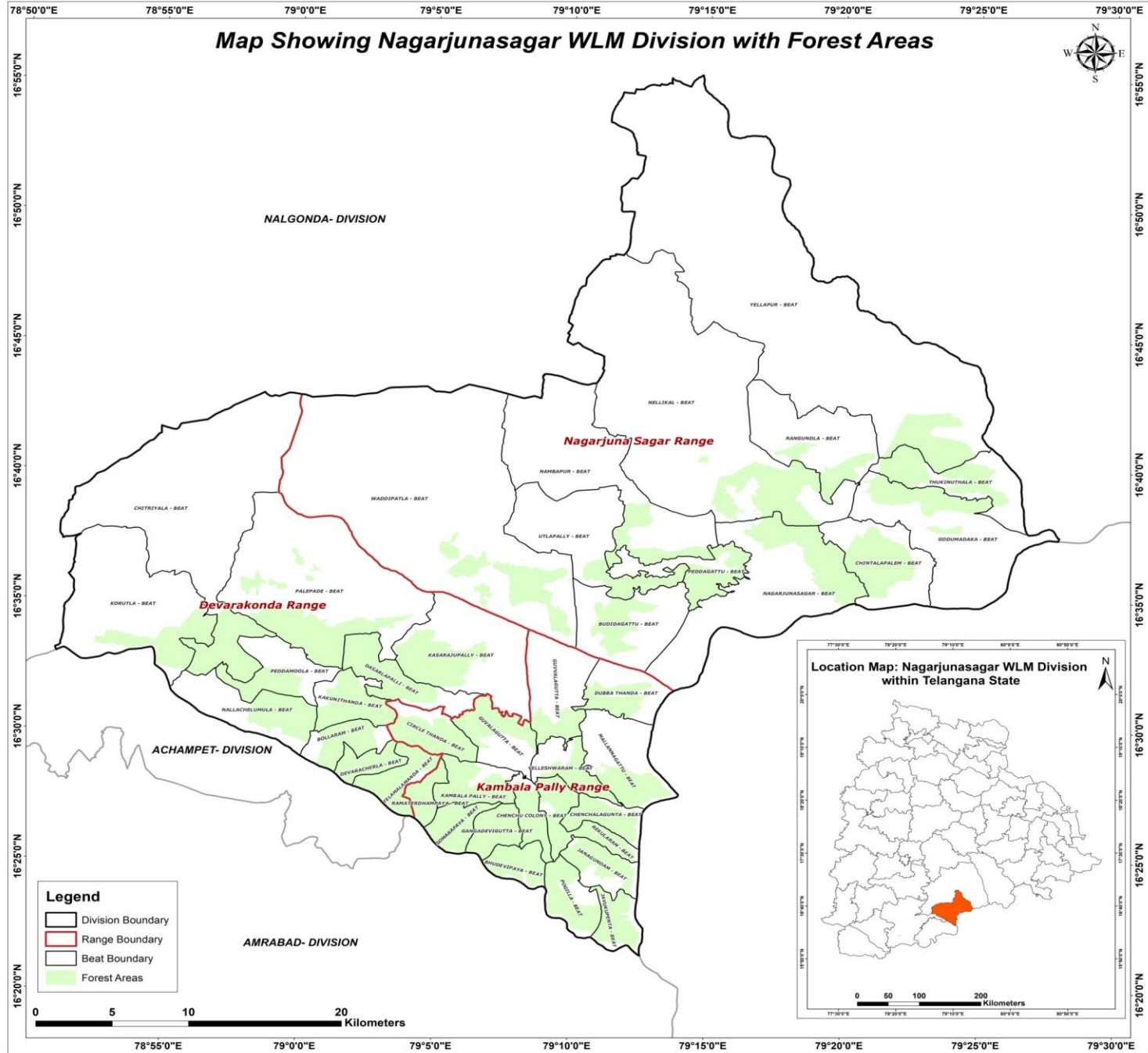


# **SITE SUITABILITY ANALYSIS FOR WATER HARVESTING STRUCTURES USING REMOTE SENSING & GIS**

**Circle: Yadadri**  
**District: Nalgonda**  
**Division: Nagarjunsagar**

**Prepared at Geomatics Centre  
O/o Prl.Chief Conservator of Forests  
Aranya Bhavan, Saifabad  
Hyderabad - 500004**

# Map Showing Nagarjunasagar WLM Division with Forest Areas



## METHODOLOGY

**Various methods are available to evaluate the suitability of locations for Percolation Tanks and other SMC structures using Arc GIS.**

- A common approach is to use Geographic Information System (GIS) tools to decide the suitability by analysing factors like topography, vegetation density, distance to water sources, and terrain slope.
- Data was gathered from various sources, including the Raster Sentinel data obtained from the Copernicus open access hub.
- Elevation values were applied to the raster data using the SNAP software to create a Digital Elevation Model (DEM).
- Using Arc GIS, streams were mapped based on DEM, and potential percolation tank sites were identified based on stream order.
- Slope data generated from the CARTOSAT 30 m DEM (Source: Bhuvan) were also included in the analysis.
- By overlaying these spatial datasets and applying specific criteria, GIS can help identify optimal locations for building percolation tanks.
- Once the best location is identified, the catchment area is determined.
- The location is then ranked on the basis of catchment area and vegetation cover, with rankings ranging from I to V.



# FLOW CHART FOR METHODOLOGY



## Guidelines for building Percolation Tanks:

- Refer to the Site Suitability Map given by the GIS Cell for suitable locations
- Choose the best location for constructing a percolation tank based on the ranking priority. The priority for treatment of the watershed should be based on stream order, with primary streams taking precedence over secondary streams and secondary streams taking precedence over tertiary streams. This phased approach will ensure effective management of the watershed.
- Field conditions such as local climate, slope, vegetation and soil type must be considered when determining the location. It is important to move either upstream or downstream for a distance of about 50M, depending on the specific conditions of the site.
- It is essential to follow the priority given in the map. If no specific points are indicated, site suitability should be considered a determining factor.
- Encroached areas were not considered when demarcating points for constructing the Percolation tank.
- In the field, where streams are found at the optimal location, a percolation tank can be built if a point is missing on the map.
- The catchment area should also be considered when estimating the construction requirements like length of the bund, height of the bund, wear width etc., after verifying with the actual field conditions.
- Planting native vegetation around the tank can stabilize the soil, prevent erosion, and improve water absorption. Use plants that are well suited to the local environment.



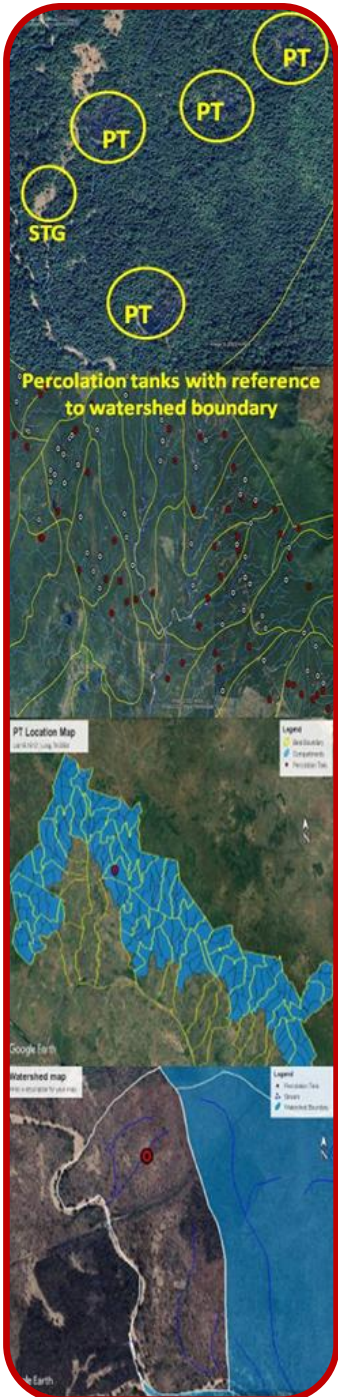
## Suitability criteria for Check-Dams and Percolation Tanks ( SITE SUITABILITY INDEX)

Index	Slope(Degrees)	Density Class
Highly suitable	0-5	Blank & Scrub
Moderately suitable	0-5	Open Forest
Least suitable	0-5	Dense Forest

## Suitability criteria for Continuous/Staggered contour trenches

Rank	Slope classes (Degrees)	Density Classes
Highly Suitable	>5 and <= 10	Blanks
Moderately Suitable	>5 and <= 10	Scrub forest
Least suitable	>5 and <= 10	Open forest
	> 10 and < 25	Blanks & scrubs
MPTs and SGPs	>5 and <= 10	Dense Forest
	> 10 and < 25	Open and Dense forest





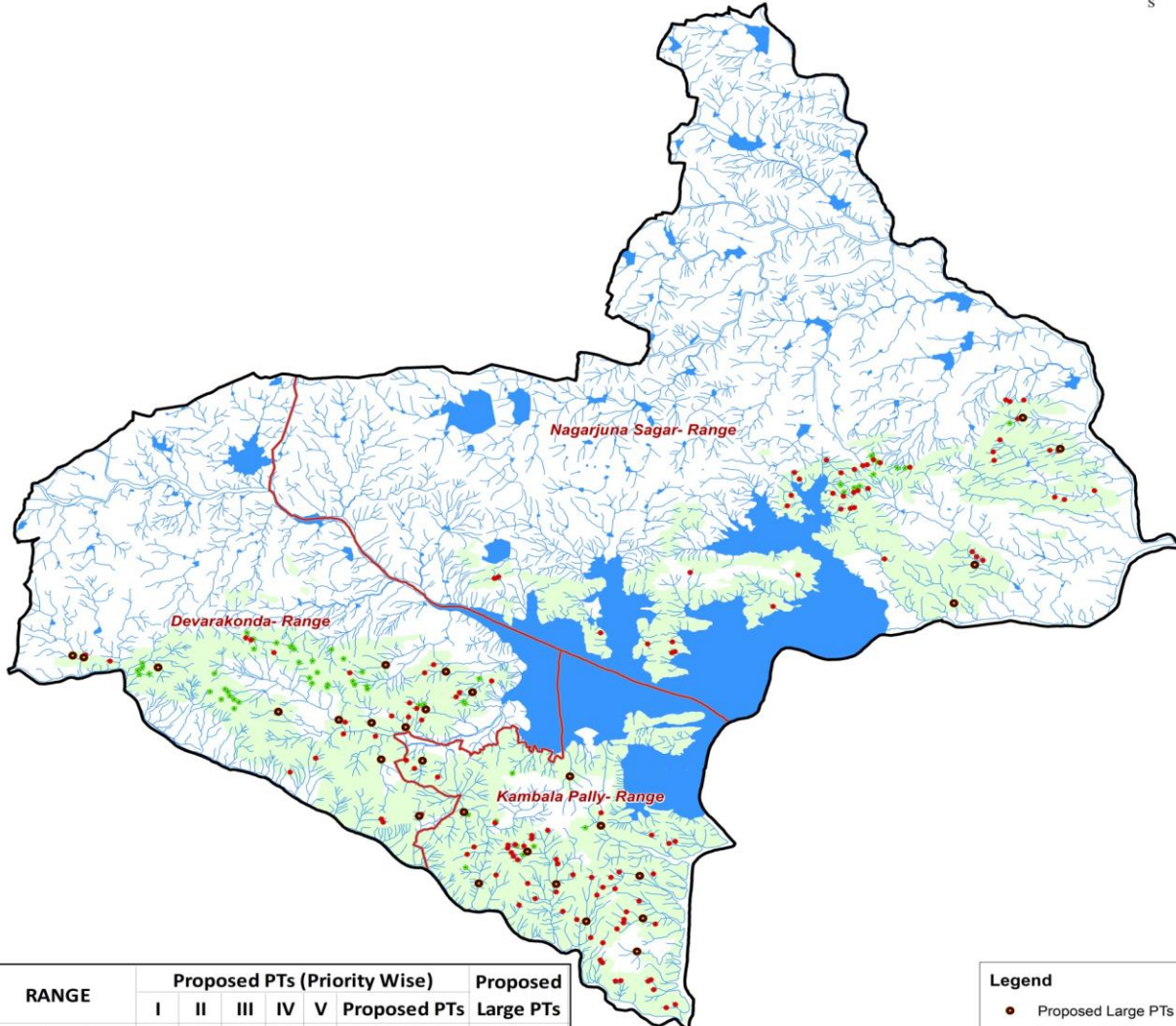
## PRIORITY CLASSES FOR PERCOLATION TANK

Priority	Catchment Area(Ha)	Density Class
1	0-25 0-25	Scrub Blank
2	0-25 25-50	Open Forest Blank
3	25-50 >50	Open Forest Scrub & blank
4	0-25 >50	Dense Forest Open Forest
5	25-50 >50	Dense Forest Dense Forest



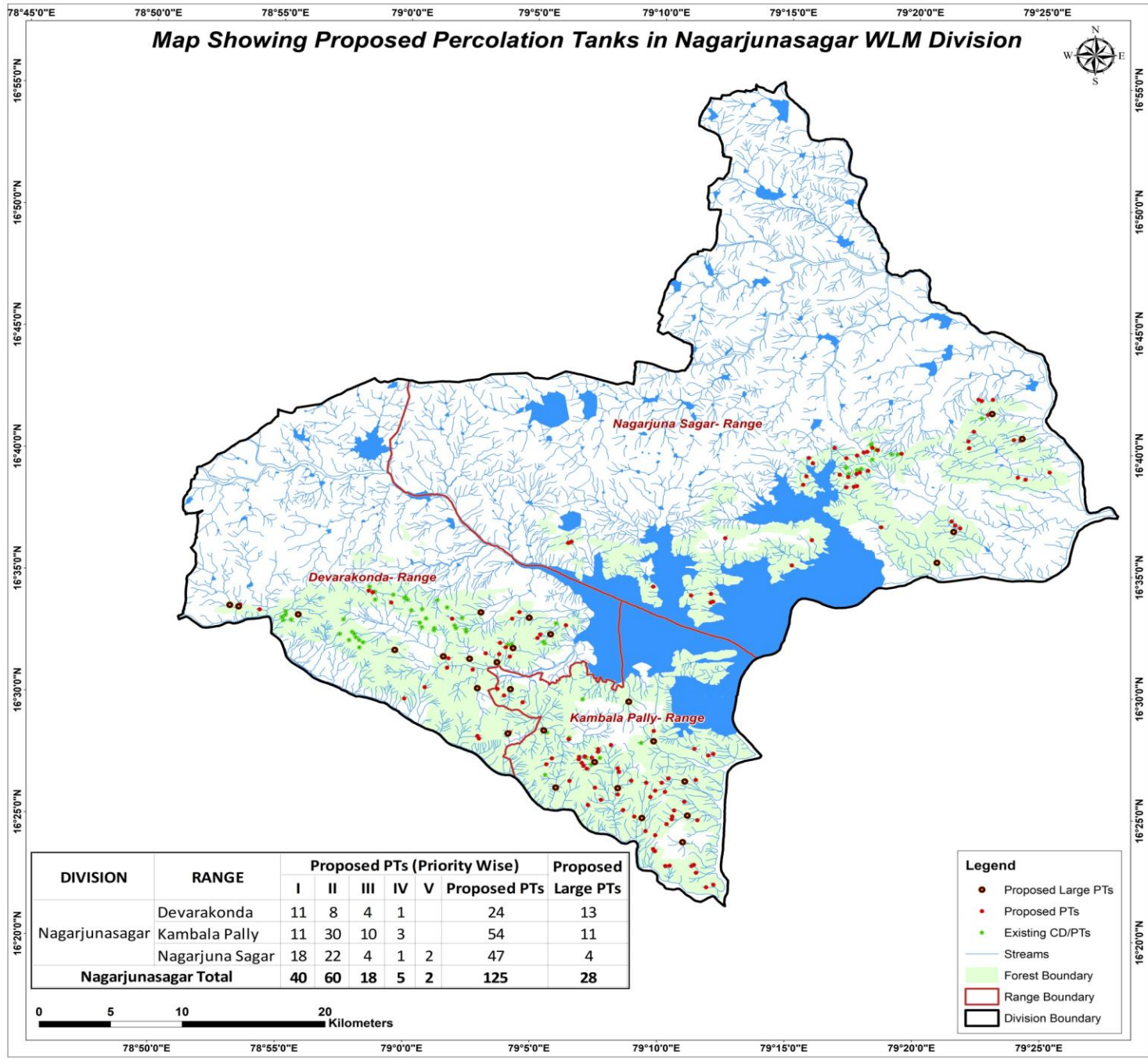


# Map Showing Proposed Percolation Tanks in Nagarjunasagar WLM Division

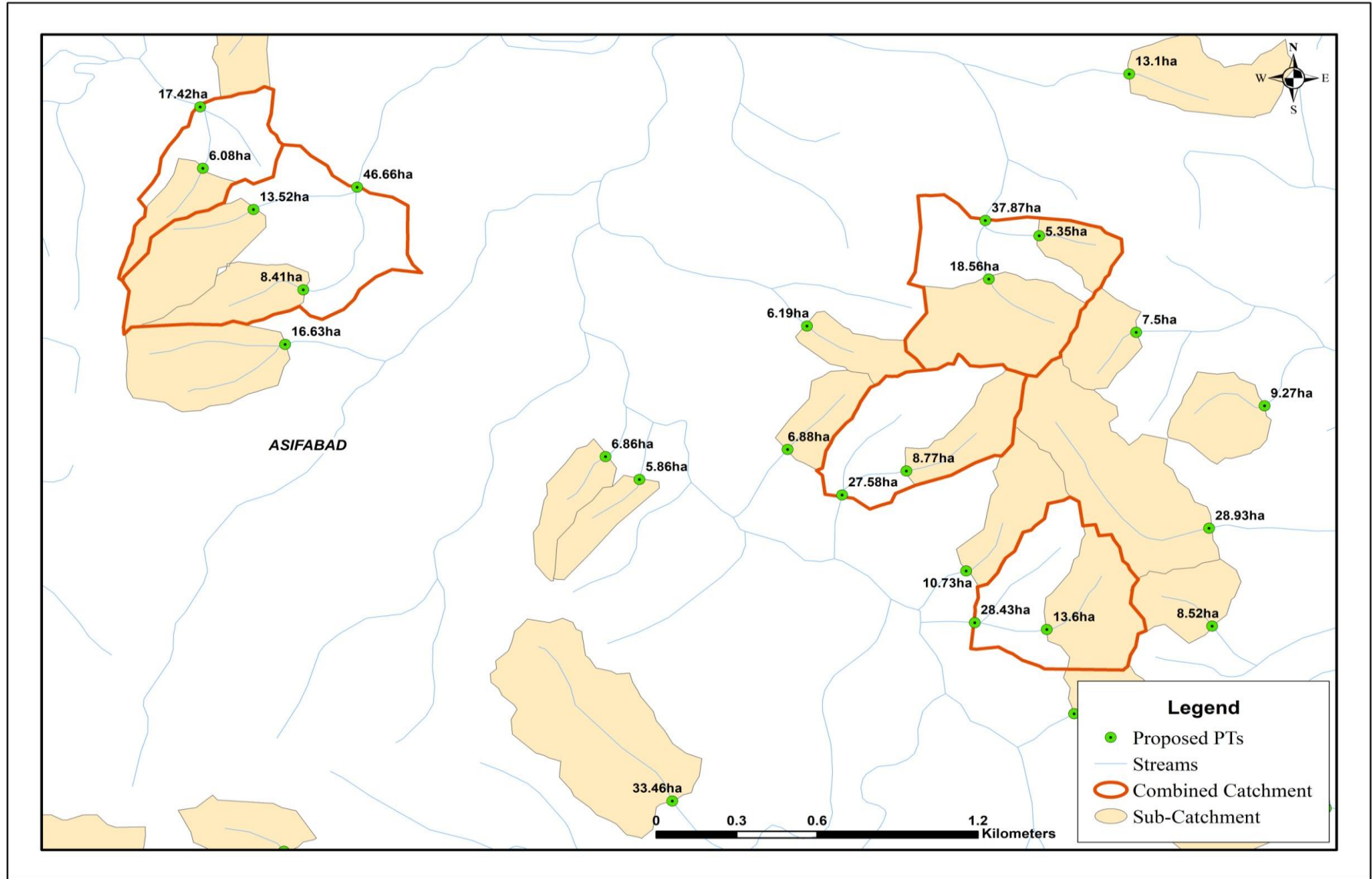


DIVISION	RANGE	Proposed PTs (Priority Wise)					Proposed PTs	Proposed Large PTs
		I	II	III	IV	V		
Nagarjunasagar	Devarakonda	11	8	4	1		24	13
	Kambala Pally	11	30	10	3		54	11
	Nagarjuna Sagar	18	22	4	1	2	47	4
<b>Nagarjunasagar Total</b>		<b>40</b>	<b>60</b>	<b>18</b>	<b>5</b>	<b>2</b>	<b>125</b>	<b>28</b>

- Legend**
- Proposed Large PTs
  - Proposed PTs
  - Existing CD/PTs
  - Streams
  - Forest Boundary
  - Range Boundary
  - Division Boundary



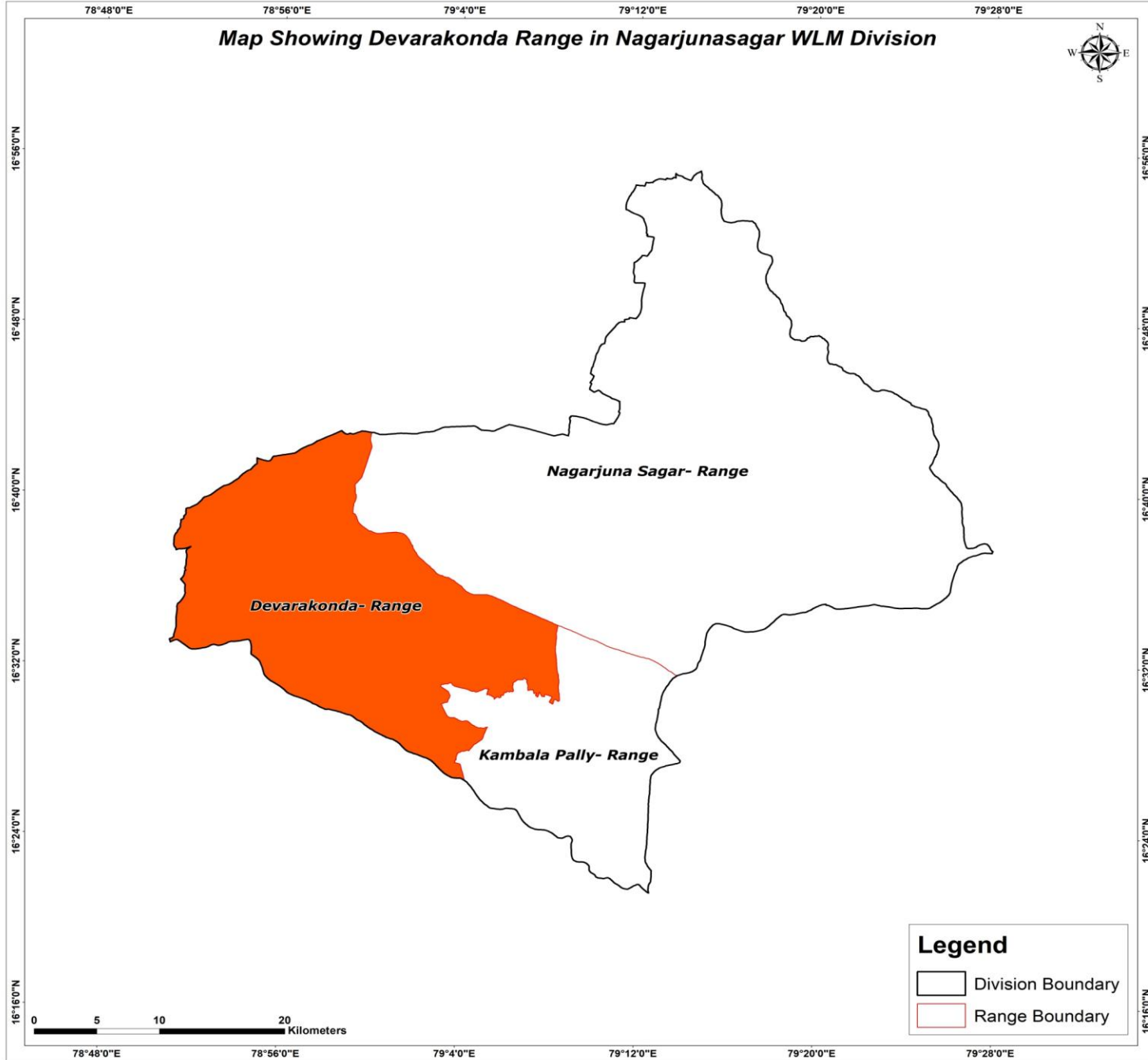
# CATCHMENT AREA



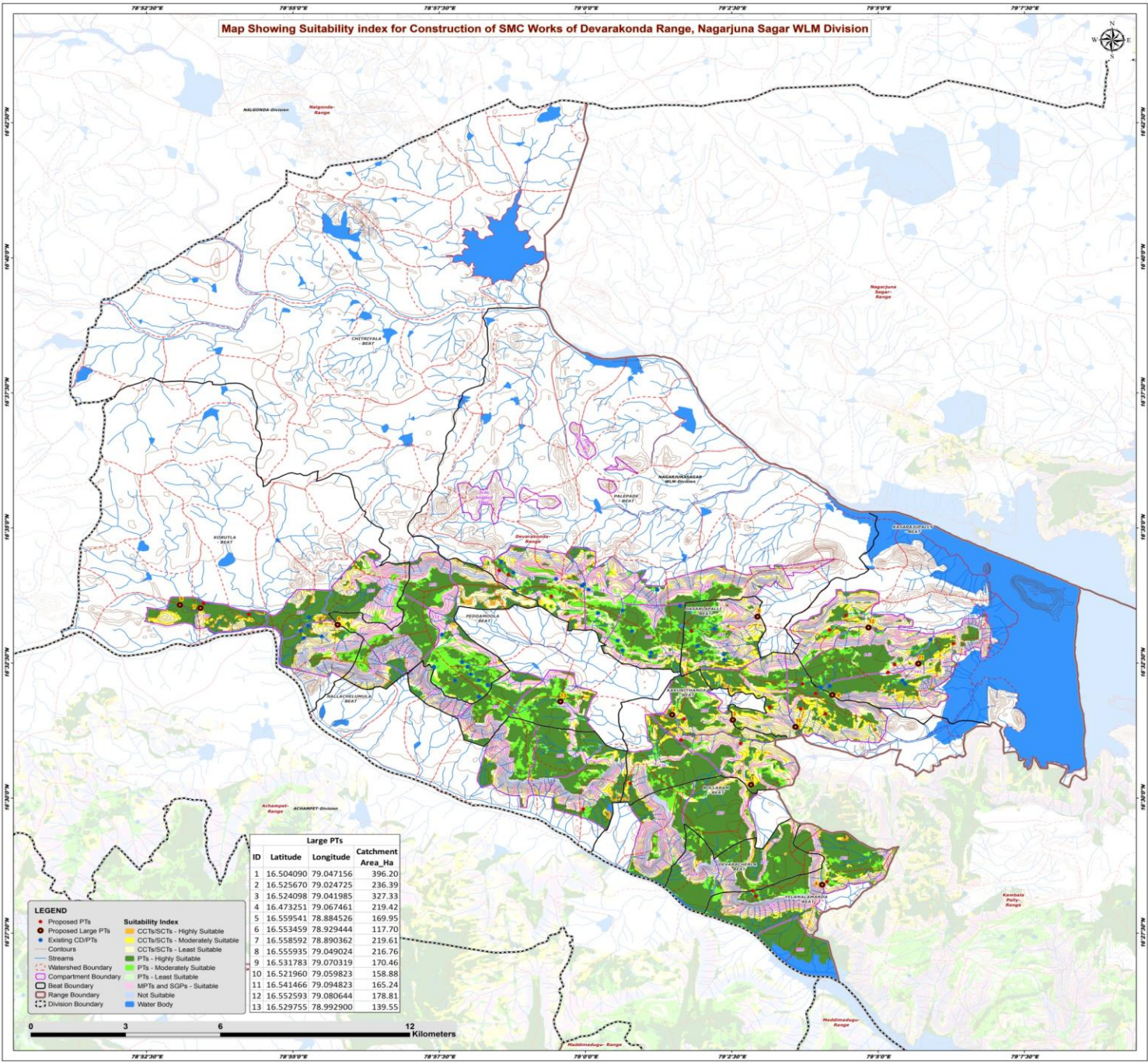
# Sample Catchment Map



**Map Showing Devarakonda Range in Nagarjunasagar WLM Division**



Map Showing Suitability index for Construction of SMC Works of Devarakonda Range, Nagarjuna Sagar WLM Division



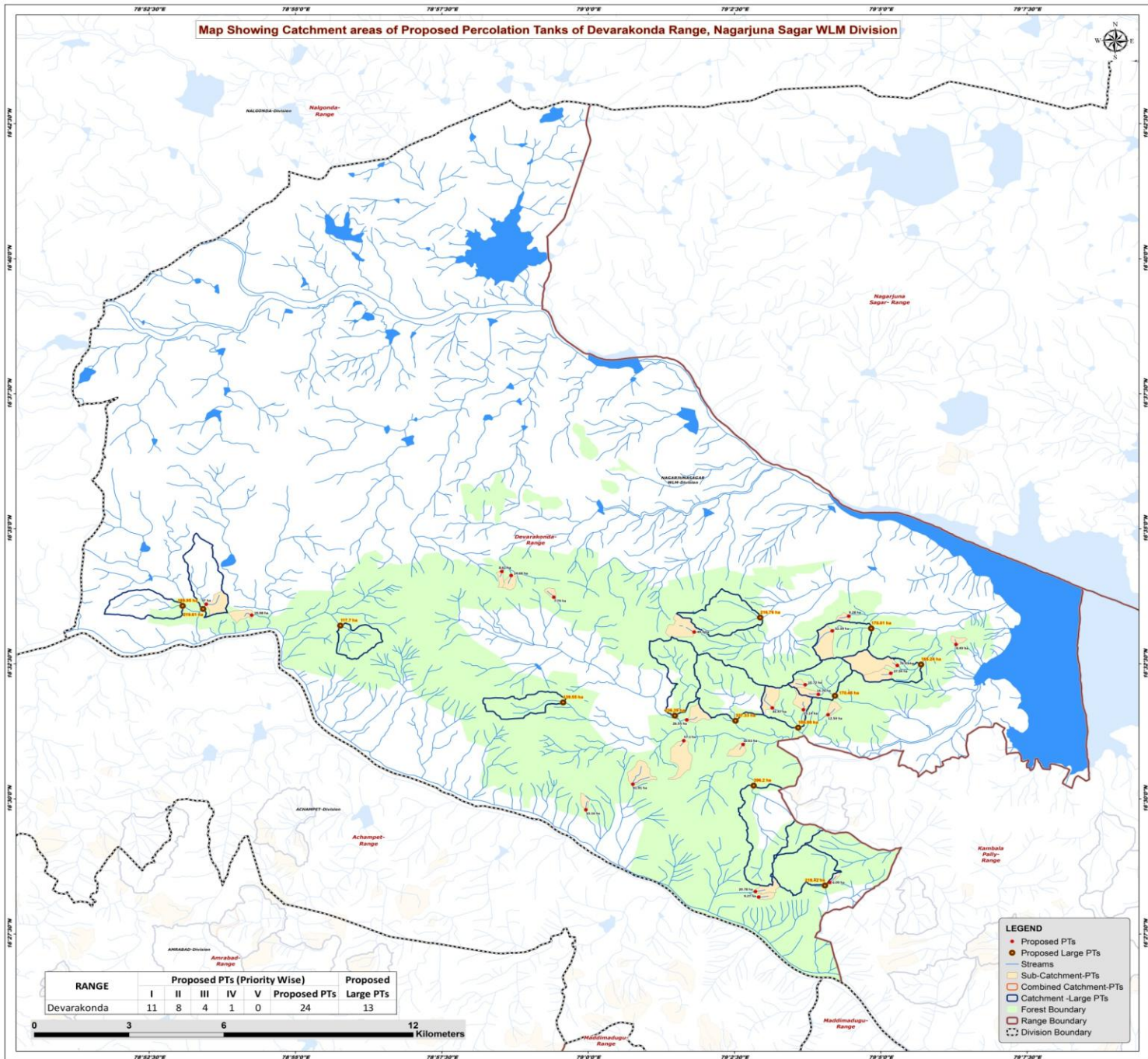
- LEGEND**
- Proposed PTs
  - Existing Large PTs
  - Existing CDPTs
  - Contours
  - Streams
  - - - Watershed Boundary
  - Compartment Boundary
  - Beat Boundary
  - Range Boundary
  - Division Boundary

- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

Large PTs			
ID	Latitude	Longitude	Catchment Area_Ha
1	16.504090	79.047156	396.20
2	16.525670	79.024725	236.39
3	16.524098	79.041985	327.33
4	16.473251	79.067462	219.42
5	16.559541	78.884536	169.95
6	16.553459	78.929444	117.70
7	16.558592	78.890362	219.61
8	16.555935	79.049024	216.76
9	16.531783	79.070319	170.46
10	16.521960	79.059823	158.88
11	16.541466	79.094823	165.24
12	16.552593	79.080644	178.81
13	16.529755	78.992900	139.55

0 3 6 12 Kilometers

Map Showing Catchment areas of Proposed Percolation Tanks of Devarakonda Range, Nagarjuna Sagar WLM Division



RANGE	Proposed PTs (Priority Wise)					Proposed Large PTs
	I	II	III	IV	V	
Devarakonda	11	8	4	1	0	24
						13

0 3 6 12 Kilometers

- LEGEND**
- Proposed PTs
  - Proposed Large PTs
  - Streams
  - ▭ Sub-Catchment-PTs
  - ▭ Combined Catchment-PTs
  - ▭ Catchment - Large PTs
  - ▭ Forest Boundary
  - ▭ Range Boundary
  - ▭ Division Boundary

## Beat wise Abstract of Proposed PT's – Devarakonda Range

S. No.	Beat	Proposed PT's
1	DASARLAPALLI	6
2	KAKUNITHANDA	4
3	KASARAJUPALLY	5
4	KORUTLA	2
5	NALLACHELUMULA	1
6	PALEPADE	3
7	YELAMALAMANDA	3
	<b>Total</b>	<b>24</b>

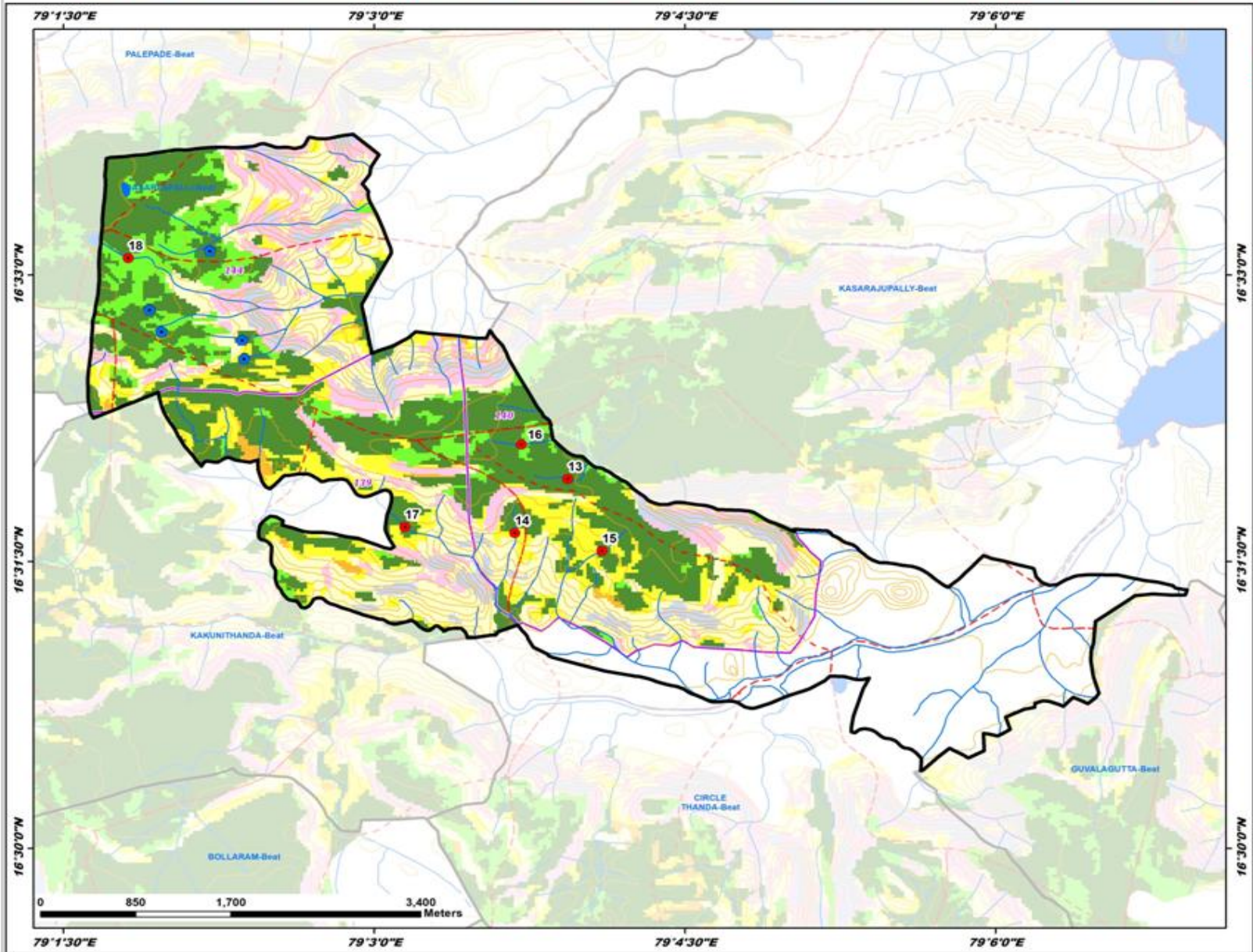
## List of Proposed PTs – Devarakonda WLM Range

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
1	16.516787	79.044157	16.61	I	KAKUNITHANDA
2	16.524351	79.028086	26.55	II	KAKUNITHANDA
3	16.504502	79.012759	41.91	II	KAKUNITHANDA
4	16.517945	79.027243	57.10	IV	KAKUNITHANDA
5	16.469703	79.048594	9.27	I	YELAMALAMANDA
6	16.471413	79.047654	20.78	I	YELAMALAMANDA
7	16.474200	79.068801	6.09	II	YELAMALAMANDA
8	16.556671	78.904181	19.98	I	KORUTLA
9	16.560065	78.891264	37.00	II	KORUTLA
10	16.570165	78.975439	8.61	I	PALEPADE
11	16.562230	78.990268	7.79	II	PALEPADE
12	16.568934	78.978093	14.68	II	PALEPADE
13	16.532219	79.065580	14.79	I	DASARLAPALLI
14	16.527508	79.061315	23.14	I	DASARLAPALLI
15	16.525937	79.068328	12.59	I	DASARLAPALLI
16	16.535222	79.061851	10.72	II	DASARLAPALLI
17	16.528039	79.052467	35.47	II	DASARLAPALLI
18	16.551474	79.030223	49.50	III	DASARLAPALLI
19	16.556375	79.074249	9.28	I	KASARAJUPALLY
20	16.547640	79.104796	8.49	I	KASARAJUPALLY
21	16.538733	79.086205	27.34	III	KASARAJUPALLY
22	16.541155	79.088053	76.93	III	KASARAJUPALLY
23	16.551850	79.069541	52.34	III	KASARAJUPALLY
24	16.496616	78.999379	10.16	I	NALLACHELUMULA

# Map Showing Suitability Index for Construction of SMC Works of Dasarlapalli Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
13	16.532219	79.065580	14.79	I
14	16.527508	79.061315	23.14	I
15	16.525937	79.068328	12.59	I
16	16.535222	79.061851	10.72	II
17	16.528039	79.052467	35.47	II
18	16.551474	79.030223	49.50	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

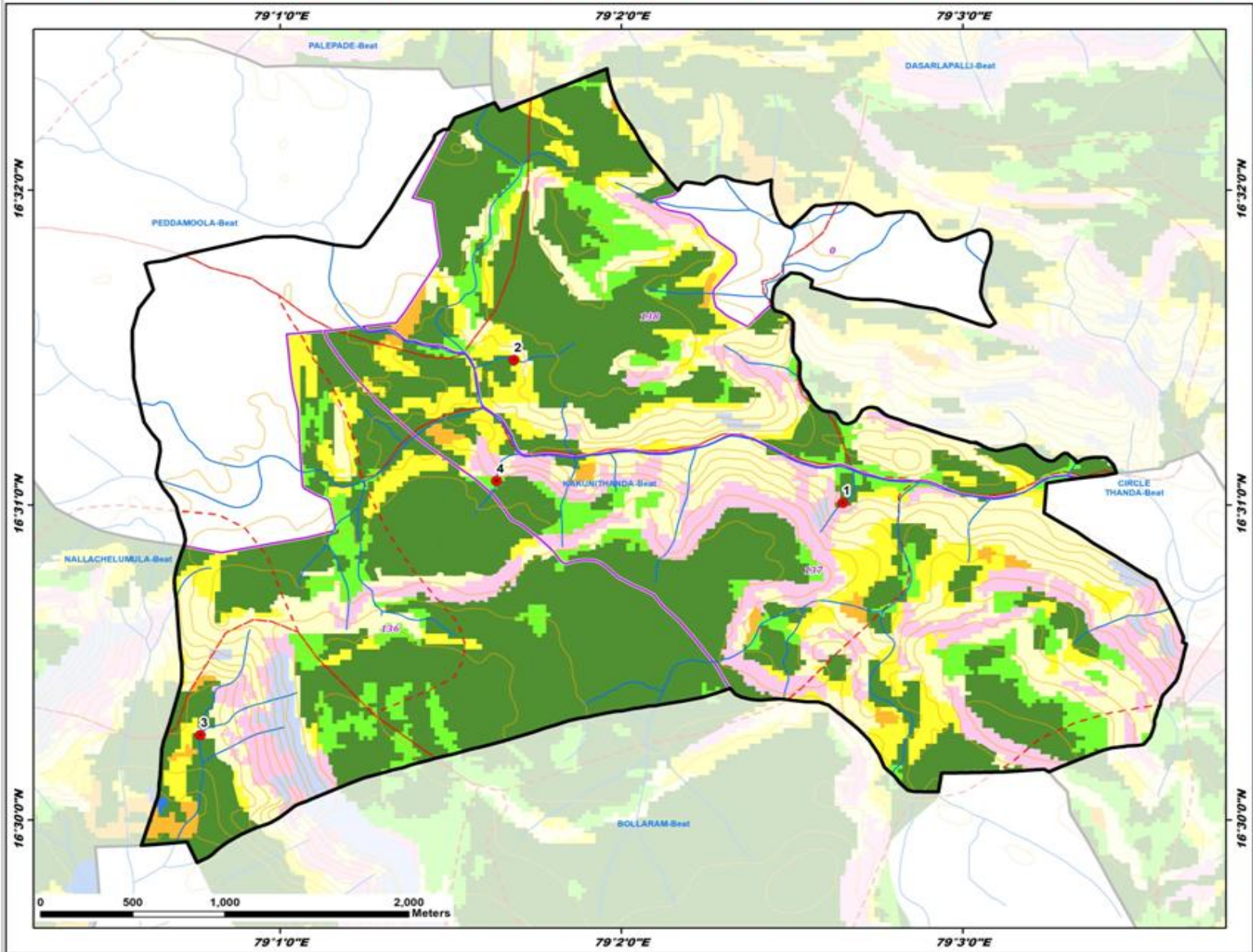
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Kakunithanda Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
1	16.516787	79.044157	16.61	I
2	16.524351	79.028086	26.55	II
3	16.504502	79.012759	41.91	II
4	16.517945	79.027243	57.10	IV

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- ▭ Watershed Boundary
- ▭ Compartment Boundary
- ▭ Beat Boundary
- ▭ Division Boundary

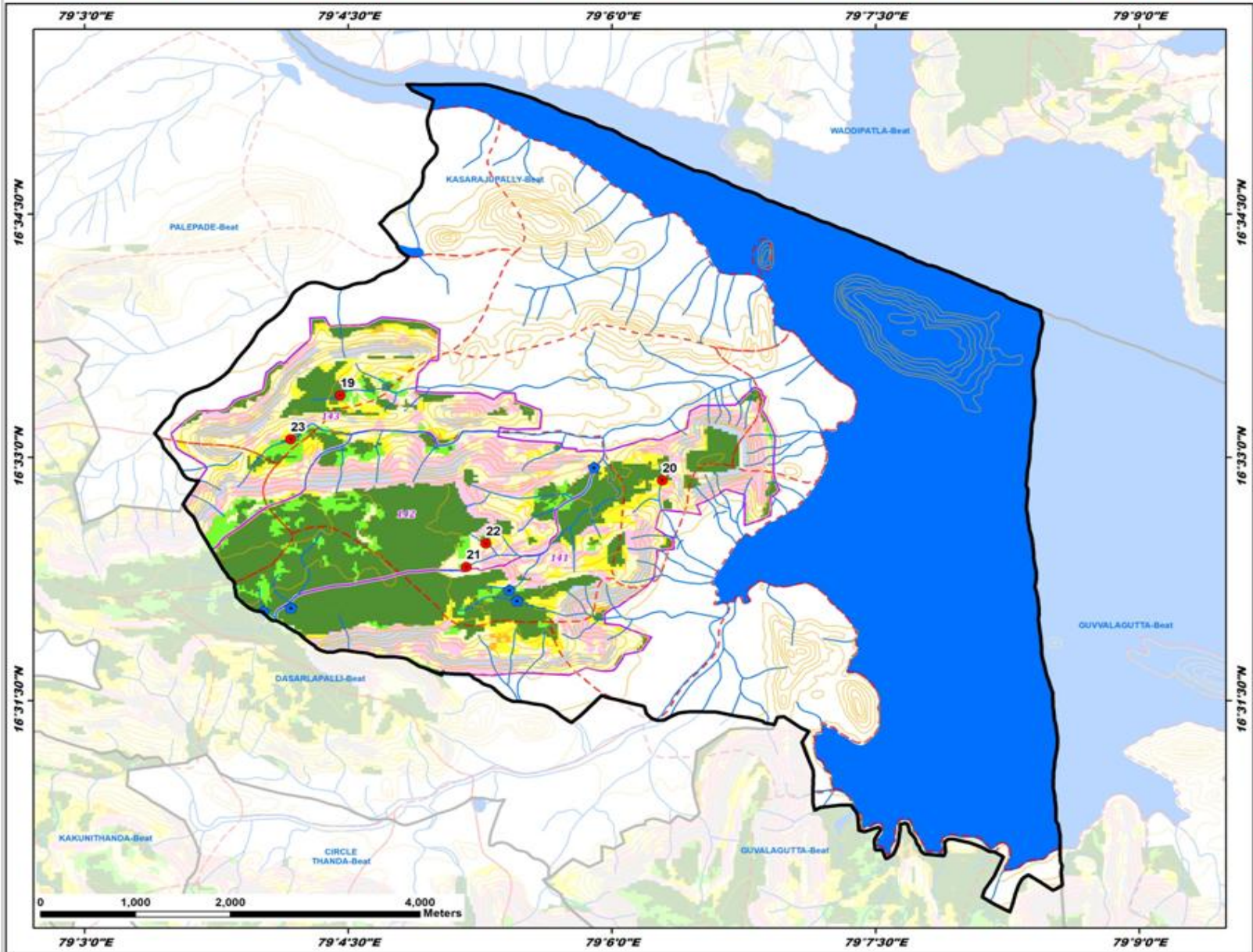
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Kasarajupally Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
19	16.556375	79.074249	9.25	I
20	16.547640	79.104796	8.49	I
21	16.538733	79.066205	27.34	III
22	16.541155	79.088053	76.93	III
23	16.551850	79.069541	52.34	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

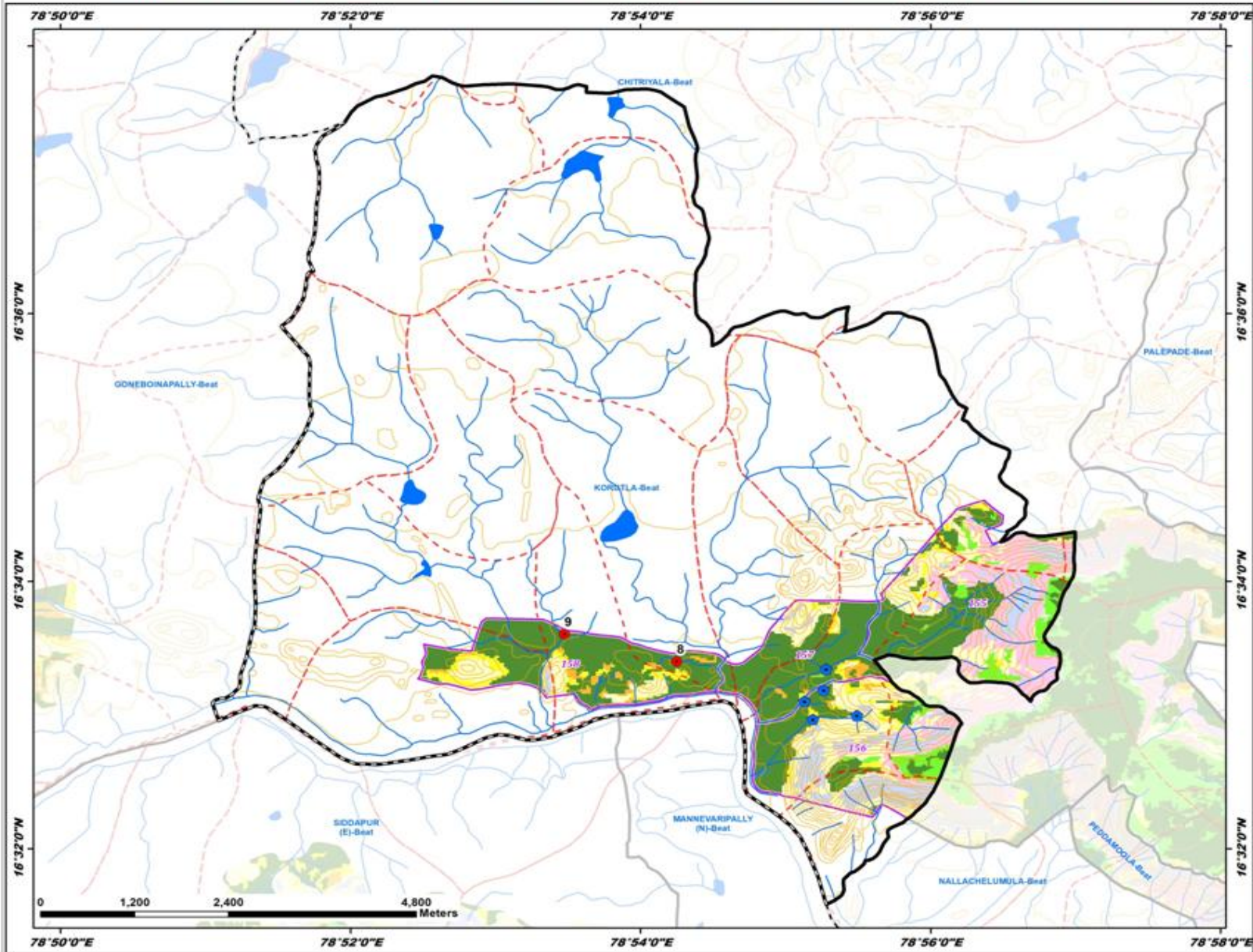
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Korutla Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
8	16.556671	78.904181	19.98	I
9	16.560065	78.891264	37.00	II

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- Compartment Boundary
- Beat Boundary
- - - Division Boundary

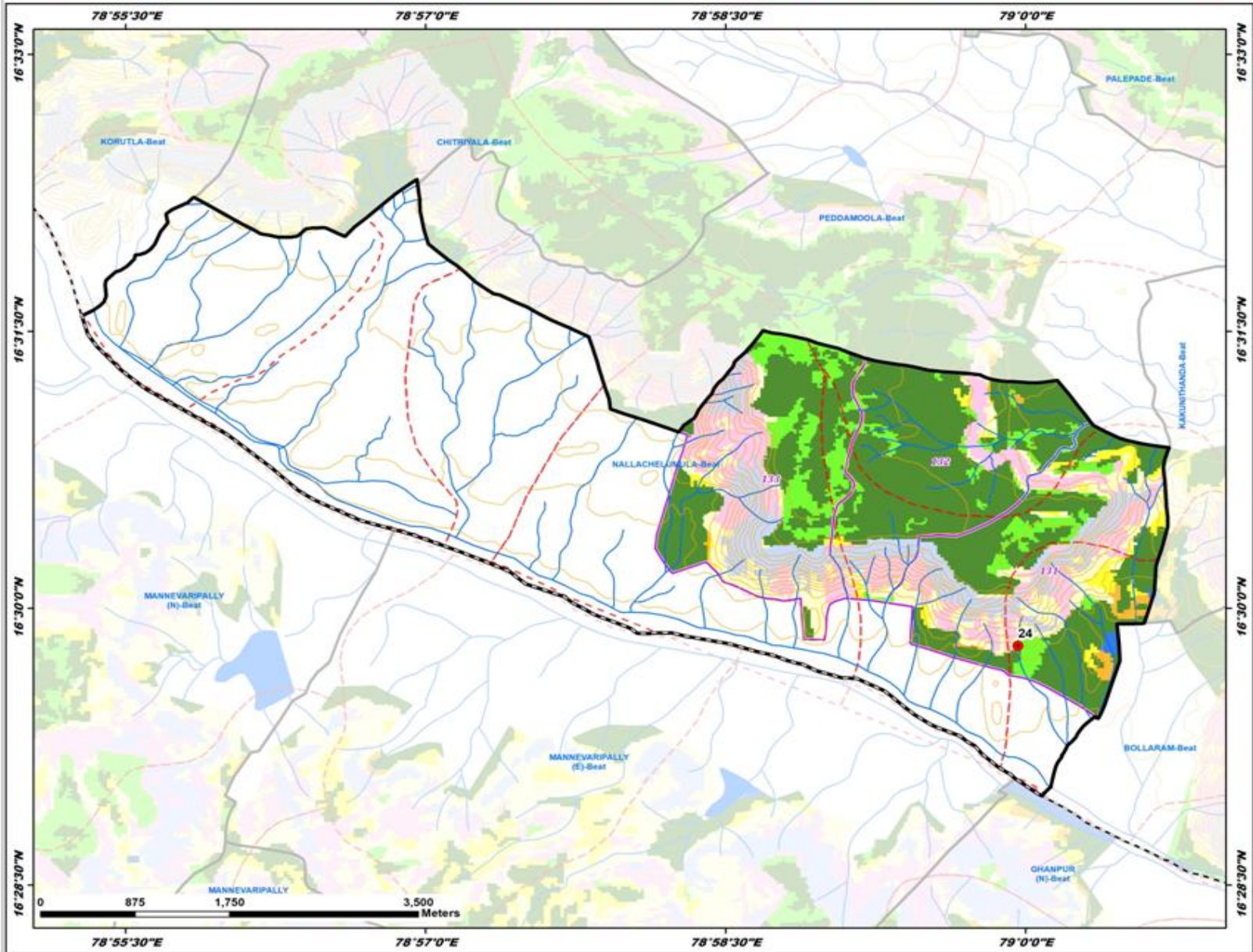
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Nallachelumula Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
24	16.496616	78.999379	10.16	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

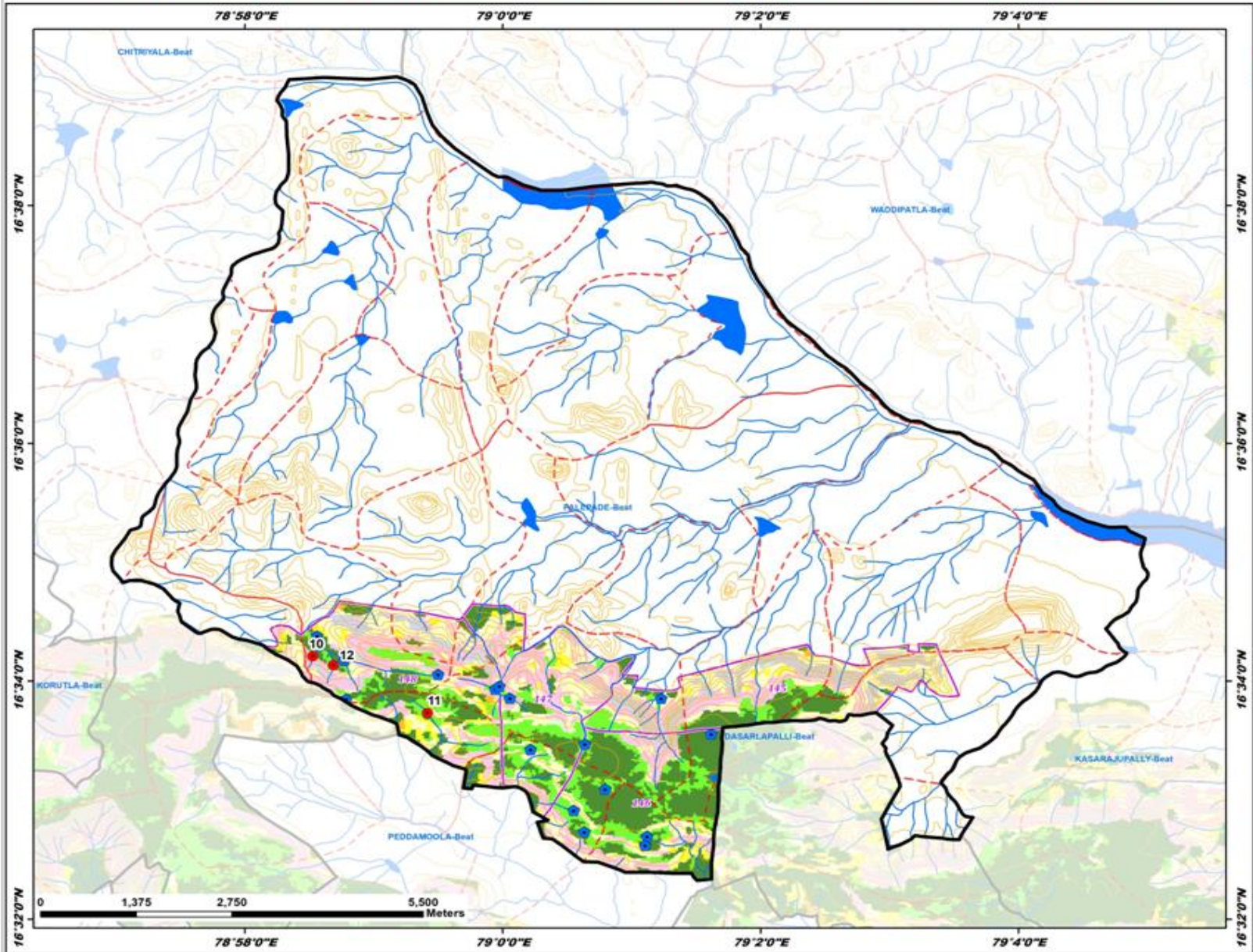
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Palepade Beat



Division : Nagarjunasagar  
Range : Devarakonda



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
10	16.570565	78.975439	8.61	I
11	16.562230	78.990268	7.79	II
12	16.568934	78.978093	14.68	II

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

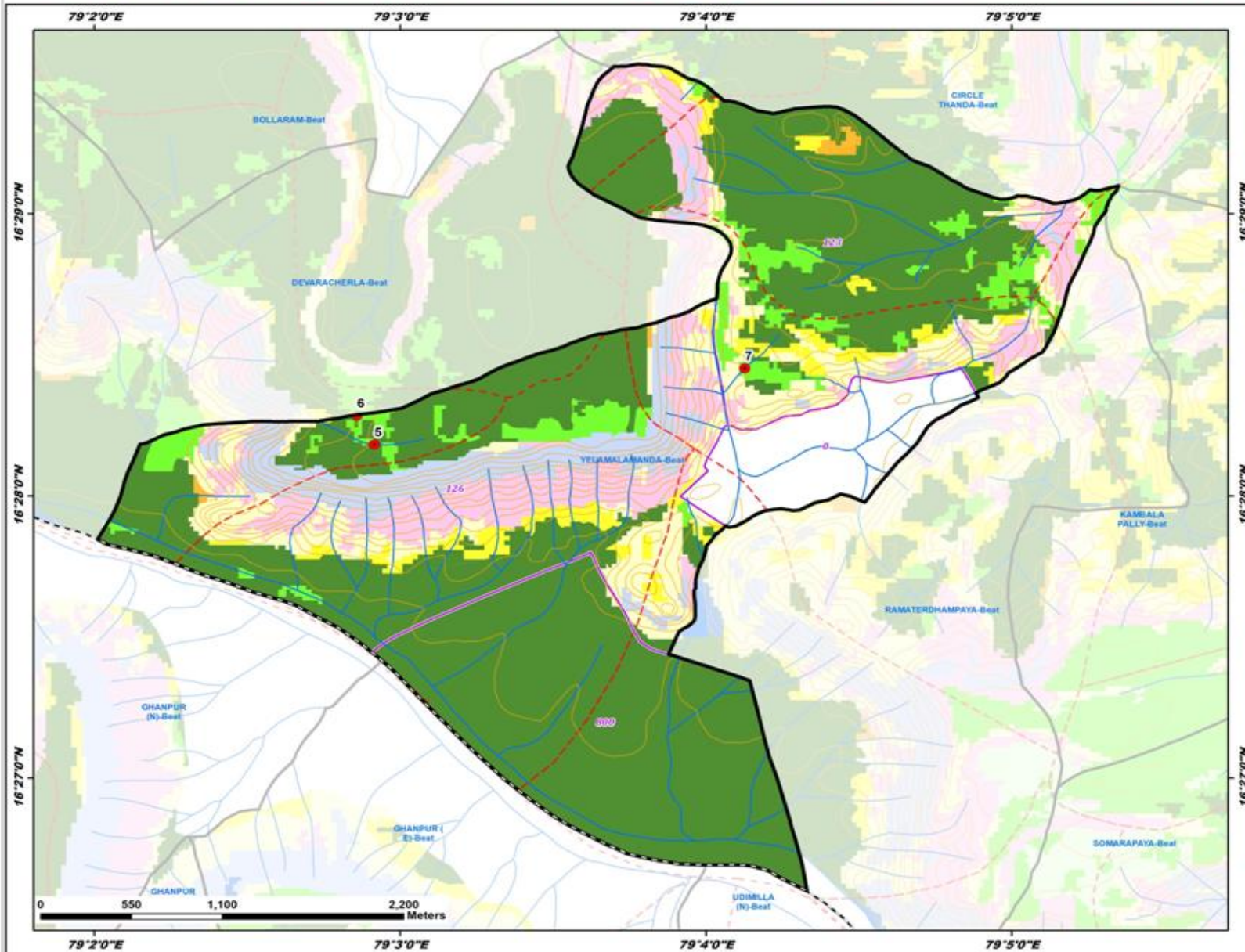
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Yelamalamanda Beat



Division : Nagarjunasagar  
Range : Devarakonda

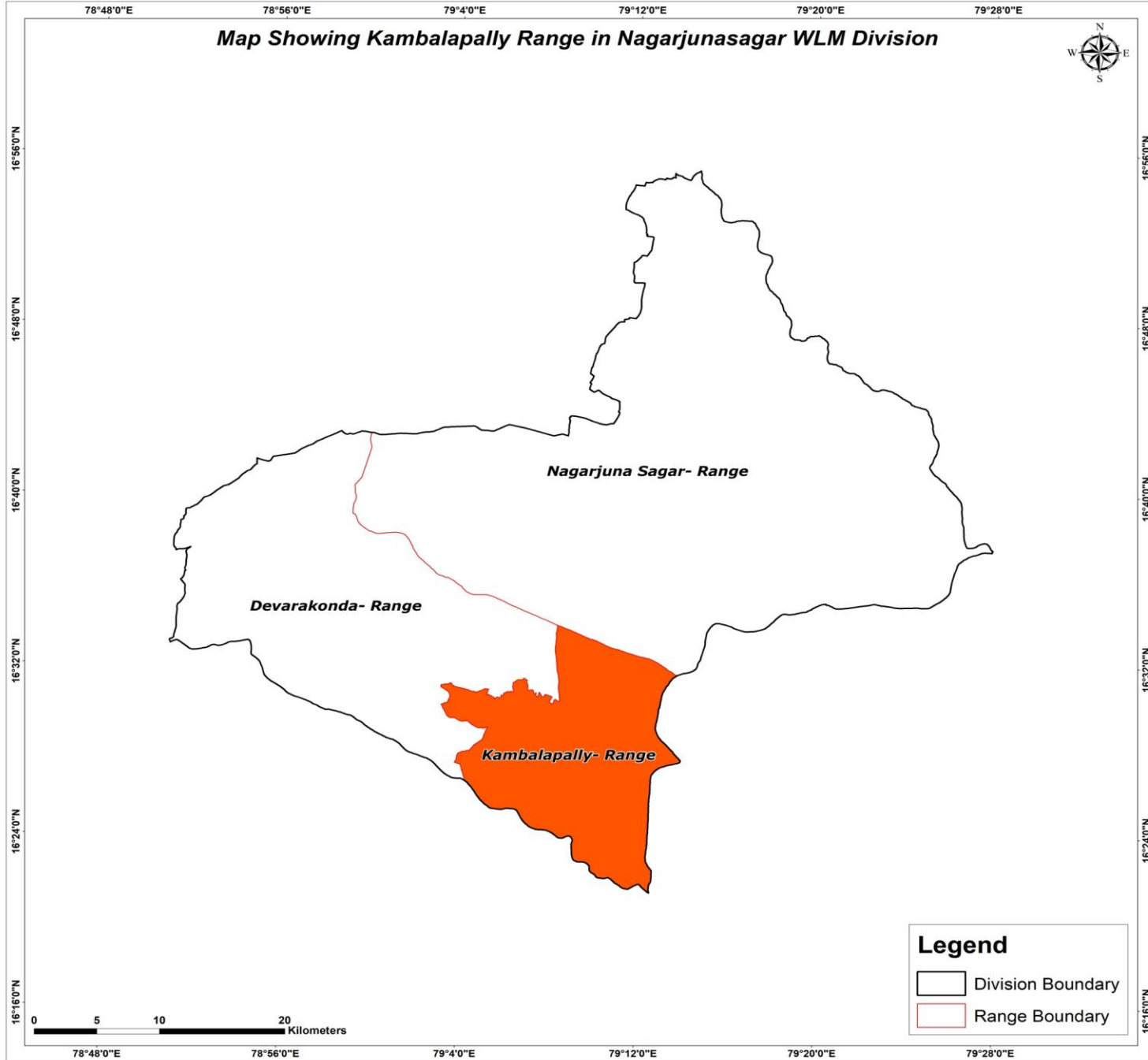


ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
5	16.469703	79.048594	9.27	I
6	16.471413	79.047654	20.78	I
7	16.474200	79.068801	6.09	II

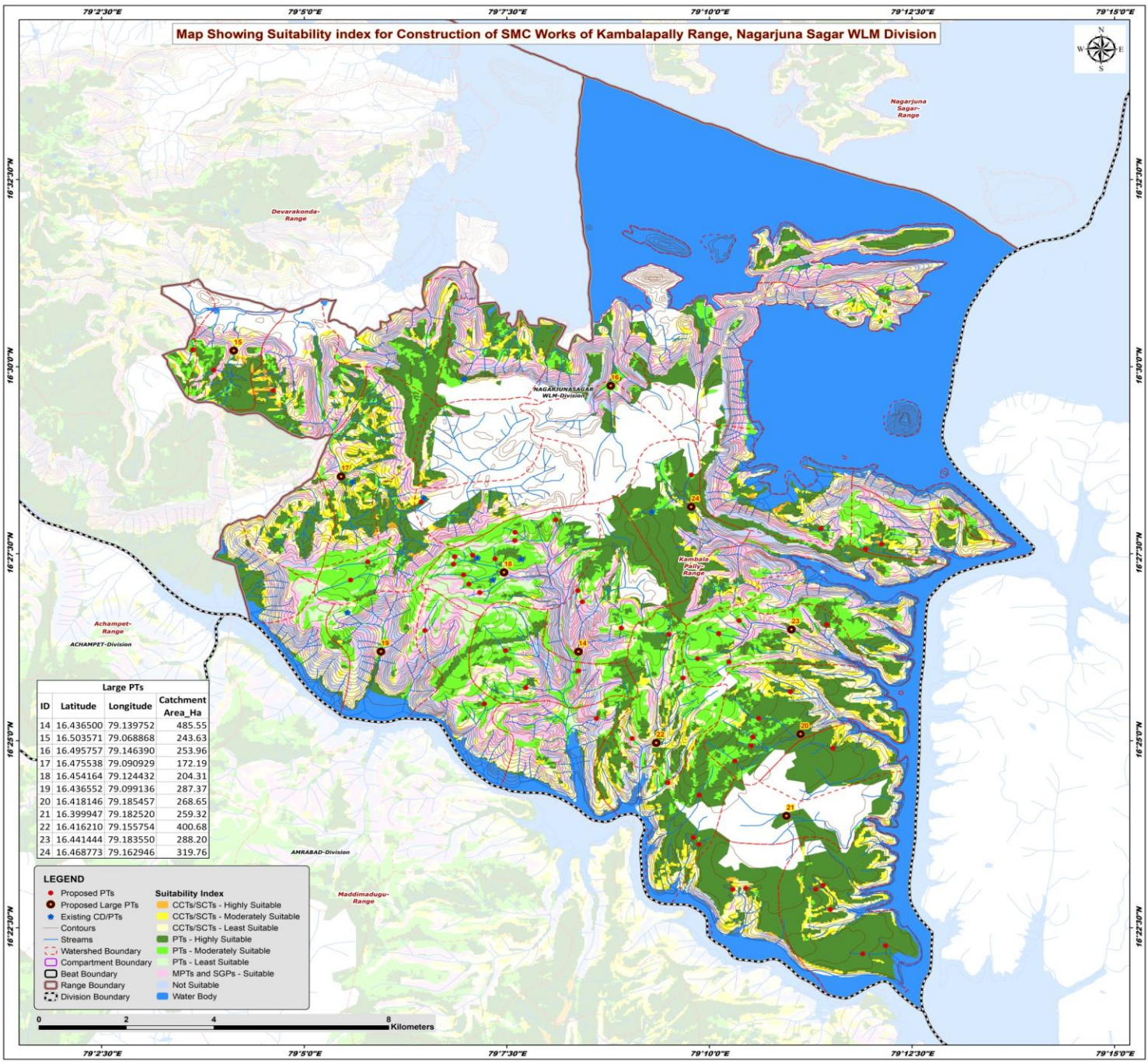
## LEGEND

- Proposed PTs
  - Existing CD/PTs
  - Contours
  - Streams
  - Watershed Boundary
  - Compartment Boundary
  - Beat Boundary
  - Division Boundary
- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

**Map Showing Kambalapally Range in Nagarjunasagar WLM Division**



Map Showing Suitability index for Construction of SMC Works of Kambalapally Range, Nagarjuna Sagar WLM Division



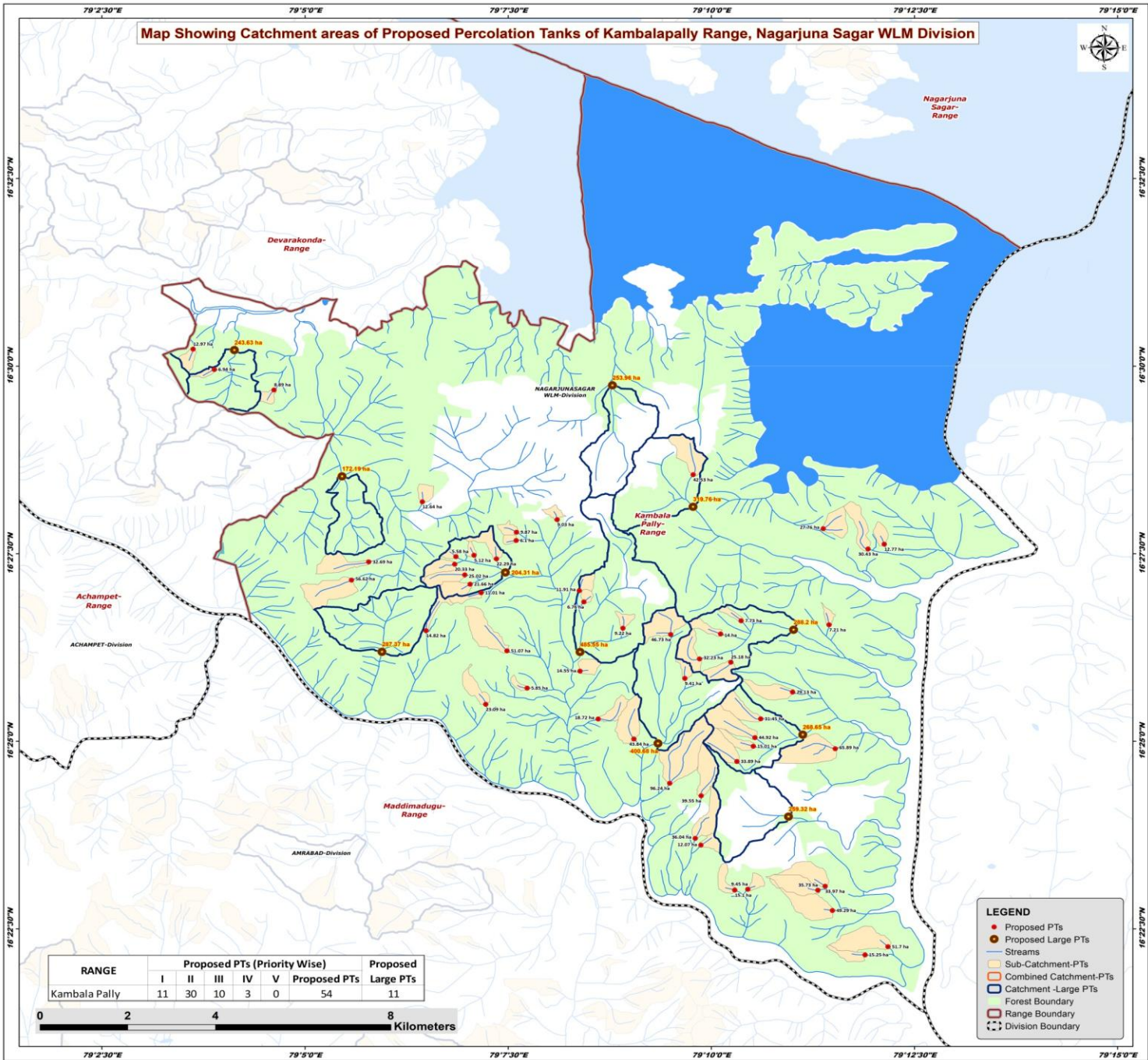
**Large PTs**

ID	Latitude	Longitude	Catchment Area_Ha
14	16.436500	79.139752	485.55
15	16.503571	79.068868	243.63
16	16.495757	79.146390	253.96
17	16.475538	79.090929	172.19
18	16.454164	79.124432	204.31
19	16.436552	79.099136	287.37
20	16.418146	79.185457	268.65
21	16.399947	79.182520	259.32
22	16.416210	79.155754	400.68
23	16.441444	79.183550	288.20
24	16.468773	79.162946	319.76

- LEGEND**
- Proposed PTs
  - Proposed Large PTs
  - Existing CD/PTs
  - Contours
  - Streams
  - Watershed Boundary
  - Compartment Boundary
  - Beat Boundary
  - Range Boundary
  - Division Boundary
  - CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGP - Suitable
  - Not Suitable
  - Water Body

0 2 4 8 Kilometers

Map Showing Catchment areas of Proposed Percolation Tanks of Kambalapally Range, Nagarjuna Sagar WLM Division



## Beat wise Abstract of Proposed PT's – Kambalapally Range

S. No.	Beat	Proposed PT's
1	BHUDEVIPAYA	2
2	CHENCHALAGUNTA	3
3	CHENCHU COLONY	5
4	CIRCLE THANDA	3
5	GANGADEVIGUTTA	4
6	JANAGUNDAM	5
7	JAVUKUPENTA	5
8	KAMBALA PALLY	9
9	MALLANNAGATTU	3
10	POGILLA	7
11	REKULARAM	4
12	SOMARAPAYA	3
13	YELLESHWARAM	1
	<b>Total</b>	<b>54</b>

## List of Proposed PTs – Kambalapally Range

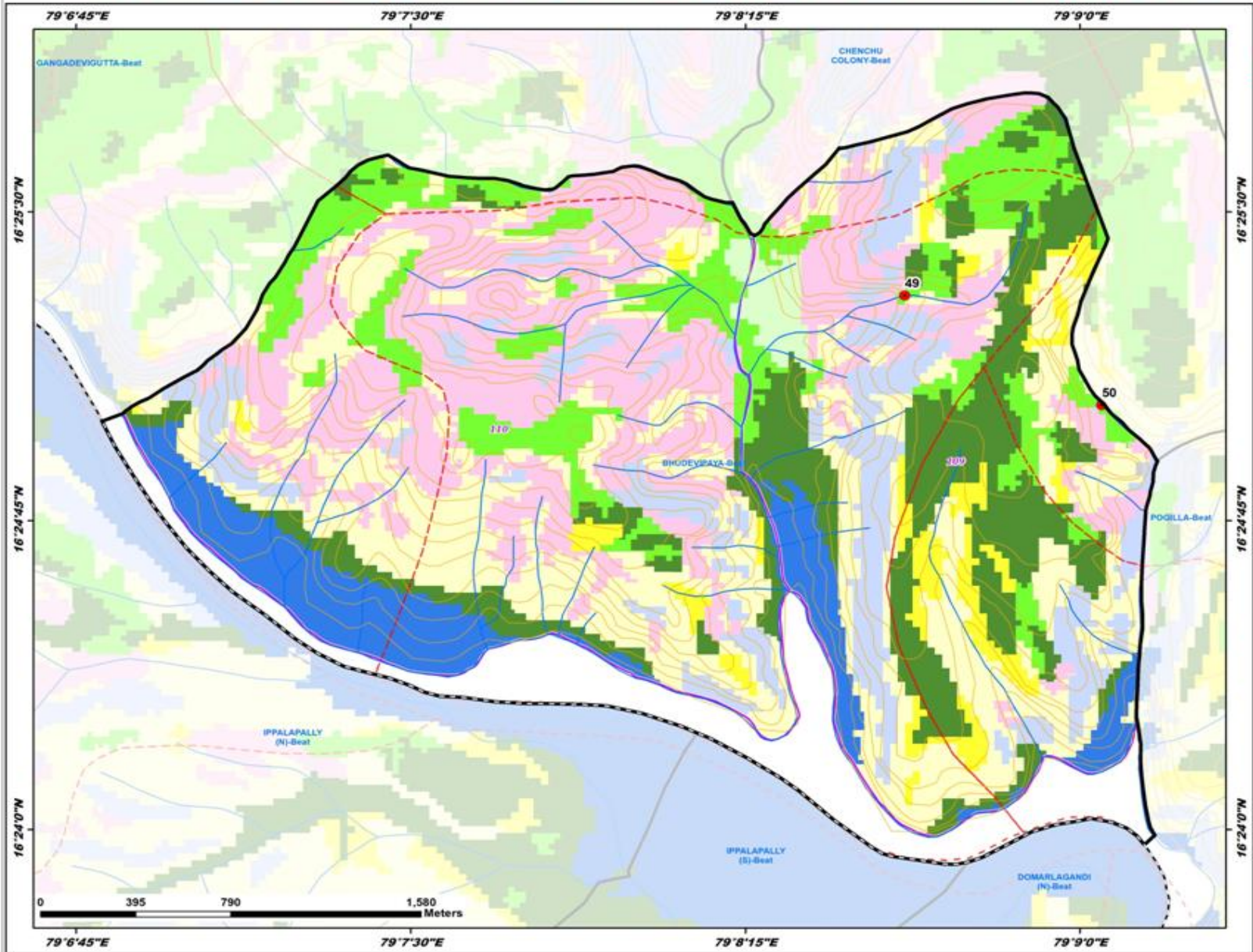
ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
25	16.432239	79.139766	14.55	II	CHENCHU COLONY
26	16.465918	79.135085	9.03	II	CHENCHU COLONY
27	16.450115	79.139621	11.91	II	CHENCHU COLONY
28	16.447624	79.140547	6.76	II	CHENCHU COLONY
29	16.441767	79.148559	9.22	II	CHENCHU COLONY
30	16.503782	79.060404	12.97	I	CIRCLE THANDA
31	16.494725	79.076997	8.89	I	CIRCLE THANDA
32	16.499268	79.064752	6.94	I	CIRCLE THANDA
33	16.428480	79.128931	5.85	II	GANGADEVIGUTTA
34	16.424880	79.120413	23.09	II	GANGADEVIGUTTA
35	16.436742	79.124789	51.07	IV	GANGADEVIGUTTA
36	16.449662	79.119469	11.01	IV	GANGADEVIGUTTA
37	16.469878	79.107411	12.64	I	KAMBALA PALLY
38	16.463110	79.126721	9.87	II	KAMBALA PALLY
39	16.457976	79.118029	5.12	II	KAMBALA PALLY
40	16.456004	79.114043	20.33	II	KAMBALA PALLY
41	16.461270	79.126673	6.10	II	KAMBALA PALLY
42	16.457695	79.114310	5.58	II	KAMBALA PALLY
43	16.457197	79.122604	22.29	II	KAMBALA PALLY
44	16.456511	79.096427	32.69	III	KAMBALA PALLY
45	16.452467	79.092900	56.62	IV	KAMBALA PALLY
46	16.451574	79.117232	21.66	II	SOMARAPAYA
47	16.441247	79.108168	14.82	II	SOMARAPAYA
48	16.453619	79.116119	25.02	III	SOMARAPAYA
49	16.421613	79.143463	18.72	II	BHUDEVIPAYA
50	16.417182	79.150823	43.84	III	BHUDEVIPAYA
51	16.415545	79.175302	15.01	I	JANAGUNDAM
52	16.417481	79.175627	44.92	II	JANAGUNDAM
53	16.421644	79.176820	31.45	II	JANAGUNDAM
54	16.427576	79.183386	29.13	II	JANAGUNDAM
55	16.415004	79.192118	65.89	III	JANAGUNDAM
56	16.369212	79.198229	15.25	I	JAVUKUPENTA
57	16.384447	79.190057	33.97	II	JAVUKUPENTA
58	16.383587	79.188568	35.73	II	JAVUKUPENTA
59	16.379060	79.191532	49.29	II	JAVUKUPENTA
60	16.371017	79.202942	51.70	III	JAVUKUPENTA
61	16.383599	79.171487	15.10	I	POGILLA
62	16.383782	79.174171	9.45	I	POGILLA
63	16.393611	79.164543	12.07	I	POGILLA
64	16.395103	79.163399	36.04	II	POGILLA

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
65	16.404549	79.164605	39.55	II	POGILLA
66	16.412187	79.171940	33.89	III	POGILLA
67	16.407346	79.158163	96.24	III	POGILLA
68	16.442551	79.190832	7.21	I	CHENCHALAGUNTA
69	16.440489	79.168589	14.00	II	CHENCHALAGUNTA
70	16.443440	79.172798	7.73	II	CHENCHALAGUNTA
71	16.460455	79.202165	12.77	I	MALLANNAGATTU
72	16.459376	79.198843	30.43	II	MALLANNAGATTU
73	16.463897	79.189646	27.76	II	MALLANNAGATTU
74	16.430626	79.161249	9.41	II	REKULARAM
75	16.434234	79.170705	25.18	III	REKULARAM
76	16.440369	79.158367	46.73	III	REKULARAM
77	16.434964	79.164278	32.23	III	REKULARAM
78	16.475879	79.162965	42.53	II	YELLESHWARAM

# Map Showing Suitability Index for Construction of SMC Works of Bhudevipaya Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
49	16.421613	79.143463	18.72	II
50	16.417182	79.150823	43.84	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

**Suitability Index**

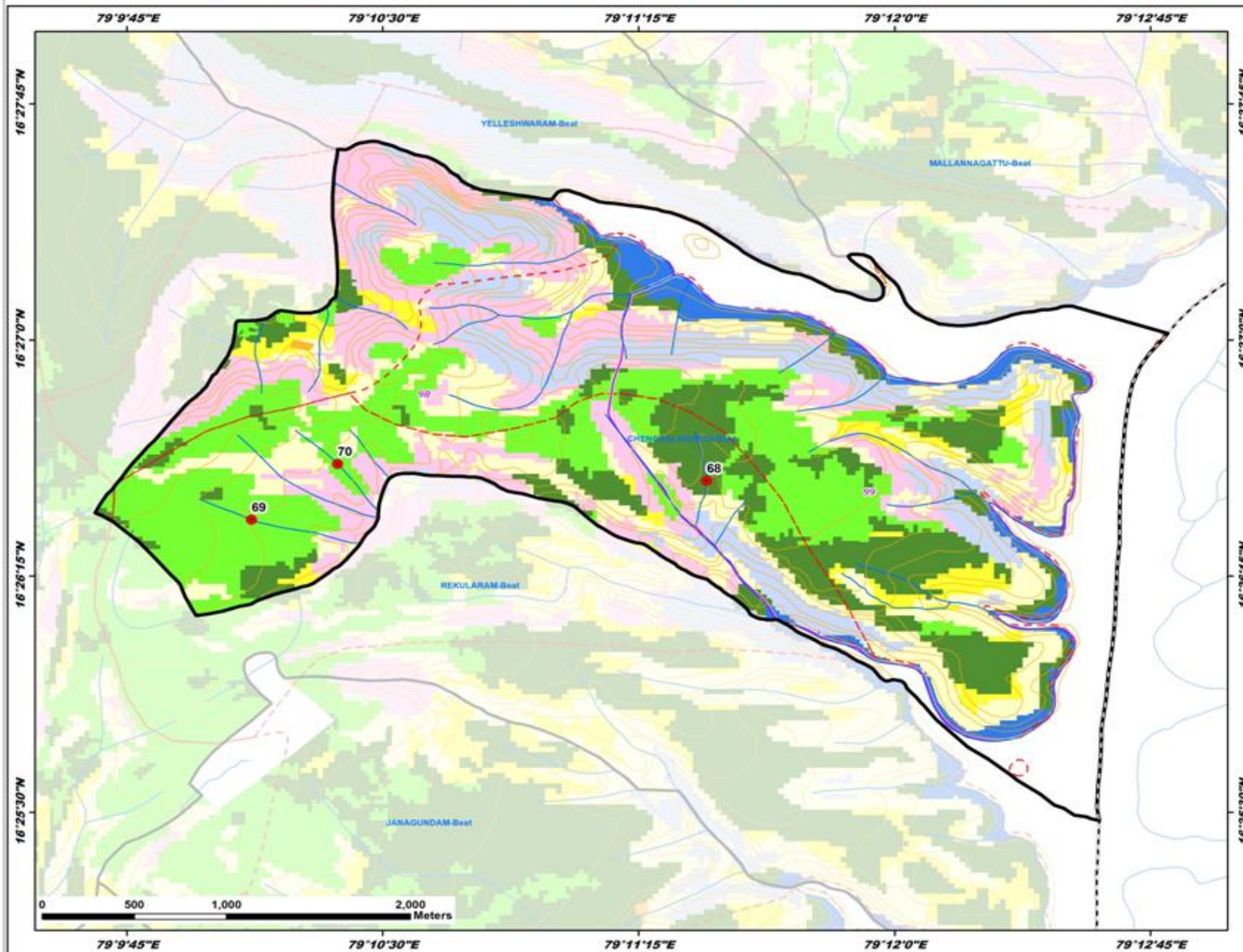
- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body



# Map Showing Suitability Index for Construction of SMC Works of Chenchalagunta Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
68	16.44251	79.190832	7.21	I
69	16.440489	79.168589	14.00	II
70	16.443440	79.172798	7.73	II

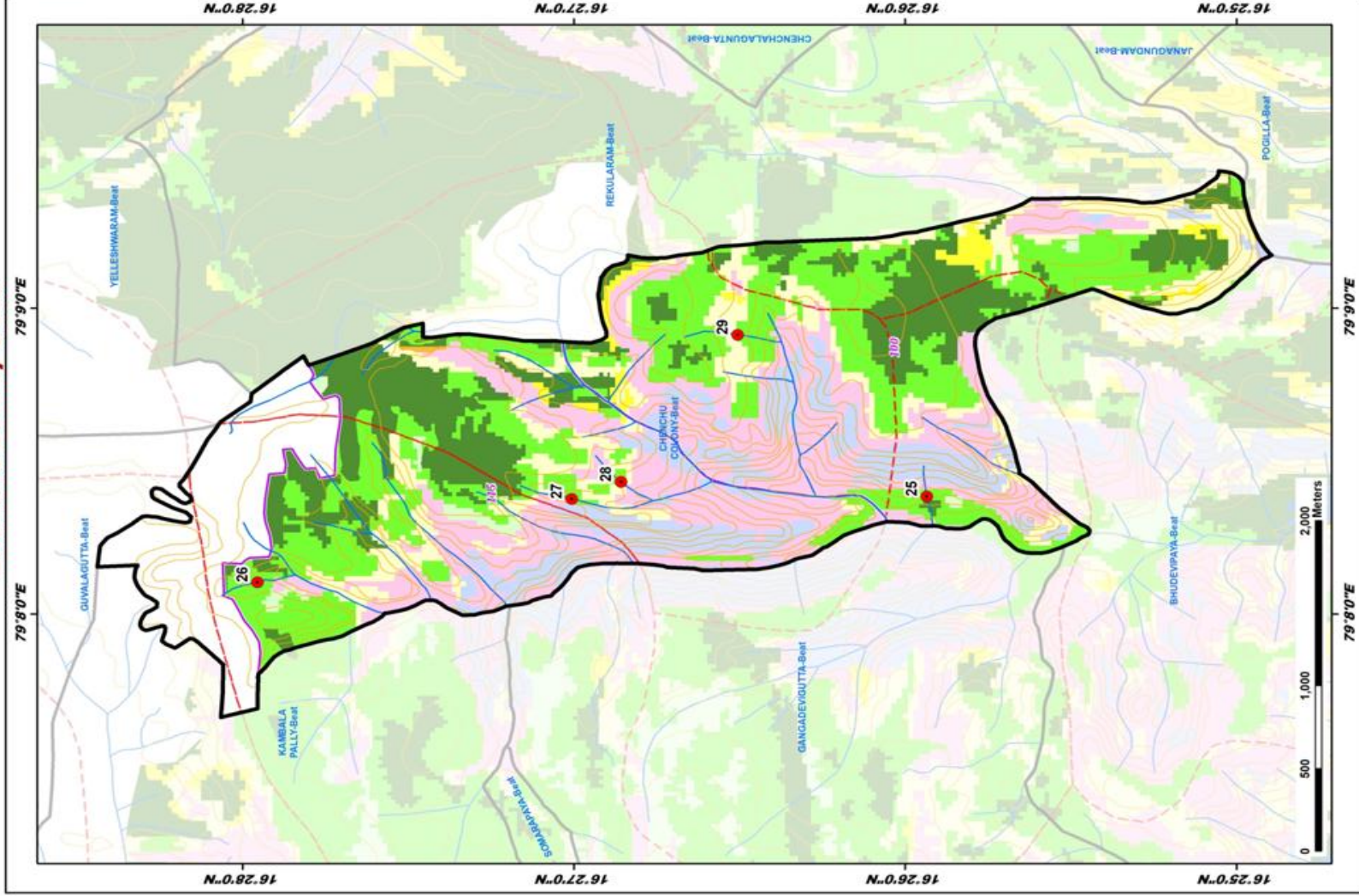
### LEGEND

- Proposed PTs
  - Existing CD/PTs
  - Contours
  - Streams
  - Watershed Boundary
  - Compartment Boundary
  - Beat Boundary
  - Division Boundary
- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Chenchu Colony Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
25	16.43239	79.13976	14.55	II
26	16.46918	79.13085	9.03	II
27	16.45015	79.13962	11.91	II
28	16.44704	79.14047	6.76	II
29	16.441767	79.148559	9.22	II

## LEGEND

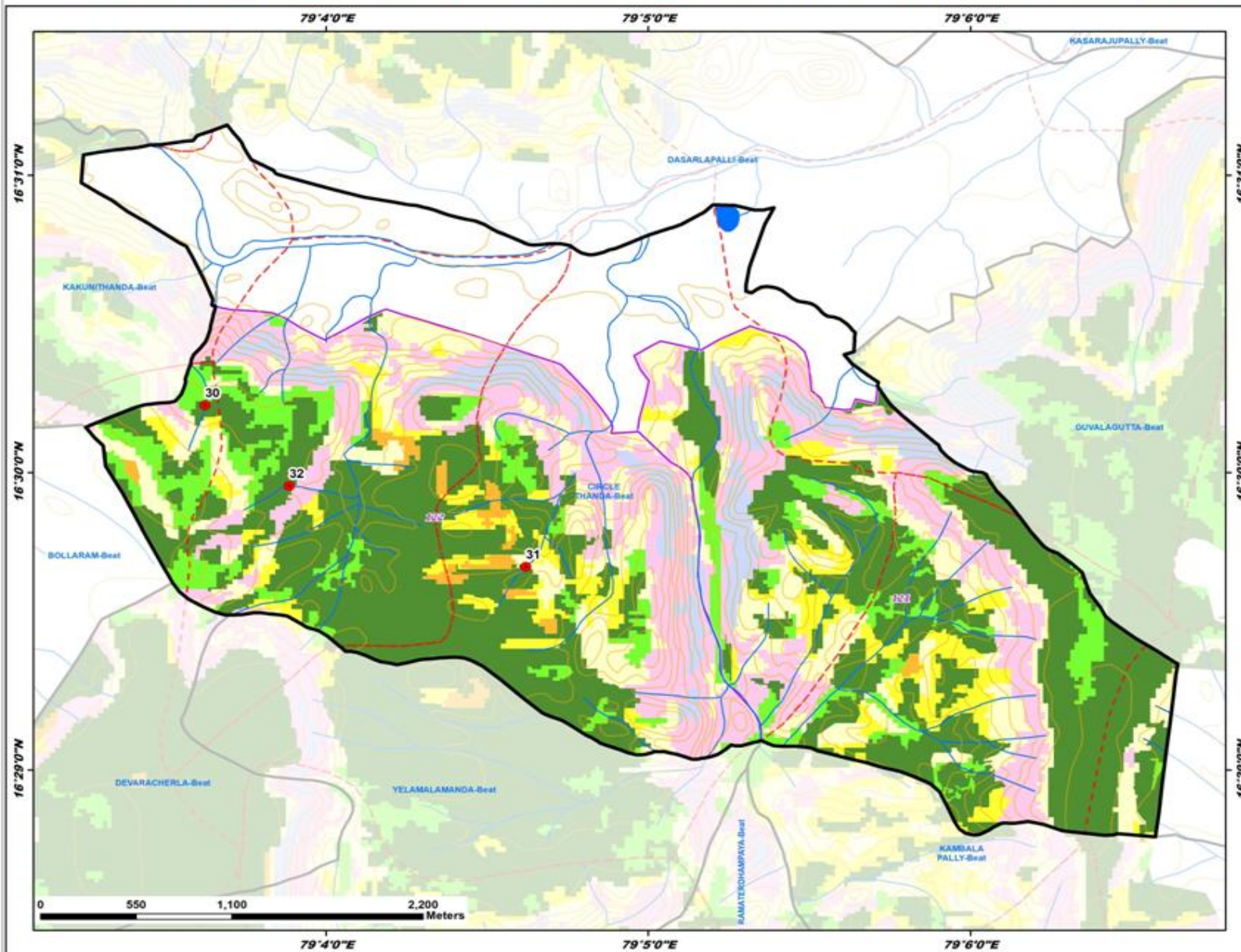
- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

- ### Suitability Index
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Circle Thanda Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
30	16.503782	79.060404	12.97	I
31	16.494725	79.076997	8.89	I
32	16.499268	79.064752	6.94	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

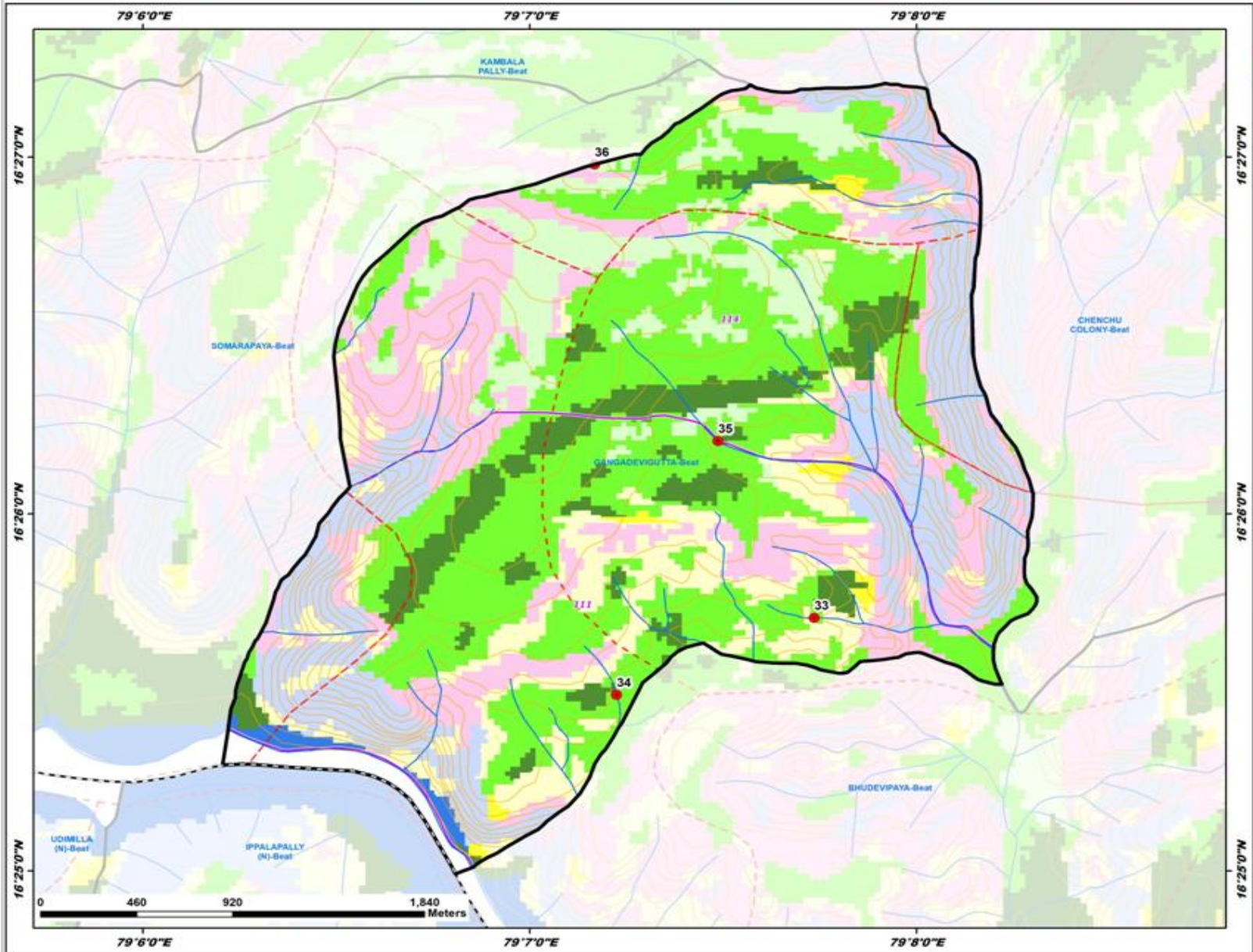
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Gangadevigutta Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
33	16.429480	79.128931	5.85	II
34	16.424880	79.120413	23.09	II
35	16.436742	79.124789	51.07	IV
36	16.449662	79.119469	11.01	IV

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

**Suitability Index**

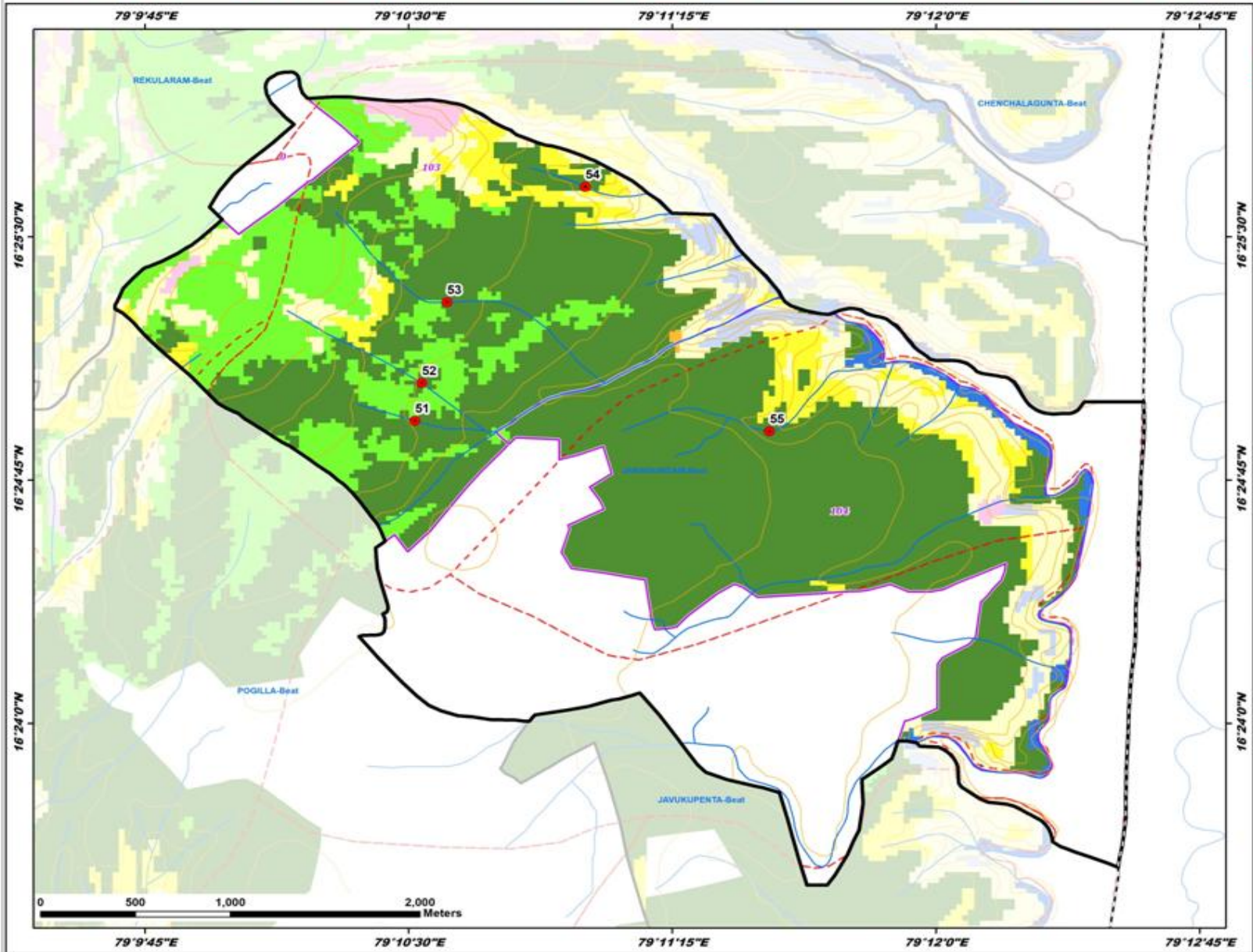
- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body



# Map Showing Suitability Index for Construction of SMC Works of Janagundam Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
51	16.415545	79.175302	15.01	I
52	16.417481	79.175627	44.92	II
53	16.421644	79.176820	31.45	II
54	16.427576	79.183386	29.13	II
55	16.415004	79.192118	65.89	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

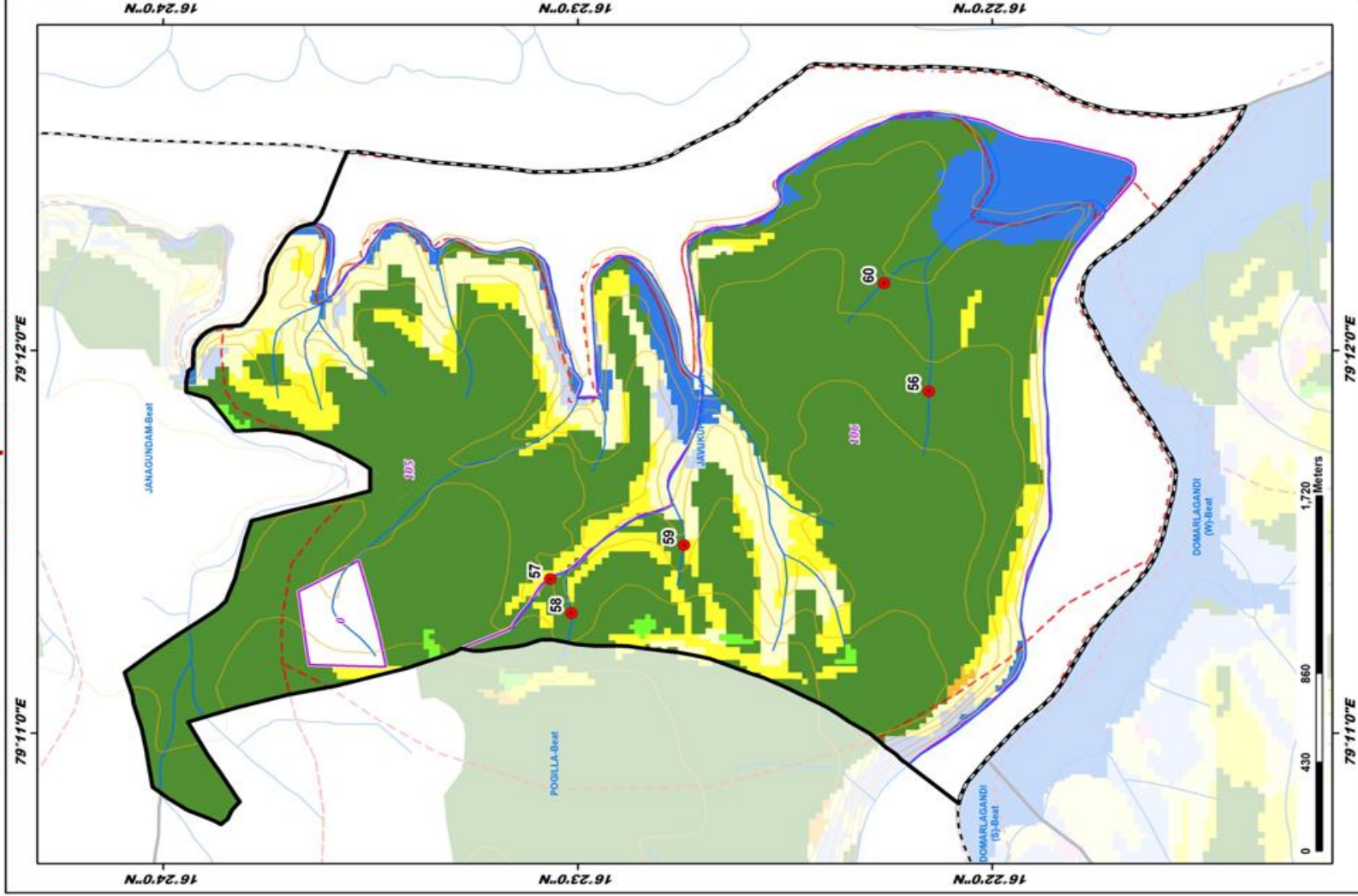
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Javukupenta Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
56	16.369212	79.188229	15.25	I
57	16.394447	79.190057	35.97	II
58	16.383587	79.188568	35.73	II
59	16.379660	79.191532	48.29	II
60	16.371037	79.202942	51.70	III

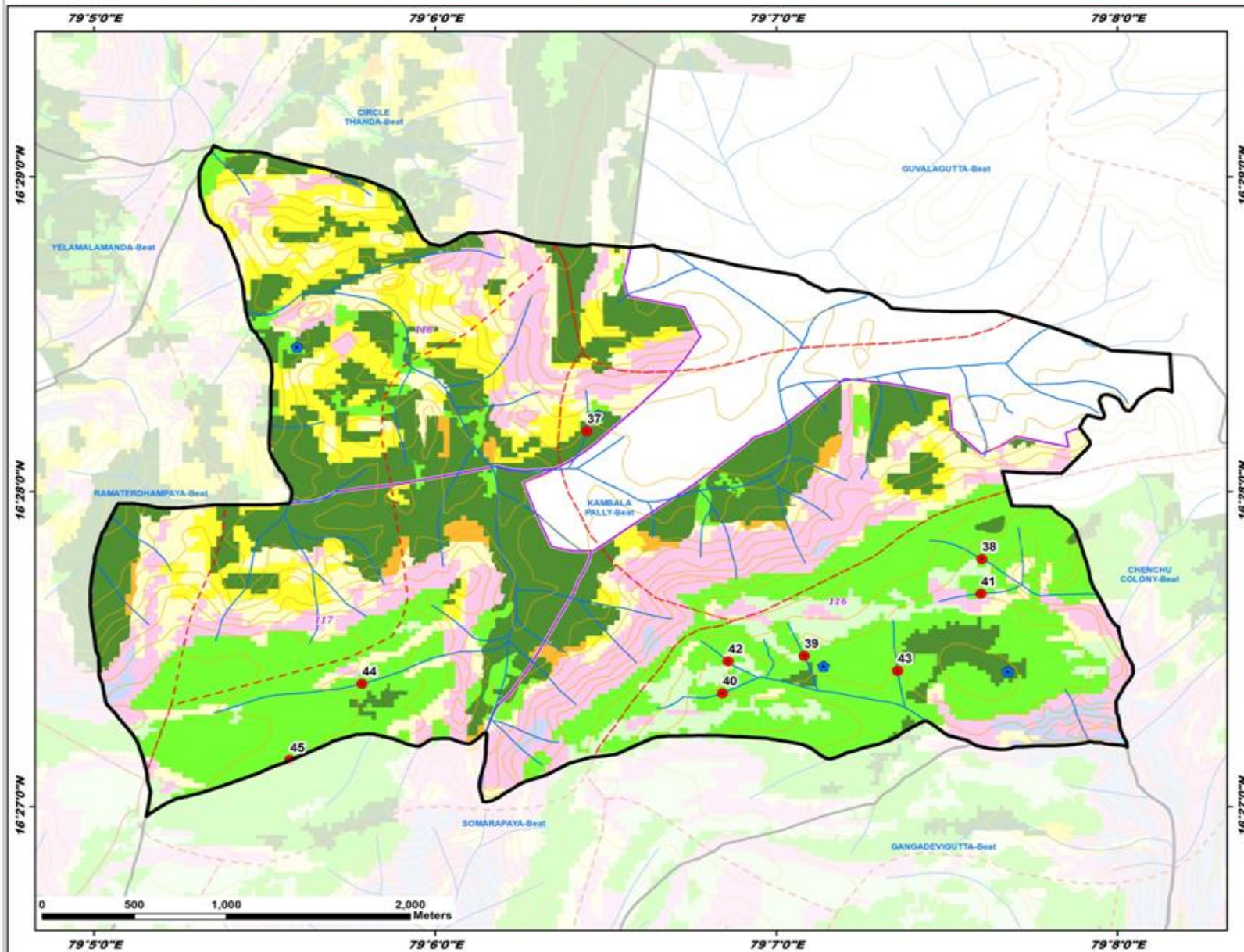
## LEGEND

- Proposed P/Ts
  - Existing CD/P/Ts
  - Contours
  - Streams
  - Watershed Boundary
  - Compartment Boundary
  - Beat Boundary
  - Division Boundary
- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Kambalapally Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
37	16.469878	79.107411	12.64	I
38	16.463110	79.126721	9.87	II
39	16.457976	79.118029	5.12	II
40	16.456604	79.114043	20.33	II
41	16.461270	79.126673	6.10	II
42	16.457695	79.114310	5.58	II
43	16.457197	79.122604	22.29	II
44	16.456511	79.096427	32.69	III
45	16.452467	79.092900	56.62	IV

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

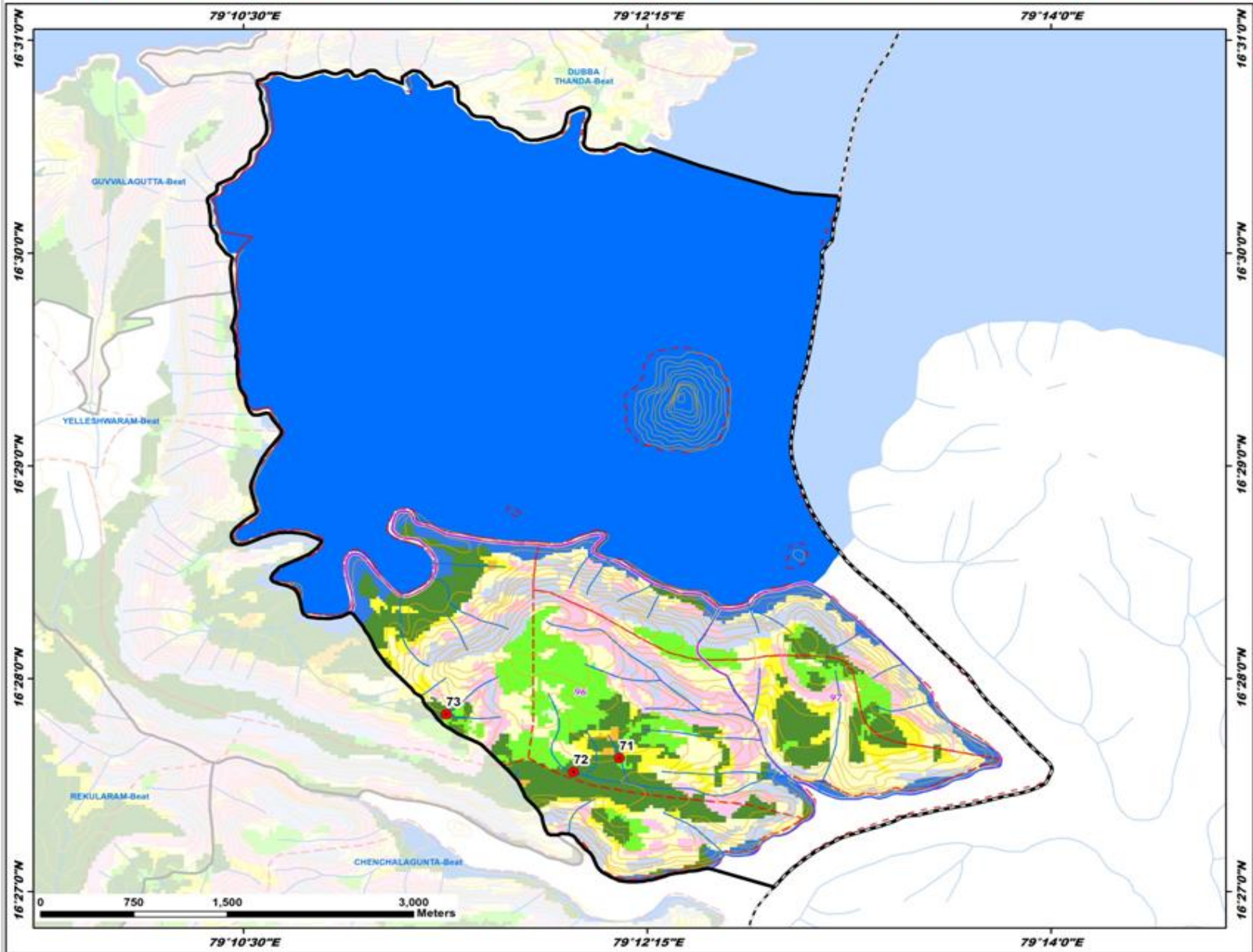
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Mallannagattu Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
71	16.460455	79.202165	12.77	I
72	16.459376	79.198843	30.43	II
73	16.463897	79.189646	27.76	II

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- ▭ Watershed Boundary
- ▭ Compartment Boundary
- ▭ Beat Boundary
- ▭ Division Boundary

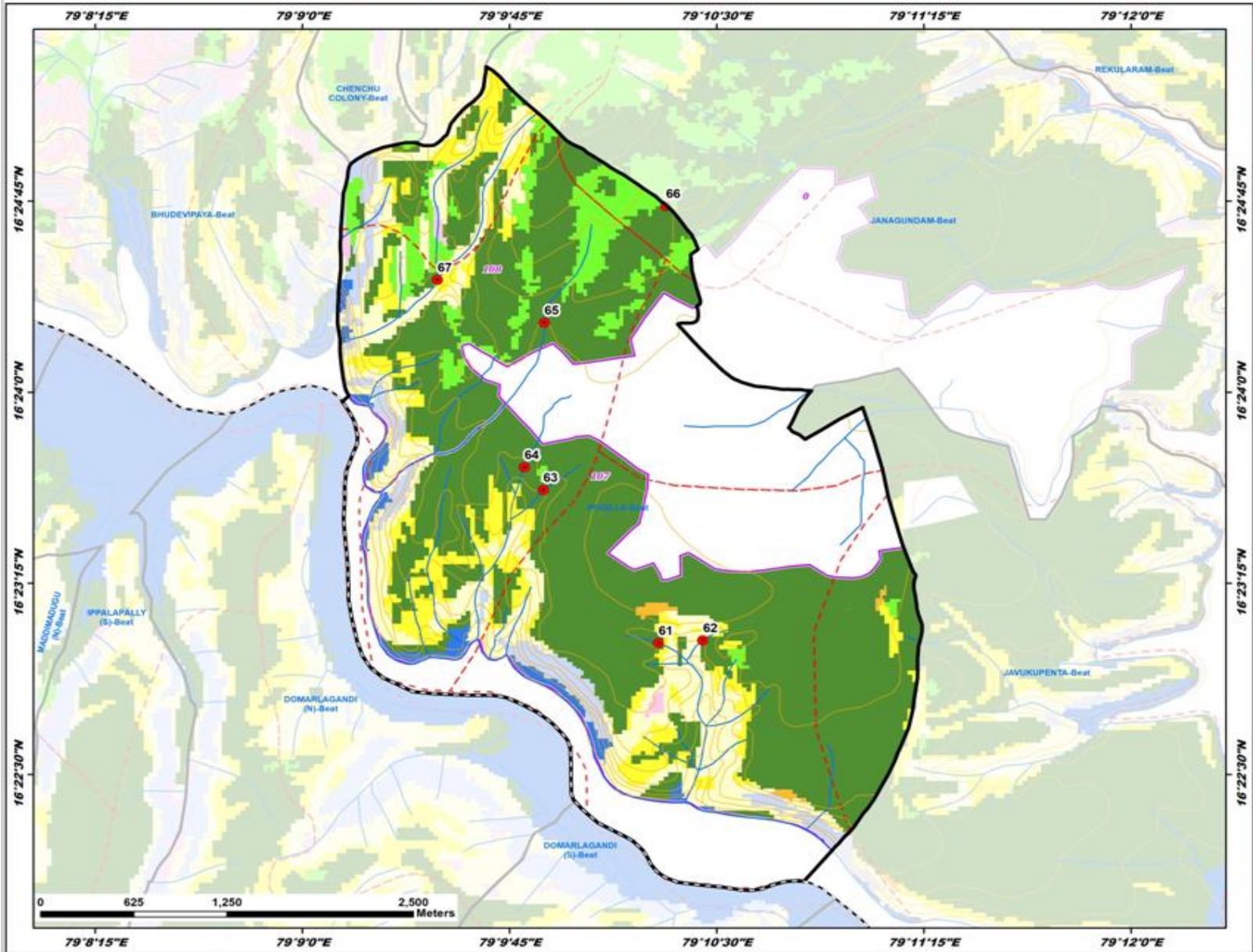
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Pogilla Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
61	16.383599	79.173487	15.10	I
62	16.383782	79.174171	9.45	I
63	16.393611	79.154543	12.07	I
64	16.395103	79.163399	36.04	II
65	16.404549	79.164605	39.55	II
66	16.412187	79.173940	33.89	III
67	16.407346	79.158163	96.24	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

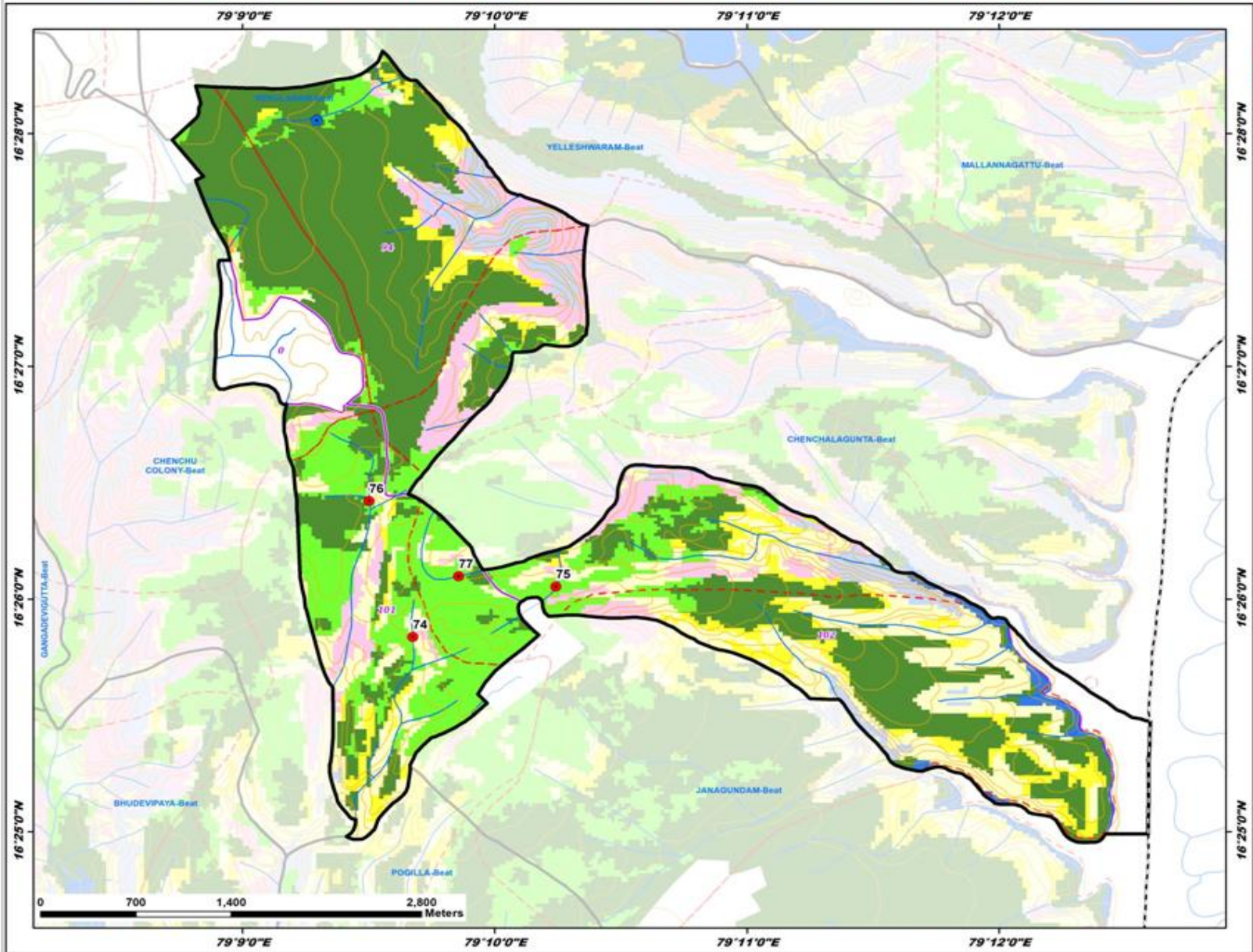
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Rekularam Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
74	16.430626	79.163249	9.41	II
75	16.434234	79.170705	25.18	III
76	16.440369	79.158367	46.73	III
77	16.434964	79.164278	32.23	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- ▭ Watershed Boundary
- ▭ Compartment Boundary
- ▭ Beat Boundary
- ▭ Division Boundary

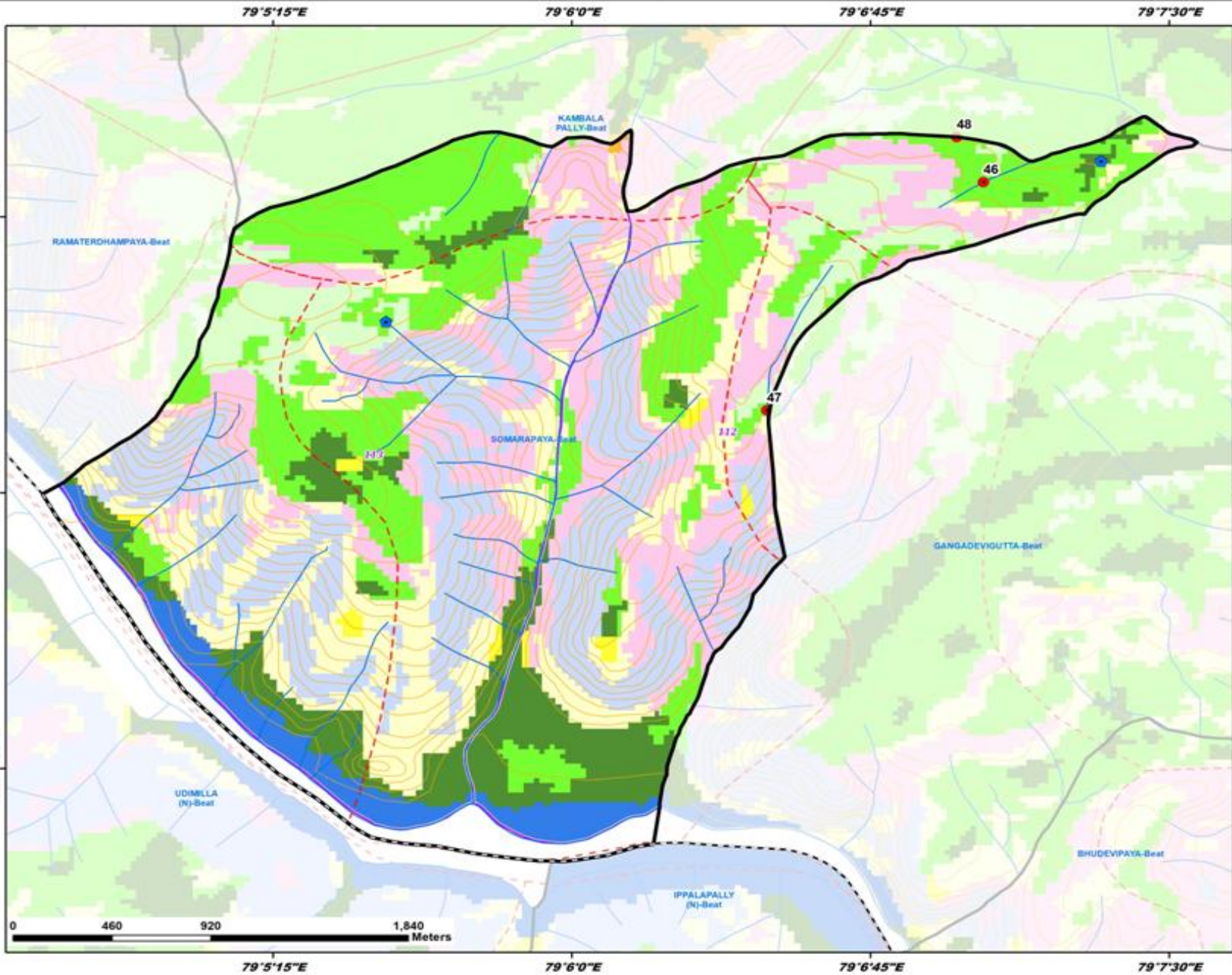
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Somarapaya Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
46	16.451574	79.117232	21.66	II
47	16.441247	79.108168	14.82	II
48	16.453619	79.116119	25.02	III

## LEGEND

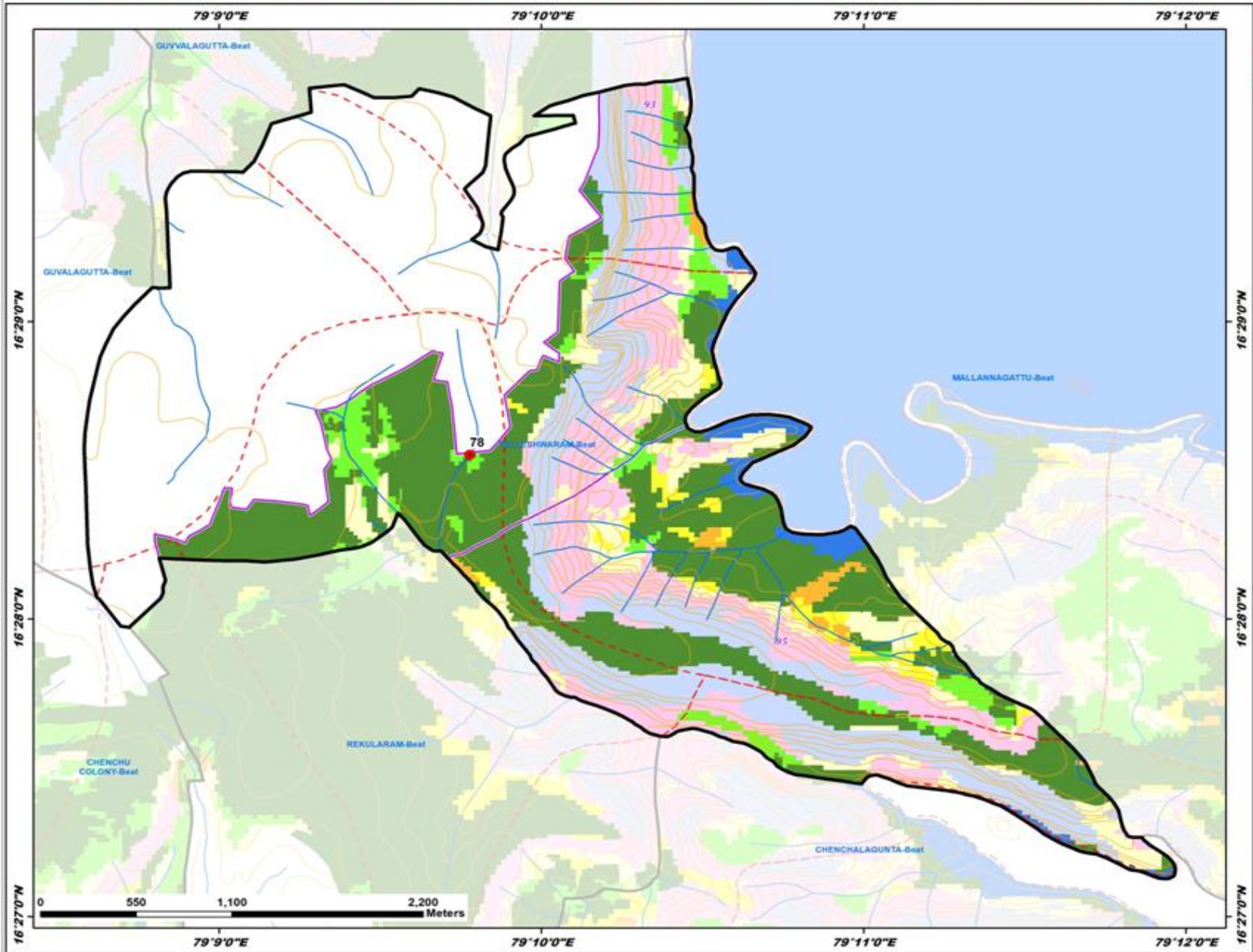
- Proposed PTs
- ★ Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- ▭ Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

- ### Suitability Index
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Yelleshwaram Beat



Division : Nagarjunasagar  
Range : Kambalapally



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
78	16.475879	79.162965	42.53	II

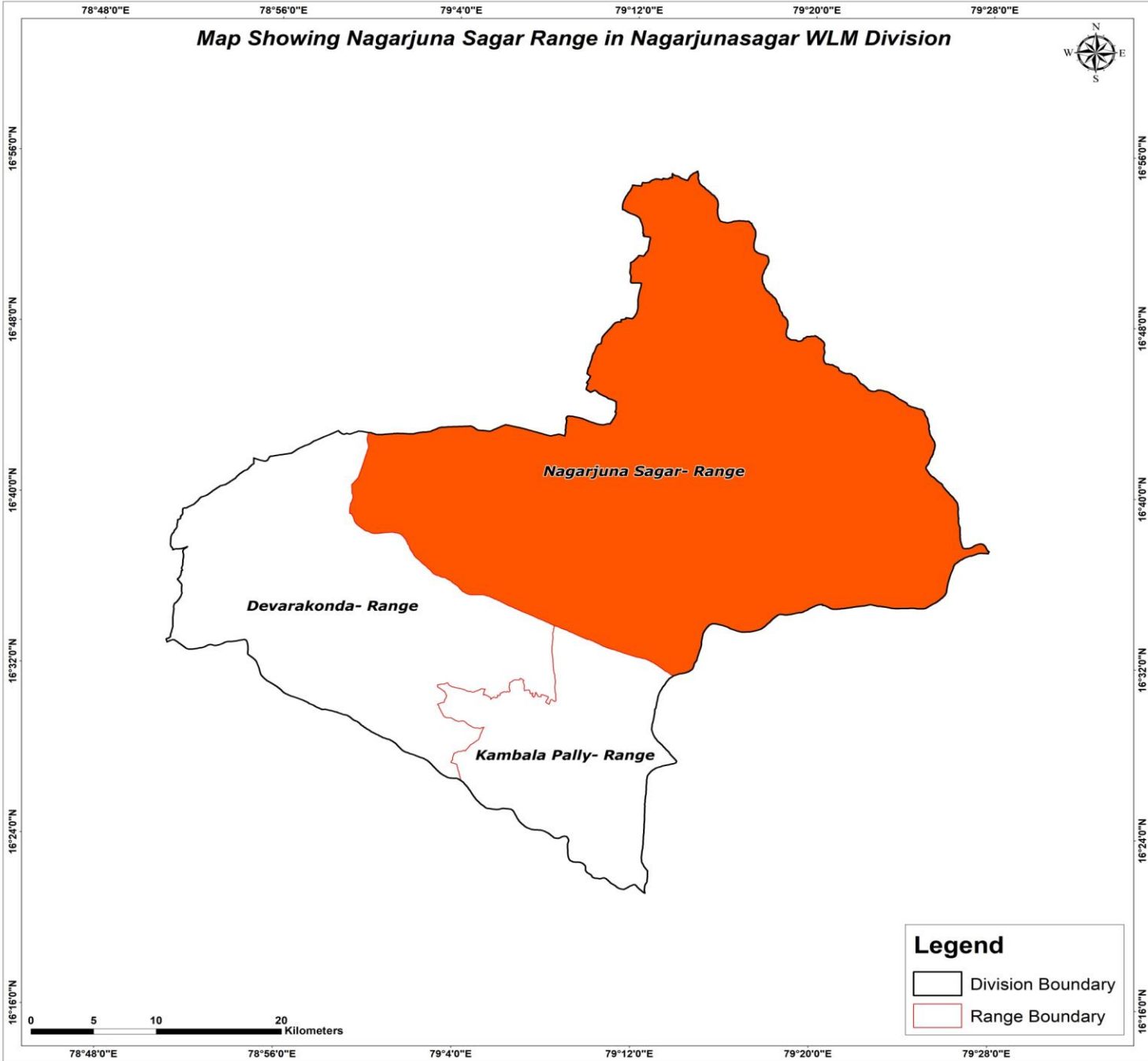
**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

**Suitability Index**

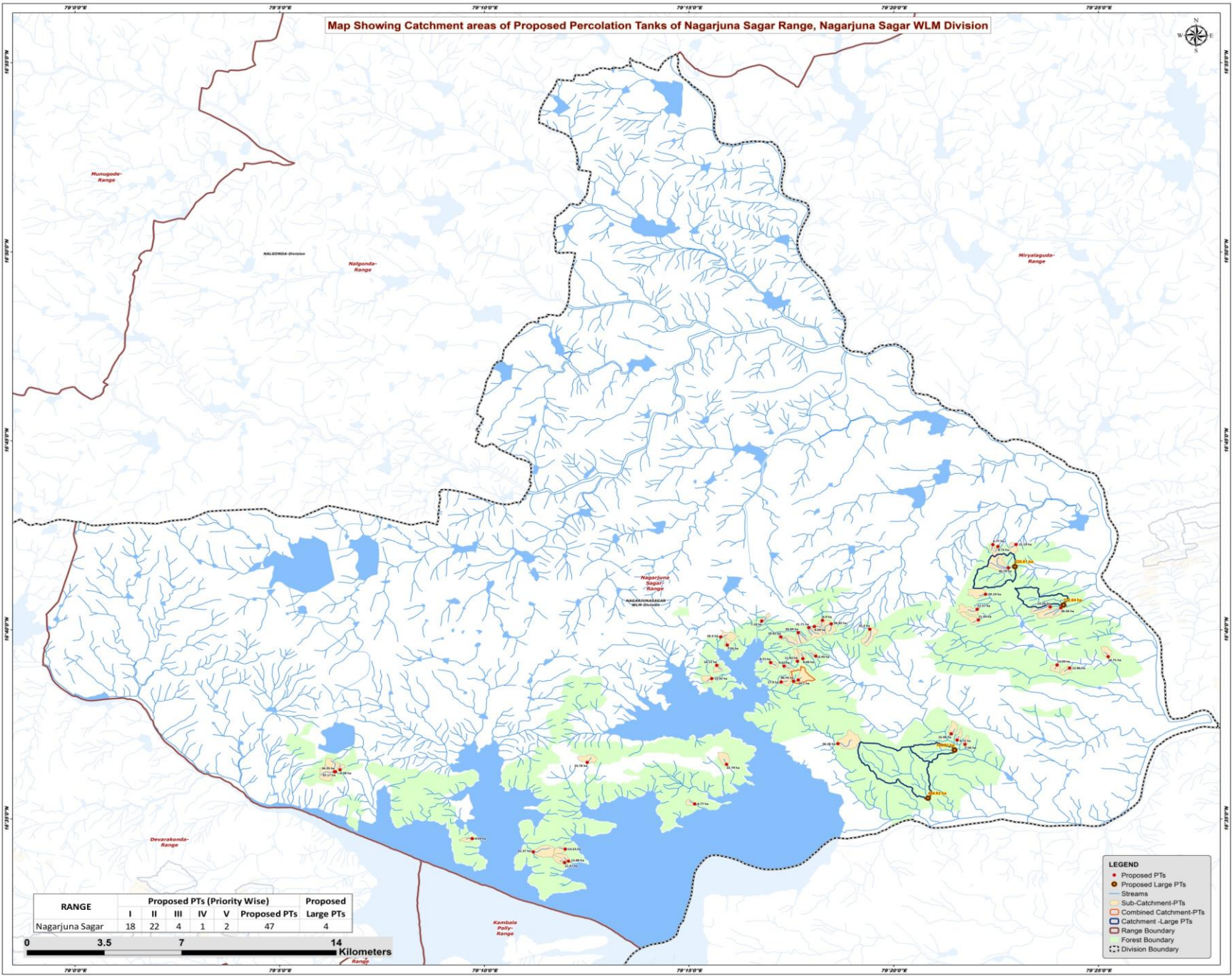
- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

**Map Showing Nagarjuna Sagar Range in Nagarjunasagar WLM Division**





Map Showing Catchment areas of Proposed Percolation Tanks of Nagarjuna Sagar Range, Nagarjuna Sagar WLM Division



RANGE	Proposed PTs (Priority Wise)					Proposed Large PTs
	I	II	III	IV	V	
Nagarjuna Sagar	18	22	4	1	2	47
						4

- LEGEND**
- Proposed PTs
  - Proposed Large PTs
  - Streams
  - Sub-Catchment-PTs
  - Combined Catchment-PTs
  - Catchment -Large PTs
  - Range Boundary
  - ▭ Forest Boundary
  - ⋯ Division Boundary



## Beat wise Abstract of Proposed PT's – Nagarjunasagar Range

S. No.	Beat	Proposed PT's
1	BUDIDAGATTU	4
2	CHINTALPALEM	3
3	GODUMADAKA	2
4	NAGARJUNASAGAR	1
5	NAMBAPUR	1
6	NELLIKAL	19
7	PEDDAGATTU	2
8	RANGUNDLA	1
9	THUKINUTHALA	4
10	WADDIPATLA	4
11	YELLAPUR	6
	<b>Total</b>	<b>47</b>

## List of Proposed PTs – Nagarjunsagar Range

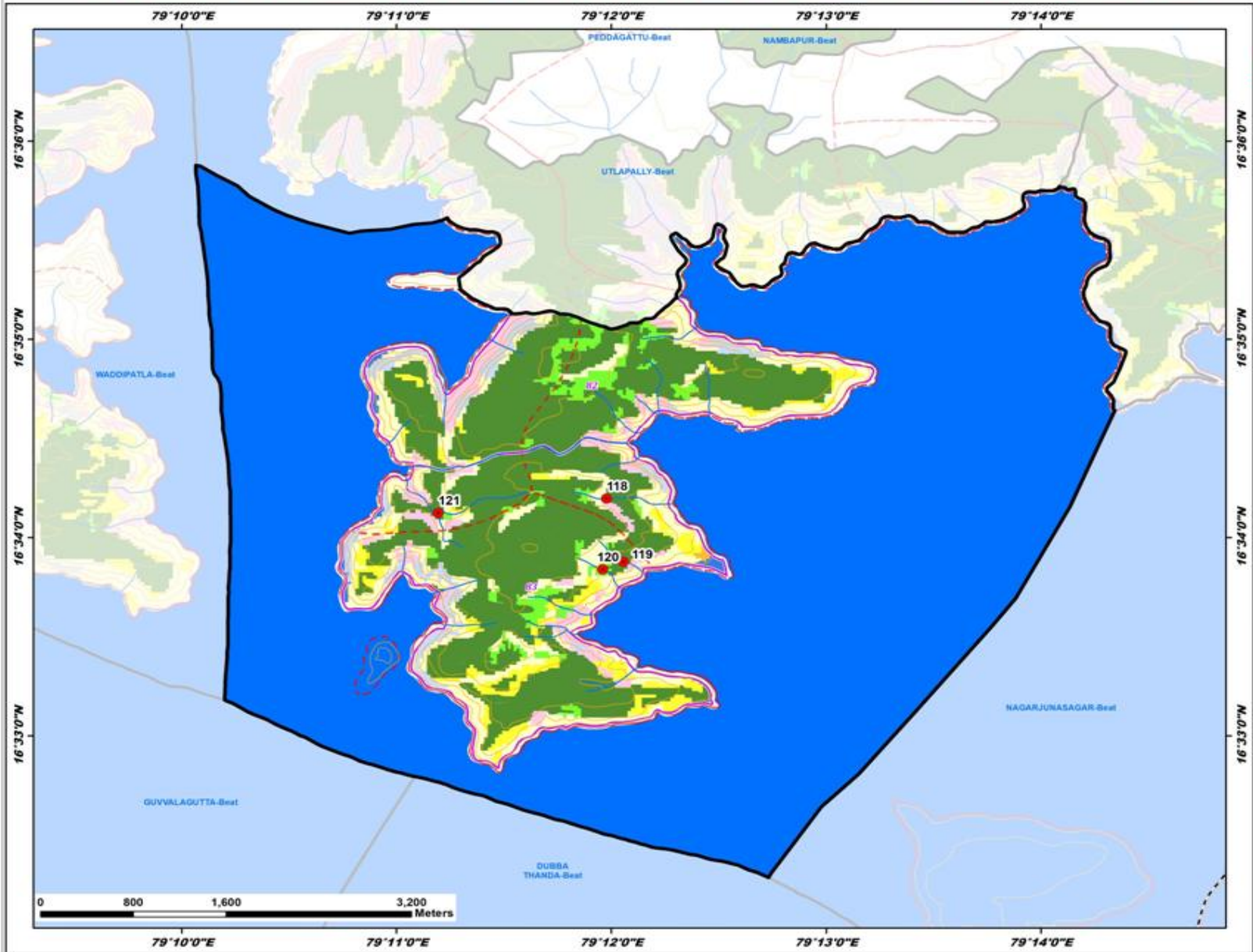
ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
79	16.620819	79.356764	16.98	I	CHINTALAPALEM
80	16.618034	79.359158	8.72	I	CHINTALAPALEM
81	16.616136	79.362395	7.06	I	CHINTALAPALEM
82	16.616436	79.310635	58.38	IV	NAGARJUNASAGAR
83	16.663520	79.262907	20.50	I	NELLIKAL
84	16.670484	79.279618	7.18	I	NELLIKAL
85	16.667605	79.298784	21.71	I	NELLIKAL
86	16.655064	79.301622	6.49	II	NELLIKAL
87	16.652222	79.283245	8.71	II	NELLIKAL
88	16.659914	79.265572	7.26	II	NELLIKAL
89	16.643642	79.287514	17.90	II	NELLIKAL
90	16.653906	79.296363	8.68	II	NELLIKAL
91	16.663543	79.287399	19.82	II	NELLIKAL
92	16.670825	79.304353	6.90	II	NELLIKAL
93	16.665441	79.294467	20.49	II	NELLIKAL
94	16.650678	79.288733	9.42	II	NELLIKAL
95	16.652773	79.294184	11.82	II	NELLIKAL
96	16.645155	79.259269	13.92	II	NELLIKAL
97	16.668094	79.301040	9.09	II	NELLIKAL
98	16.650975	79.261312	10.11	II	NELLIKAL
99	16.669255	79.307895	28.85	III	NELLIKAL
100	16.644498	79.294482	29.10	V	NELLIKAL
101	16.644008	79.292557	46.76	V	NELLIKAL
102	16.666915	79.323603	32.40	III	RANGUNDLA
103	16.608175	79.208584	24.78	I	NAMBAPUR
104	16.607304	79.265299	22.79	I	PEDDAGATTU
105	16.589880	79.252331	8.77	I	PEDDAGATTU
106	16.651138	79.399871	13.09	I	GODUMADAKA
107	16.649775	79.404986	12.86	I	GODUMADAKA
108	16.654805	79.420696	16.71	I	THUKINUTHALA
109	16.671002	79.367812	21.44	II	THUKINUTHALA
110	16.675693	79.367343	27.57	II	THUKINUTHALA
111	16.682322	79.370766	29.19	III	THUKINUTHALA
112	16.704245	79.373753	6.77	I	YELLAPUR
113	16.704284	79.383187	15.19	I	YELLAPUR
114	16.676363	79.401491	36.36	II	YELLAPUR
115	16.703405	79.375788	8.73	II	YELLAPUR
116	16.693975	79.380076	49.79	II	YELLAPUR
117	16.676738	79.397082	22.26	II	YELLAPUR
118	16.569958	79.199634	13.23	I	BUDIDAGATTU

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
119	16.564646	79.200945	13.88	I	BUDIDAGATTU
120	16.564000	79.199334	12.47	II	BUDIDAGATTU
121	16.568742	79.186579	41.37	III	BUDIDAGATTU
122	16.604933	79.107910	6.08	I	WADDIPATLA
123	16.574592	79.161756	9.54	I	WADDIPATLA
124	16.604057	79.106049	25.17	II	WADDIPATLA
125	16.604083	79.105688	34.35	II	WADDIPATLA

# Map Showing Suitability Index for Construction of SMC Works of Budidagattu Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
118	16.569958	79.199634	13.23	I
119	16.564646	79.200945	13.88	I
120	16.564000	79.199334	12.47	II
121	16.568742	79.186579	41.37	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- ▭ Watershed Boundary
- ▭ Compartment Boundary
- ▭ Beat Boundary
- ▭ Division Boundary

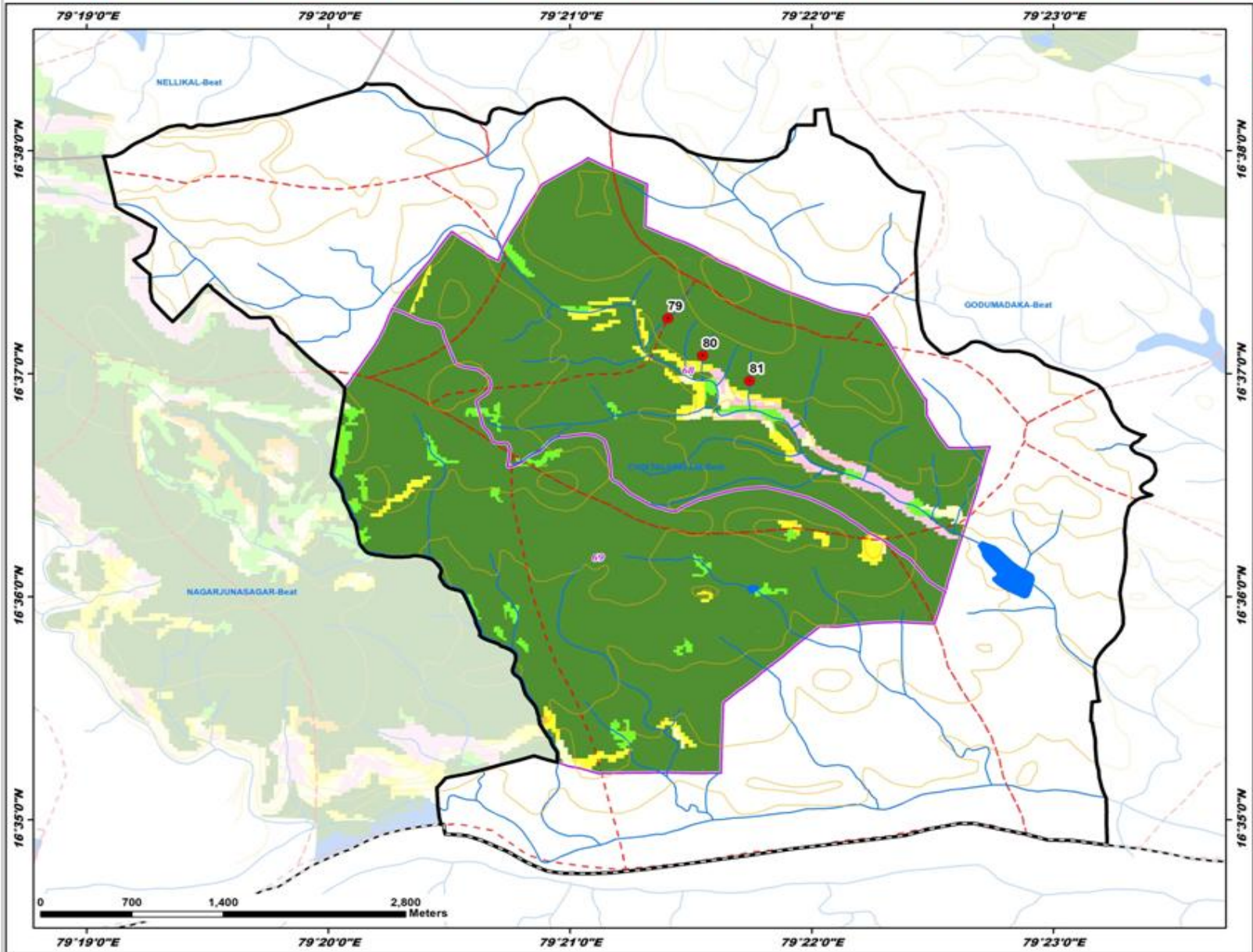
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Chintalapalem Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
79	16.620819	79.356764	16.98	I
80	16.618034	79.359158	8.72	I
81	16.616136	79.362395	7.06	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

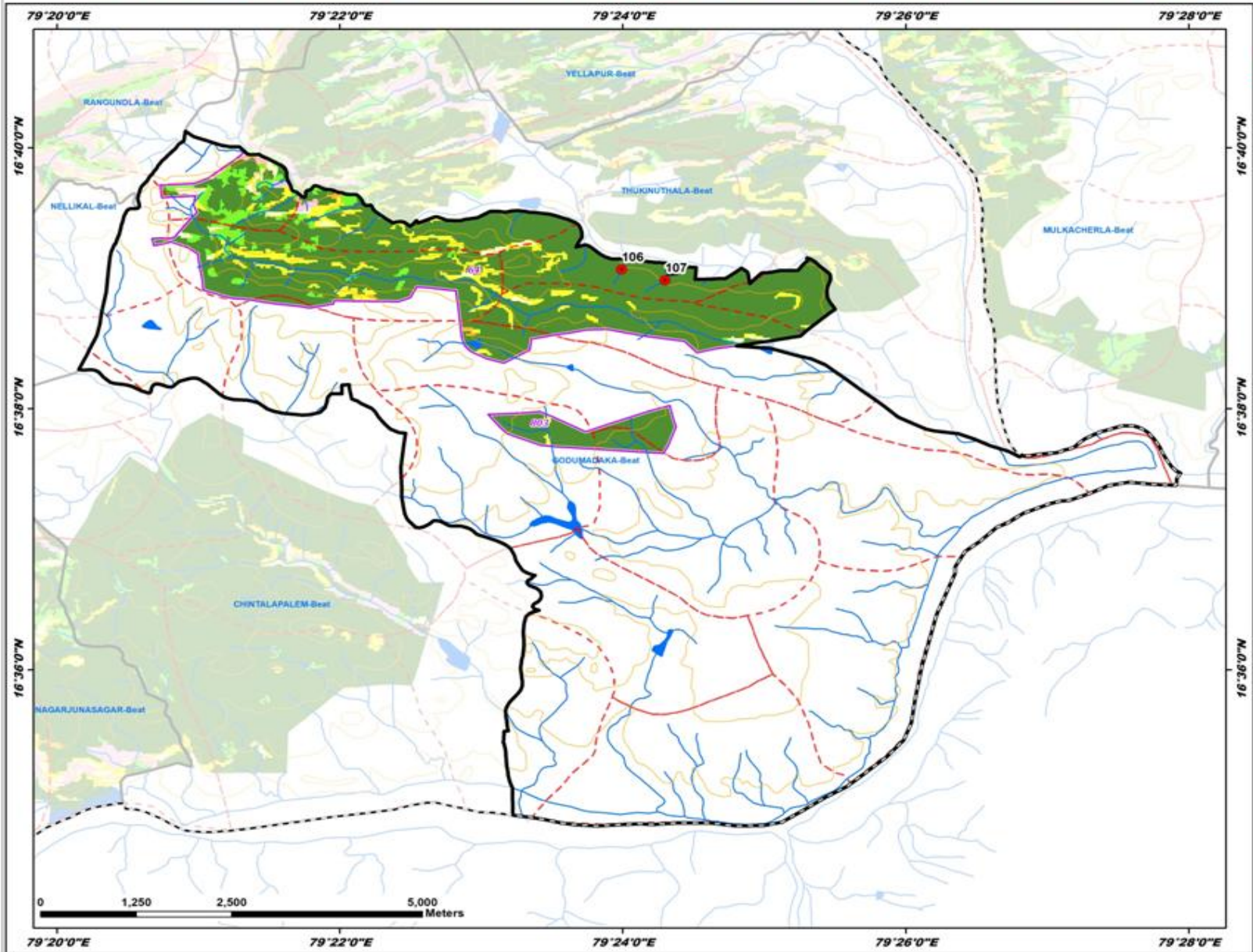
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Godumadaka Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
106	16.651138	79.399871	13.09	I
107	16.649775	79.404886	12.86	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

**Suitability Index**

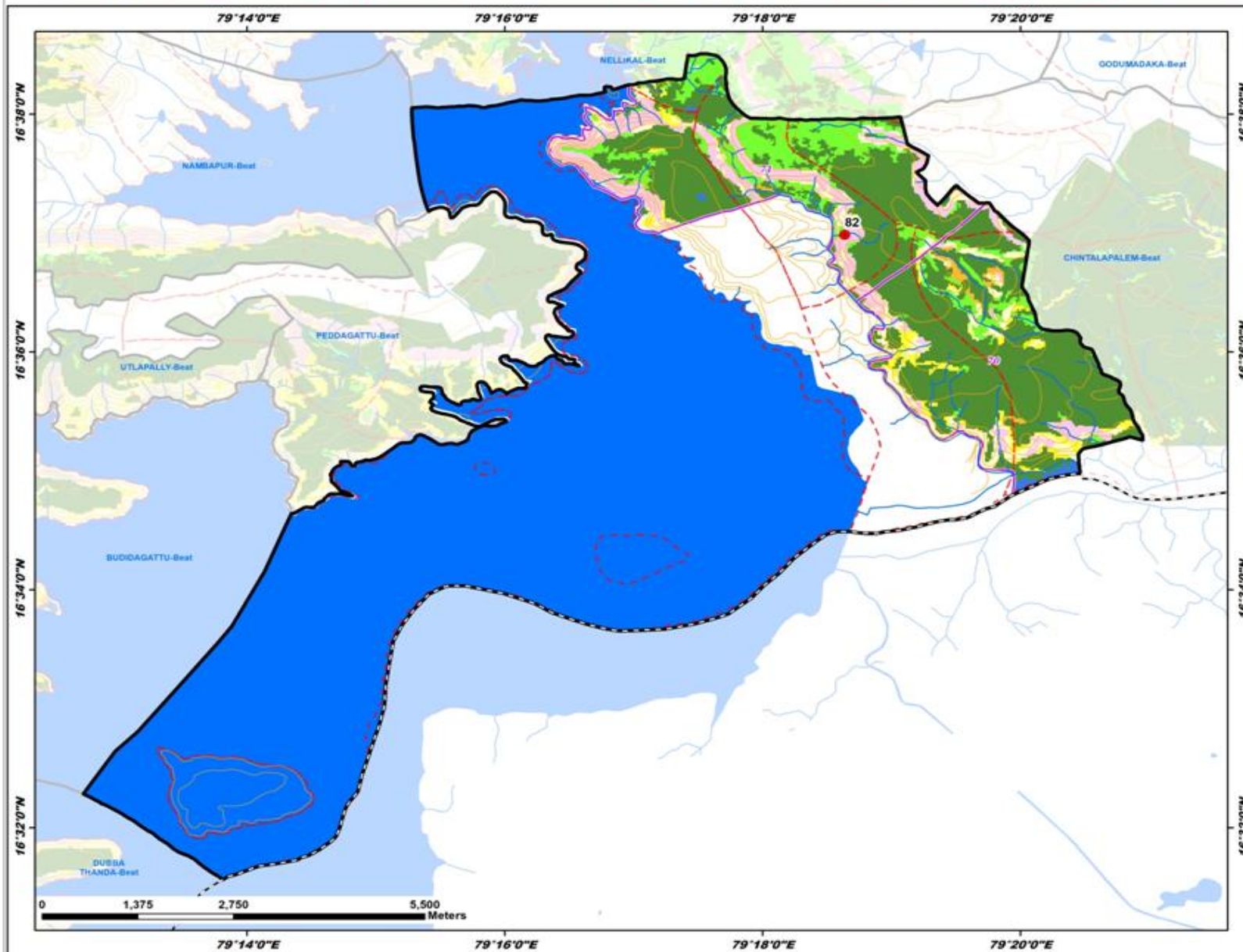
- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body



# Map Showing Suitability Index for Construction of SMC Works of Nagarjunasagar Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
82	16.616436	79.330635	58.38	IV

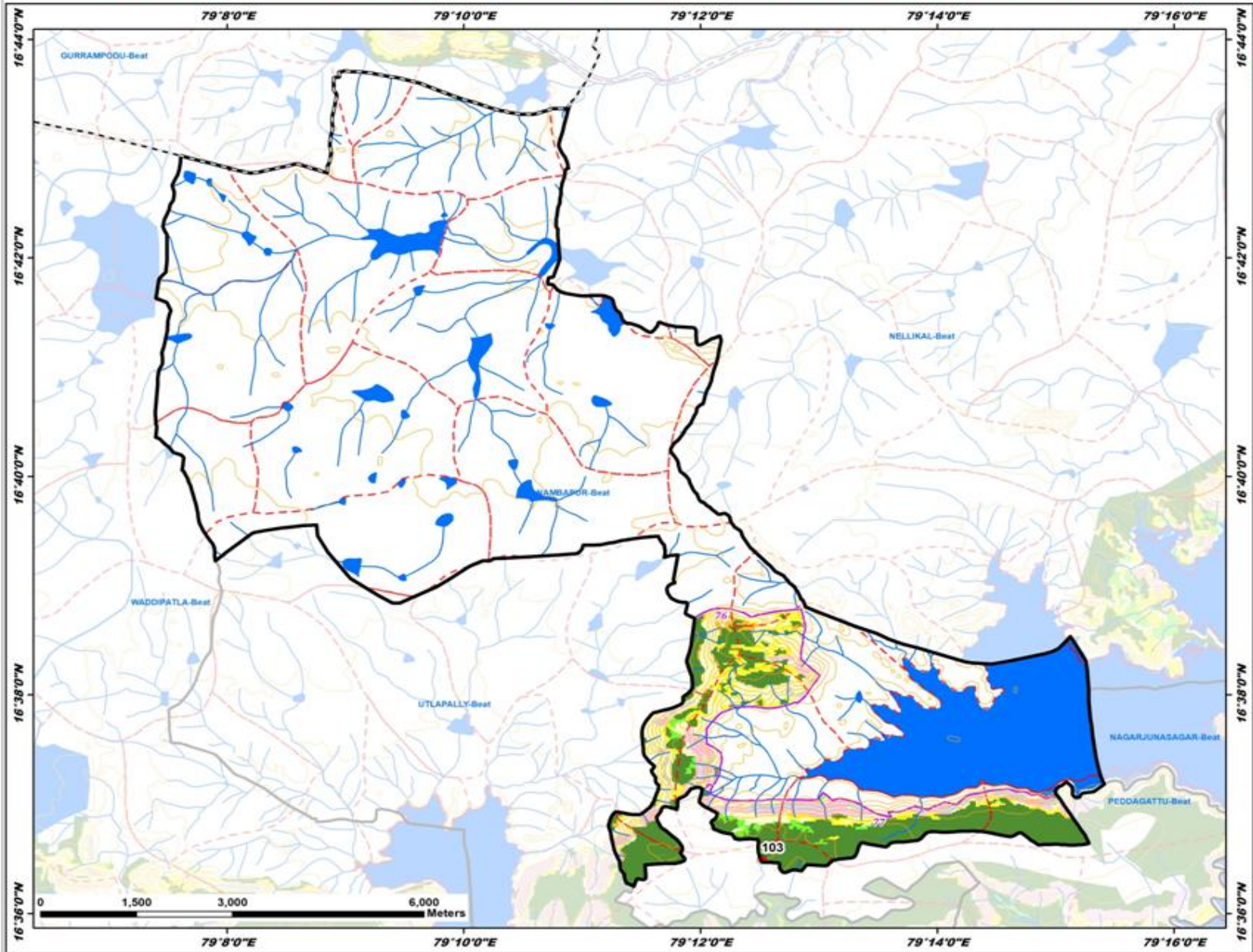
### LEGEND

- Proposed PTs
  - Existing CD/PTs
  - Contours
  - Streams
  - - - Watershed Boundary
  - - - Compartment Boundary
  - ▭ Beat Boundary
  - - - Division Boundary
- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Nambapur Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
103	16.608175	79.208584	24.78	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

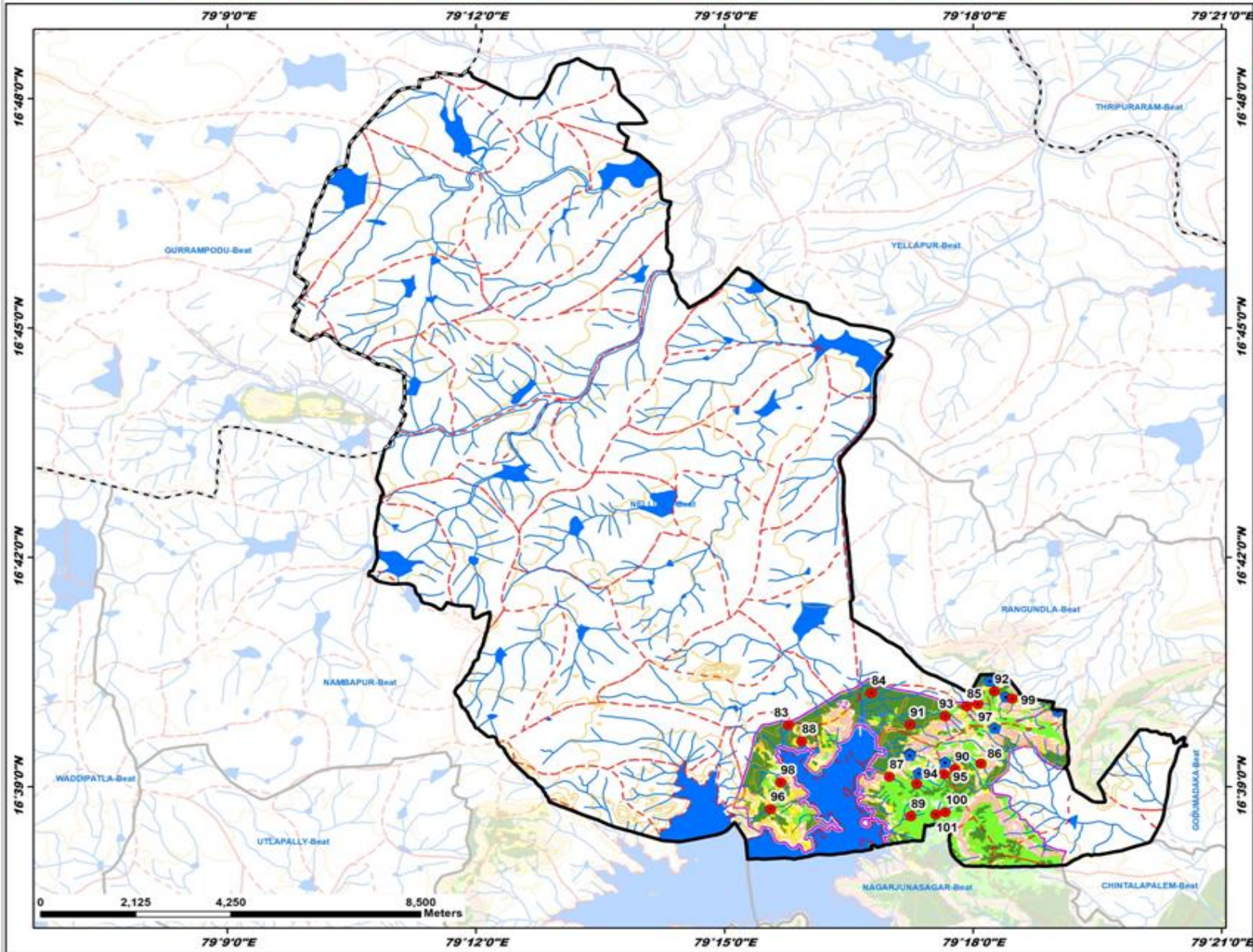
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Nellikal Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
83	16.663520	79.262907	20.50	I
84	16.670484	79.279638	7.18	I
85	16.667605	79.298784	21.71	I
86	16.655064	79.305622	6.49	II
87	16.652222	79.283245	8.71	II
88	16.659914	79.265572	7.26	II
89	16.643642	79.287514	17.90	II
90	16.653906	79.296363	8.68	II
91	16.663543	79.287399	19.82	II
92	16.670825	79.304353	6.90	II
93	16.665441	79.294467	20.49	II
94	16.650678	79.288733	9.42	II
95	16.652773	79.294184	11.82	II
96	16.645155	79.259269	13.92	II
97	16.668094	79.305040	9.09	II
98	16.650975	79.261312	10.11	II
99	16.669255	79.307895	28.85	III
100	16.644498	79.294482	25.10	V
101	16.644008	79.292557	46.76	V

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- - - Watershed Boundary
- - - Compartment Boundary
- ▭ Beat Boundary
- - - Division Boundary

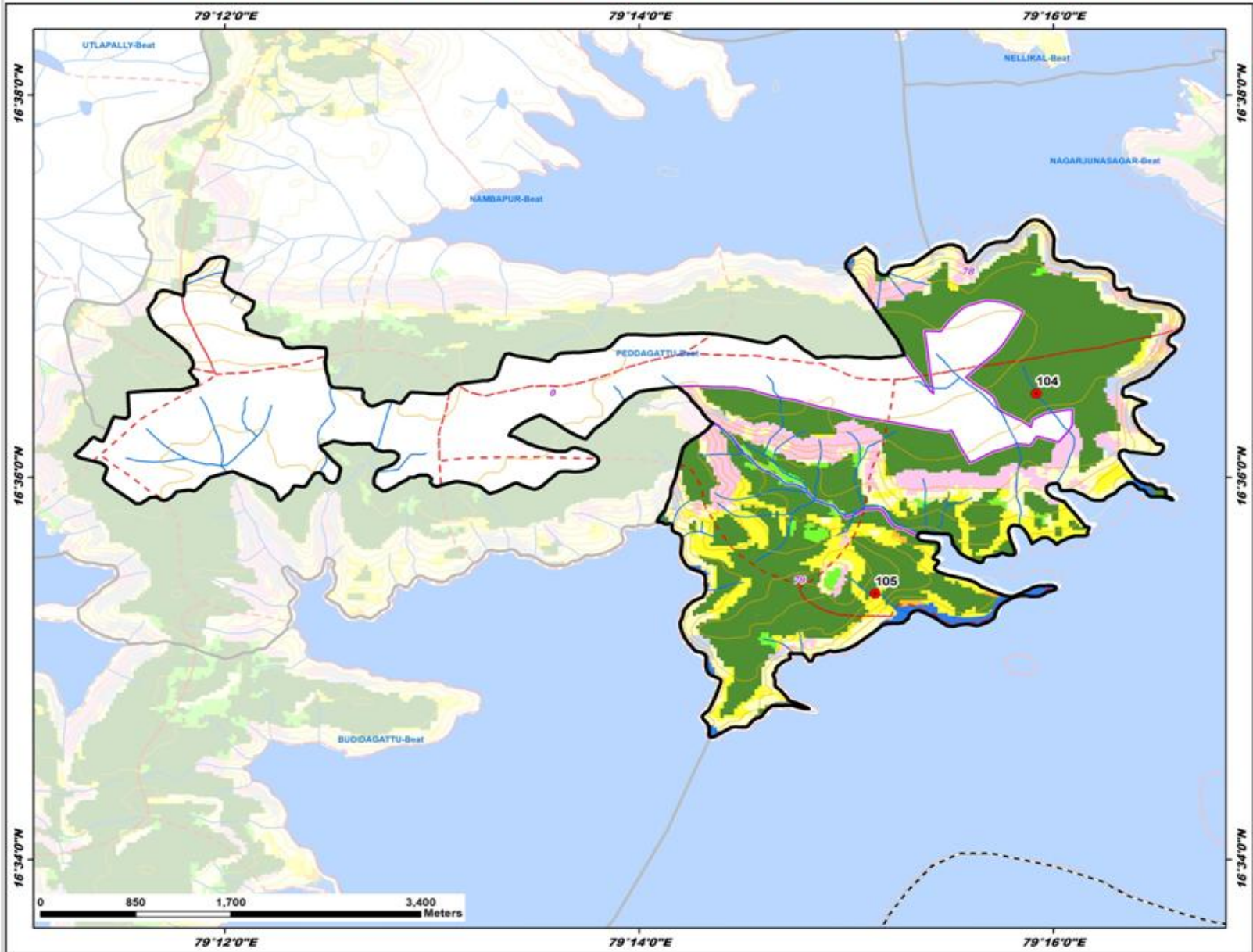
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Peddagattu Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
104	16.607904	79.265299	22.79	I
105	16.589880	79.252331	8.77	I

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

**Suitability Index**

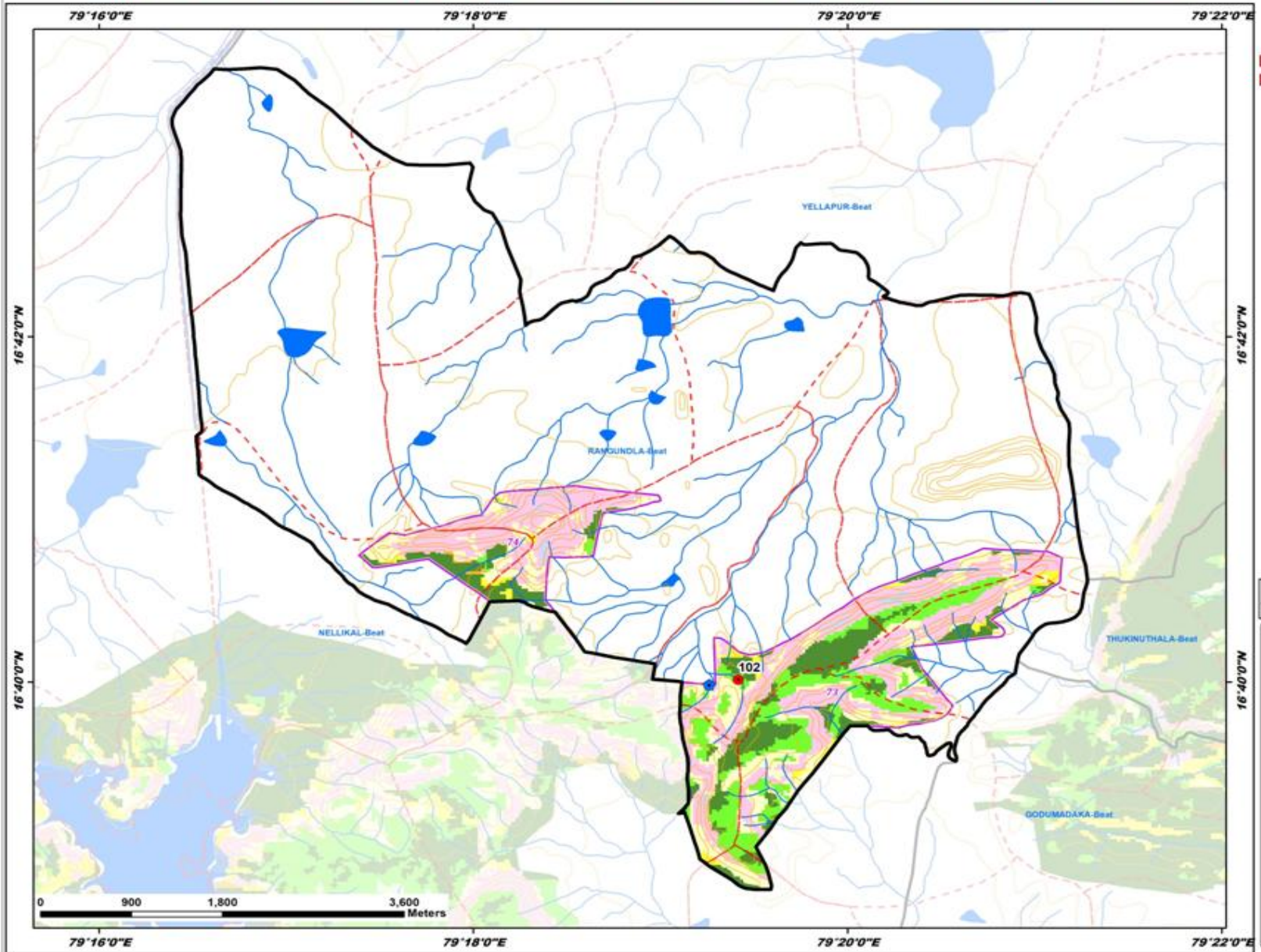
- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body



# Map Showing Suitability Index for Construction of SMC Works of Rangundla Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



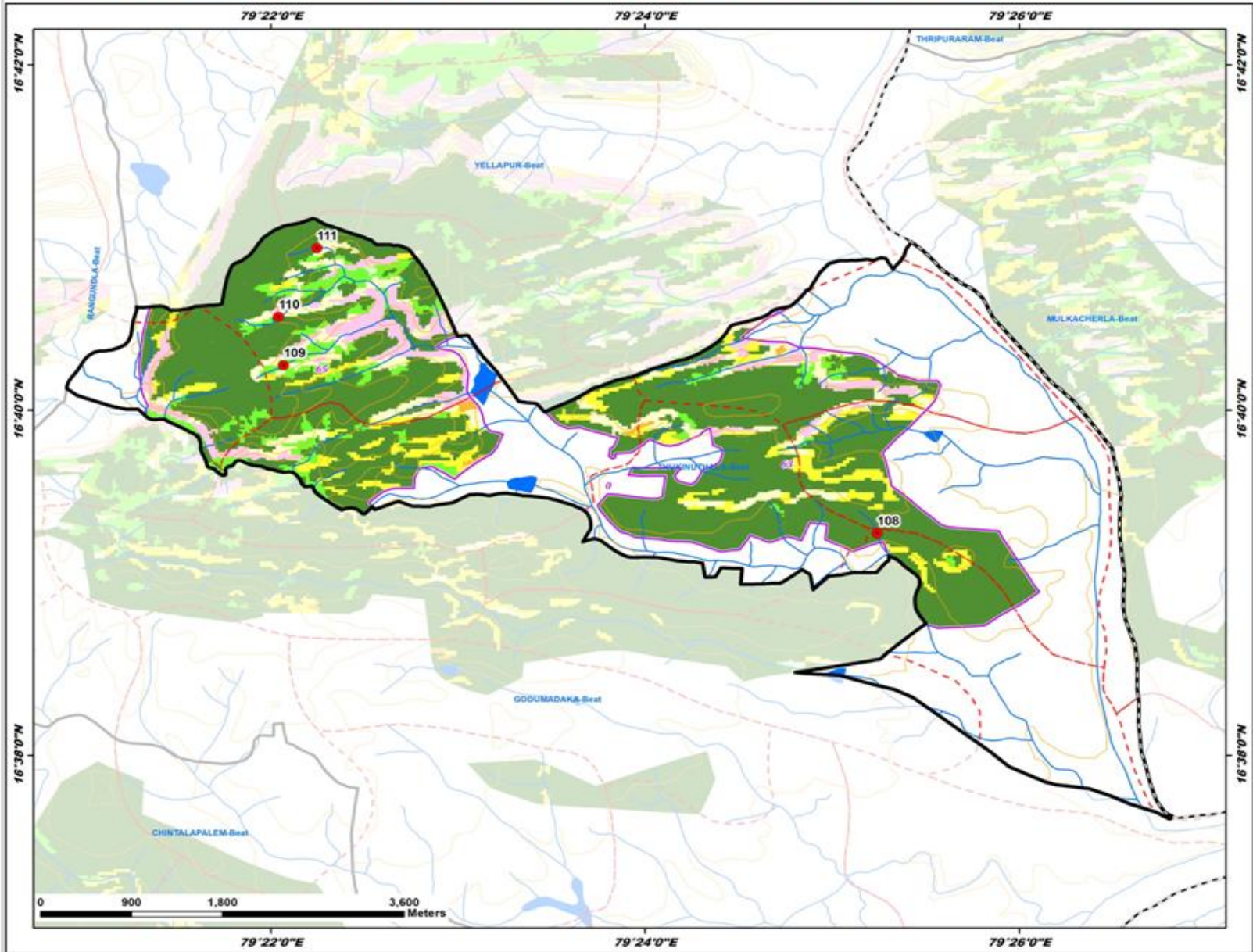
ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
102	16.666915	79.323603	32.40	III

- LEGEND**
- Proposed PTs
  - Existing CD/PTs
  - Contours
  - Streams
  - - - Watershed Boundary
  - - - Compartment Boundary
  - ▭ Beat Boundary
  - - - Division Boundary
- Suitability Index**
- CCTs/SCTs - Highly Suitable
  - CCTs/SCTs - Moderately Suitable
  - CCTs/SCTs - Least Suitable
  - PTs - Highly Suitable
  - PTs - Moderately Suitable
  - PTs - Least Suitable
  - MPTs and SGPs - Suitable
  - Not Suitable
  - Water Body

# Map Showing Suitability Index for Construction of SMC Works of Thukinuthala Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
108	16.654805	79.420696	16.71	I
109	16.671002	79.367812	21.64	II
110	16.675693	79.367343	27.57	II
111	16.682322	79.370766	29.19	III

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

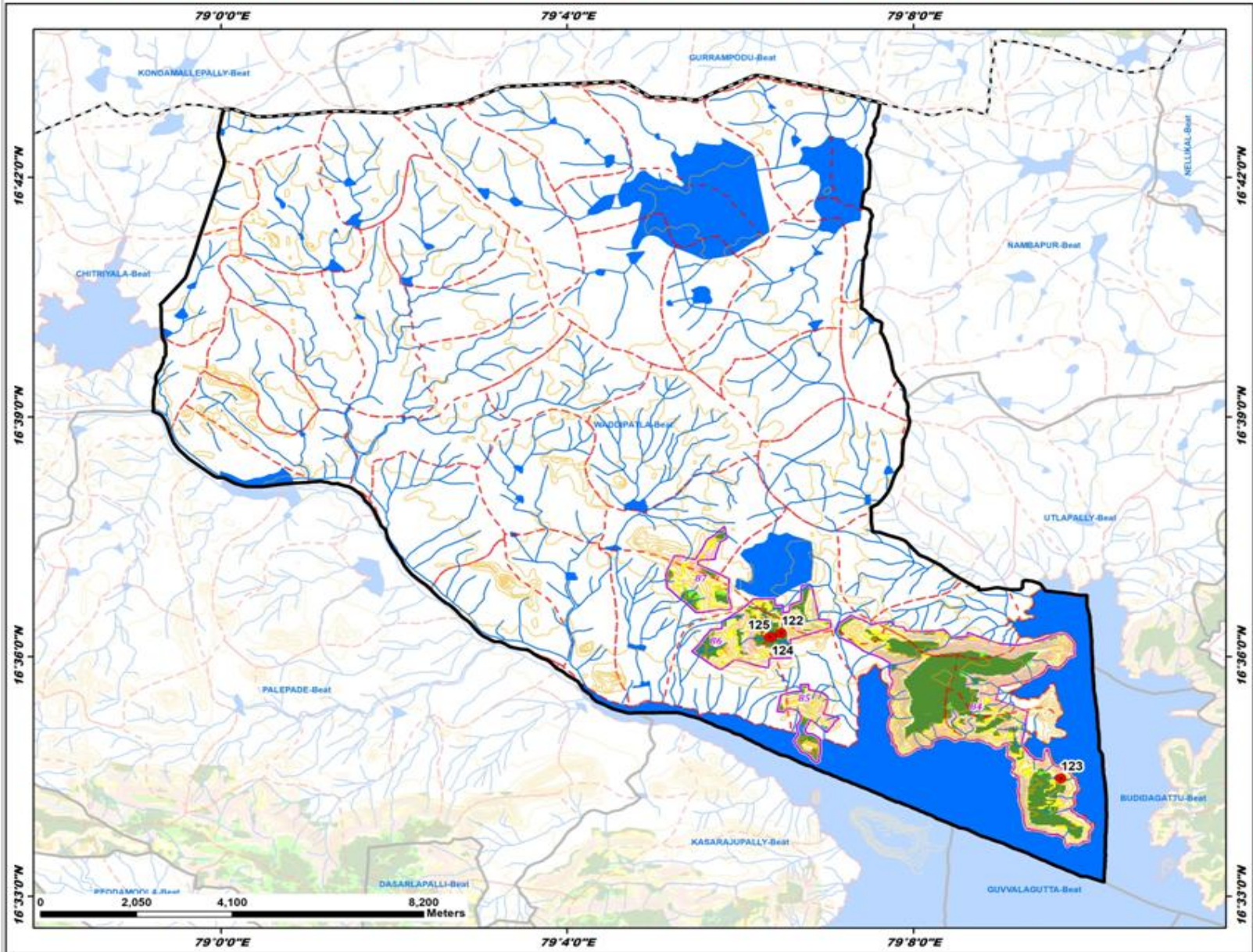
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Waddipatla Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
122	16.604933	79.107910	6.08	I
123	16.574592	79.161756	9.54	I
124	16.604057	79.106049	25.17	II
125	16.604083	79.105688	34.35	II

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

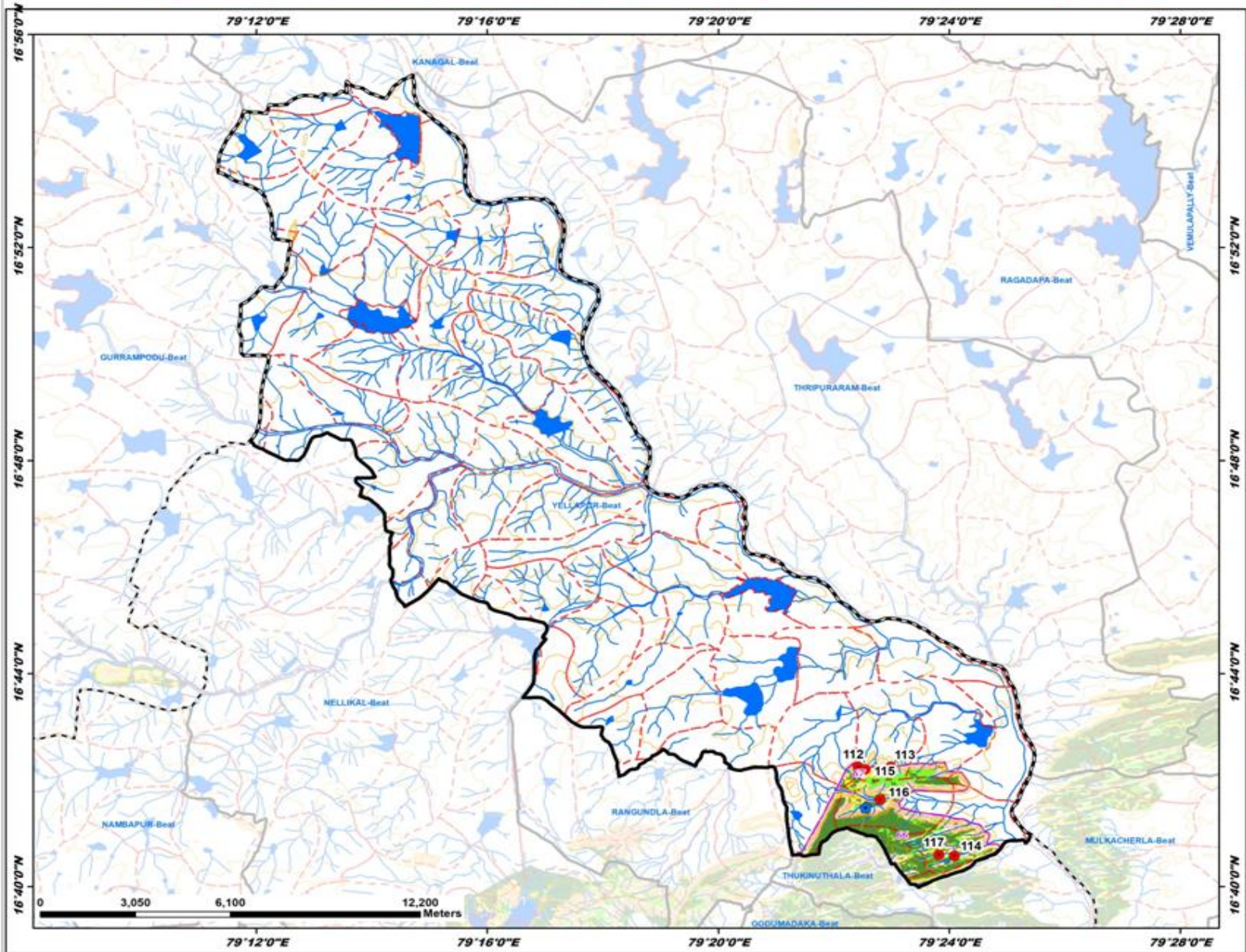
**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body

# Map Showing Suitability Index for Construction of SMC Works of Yellapur Beat



Division : Nagarjunasagar  
Range : Nagarjunasagar



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
112	16.704245	79.373753	6.77	I
113	16.704284	79.383187	15.19	I
114	16.676363	79.403491	36.36	II
115	16.703405	79.375788	8.73	II
116	16.693975	79.380076	49.79	II
117	16.676738	79.397082	22.26	II

**LEGEND**

- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

**Suitability Index**

- CCTs/SCTs - Highly Suitable
- CCTs/SCTs - Moderately Suitable
- CCTs/SCTs - Least Suitable
- PTs - Highly Suitable
- PTs - Moderately Suitable
- PTs - Least Suitable
- MPTs and SGPs - Suitable
- Not Suitable
- Water Body