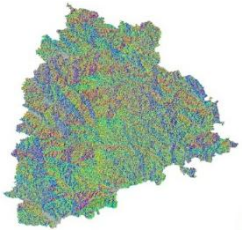
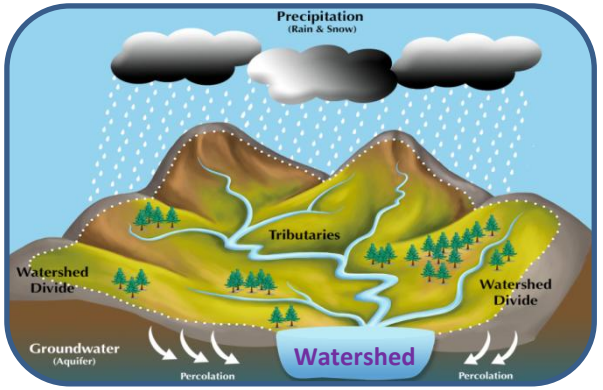
Government of Telangana – Forest Department

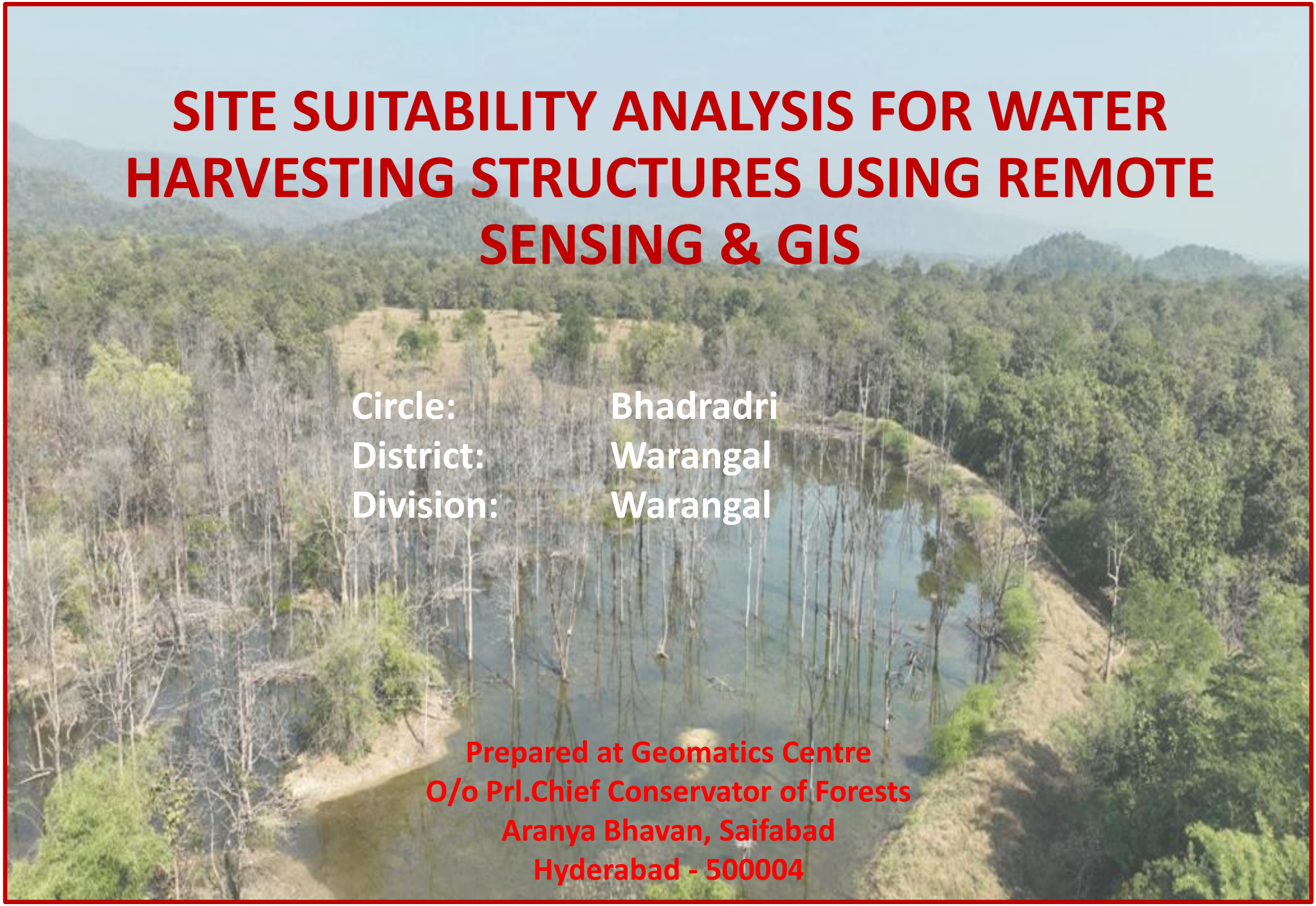


SITE SUITABILITY ANALYSIS FOR WATER HARVESTING STRUCTURES USING REMOTE SENSING & GIS



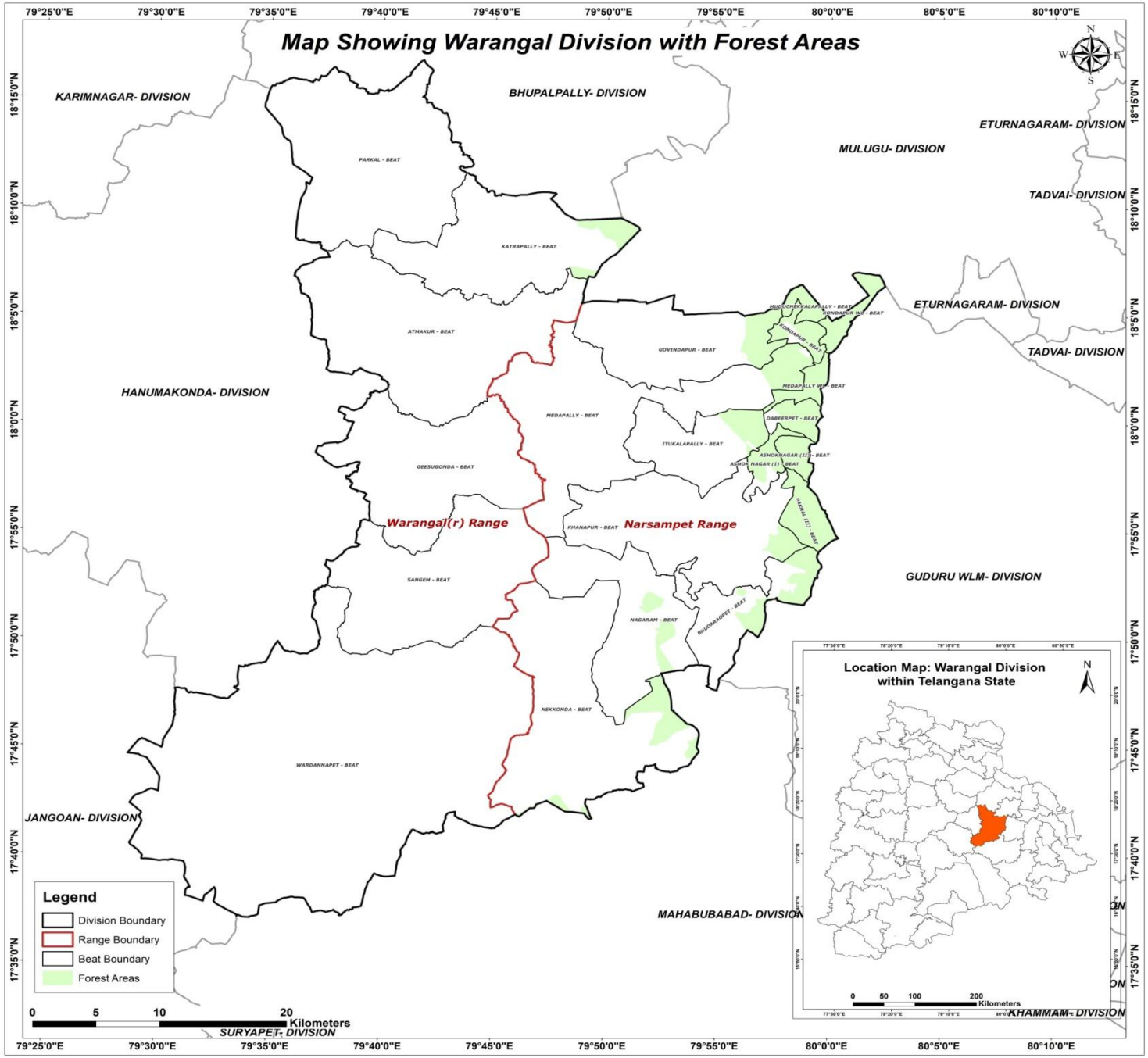
Prepared at Geomatics Centre
Office of Prl. Chief Conservator of Forests
Aranya Bhavan, Hyderabad - 04

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



Circle: Bhadradri
District: Warangal
Division: Warangal

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


Map Showing Warangal Division with Forest Areas
KARIMNAGAR- DIVISION
BHUPALPALLY- DIVISION
ETURNAGARAM- DIVISION
MULUGU- DIVISION
TADVAI- DIVISION
HANUMAKONDA- DIVISION
GUDURU WLM- DIVISION
JANGOAN- DIVISION
MAHABUBABAD- DIVISION
KHAMMAM- DIVISION
SURYAPET- DIVISION
Warangal(r) Range
Narsampet Range
PARKAL - BEAT
KATRAPALLY - BEAT
ATMAKUR - BEAT
GOVINDAPUR - BEAT
MEDAPALLY - BEAT
GEESUGONDA - BEAT
ITUKALAPALLY - BEAT
KHANAPUR - BEAT
SANGEM - BEAT
NAGARAM - BEAT
NEKKONDA - BEAT
WARDANNAPET - BEAT
DABEERPET - BEAT
Legend
Division Boundary
Range Boundary
Beat Boundary
Forest Areas
0 5 10 20 Kilometers
Location Map: Warangal Division within Telangana State
0 50 100 200 Kilometers
79°25'0"E
79°30'0"E
79°35'0"E
79°40'0"E
79°45'0"E
79°50'0"E
79°55'0"E
80°0'0"E
80°5'0"E
80°10'0"E
18°15'0"N
18°10'0"N
18°5'0"N
18°0'0"N
17°55'0"N
17°50'0"N
17°45'0"N
17°40'0"N
17°35'0"N

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.

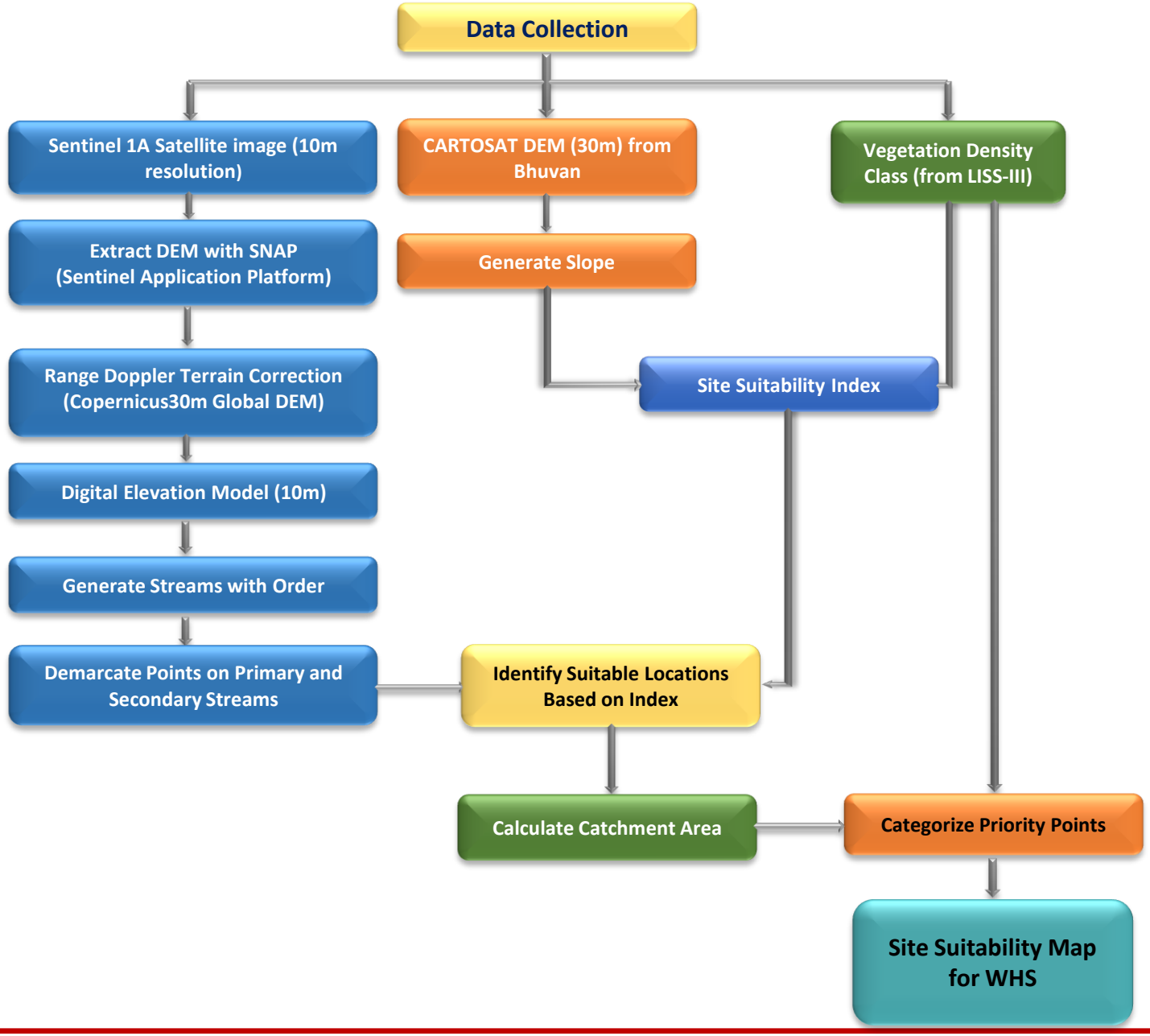
- Slope data generated from the CARTOSAT 30 m DEM (Source: Bhuvan) were also included in the analysis.

- 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.

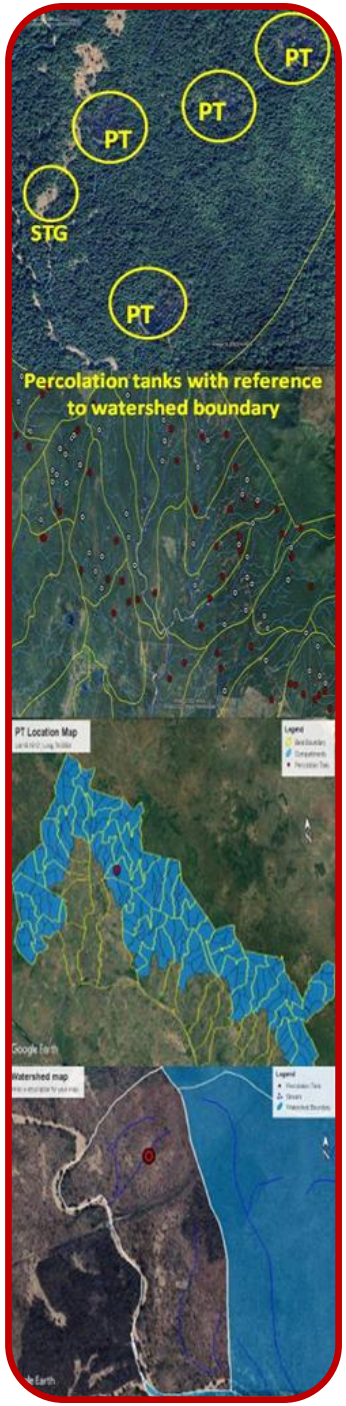
- Planting native vegetation around the tank can stabilize the soil, prevent erosion, and improve water absorption. Use plants that are well suited to the local environment.

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

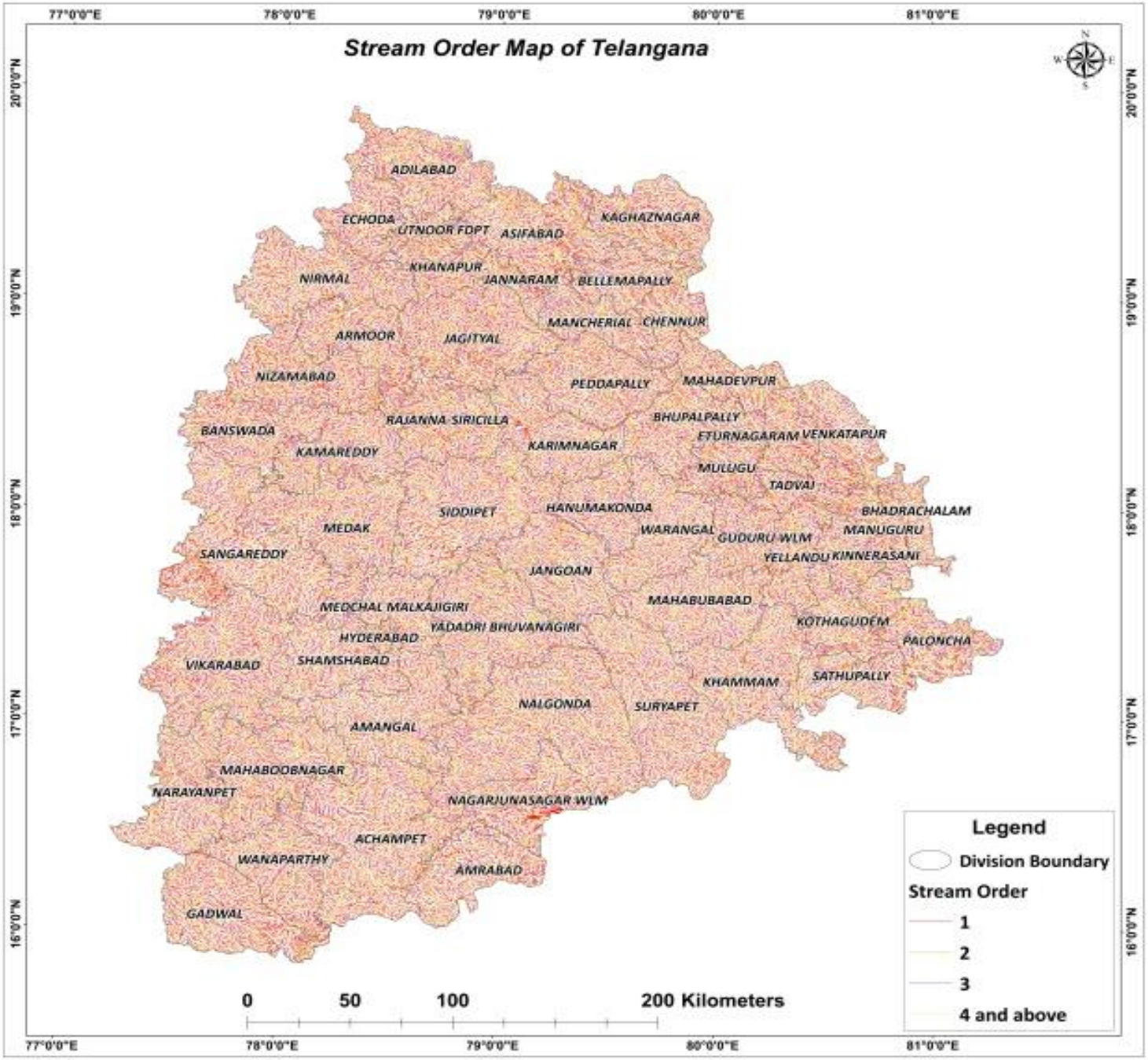
Suitability criteria for Continuous/Staggered contour trenches

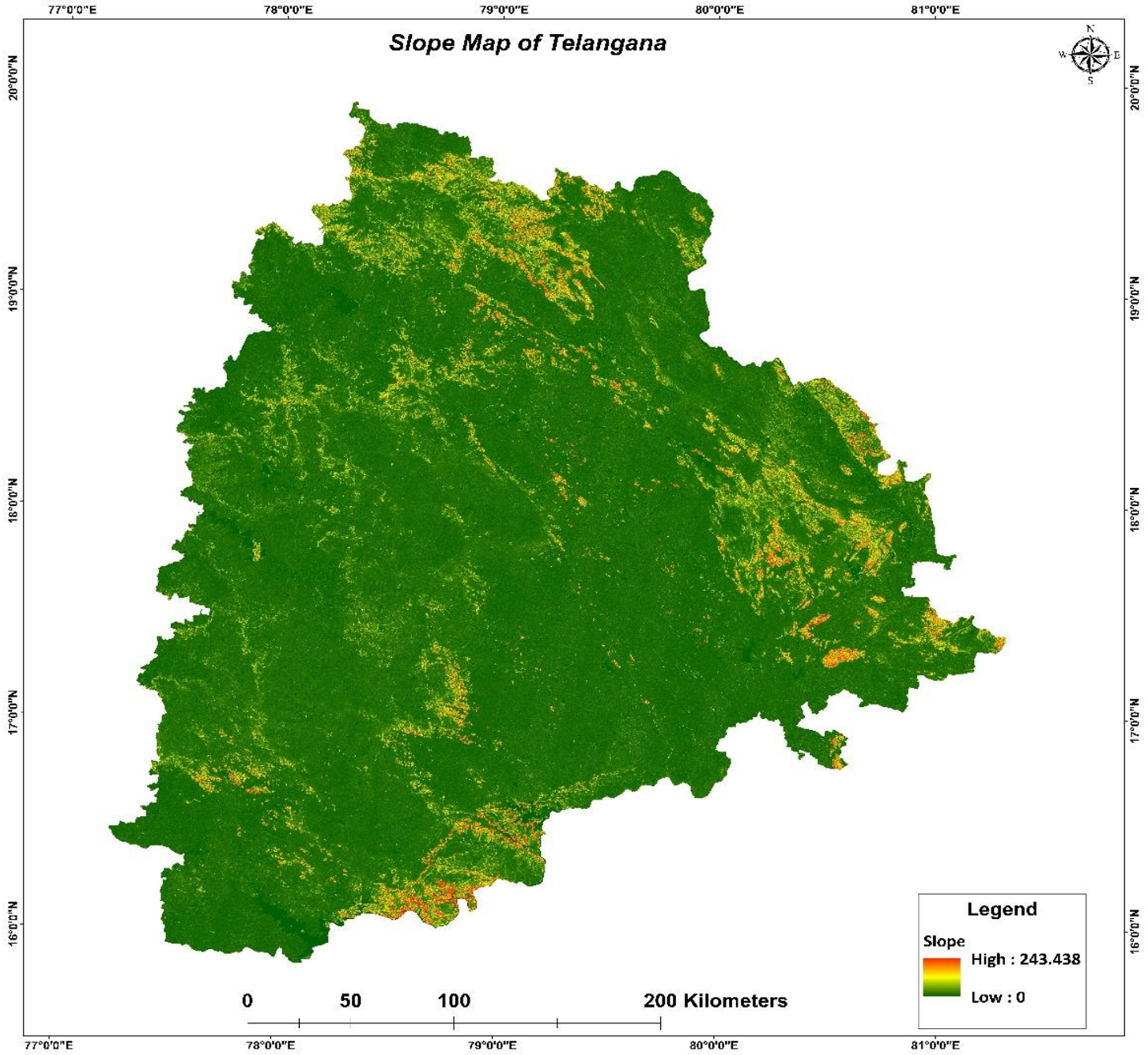
Rank	Slope classes (Degrees)	Density Classes
Highly Suitable	>5 and <= 10	Blanks
Moderately Suitable	>5 and <= 10	Scrub forest
Least suitable	>5 and <= 10	Open forest
	> 10 and < 25	Blanks & scrubs
MPTs and SGPs	>5 and <= 10	Dense Forest
	> 10 and < 25	Open and Dense forest



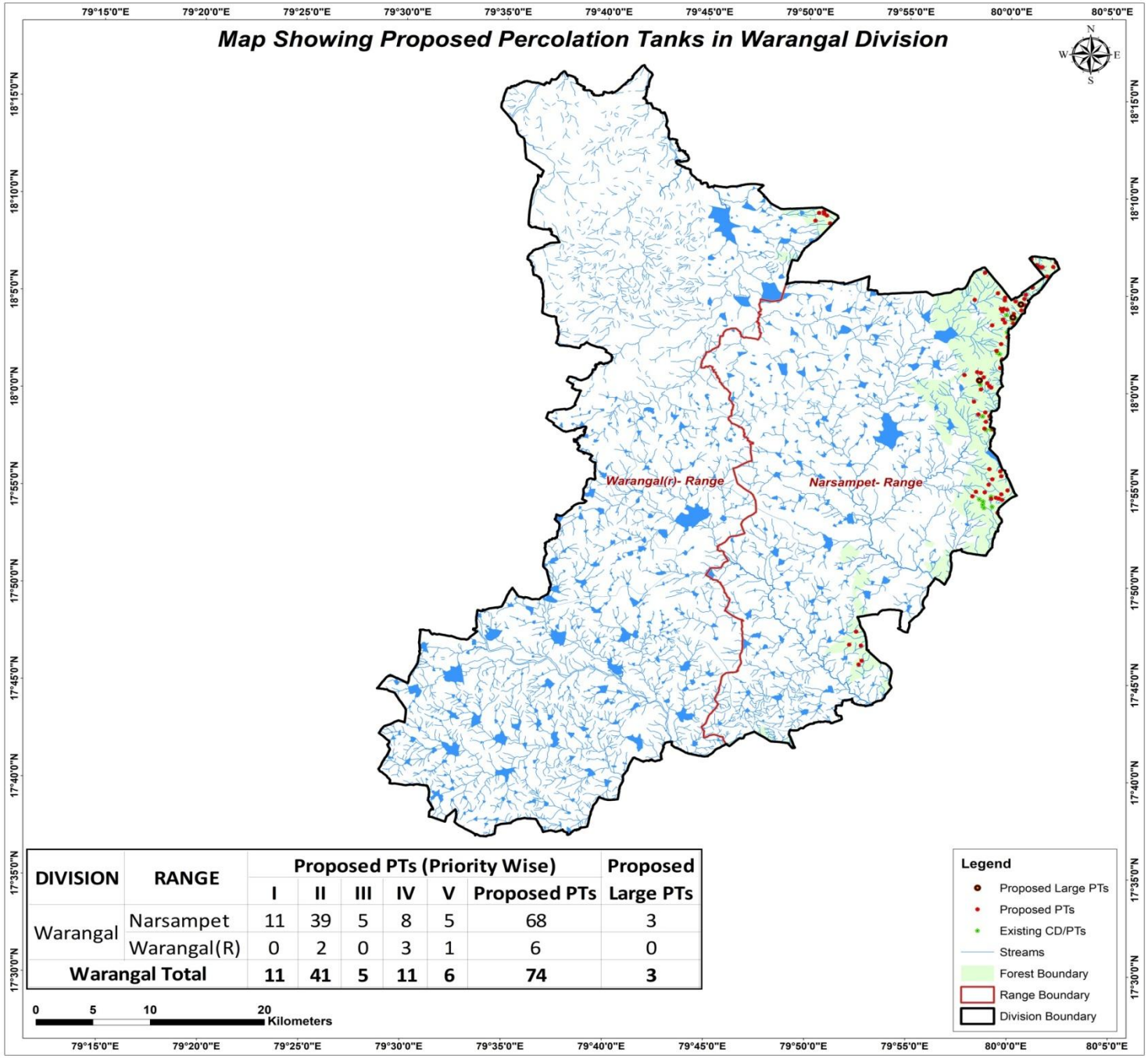
PRIORITY CLASSES FOR PERCOLATION TANK

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


Stream Order Map of Telangana
77°0'0"E
78°0'0"E
79°0'0"E
80°0'0"E
81°0'0"E
20°0'0"N
19°0'0"N
18°0'0"N
17°0'0"N
16°0'0"N
ADILABAD
ECHODA
UTNOOR FDPT
ASIFABAD
KAGHAZNAGAR
KHANAPUR
NIRMAL
JANNARAM
BELLEMAPALLY
MANCHERIAL
CHENNUR
ARMOOR
JAGITYAL
NIZAMABAD
PEDDAPALLY
MAHADEVPUR
RAJANNA SIRICILLA
BHUPALPALLY
BANSWADA
ETURNAGARAM
VENKATAPUR
KAMAREDDY
KARIMNAGAR
MULUGU
TADVAI
SIDDIPET
HANUMAKONDA
BHADRACHALAM
MEDAK
WARANGAL
MANUGURU
GUDURU WLM
SANGAREDDY
YELLANDU
KINNERASANI
JANGOAN
MAHABUBABAD
MEDCHAL MALKAJIGIRI
KOTHAGUDEM
YADADRI BHUVANAGIRI
HYDERABAD
PALONCHA
VIKARABAD
SHAMSHABAD
KHAMMAM
SATHUPALLY
NALGONDA
SURYAPET
AMANGAL
MAHABOOBNAGAR
NARAYANPET
NAGARJUNASAGAR WLM
ACHAMPET
WANAPARTHY
AMRABAD
GADWAL
0
50
100
200 Kilometers
Legend
Division Boundary
Stream Order
1
2
3
4 and above

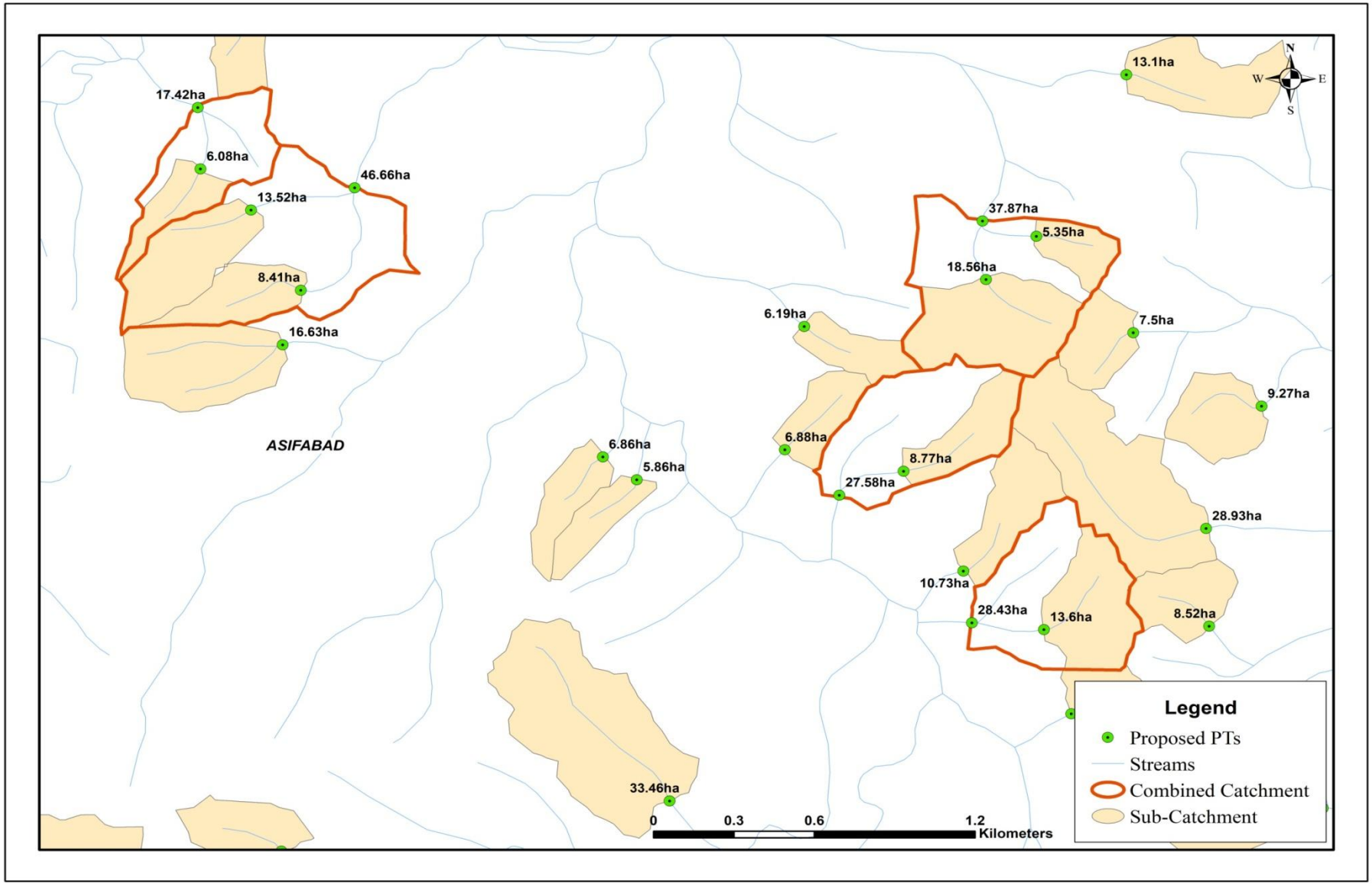

Slope Map of Telangana
77°0'0"E
78°0'0"E
79°0'0"E
80°0'0"E
81°0'0"E
20°0'0"N
19°0'0"N
18°0'0"N
17°0'0"N
16°0'0"N
N
W
E
S
Legend
Slope
High : 243.438
Low : 0
0
50
100
200 Kilometers

Map Showing Proposed Percolation Tanks in Warangal Division

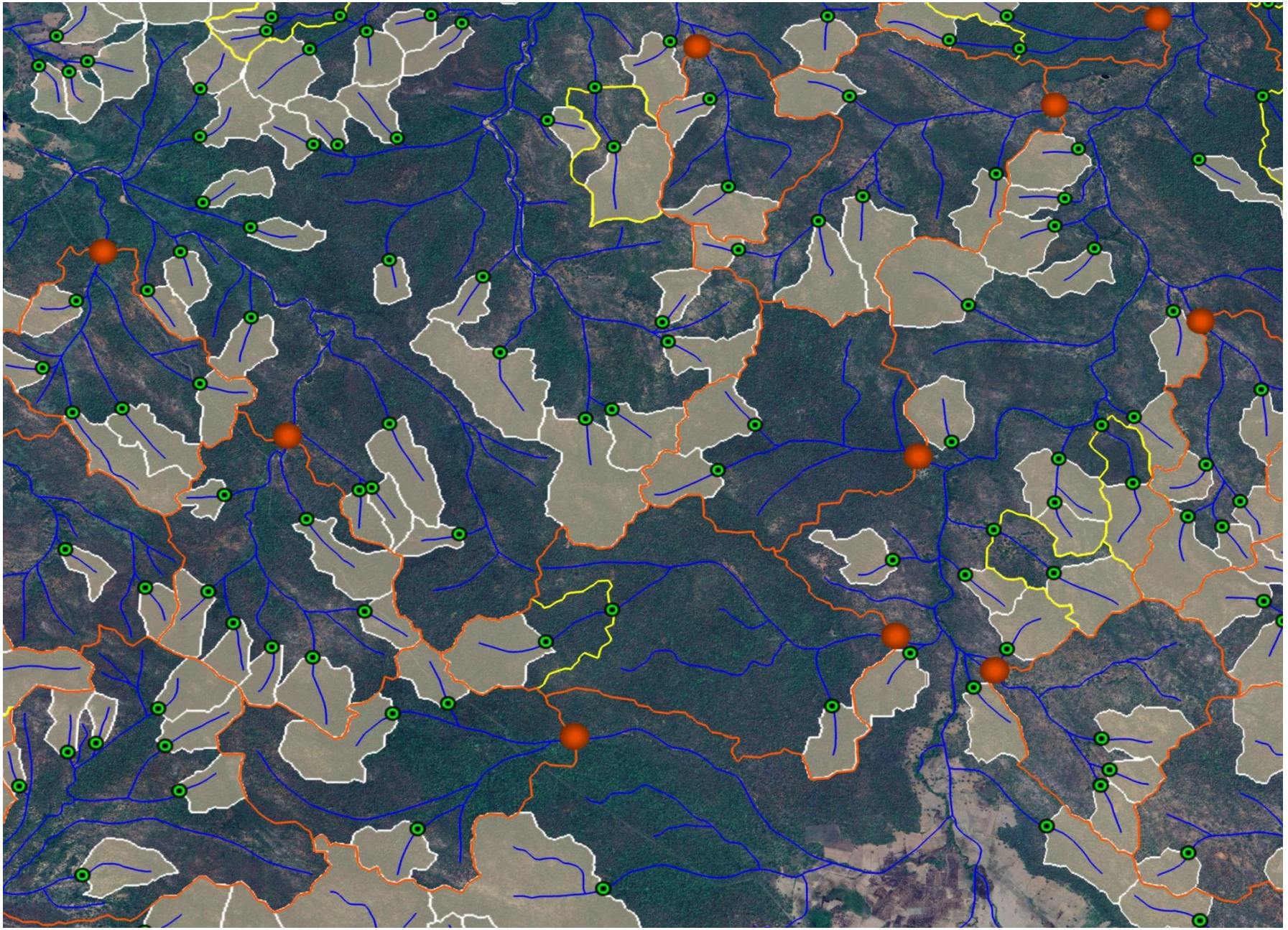


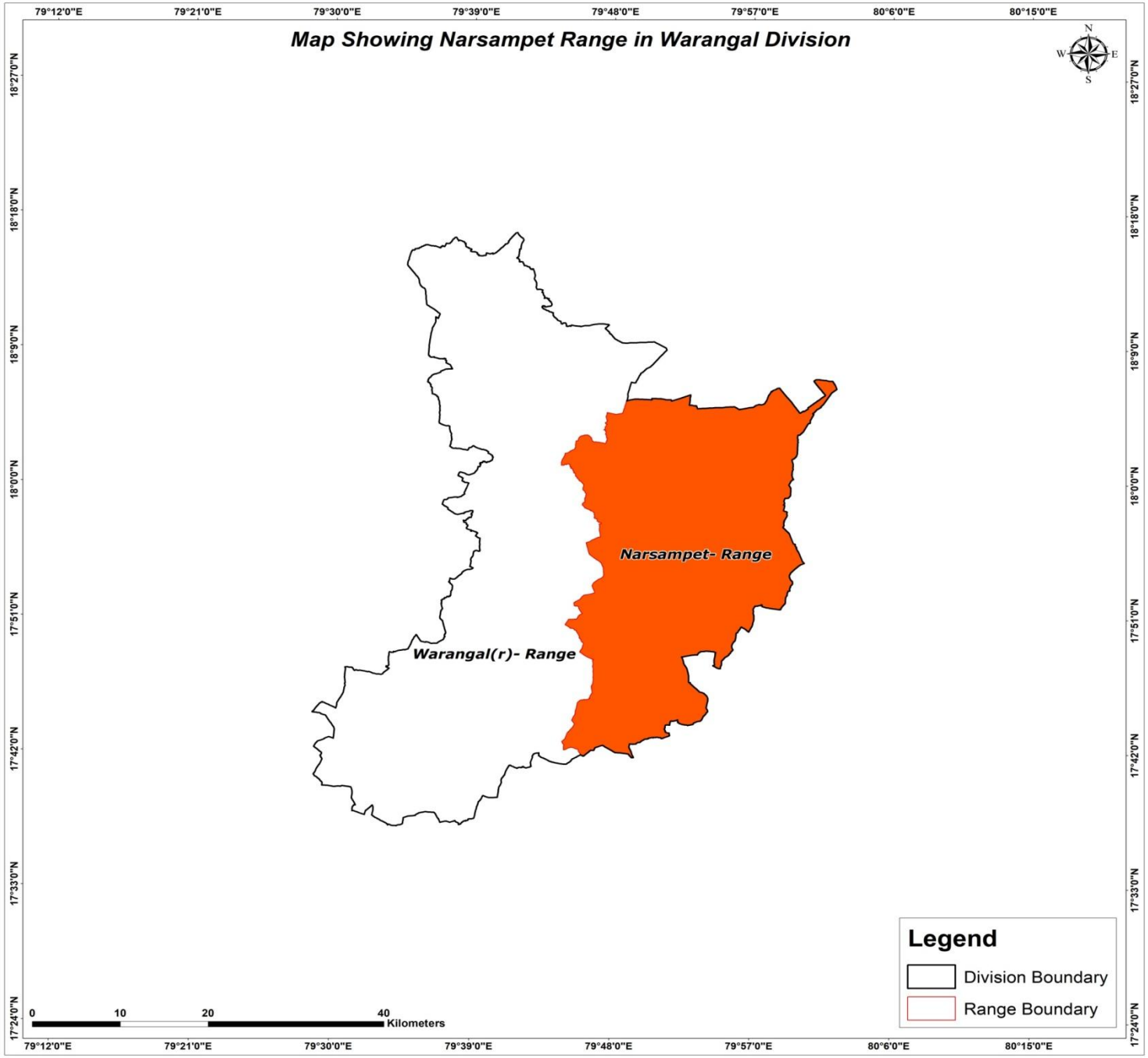
DIVISION	RANGE	Proposed PTs (Priority Wise)						Proposed Large PTs
		I	II	III	IV	V	Proposed PTs	
Warangal	Narsampet	11	39	5	8	5	68	3
	Warangal(R)	0	2	0	3	1	6	0
Warangal Total		**11**	**41**	**5**	**11**	**6**	**74**	**3**

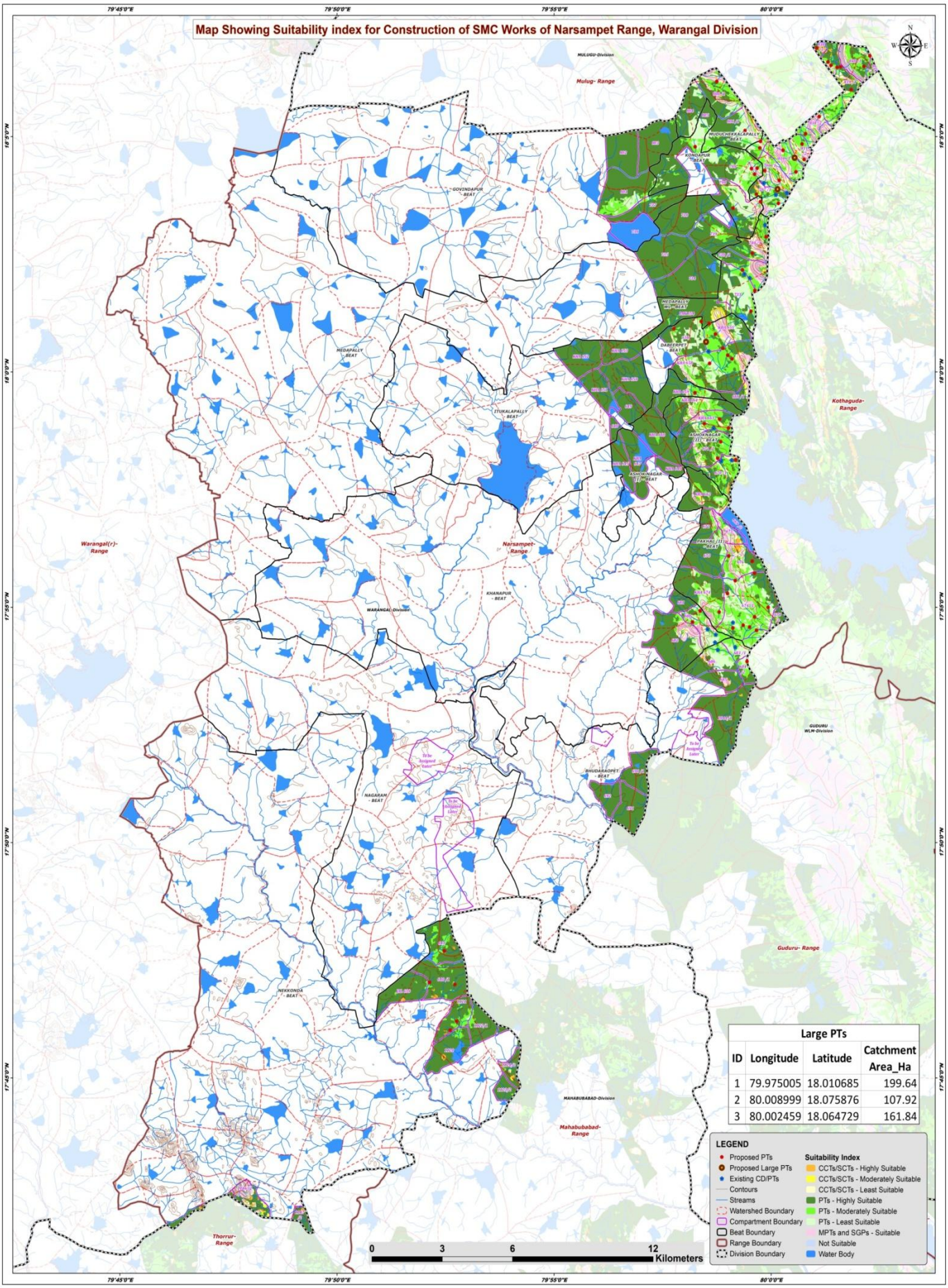
CATCHMENT AREA

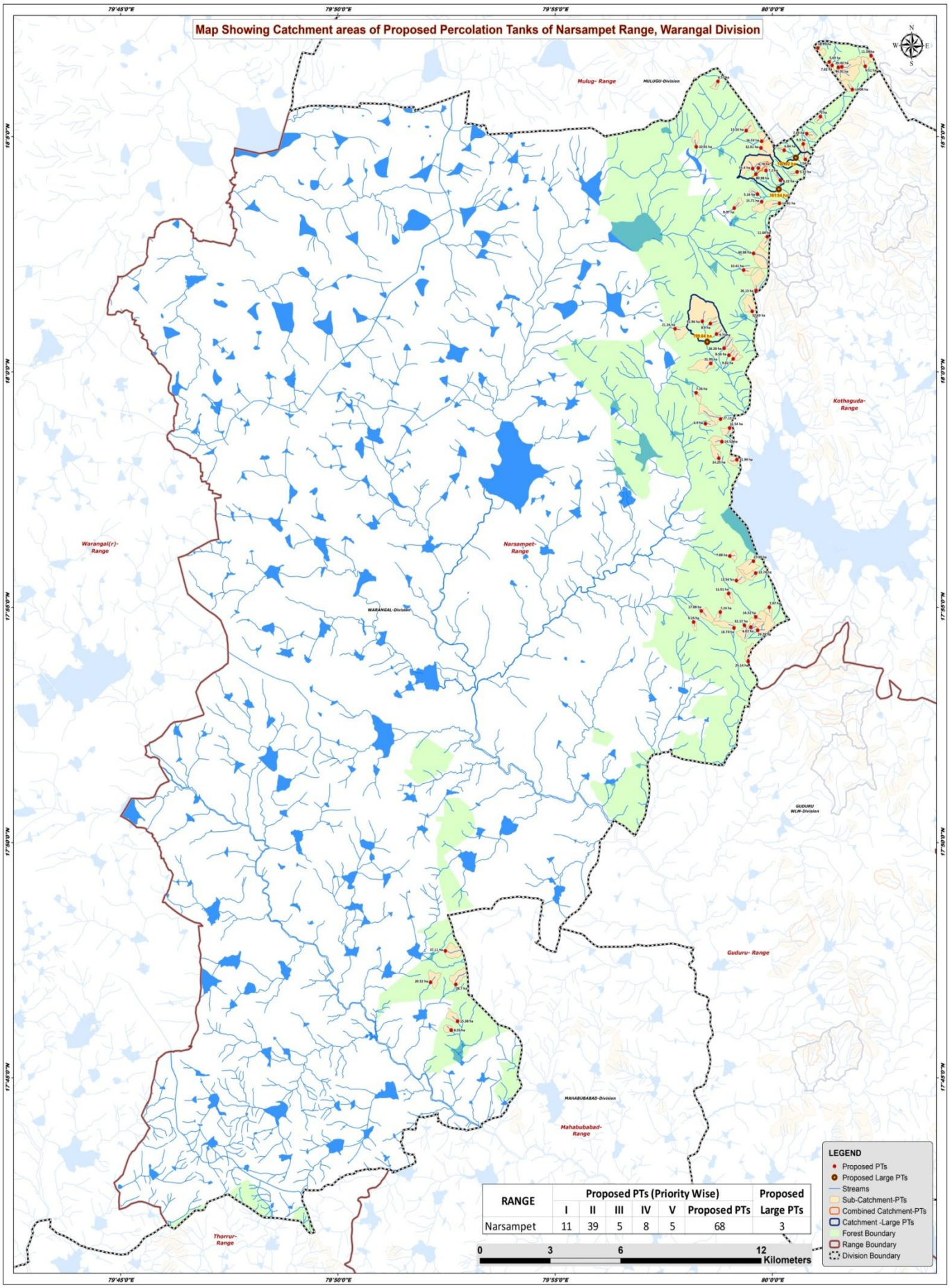


Sample Catchment Map




Map Showing Narsampet Range in Warangal Division
79°12'0"E
79°21'0"E
79°30'0"E
79°39'0"E
79°48'0"E
79°57'0"E
80°6'0"E
80°15'0"E
18°27'0"N
18°18'0"N
18°9'0"N
18°0'0"N
17°51'0"N
17°42'0"N
17°33'0"N
17°24'0"N
N
W
E
S
Narsampet- Range
Warangal(r)- Range
0
10
20
40
Kilometers
Legend
Division Boundary
Range Boundary


Map Showing Suitability index for Construction of SMC Works of Narsampet Range, Warangal Division
79°45'0"E
79°50'0"E
79°55'0"E
80°0'0"E
N
W
E
S
MULUGU-Division
Mulug- Range
GOVINDAPUR - BEAT
MEDAPALLY - BEAT
ITUKALAPALLY - BEAT
KHANAPUR - BEAT
WARANGAL-Division
NAGARAM - BEAT
NEKKONDA - BEAT
Warangal(r)- Range
Narsampet- Range
MIDICHERLAPALLY BEAT
KONDAPUR - BEAT
MEDAPALLY WLM-BEAT
DAREPPET - BEAT
ASHOKNAGAR (T) - BEAT
ASHOKNAGAR (T) - BEAT
PAKHAL (T) - BEAT
BHUDARAOPET - BEAT
To be Assigned Later
Kothaguda- Range
GUDURU WLM-Division
Guduru- Range
MAHABUBABAD-Division
Mahababad- Range
Thorrur- Range
0 3 6 12 Kilometers
Large PTs
ID | Longitude | Latitude | Catchment Area_Ha
1 | 79.975005 | 18.010685 | 199.64
2 | 80.008999 | 18.075876 | 107.92
3 | 80.002459 | 18.064729 | 161.84
LEGEND
Proposed PTs
Proposed Large PTs
Existing CD/PTs
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


Map Showing Catchment areas of Proposed Percolation Tanks of Narsampet Range, Warangal Division
79°45'0"E
79°50'0"E
79°55'0"E
80°0'0"E
N
W
E
S
Mulug- Range
MULUGU-Division
Kothaguda-Range
Warangal(r)-Range
Narsampet-Range
WARANGAL-Division
GUDURU WLM-Division
Guduru- Range
MAHABUBABAD-Division
Mahabubabad-Range
Thorrur-Range
RANGE
Proposed PTs (Priority Wise)
I
II
III
IV
V
Proposed PTs
Proposed Large PTs
Narsampet
11
39
5
8
5
68
3
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 – Narsampet Range

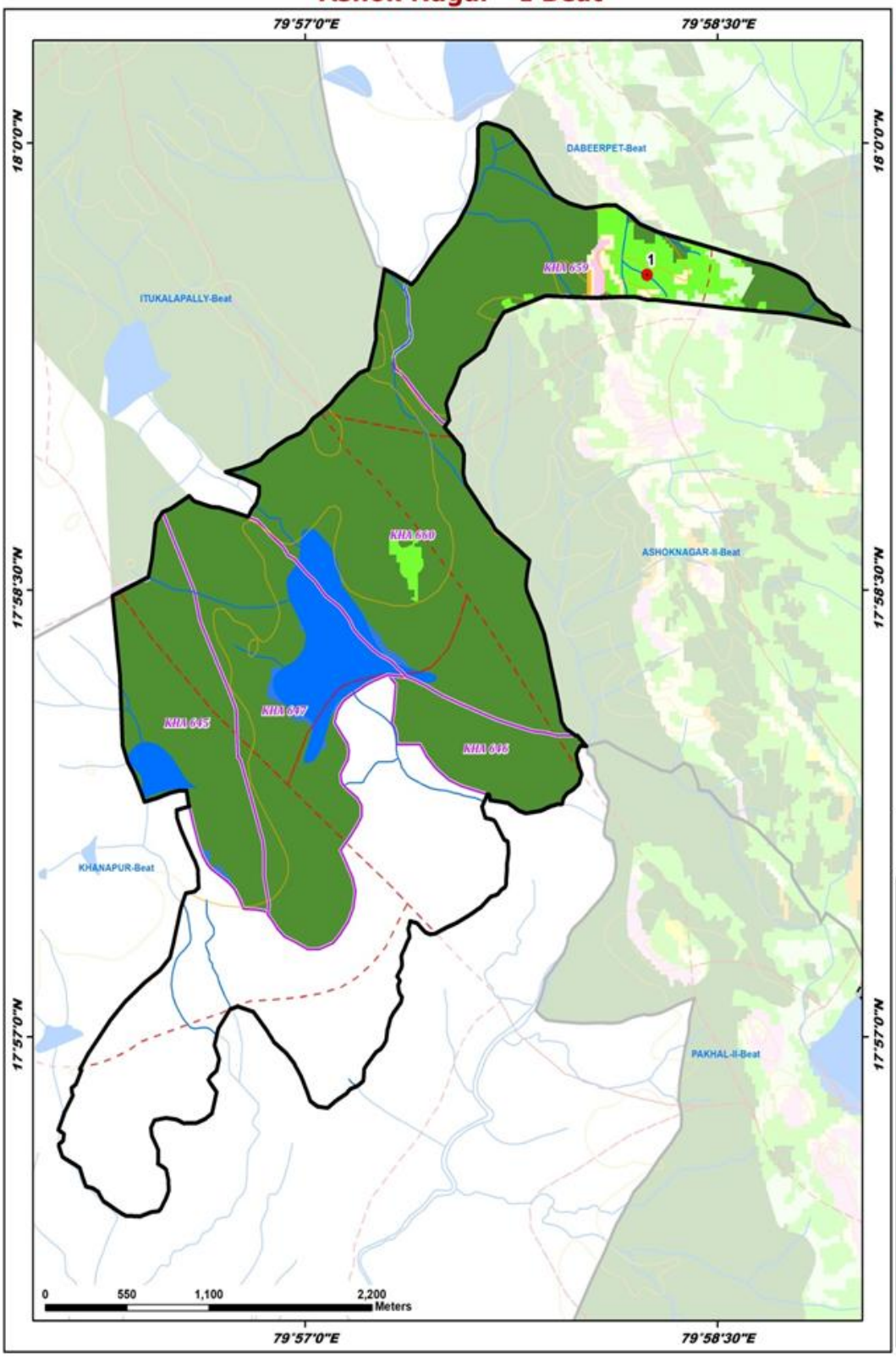
S. No.	Beat	Proposed PT's
1	ASHOK NAGAR - I	1
2	ASHOKNAGAR-II	6
3	BHUDARAOPET	1
4	DABEERPET	8
5	KHANAPUR	2
6	KONDAPUR	6
7	KONDAPUR WL	19
8	MEDAPALLY WL	5
9	MUDUCHEKKALAPALLY	3
10	NEKKONDA	5
11	PAKHAL-II	12
	Total	**68**

List of Proposed PTs – Narsampet Range

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
1	17.992616	79.970744	7.26	II	ASHOK NAGAR - I
2	17.969450	79.979465	14.25	I	ASHOKNAGAR-II
3	17.980166	79.983622	12.54	II	ASHOKNAGAR-II
4	17.968941	79.986412	11.99	II	ASHOKNAGAR-II
5	17.983338	79.980151	27.13	II	ASHOKNAGAR-II
6	17.975341	79.980635	14.52	II	ASHOKNAGAR-II
7	17.981675	79.974321	6.90	II	ASHOKNAGAR-II
8	17.928775	79.993637	13.74	I	PAKHAL-II
9	17.921590	79.983257	11.01	I	PAKHAL-II
10	17.916659	79.998838	7.97	II	PAKHAL-II
11	17.934845	79.983714	7.88	II	PAKHAL-II
12	17.909668	79.991745	6.01	II	PAKHAL-II
13	17.933003	79.992770	27.39	II	PAKHAL-II
14	17.909349	79.985315	18.74	II	PAKHAL-II
15	17.926142	79.986196	13.56	II	PAKHAL-II
16	17.913295	79.993651	14.31	II	PAKHAL-II
17	17.908518	79.994393	29.28	III	PAKHAL-II
18	17.914975	79.980035	7.24	IV	PAKHAL-II
19	17.910321	79.989299	32.17	V	PAKHAL-II
20	17.897512	79.990738	25.14	III	BHUDARAOPET
21	17.911448	79.969805	5.24	II	KHANAPUR
22	17.915356	79.972773	17.88	II	KHANAPUR
23	18.008427	79.981476	16.26	I	DABEERPET
24	18.017129	79.976235	8.90	I	DABEERPET
25	18.004648	79.984973	9.82	I	DABEERPET
26	18.013453	79.978601	9.71	II	DABEERPET
27	18.015296	79.962669	21.26	II	DABEERPET
28	18.005938	79.983343	8.56	II	DABEERPET
29	18.017948	79.973142	91.96	IV	DABEERPET
30	18.003069	79.976399	31.99	V	DABEERPET
31	18.058039	79.985382	8.07	II	KONDAPUR
32	18.072202	79.994641	6.78	II	KONDAPUR
33	18.060310	79.995928	15.71	IV	KONDAPUR
34	18.079762	79.970829	10.91	IV	KONDAPUR
35	18.072022	79.992466	55.40	V	KONDAPUR
36	18.070051	79.993686	80.98	V	KONDAPUR
37	18.108034	80.026675	20.42	I	KONDAPUR WL
38	18.108251	80.035615	9.51	I	KONDAPUR WL
39	18.100038	80.030723	14.09	I	KONDAPUR WL
40	18.075275	80.012670	7.04	II	KONDAPUR WL

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
41	18.109812	80.021829	5.69	II	KONDAPUR WL
42	18.078501	80.004559	6.84	II	KONDAPUR WL
43	18.067890	80.003100	6.22	II	KONDAPUR WL
44	18.114714	80.017457	18.95	II	KONDAPUR WL
45	18.071364	79.997541	7.20	II	KONDAPUR WL
46	18.080772	80.011863	9.30	II	KONDAPUR WL
47	18.084359	80.013189	7.49	II	KONDAPUR WL
48	18.108568	80.022939	7.02	II	KONDAPUR WL
49	18.112017	80.037866	11.34	II	KONDAPUR WL
50	18.062984	79.994305	5.16	II	KONDAPUR WL
51	18.107860	80.025326	44.91	III	KONDAPUR WL
52	18.059750	80.002760	14.81	IV	KONDAPUR WL
53	18.070860	80.009498	5.55	IV	KONDAPUR WL
54	18.090456	80.018461	7.00	IV	KONDAPUR WL
55	18.079359	79.995645	32.01	V	KONDAPUR WL
56	18.036085	79.989007	10.41	II	MEDAPALLY WL
57	18.041987	79.992812	44.88	II	MEDAPALLY WL
58	18.047904	79.998067	11.66	II	MEDAPALLY WL
59	18.028860	79.993737	26.13	III	MEDAPALLY WL
60	18.021488	79.992266	32.63	III	MEDAPALLY WL
61	18.102917	79.979141	6.57	II	MUDUCHEKKALAPALLY
62	18.081715	79.995907	16.53	II	MUDUCHEKKALAPALLY
63	18.085491	79.989967	13.16	IV	MUDUCHEKKALAPALLY
64	17.766915	79.876828	8.35	I	NEKKONDA
65	17.783862	79.868871	20.52	I	NEKKONDA
66	17.783106	79.878597	28.70	II	NEKKONDA
67	17.770096	79.879251	15.38	II	NEKKONDA
68	17.795011	79.874599	37.11	II	NEKKONDA

Map Showing Suitability Index for Construction of SMC Works of Ashok Nagar - I Beat



N
W
E
S

Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
1	17.992616	79.970744	7.26	II

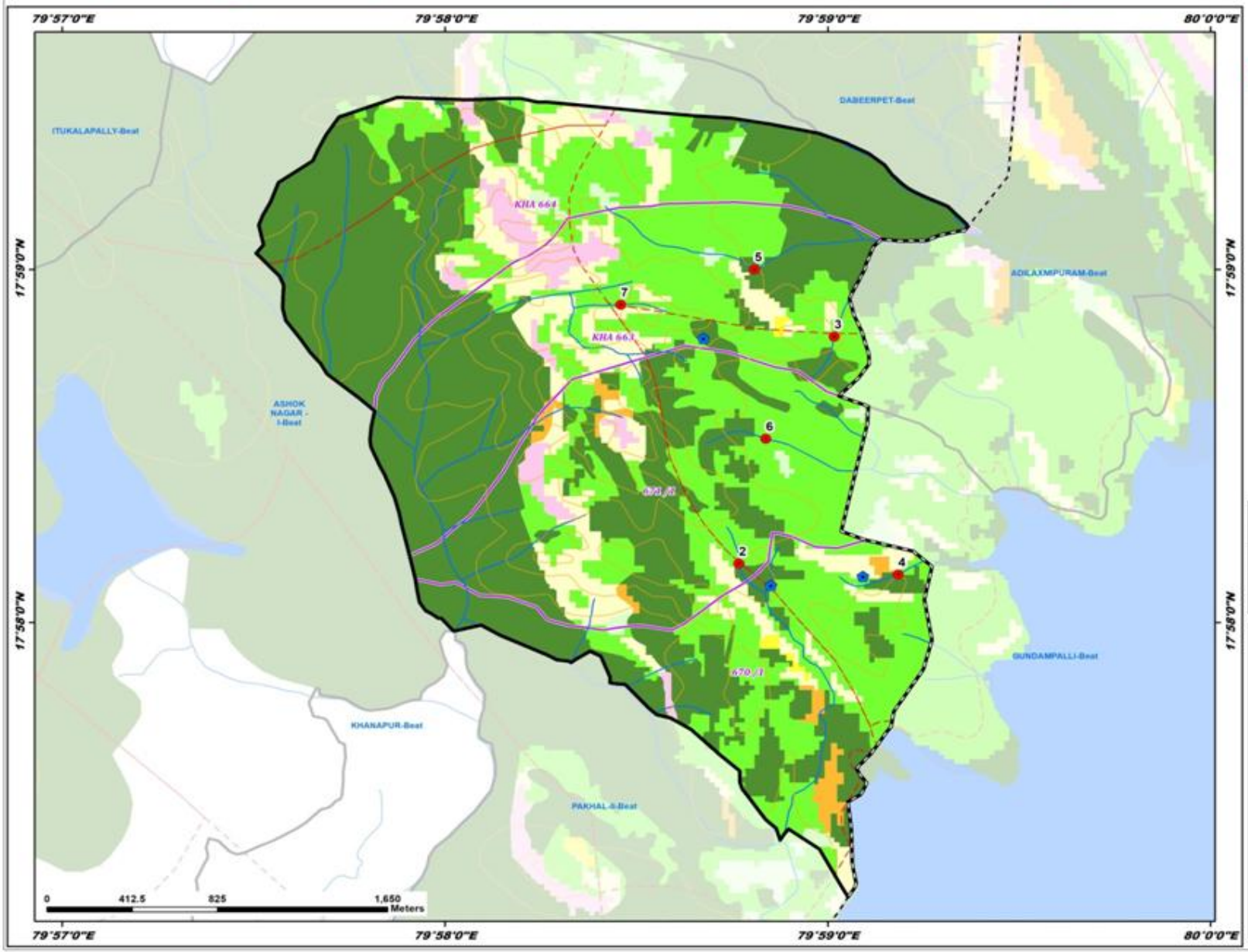
LEGEND

- 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

Map Showing Suitability Index for Construction of SMC Works of AshokNagar -II Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
2	17.969450	79.979465	14.25	I
3	17.980166	79.983622	12.54	II
4	17.968941	79.986412	11.99	II
5	17.983338	79.980151	27.13	II
6	17.975341	79.980635	14.52	II
7	17.981675	79.974321	6.90	II

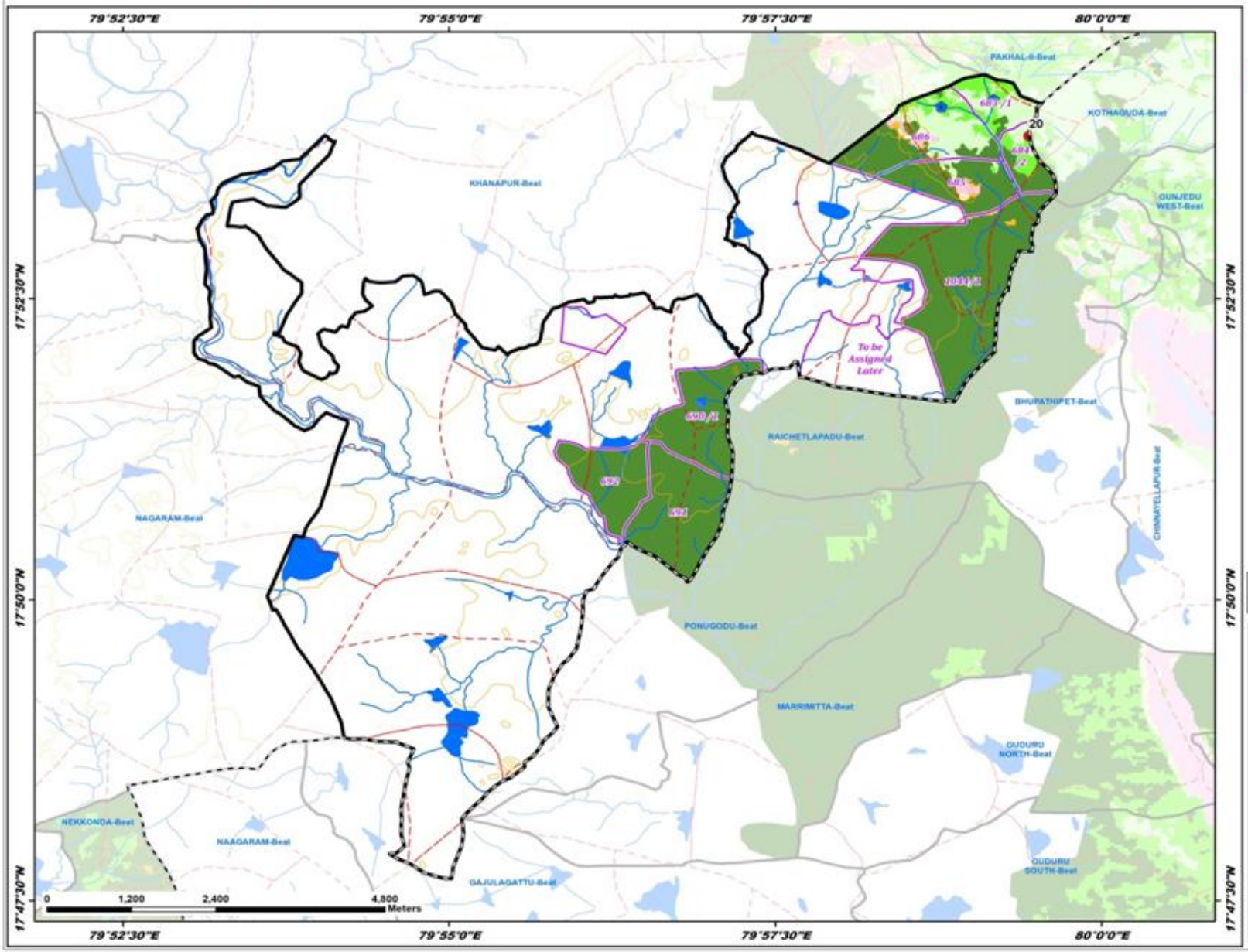
LEGEND

- 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 Bhudaraopet Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
20	17.897512	79.990738	25.14	III

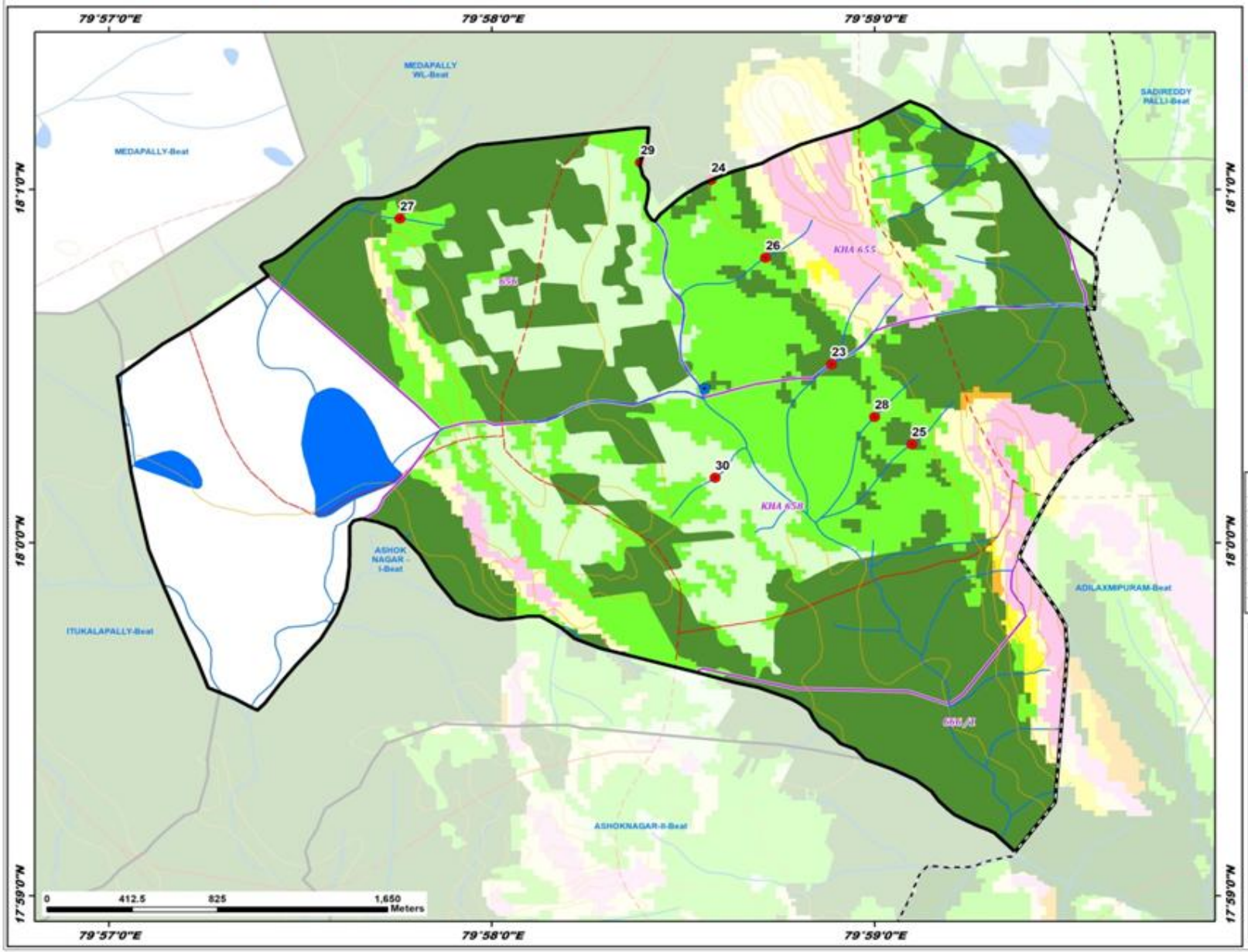
LEGEND

- 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 Dabeerpet Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
23	18.008427	79.981476	16.26	I
24	18.017129	79.976235	8.90	I
25	18.004648	79.984973	9.82	I
26	18.013453	79.978601	9.71	II
27	18.015296	79.962669	21.26	II
28	18.005938	79.983343	8.56	II
29	18.017948	79.973142	91.96	IV
30	18.003069	79.976399	31.99	V

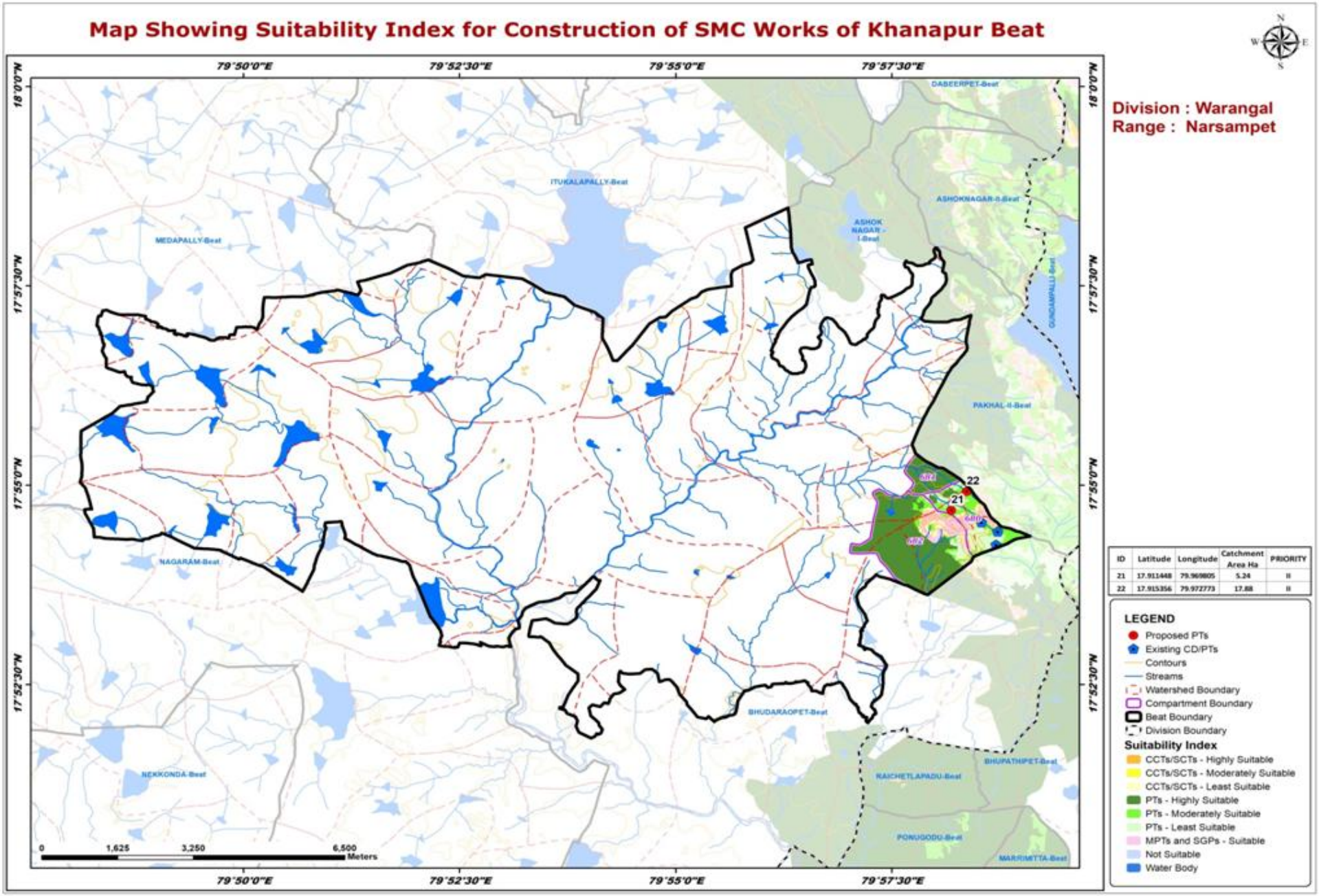
LEGEND

- 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 Khanapur Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
21	17.911448	79.969805	5.24	II
22	17.915356	79.972773	17.88	II

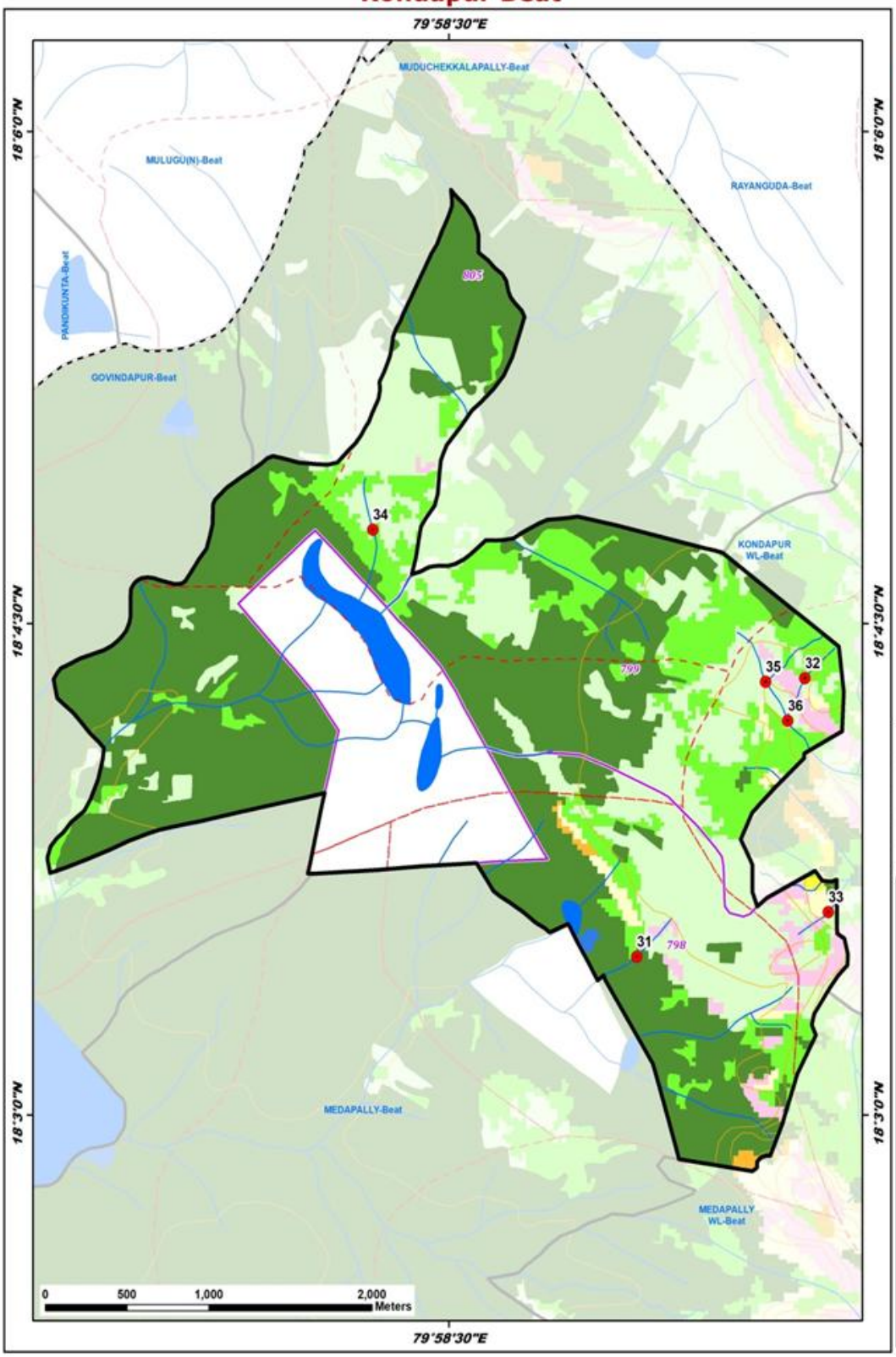
LEGEND

- 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 Kondapur Beat



N
W E
S

Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
31	18.058039	79.985382	8.07	II
32	18.072202	79.994641	6.78	II
33	18.060310	79.995928	15.71	IV
34	18.079762	79.970829	10.91	IV
35	18.072022	79.992466	55.40	V
36	18.070051	79.993686	80.98	V

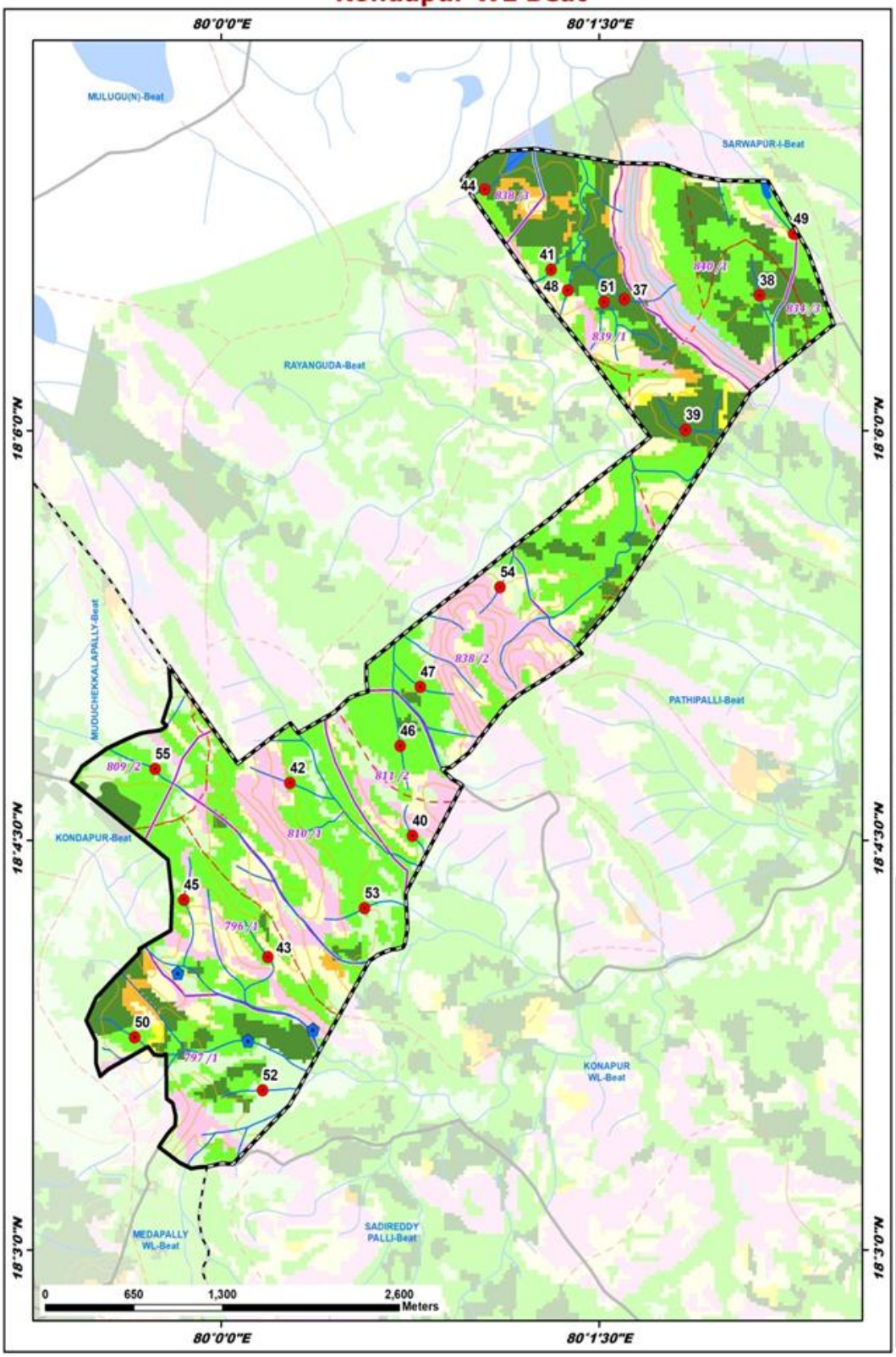
LEGEND

- 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 Kondapur WL Beat



N
W E
S

Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
37	18.108034	80.026675	20.42	I
38	18.108251	80.035615	9.51	I
39	18.100038	80.030723	14.09	I
40	18.075275	80.012670	7.04	II
41	18.109812	80.021829	5.69	II
42	18.078501	80.004559	6.84	II
43	18.067890	80.003100	6.22	II
44	18.114714	80.017457	18.95	II
45	18.071364	79.997541	7.20	II
46	18.080772	80.011863	9.30	II
47	18.084359	80.013189	7.49	II
48	18.108568	80.022939	7.02	II
49	18.112017	80.037866	11.34	II
50	18.062984	79.994305	5.16	II
51	18.107860	80.025326	44.91	III
52	18.059750	80.002760	14.81	IV
53	18.070860	80.009498	5.55	IV
54	18.090456	80.018461	7.00	IV
55	18.079359	79.995645	32.01	V

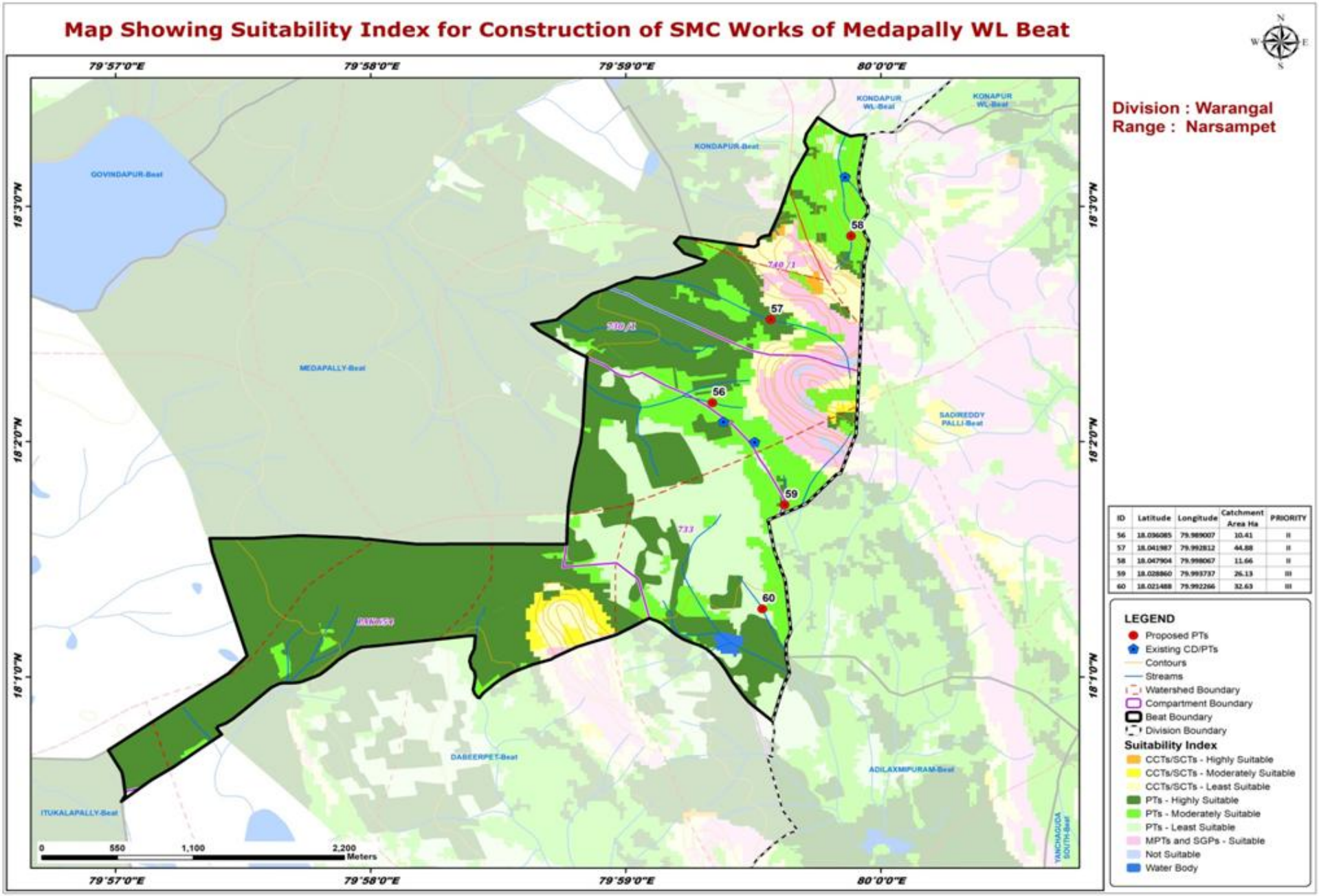
LEGEND

- 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 Medapally WL Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
56	18.036085	79.989007	10.41	II
57	18.041987	79.992812	44.88	II
58	18.047904	79.998067	11.66	II
59	18.028860	79.993737	26.13	III
60	18.021488	79.992266	32.63	III

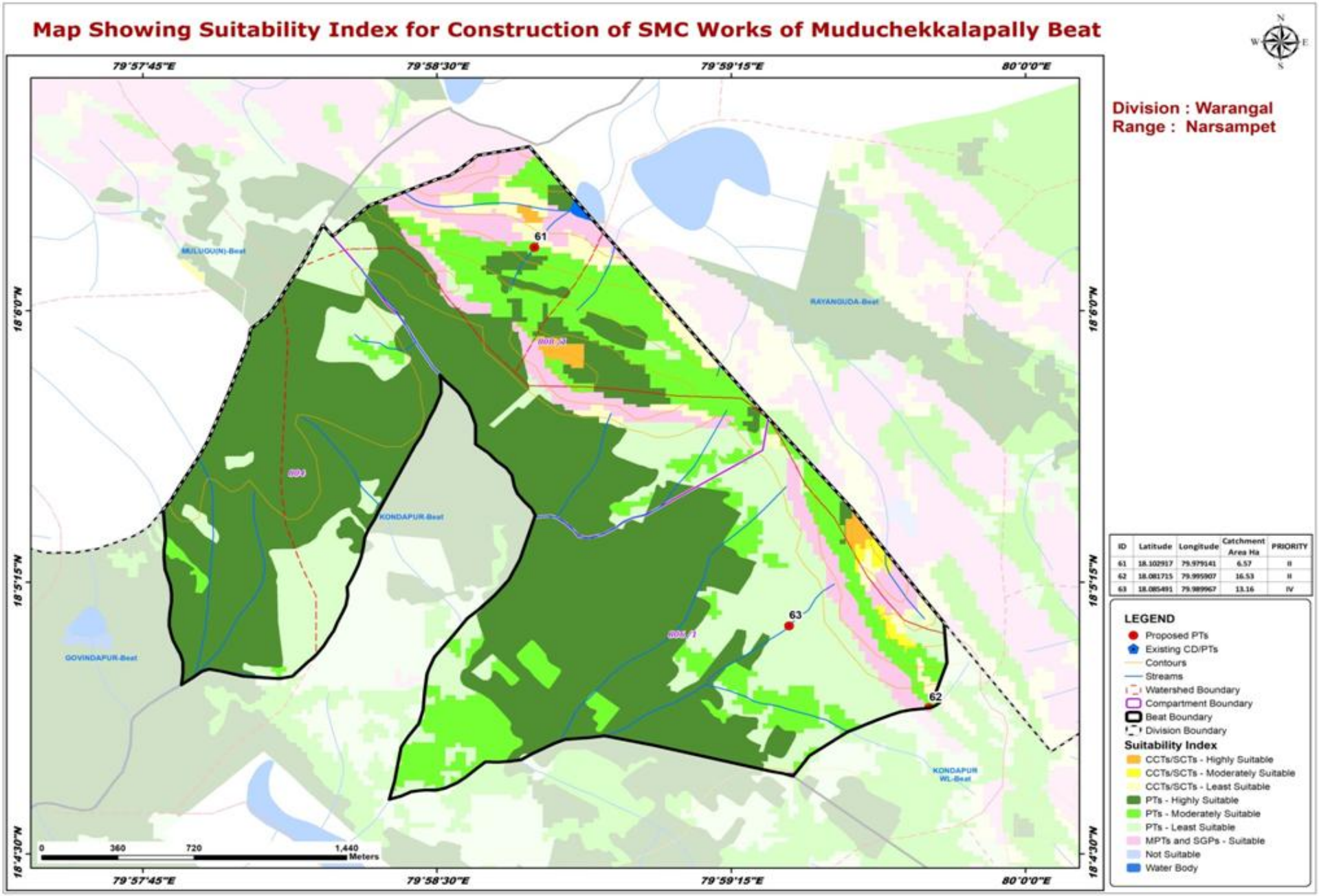
LEGEND

- 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 Muduchekkalapally Beat



ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
61	18.102917	79.979141	6.57	II
62	18.081715	79.995907	16.53	II
63	18.085491	79.989967	13.16	IV

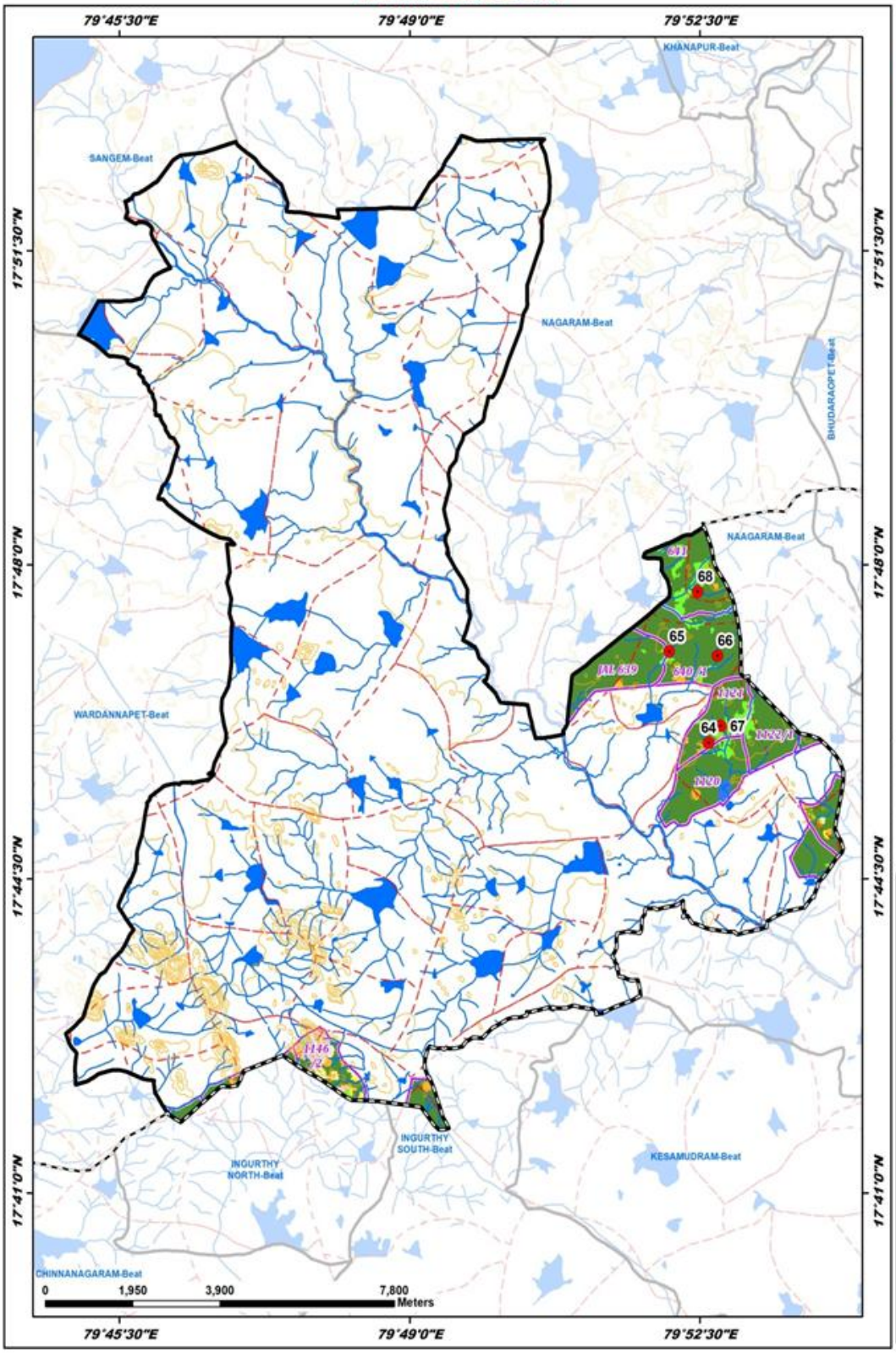
LEGEND

- 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 Nekkonda Beat



Division : Warangal
Range : Narsampet

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
64	17.766915	79.876828	8.35	I
65	17.783862	79.868871	20.52	I
66	17.783106	79.878597	28.70	II
67	17.770096	79.879251	15.38	II
68	17.795011	79.874599	37.11	II

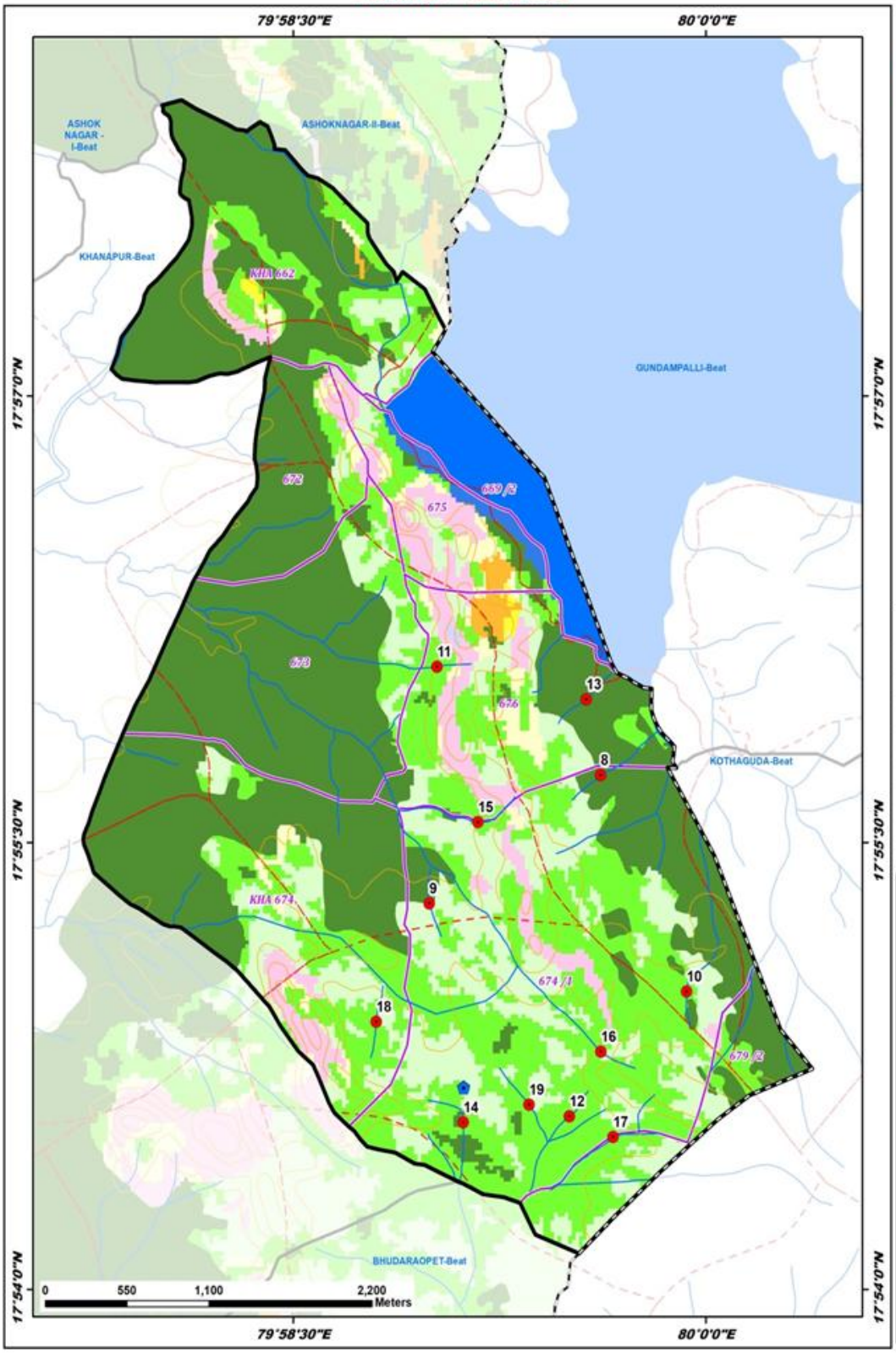
LEGEND

- 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 Pakhal - II Beat



Division : Warangal
Range : Narsampet

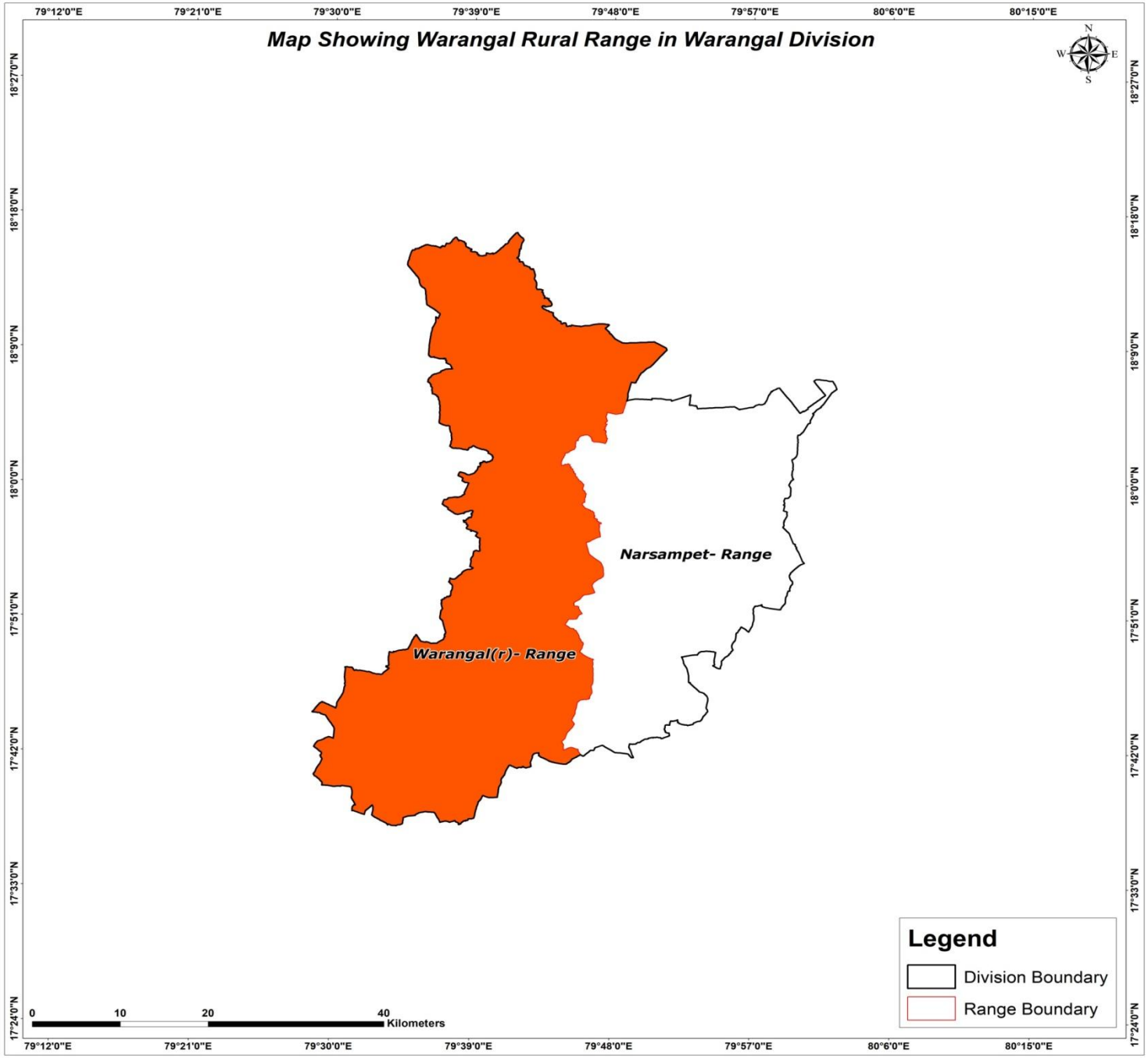
ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
8	17.928775	79.993637	13.74	I
9	17.921590	79.983257	11.01	I
10	17.916659	79.998838	7.97	II
11	17.934845	79.983714	7.88	II
12	17.909668	79.991745	6.01	II
13	17.933003	79.992770	27.39	II
14	17.909349	79.985315	18.74	II
15	17.926142	79.986196	13.56	II
16	17.913295	79.993651	14.31	II
17	17.908518	79.994393	29.28	III
18	17.914975	79.980035	7.24	IV
19	17.910321	79.989299	32.17	V

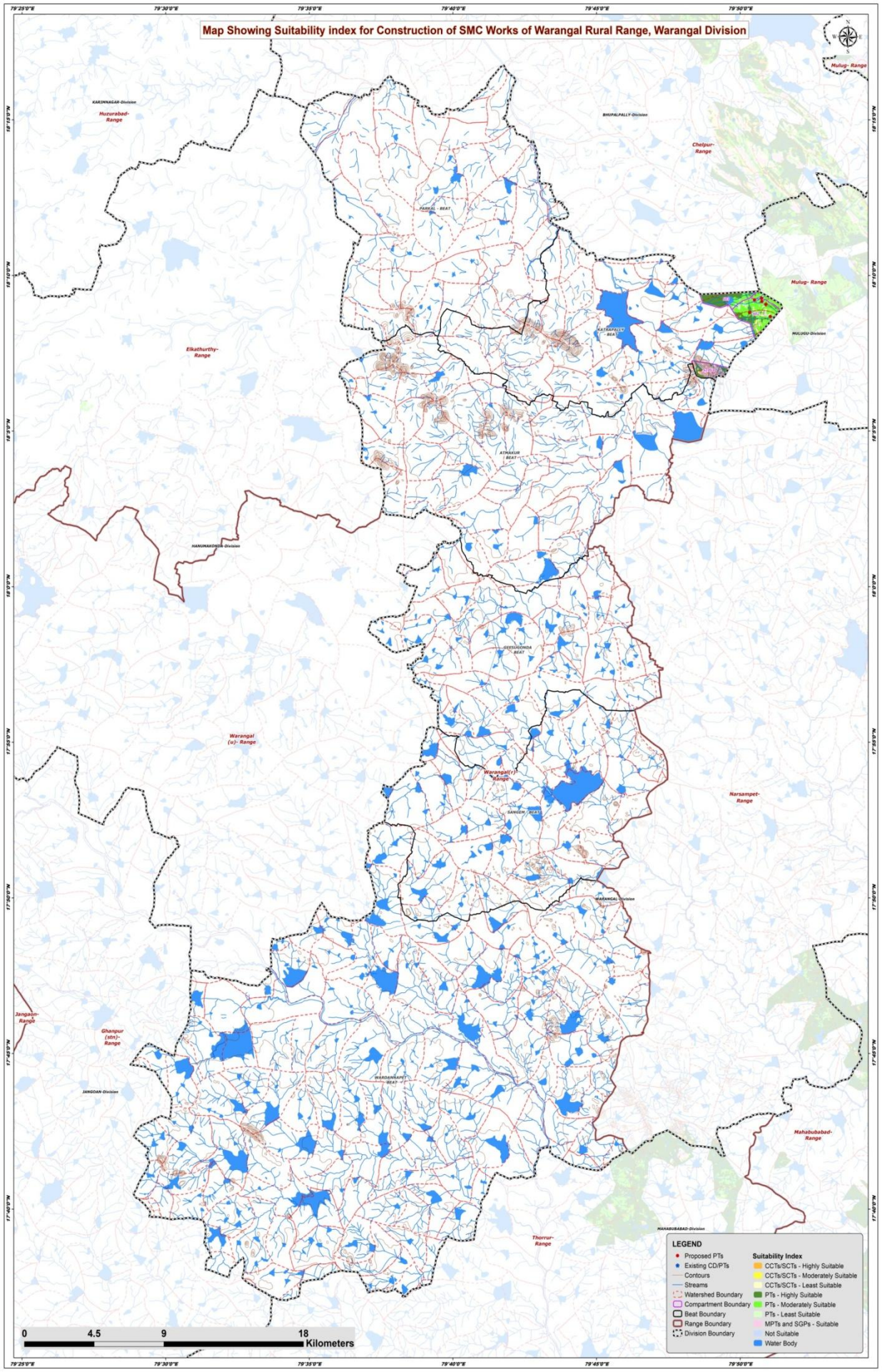
LEGEND

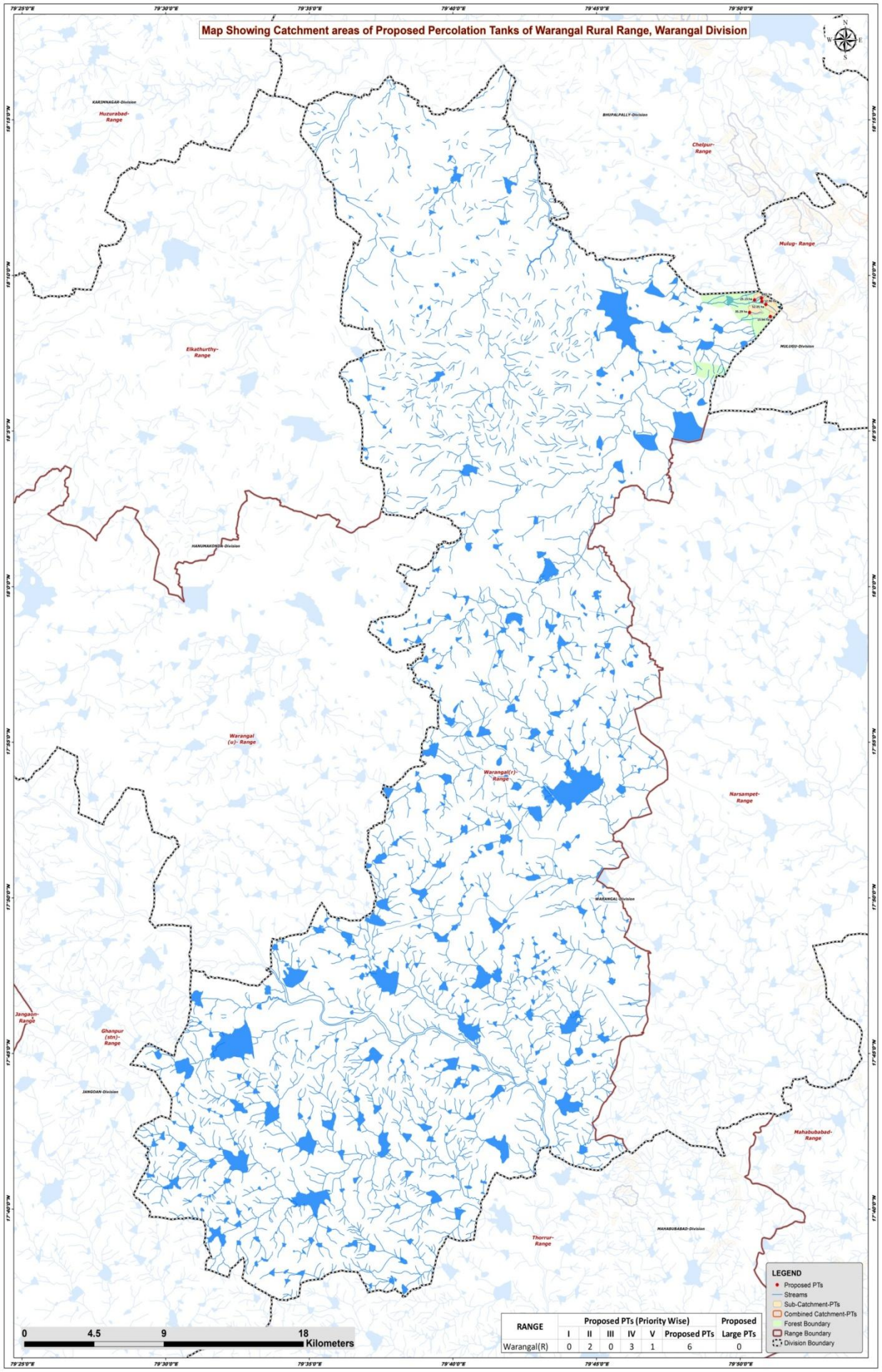
- Proposed PTs
- Existing CD/PTs
- Contours
- Streams
- Watershed Boundary
- Compartment Boundary
- Beat Boundary
- Division Boundary

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 Warangal Rural Range in Warangal Division
79°12'0"E
79°21'0"E
79°30'0"E
79°39'0"E
79°48'0"E
79°57'0"E
80°6'0"E
80°15'0"E
18°27'0"N
18°18'0"N
18°9'0"N
18°0'0"N
17°51'0"N
17°42'0"N
17°33'0"N
17°24'0"N
N
W
E
S
Narsampet- Range
Warangal(r)- Range
0
10
20
40
Kilometers
Legend
Division Boundary
Range Boundary


Map Showing Suitability index for Construction of SMC Works of Warangal Rural Range, Warangal Division
79°25'0"E
79°30'0"E
79°35'0"E
79°40'0"E
79°45'0"E
79°50'0"E
Mulug- Range
KARIMNAGAR-Division
Huzurabad- Range
BHUPALPALLY-Division
Chelpur- Range
PARKAL - BEAT
Mulug- Range
KATAKAPALLY - BEAT
MULUGU-Division
Elkathurthy- Range
ATMAKUR - BEAT
HANUMAKONDA-Division
GEESUGONDA BEAT
Warangal (u)- Range
Warangal(r) Range
Narsampet- Range
SANGEM - BEAT
WARANGAL-Division
Jangaon- Range
Ghanpur (stn)- Range
WARDANNAPET - BEAT
JANGOAN-Division
Mahabubabad- Range
Thorrur- Range
MAHABUBABAD-Division
LEGEND
Proposed PTs
Existing CD/PTs
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
0
4.5
9
18
Kilometers



RANGE	Proposed PTs (Priority Wise)						Proposed
	I	II	III	IV	V	Proposed PTs	Large PTs
Warangal(R)	0	2	0	3	1	6	0

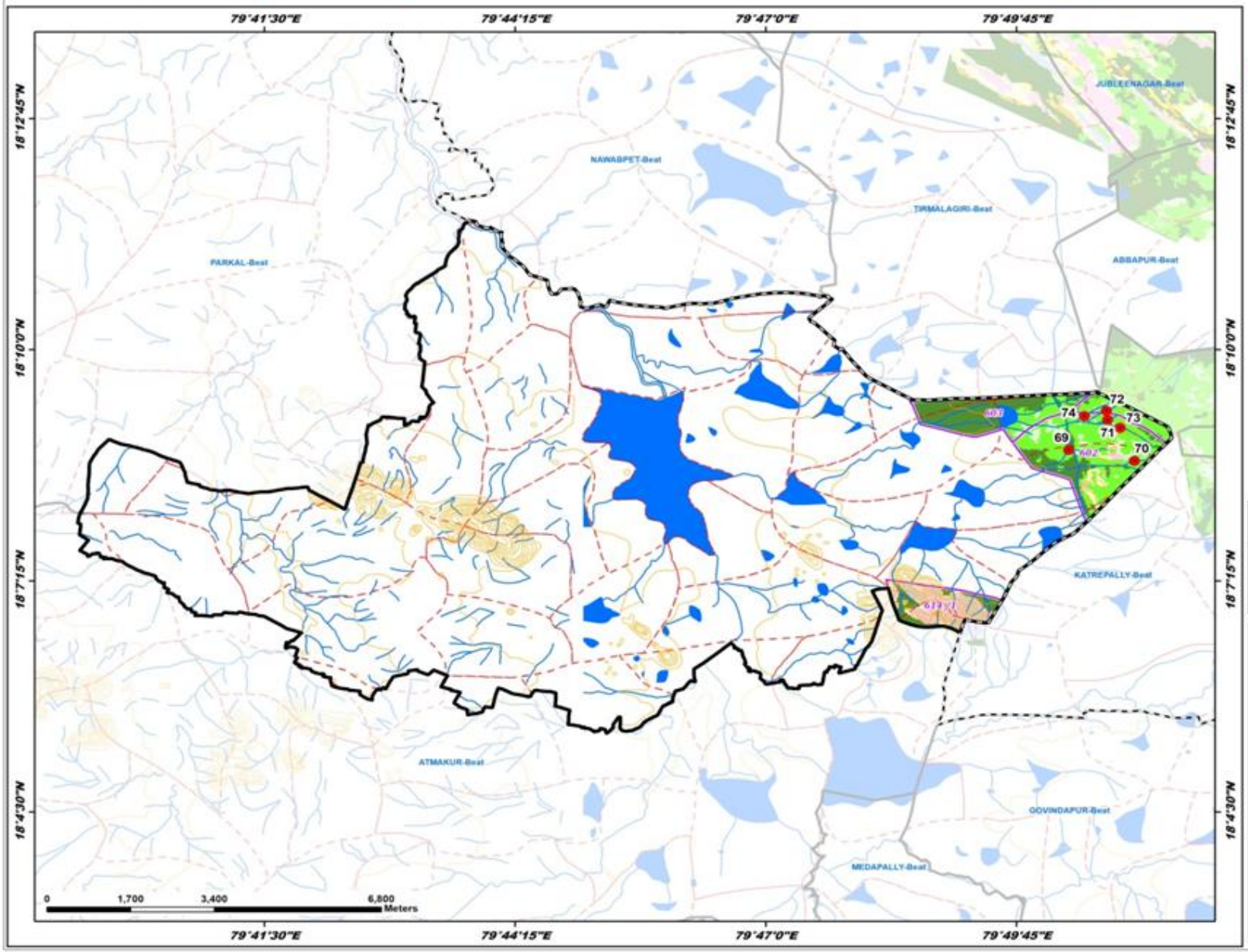
Beat wise Abstract of Proposed PT's – Warangal Rural Range

S. No.	Beat	Proposed PT's
1	KATRAPALLY	6
	Total	**6**

List of Proposed PTs – Warangal Rural Range

ID	Latitude	Longitude	Catchment Area_Ha	Priority	Beat
69	18.146832	79.838760	35.29	II	KATRAPALLY
70	18.144659	79.850819	15.66	II	KATRAPALLY
71	18.152760	79.845920	12.96	IV	KATRAPALLY
72	18.154583	79.845703	8.81	IV	KATRAPALLY
73	18.151198	79.848187	52.05	IV	KATRAPALLY
74	18.153551	79.841659	25.15	V	KATRAPALLY

Map Showing Suitability Index for Construction of SMC Works of Katrapally Beat



Division : Warangal
Range : Warangal Rural

ID	Latitude	Longitude	Catchment Area Ha	PRIORITY
69	18.146832	79.838760	35.29	II
70	18.144659	79.850819	15.66	II
71	18.152760	79.845920	12.96	IV
72	18.154583	79.845703	8.81	IV
73	18.151198	79.848187	52.05	IV
74	18.153551	79.841659	25.15	V

LEGEND

- Proposed PTs
- Existing CD/PTs
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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