Renovation of Water Harvesting Structures in Landscapes of Alluri Sitharamaraju District under GEF-IUCN Project

Submitted by

Foundation For Ecological Security

WASSAN

Rainforest Alliance

Table of Contents

1 Executive Summary

The "**Strengthening Sustainable Agriculture and Biodiversity across Landscapes (SABAL)"** project, led by Rainforest Alliance and in collaboration with RYSS, FES, and WASSAN, is supported by GEF, UNEP, and IUCN. It aims to transform land management into sustainable agricultural systems, achieve Land Degradation Neutrality (LDN), conserve biodiversity, and enhance rural livelihoods in Andhra Pradesh and Karnataka. The project focuses on policy reform, sustainable agriculture, multi-stakeholder landscape governance, market development, and public-private finance.

Integrated Landscape Management (ILM) simplifies development by connecting stakeholders across sectors for sustainable outcomes. It aligns with the Sustainable Development Goals for convergence and partnership in development, offering an inclusive, multi-disciplinary approach to address issues and promote sustainability. SABAL targets tribes in the Eastern Ghats through Natural Farming, Biodiversity, and High Conservation Value Forests.

Micro landscapes, small distinct regions in Andhra Pradesh, are the focus of rural development. WASSAN serves as the technical agency for Andhra Pradesh, and FES for profiling, MSLMBs, Commons, and HCVF in both Andhra Pradesh and Karnataka, covering the Eastern and Western Ghats.

S. No.	Name of the Micro Landscape	Villages	Gram Panchayats	Mandal	District	Area (ha)
1	D Gonduru	16	D Gonduru Vanjangi	Paderu	ASR	1435
2	Nittapattu	18	Singarbha	G Madugula	ASR	1550
3	Pinakota	9	Pinakota	Ananthagiri	ASR	1600

2 Present Situation

Agriculture is the mainstay of nearly 70% of households. Though the District mainly depends on Agriculture. Rice is a staple food of the people and Paddy is therefore the principal food crop of the district followed by Ragi, Maize, Bajra, Korra, Niger Seed, Rajma Beans, Red gram, Chillies, Turmeric, Ginger and Jowar. Since there is no Major Irrigation system, only about 40% of the cropped area is irrigated under Minor Irrigation Systems like check dams which are fed by Kond Jorus. The rest of the cultivated area is covered under dry crops. (Source – District Handbook of Statistics 2019-20)

Name of the Micro-landscape	Name of the GP	No of villages	Total HH	Total landscape area in Ha	Total forest land in Ha	Total common land in ha	Total Agriculture land in Ha	The total land under NF in Ha	The total land under partial NF
D. Gonduru	D. Gonduru & Vanjangi	16	595	1435	917	23.08	306.8	306.8	0
M Nittapattu	Singharba	18	812	1550	600	41.28	750	696.2	47.72
Pinakota	Pinakota	7	444	1600	519	109.1	1523	1337	186

3 Problem Statement:

Water-related infrastructure challenges in Alluri Sitharamaraju District pose significant obstacles to the local population. These challenges include inadequate access to safe drinking water, ageing and poorly maintained water harvesting structures, inefficient water distribution, water source contamination, and limited sanitation facilities. These issues not only restrict access to clean daily water but also impede agricultural productivity by hindering dependable irrigation. Additionally, the region's communities face water scarcity during droughts and are susceptible to flooding, further straining water-related infrastructure. A comprehensive and sustainable approach is essential to address these multifaceted issues, securing the well-being and livelihoods of the communities in Alluri Sitharamaraju District.

Figure 1: Representative Image of canals

Project support is urgently required to renovate existing water harvesting structures, addressing these challenges through infrastructure restoration, enhanced agricultural productivity, drought resilience, and flood preparedness. This holistic approach will lead to a lasting positive impact on the quality of life for the district's residents.

A drinking water case of Palamanusilaka habitation of D Gonduru GP.

When the SABAL team had a participatory planning exercise with the community of Palamanusilaka a small habitation of D. Gonduru GP of Paderu Mandal, comprised of 16 tribal families with 72 population. In this exercise, we have realized that the community depends on Parakabanda Spring for drinking water which is found in the nearby village “Doddipalli” . The source point belongs to a tribal farmer, 2km distance from the village. Palamanusilaka community paid compensation to that farmer to access spring water. It has been continued for 15 years from 2008 to 2021. For the last few years unable to get water due to diverting the spring water for irrigation. Conflicts arose between the farmers of Doddipalli and Palamanusilaka villages and this issue has been neglected by GP leaders proposed borewell for drinking water in the Palamanusilaka in 2023 is completely dependent on electricity power. Women of the Palamanusilaka have shown interest in revising spring water for drinking water and they are seeking support to renovate the existing pipeline network and filter tank to get clean water. The community wishes the RWS would take up this case to resolve it soon.

3.1 Objectives of the project

1. **Enhancing the capacity and effectiveness of existing water harvesting structures:** The primary goal is to improve the functionality and efficiency of the existing water harvesting systems. This will involve a comprehensive assessment, repair, and modernization of these structures to maximize water storage and distribution.
2. **Improving water availability for agricultural and domestic use:** The project intends to increase the availability of water resources for both agricultural and domestic purposes, thereby addressing water scarcity issues in the region. This will contribute to food security and improve the living conditions of the local population.
3. **Promoting sustainable land and water resource management:** Promoting sustainable practices that enhance water resource management ensuring long-term sustainability. This will mitigate the adverse effects of climate change and improve the overall environmental conditions in the district.
4. **Empowering local communities and ensuring their active participation:** To achieve lasting impact, the project will involve local communities in decision-making, planning, and execution. We aim to empower the people to take charge of their water resources, leading to a more self-sustaining system.

3.2 Target Area

The project will be concentrated in the Alluri Sitharamaraju District, covering specific locations. We have identified potentially the WHS across the landscapes

S. No.	Landscapes	Type of WHS	Numbers	Remarks
1	Pinakota Landscape	Check Dams	9	Damaged, leakage, need repair, silted
2	D.Gonduru	Check Dams	5	
3	M.Nittapattu	Check Dams	8	
		Total	**22**	
1	Pinakota Landscape	Canals	19	Need lining with cement
2	D.Gonduru	Canals	9	
3	M.Nittapattu	Canals	22	
		Total	**50**	
1	Pinakota Landscape	Springs	9	Need conservation of the spring shed from where the springs are originating
2	D. Gonduru	Springs	40	
3	M.Nittapattu	Springs	13	
		Total	**62**	

These areas have been selected based on assessing their water resource needs and potential for impactful change (A detailed Annexure is attached as part of the document).

The potential water harvesting structures (WHS) and their numbers are shown in the GIS maps for all three micro-conservation landscapes, Pinakota, D. Gonduru, M. Nittapattu **(Figure 2;Figure 3; Figure 4).**

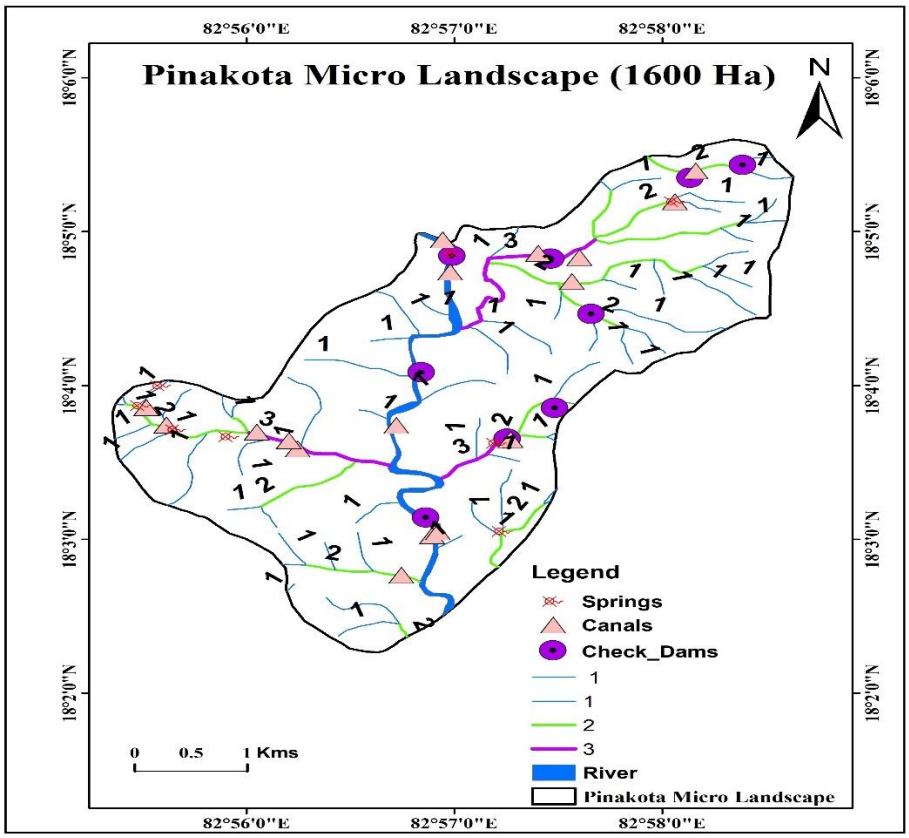

Figure 2: GIS Map of Pinakota showing Springs, Canals and Check-dams

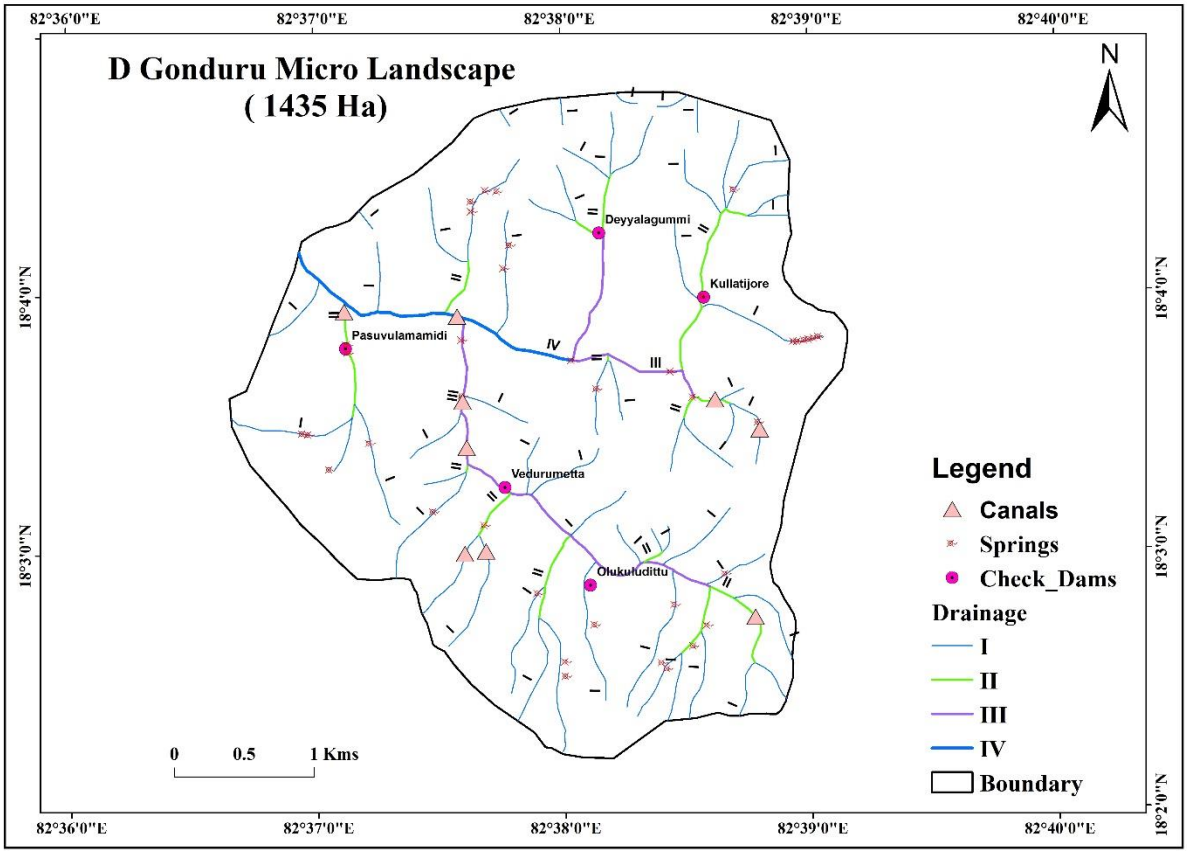

Figure 3: GIS Map of D. Gonduru showing Springs, Canals and Check-dams

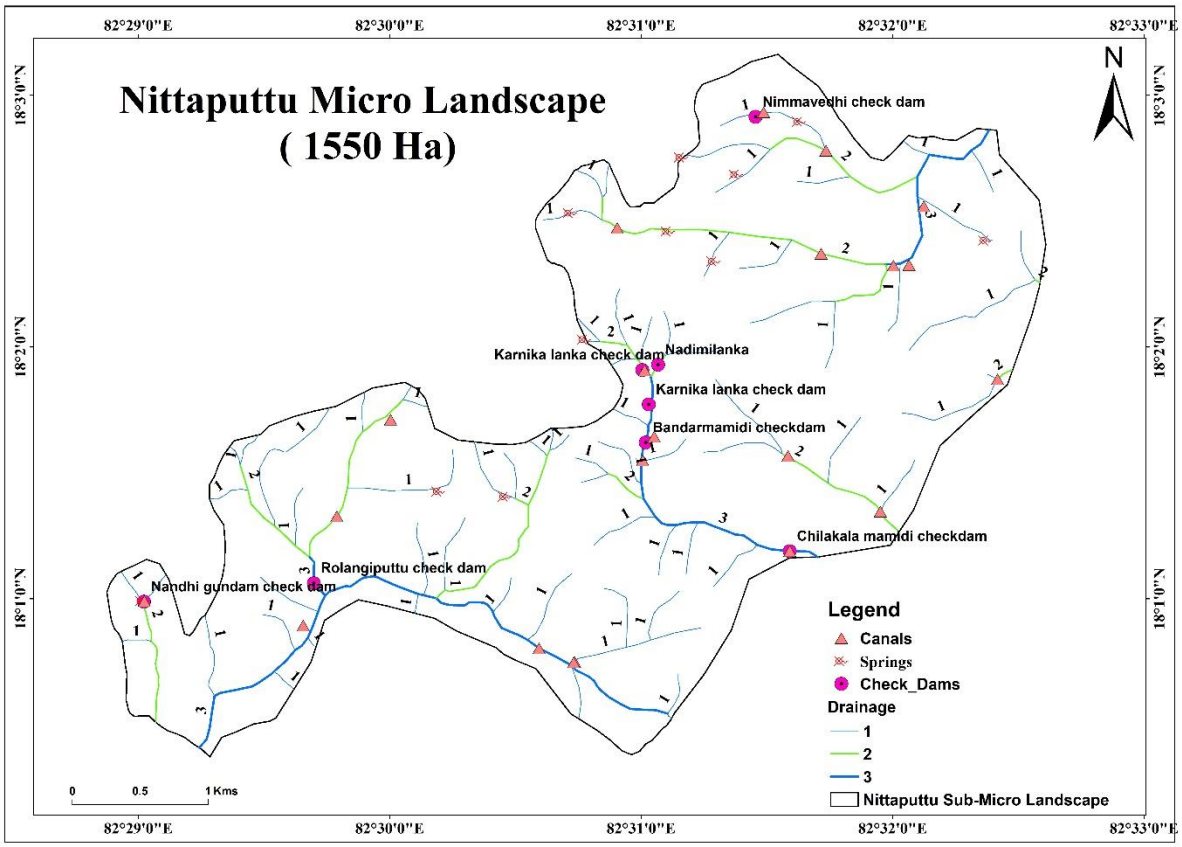

Figure 4: GIS Map of M. Nittapattu-springs, Canals and Check-dams

3.3 Needs Assessment

The needs assessment revealed the current state of water harvesting structures in the landscapes district. It was observed that many structures are in a state of disrepair and with limited capacity. These challenges have resulted in reduced water availability, adversely affecting both agriculture and domestic use. The project aims to address these issues and anticipates the following impacts:

- Increased water storage capacity, reducing dependency on erratic rainfall.
- Enhanced water quality and distribution systems.
- Improved crop yields and food security.
- Economic opportunities for the local population through increased agricultural productivity.
- Enhanced environmental conservation and resilience against climate change.

3.4 Project Approach: Renovation and Rehabilitation

- **Detailed engineering assessments and designs for each structure:** Each water harvesting structure will undergo a thorough engineering assessment to identify weaknesses and areas for improvement. Based on these assessments, detailed renovation designs will be developed to ensure optimal functionality.
- **Repair and restoration of damaged components:** The project will involve the repair and restoration of damaged components (Repairs to the water harvesting structure, improvement of water use efficiency by the lining of canals up to field channels, etc), ensuring that the structures are in good working condition.

- **Implementation of modern, sustainable, and eco-friendly technologies:** To improve the long-term sustainability and efficiency of the water harvesting structures, modern and eco-friendly technologies will be incorporated, reducing the environmental footprint.

3.5 Capacity Building

- **Training and skill development for local communities in water resource management:** Local community members will be provided with training and skill development programs focused on water resource management. This will empower them to actively participate in the maintenance and decision-making processes.
- **Workshops on water-efficient agriculture practices:** Workshops will be organized to educate local farmers on water-efficient agriculture practices, promoting sustainable and responsible farming methods.

3.6 Community Engagement

- **Involving local communities for sustainable maintenance:** Ensuring that the local communities are actively involved in the ongoing maintenance and management of the water harvesting structures.
- **Raising awareness about water conservation and the importance of water harvesting:** Public awareness campaigns will be conducted to educate the community about the significance of water conservation and the role of water harvesting in ensuring a sustainable and prosperous future.

3.7 Budget and Funding

We need budgetary support through a convergence mode to facilitate the renovation of water harvesting structures in the landscapes

3.8 Expected Outcomes

The project anticipates the following outcomes:

- Improved water availability and quality for agricultural and domestic use.
- Enhanced agricultural productivity leads to increased income for local communities.
- Strengthened water resource management and conservation practices.
- Empowered local communities actively participating in project maintenance.
- Greater environmental resilience and sustainability.

3.9 Conclusion

We are dedicated to ensuring the successful implementation of this project and are seeking your support and collaboration. Together, we can make a significant difference in improving water security and enhancing the lives of the people in Alluri Sitharamaraju District.

Your partnership and support are crucial in turning this vision into a reality. We look forward to further discussions and potential collaboration to create a brighter and more sustainable future for the district.

4 Annexure-Renovation of WHS in Landscapes ASR – Check-dams

Renovation of Water Harvesting Structures in Landscapes Alluri Sitharamaraju District – Check-dams									
SL No	***Landscape Name***	***Mandal Name***	***Grama Panchayat Name***	***Village Name***	***Checkdam Name (Local Name)***	***Present Status***	***GPS Coordinates***		***Remarks***
							Latitude	***Longitude***	
1	Pinakota	Ananthagiri	Pinakota	*Chinthapaka*	*Udaragadda Checkdam*	-70 - 80 % damage and Silt , Storage problem, Increase height, Feeder cannels construction nearly 500 rmt (Area covered - 70 acres dry land)	*18.060946*	*82.954247*	
2	Pinakota	Ananthagiri	Pinakota	*Balagaruvu*	*Vaajangi Checkdam*	- 80% damage and all repair work and Cannel work	*18.060582*	*82.966805*	
3	Pinakota	Ananthagiri	Pinakota	*Balagaruvu*	*Vaajangi Checkdam*	- 60% damage and all repair work, Cannel work	*18.09271*	*82.968907*	
4	Pinakota	Ananthagiri	Pinakota	*Velagalapadu*	*Peddagadda Check dam*	- 70% damage and all repair work	*18.052398*	*82.947685*	
5	Pinakota	Ananthagiri	Pinakota	*Pinakota*	*Kannamnaidu thalakattu Checkdam*	Repair work	*18.083899*	*82.946455*	
6	Pinakota	Ananthagiri	Pinakota	*Pinakota*	*Bairava Murthy Checkdam*	Need cement cannel work	*18.068129*	*82.94734*	
7	Pinakota	Ananthagiri	Pinakota	*Pinakota*	*Dharmaraju Checkdam*	Repair work	*18.074443*	*82.960972*	
8	Pinakota	Ananthagiri	Pinakota	*Pinakota*	*Boddamanu Checkdam*	100% damaged and cannel work	*18.080449*	*82.957734*	
9	Pinakota	Ananthagiri	Pinakota	*Borrapalem*	*Patha selama Checkdam*	95% damaged	*18.09271*	*82.968907*	
10	D Gonduru	Paderu	D Gondhuru	*Karkaputtu*	*Kullatijore*	Need cement cannel work wp to 500rmt	*18.066327*	*82.642859*	
11	D Gonduru	Paderu	D Gondhuru	*Vakapalli*	*Pasuvulamamidi*	Need cement cannel work wp to 500rmt	*18.063187*	*82.61867*	
12	D Gonduru	Paderu	D Gondhuru	*D Gondhuru*	*Deyyalagummi*	Need cement cannel work wp to 500rmt	*18.070525*	*82.635813*	
13	D Gonduru	Paderu	Vanjangi	*Borramamidi*	*Olukuludittu*	Repair work	*18.047815*	*82.635058*	
14	D Gonduru	Paderu	Vanjangi	*Doddipalli*	*Vedurumetta*	- 70% damage and all repair work	*18.054175*	*82.629349*	
15	M Nittapattu	G Madugula	Singarbha	*Baram*	*Nandhi gundam check dam*	Storage problem and Desiltation work	*18.016483*	*82.483709*	
16	M Nittapattu	G Madugula	Singarbha	*Kanrnika lanka*	*Karnika lanka check dam*	Filled with soil(Storage area)	*18.031821*	*82.516744*	
17	M Nittapattu	G Madugula	Singarbha	*Kanrnika lanka*	*Karnika lanka check dam*	Leakage	*18.029543*	*82.517177*	
18	M Nittapattu	G Madugula	Singarbha	*Nimma vedhi*	*Nimmavedhi check dam*	Filled with soil(Storage area)	*18.048582*	*82.524251*	
19	M Nittapattu	G Madugula	Singarbha	*Rollangi puttu*	*Rolangiputtu check dam*	Filled with soil(Storage area)	*18.017708*	*82.494972*	
20	M Nittapattu	G Madugula	Singarbha	*Singarbha*	*Chilakala mamidi checkdam*	Filled with soil(Storage area)	*18.015958*	*82.529576*	
21	M Nittapattu	G Madugula	Singarbha	*Singarbha*	*Bandarmamidi checkdam*	Filled with soil(Storage area)	*18.027337*	*82.516657*	
22	M Nittapattu	G Madugula	Singarbha	*Singarbha*	*Nadimilanka*	Filled with soil(Storage area)	*18.031239*	*82.516963*	

5 Annexure-Renovation of WHS in Landscapes ASR- Canals

Renovation of Water Harvesting Structures in Landscapes Alluri Sitharamaraju District - Canals										
S. No	**Landscape Name**	**Mandal Name**	**Grama Panchayat Name**	**Village Name**	**Check-dam Name**	**Length of the Canal in Running mts**	**Present Status**	**Latitude**	**Longitude**	**Remarks**
1	Pinakota	Ananthagiri	Pinakota	Vaajangi	Dheyyala gummi kaluva	300	Lining with the loose soil, Need cement structure	18.064301	82.925291	
2	Pinakota	Ananthagiri	Pinakota	Vaajangi	Kanuga manu Kaluva	100	"	18.062408	82.926919	
3	Pinakota	Ananthagiri	Pinakota	Ballagaruvu	Balagaruvu kalava (G.Mavidi)	250	"	18.059811	82.937439	
4	Pinakota	Ananthagiri	Pinakota	Mallam peta	Balagaruvu check dam kaluva	300	"	18.060718	82.936723	
5	Pinakota	Ananthagiri	Pinakota	Mallam peta	Balagaruvu check dam kaluva	300	"	18.061638	82.934167	
6	Pinakota	Ananthagiri	Pinakota	Chinthapaka	Udharagada kaluva	500	"	18.060818	82.954506	
7	Pinakota	Ananthagiri	Pinakota	Chinthapaka	Mondi kota kaluva (baduva)	250	"	18.062372	82.945337	
8	Pinakota	Ananthagiri	Pinakota	Pinakota	Bidimanu kaluva	200	"	18.081973	82.947675	
9	Pinakota	Ananthagiri	Pinakota	Pinakota	Bandha manu kaluva	200	"	18.085575	82.946243	
10	Pinakota	Ananthagiri	Pinakota	Pinakota	Sapala mamidi kaluva	200	"	18.077953	82.959431	
11	Pinakota	Ananthagiri	Pinakota	Pinakota	Garumanu kaluva	200	"	18.080565	82.960041	
12	Pinakota	Ananthagiri	Pinakota	Pinakota	Birusumanu kaluva	150	"	18.081025	82.956721	
13	Pinakota	Ananthagiri	Pinakota	Borra Palem	Patha chelama kaluva	200	"	18.086608	82.967704	
14	Pinakota	Ananthagiri	Pinakota	Borra Palem	Kanam naidu kaluva	300	"	18.081973	82.947675	
15	Pinakota	Ananthagiri	Pinakota	Borra Palem	Bodda manu kaluva	200	"	18.085575	82.946243	
16	Pinakota	Ananthagiri	Pinakota	Borra Palem	Patha chelama check dam kaluva	300	"	18.092672	82.969009	
17	Pinakota	Ananthagiri	Pinakota	Velagalapadu	Perantal kaluva	500	100 rmt damage cement work and remaining lining with loose soil	18.047904	82.946971	

18	Pinakota	Ananthagiri	Pinakota	Velagalapadu	Perantal kaluva	200	Lining with the loose soil, Need cement structure	18.050443	82.94821	
19	Pinakota	Ananthagiri	Pinakota	Velagalapadu	Pasupu gundam kaluva	300	"	18.050841	82.948677	
20	D Gonduru	Paderu	Vanjangi	Doddipalli	Cheruvulanka Jore	500	Lining with the loose soil, Need cement structure	18.057822	82.627295	
21	D Gonduru	Paderu	Vanjangi	Doddipalli	Bagide Jore	800	"	18.050123	82.628407	
22	D Gonduru	Paderu	Vanjangi	Doddipalli	Cheekati Gummi	500	"	18.049992	82.62708	
23	D Gonduru	Paderu	D Gonduru	Karkaputtu	Kullati jore	500	"	18.059734	82.64357	
24	D Gonduru	Paderu	D Gonduru	D Gonduru	Pathala Gadda	500	"	18.058277	82.647154	
25	D Gonduru	Paderu	Vanjangi	Doddipalli	Pulilagala Jore	600	"	18.058803	82.627423	
26	D Gonduru	Paderu	Vanjangi	V Kothavuru	Sathakalamamidi	600	"	18.0457	82.646164	
27	D Gonduru	Paderu	D Gonduru	Palamanusnka	Bodsamanukaaluva	600	"	18.064948	82.626365	
28	D Gonduru	Paderu	D Gonduru	Vakapalli	Ventipanukujore	500	"	18.065572	82.61859	
29	M Nittapattu	G Madugula	Singarbha	Baram	nandhi gundam kaluva	500	Lining with the loose soil, Need cement structure	18.01651	82.483728	
30	M Nittapattu	G Madugula	Singarbha	chepalli	porlu to chepalli ugam kaluva	4000	No water sourse	18.040669	82.516431	
31	M Nittapattu	G Madugula	Singarbha	G Nittapattu	G Nittapattu Kaluva	1000	Connected with G Nittapattu check-dam and leakage problem	18.038776	82.534424	
32	M Nittapattu	G Madugula	Singarbha	G Nittapattu	G Nittapattu Kaluva	500	Lining with the loose soil, Need cement structure	18.042656	82.535398	
33	M Nittapattu	G Madugula	Singarbha	Goddubusulu	Goddubusulu kaluva	2000	Lining with the loose soil, Need cement structure	18.026133	82.526401	
34	M Nittapattu	G Madugula	Singarbha	kambala bailu	Kambalu bailu kaluva	1000	Lining with the loose soil, Need cement structure	18.015193	82.538368	
35	M Nittapattu	G Madugula	Singarbha	kanrnika lanka	Karnika lanka kaluva	3000	Lining with the loose soil, Need cement structure	18.031795	82.516889	
36	M Nittapattu	G Madugula	Singarbha	M Nittapattu	Kattu gondi tom Nittapattu caluva	500	Filled with soil	18.022126	82.496497	
37	M Nittapattu	G Madugula	Singarbha	M Nittapattu	Patha nela gadda caluva	1000	Lining with the loose soil, Need cement structure	18.030453	82.542763	
38	M Nittapattu	G Madugula	Singarbha	Nimma vedhi	Nimmvedhi check dam caluva	1000	Lining with the loose soil, Need cement structure	18.048885	82.524786	
39	M Nittapattu	G Madugula	Singarbha	Pulagondi	Pendakonda to pulagondi kaluva	3000	Lining with the loose soil, Need cement structure	18.028535	82.500058	
40	M Nittapattu	G Madugula	Singarbha	Rachapalli	Kakula mamidi kaluva	1000	Leakage	18.012189	82.51113	
41	M Nittapattu	G Madugula	Singarbha	Rachapalli	Goyye Kaluva	500	Lining with the loose soil, Need cement structure	18.012509	82.512247	
42	M Nittapattu	G Madugula	Singarbha	Rachapalli	Vuta goyye Kaluva	500	Lining with the loose soil, Need cement structure	18.012464	82.512198	
43	M Nittapattu	G Madugula	Singarbha	Rollangi puttu	Rolangiputtu kaluva	2000	Connected with rolangiputtu checkdam and Lining with the	18.014909	82.494265	

							loose soil, Need cement structure			
44	M Nittapattu	G Madugula	Singarbha	Sankulamide	Kattu gondi kaluva	1000	Lining with cement but fully damaged	18.022146	82.496491	
45	M Nittapattu	G Madugula	Singarbha	Singarbha	Chilakala mamidi kaluva	2000	Lining with the loose soil, Need cement structure	18.017997	82.525179	
46	M Nittapattu	G Madugula	Singarbha	Singarbha	Bandarmamidi Kaluva	2000	Lining with cement but fully damaged	18.025842	82.51676	
47	M Nittapattu	G Madugula	Singarbha	Singarbha	Nadimilanka Kaluva	1000	"	18.02741	82.517532	
48	M Nittapattu	G Madugula	Singarbha	Ubalugaruvu	Ubalugaruvu Kaluva	2000	"	18.038721	82.533385	
49	M Nittapattu	G Madugula	Singarbha	Ubalugaruvu	Uruguveedi to Ubalagaruvu kaluva	1000	Lining with the loose soil, Need cement structure	18.046368	82.528611	
50	M Nittapattu	G Madugula	Singarbha	Modikota	Mondokota kaluva	1500	Lining with the loose soil, Need cement structure	18.040171	82.528994	

6 Annexure-Springs details in Landscapes ASR District

Springs details in Landscapes Alluri Sitharamaraju District								
S. No	**Landscape Name**	**Mandal Name**	**Grama Panchayat Name**	**Village Name**	**Spring Name**	**Latitude**	**Longitude**	**Remarks**
1	Pinakota	Ananthagiri	Pinakota	Vajangi	Pedhapadu Uta	18.066667	82.926493	
2	Pinakota	Ananthagiri	Pinakota	Vajangi	Pedhapadu Uta	18.064485	82.924889	
3	Pinakota	Ananthagiri	Pinakota	Ballagaruvu	Vajangi Gada Uta	18.061134	82.931974	
4	Pinakota	Ananthagiri	Pinakota	Chinthapaka	Dheyala Gumi Uta	18.052356	82.965342	
5	Pinakota	Ananthagiri	Pinakota	Chinthapaka	Udharada Uta	18.060433	82.953435	
6	Pinakota	Ananthagiri	Pinakota	Pinakota	Pedha Gada	18.080978	82.949908	
7	Pinakota	Ananthagiri	Pinakota	Borra Palem	Patha Chelama Uta	18.086597	82.967707	
8	Pinakota	Ananthagiri	Pinakota	Velagalapadu	Vajangi Uta	18.061896	82.927692	
9	Pinakota	Ananthagiri	Pinakota	Armen garuvu	Vajangi Uta	18.061896	82.927692	
10	D Gonduru	Paderu	Vanjangi	Doddipalli	Gajulamamidi Uta	18.051876	82.624183	
11	D Gonduru	Paderu	Vanjangi	Doddipalli	Badigi Jore	18.051741	82.628034	
12	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi	18.068372	82.630602	

13	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi	18.069774	82.62987	
14	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi Uta	18.066383	82.642887	
15	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi Area	18.079117	82.67175	
16	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi Area	18.05829	82.647198	
17	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi	18.064623	82.650935	
18	D Gonduru	Paderu	D Gonduru	D Gonduru	Deyyalagummi Area	18.06443	82.651097	
19	D Gonduru	Paderu	D Gonduru	D Gonduru	Pindimamidi	18.064207	82.651165	
20	D Gonduru	Paderu	D Gonduru	D Gonduru	Pindimamidi Uta	18.063936	82.64936	
21	D Gonduru	Paderu	D Gonduru	D Gonduru	Pandamamidi	18.063824	82.650496	
22	D Gonduru	Paderu	D Gonduru	D Gonduru	Pandamamidi Uta	18.063566	82.650795	
23	D Gonduru	Paderu	Vanjangi	Doddipalli	Cheedandi Jore	18.041967	82.633436	
24	D Gonduru	Paderu	Vanjangi	Doddipalli	Cheedandi Jore	18.042877	82.633397	
25	D Gonduru	Paderu	Vanjangi	Doddipalli	Dumpabode	18.045271	82.635418	
26	D Gonduru	Paderu	Vanjangi	Korruputtu	Thiyyamamidi	18.048048	82.645108	
27	D Gonduru	Paderu	Vanjangi	Goppulapalem	Thiyyamamidi	18.046684	82.641453	
28	D Gonduru	Paderu	Vanjangi	V Kothavuru	Basanakula	18.042784	82.639916	
29	D Gonduru	Paderu	Vanjangi	V Kothavuru	Basanakula	18.042389	82.640277	
30	D Gonduru	Paderu	Vanjangi	V Kothavuru	Basanakula	18.043838	82.64206	
31	D Gonduru	Paderu	Vanjangi	V Kothavuru	Gotibayilu	18.045171	82.642973	
32	D Gonduru	Paderu	D Gonduru	Marripalem	Utamamidi	18.073304	82.628276	
33	D Gonduru	Paderu	Vanjangi	Marripalem	Utamamidi Uta	18.073255	82.629054	
34	D Gonduru	Paderu	D Gonduru	Maddelabanda	Pindimamidi	18.072647	82.627131	
35	D Gonduru	Paderu	D Gonduru	Maddelabanda	Pindimamidi Uta	18.072596	82.627298	
36	D Gonduru	Paderu	D Gonduru	Palamanusnka	Bondlmanu Uta	18.063683	82.626577	
37	D Gonduru	Paderu	D Gonduru	Vakapalli	Yedurupalle	18.063271	82.618381	
38	D Gonduru	Paderu	D Gonduru	Vakapalli	Yedurupalli Uta	18.063082	82.618522	
39	D Gonduru	Paderu	D Gonduru	Boddimamidi	Gudlamamidi	18.0554	82.617596	
40	D Gonduru	Paderu	D Gonduru	Boddimamidi	Gudlamamidi	18.057139	82.615554	
41	D Gonduru	Paderu	D Gonduru	Boddimamidi	Marrijorre	18.057106	82.615572	
42	D Gonduru	Paderu	D Gonduru	Boddimamidi	Marrijorre	18.057013	82.620184	
43	D Gonduru	Paderu	D Gonduru	Gurrampanuku	Pulilagula Area	18.060712	82.627794	
44	D Gonduru	Paderu	Vanjangi	Bakkalapanuku	Kotachesi Uta	18.047311	82.631574	

45	D Gonduru	Paderu	Vanjangi	Kokkelu	Datugadda	18.062007	82.634453	
46	D Gonduru	Paderu	Vanjangi	Kokkelu	Gadda Utalu	18.060465	82.635661	
47	D Gonduru	Paderu	Vanjangi	Kokkelu	Datugadda	18.060957	82.640556	
48	D Gonduru	Paderu	Vanjangi	Kokkelu	Datugadda	18.060193	82.642494	
49	D Gonduru	Paderu	Vanjangi	Kokkelu	Datugadda	18.059264	82.643057	
50	M Nittapattu	G Madugula	Singarbha	Baram (Colony)	Tharagumeru Spring	18.016528	82.483628	
51	M Nittapattu	G Madugula	Singarbha	Buruguvedhi	Buruguvedhi Pedda Mamidi Vuta Thragu Neeru	18.045887	82.519343	
52	M Nittapattu	G Madugula	Singarbha	Buruguvedhi	Dhula Mamidi Vuta	18.044757	82.522975	
53	M Nittapattu	G Madugula	Singarbha	Chepalli	Uagam Goyyi Vuta	18.039014	82.521497	
54	M Nittapattu	G Madugula	Singarbha	G Nittapattu	Mamidi Chettu Vuta	18.040392	82.539516	
55	M Nittapattu	G Madugula	Singarbha	Kambala Bailu	Porulu To Karnika Lanka Spring	18.03383	82.512925	
56	M Nittapattu	G Madugula	Singarbha	M Nittapattu	Pulagondi To M Nittapattu Spring	18.023782	82.503268	
57	M Nittapattu	G Madugula	Singarbha	Mudikota And Ubalugaruvu	Mundikota And G Nittapattu Thargu Neeru Vuta	18.040988	82.518462	
58	M Nittapattu	G Madugula	Singarbha	Nimma Vedhi	Nimma Vedhi Nuyye Vuta	18.04826	82.527168	
59	M Nittapattu	G Madugula	Singarbha	Porlu	Buradasilpa Thragu Neru Vuta	18.04096	82.510346	
60	M Nittapattu	G Madugula	Singarbha	Rachapalli	Karnika Lanka To Rachapalli Thragu Neeru Vuta	18.023442	82.507666	
61	M Nittapattu	G Madugula	Singarbha	Singarbha	Yegapadu Vuta (Tharugu Neeru)	17.7944664	82.559667	
62	M Nittapattu	G Madugula	Singarbha	Singarbha Colony	Tharugu Neru Yega Padu Vuta	17.994664	82.559667	