

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
SOUTH ZONE, AT CHENNAI**

ORIGINAL APPLICATION NO.147 OF 2021

**IN THE MATTER OF:**

**KosgiVenkataiah,**

S/o KosgiBalaiah,

R/o H.No.2-57, Mudireddy Pally Village,

RajapurMandal, Mahabub Nagar District,

Telangana-509202,

Mobile No.9989323271,

Mail id: [advsravan@gmail.com](mailto:advsravan@gmail.com)

.....Applicant

VS

**1. Union of India**

Represented by its Secretary,

Union Ministry of Environment, Forest & CC

and 5 others

.....

Respondents

**COUNTER AFFIDAVIT FILED BY 6<sup>TH</sup> RESPONDENT**

**Date-21-09-2021**



**M/S MADHURI DONTI REDDY  
ADVOCATE**

**STANDING COUNCIL FOR GOVERNMENT OF  
ANDHRA PRADESH**

**A.P. POLLUTION CONTROL BOARD  
T.T.D. SUPREME COURT OF INDIA**

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**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTH ZONE  
BENCH AT CHENNAI**

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RajapurMandal, Mahabub Nagar District,  
Telangana-509202,  
Mobile No.9989323271,  
Mail id: advsravan@gmail.com..... **Applicants**  
**-Vs-**

**Union of India**

Represented by its Secretary,  
Union Ministry of Environment, Forest & CC  
Indira ParyavaranBhavan, Jorbagh,  
NewDelhi- 110003  
Mail: secy-moef@nic.in  
Phone:011-24695262,24695265 and 5 others ..... **Respondents**

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DATE- 20 .09.2021



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**BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE BENCH AT CHENNAI**

**Original Application No. 147 of 2021**

**IN THE MATTER OF**

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Telangana-509202,  
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..... Applicants

-Vs-

**1. Union of India**

Represented by its Secretary,  
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..... Respondents

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**COUNTER AFFIDAVIT FILED BY 6<sup>TH</sup> RESPONDENT**

I, J. Syamala Rao, S/o Sri. J. Satyanarayana Murthy (Late), aged about 54 years, Occ: Secretary, Government of Andhra Pradesh, R/o Vijayawada, do hereby solemnly affirm and sincerely state on oath as follows:

1. I am the Secretary, Water Resources Department to the Government of Andhra Pradesh and I am well acquainted with the facts of the case. I am authorised to depose on behalf of the 6<sup>th</sup> Respondent.
2. It is submitted that the 2<sup>nd</sup> Respondent State of Telangana and the 6<sup>th</sup> Respondent State of Andhra Pradesh are successor States of the erstwhile State of Andhra Pradesh by virtue of Sections 3 and 4 of Andhra Pradesh State Re-organisation Act, 2014, (Act, 2014). I submit that KWDT-I allocated 811 TMC of water to the erstwhile State of Andhra Pradesh under its gazetted decision dated: 31.05.1976 and the same are binding on the successor States. The 2<sup>nd</sup> and 6<sup>th</sup> Respondent States agreed to share the allocation of 811 TMC by KWDT-I in the proportion of 299 TMC and 512 TMC respectively as per the inter-state agreements dated 18<sup>th</sup> & 19<sup>th</sup> June, 2015 before Krishna River Management Board constituted under Section 85 of Act, 2014. Initially, this agreement is for the water year 2015-16. However, the said agreement being acted upon for every subsequent water



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years till date. On 06.10.2020, in the 2<sup>nd</sup> Apex Council meeting, it was decided that this interim arrangement should be continued till the reference under Section 89 is answered. In addition to this, the 2<sup>nd</sup> Respondent and the 6<sup>th</sup> Respondent are entitled to construct projects as mentioned in Para 10 of the Eleventh Schedule. The 2<sup>nd</sup> Respondent State of Telangana is permitted to construct the on-going projects of Kalwakurthy LIS and Nettempadu LIS commenced by the erstwhile State of Andhra Pradesh. Similarly, the 6<sup>th</sup> Respondent State of Andhra Pradesh is permitted to continue the construction of the on-going projects viz., Telugu Ganga, Handri Niva Sujala Sravanthi, Galeru Nagari Sujala Sravanthi and Veligonda projects. Para 7 of the Eleventh Schedule states that undertaking of any other project for which KWDT-I & II did not make any allocation, it should be treated as a "New Project". Agreement dated 18<sup>th</sup>/19<sup>th</sup> June, 2015 before Krishna River Management Board is filed herewith as **Annexure-1**.

3. It is submitted that as per Sections 84(3)(ii), 85(8)(d) and Para 7 of the Eleventh Schedule of Act, 2014, a "New Project" need to be appraised by the Central Water Commission and Krishna River Management Board and basing on such appraisal, Apex Council has to sanction the New project. Without following this mandatory procedure under Act, 2014, without any allocations, the

  
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2<sup>nd</sup> Respondent State of Telangana has issued G.O. Ms. No: 105 dt: 10.06.2015 in respect of Palamuru RangaReddy LIS (PR LIS) to lift 90 TMC of flood water from foreshore of Srisaillam Reservoir to create irrigation for 12.3 lakh acres new ayacut and also for drinking water needs. A copy of G.O. Ms. No: 105 dt: 10.06.2015 is filed herewith as **Annexure-2**.

4. It is submitted that the construction of PR LIS comprises of 5 lifts namely Anjanagiri reservoir, Sri Veeranjaneya reservoir, Venkatadri reservoir, Kurumurthiraya reservoir, Udandapur reservoir and K.P.Lakshmidhevally reservoir. The applicant in the above OA has limited his grievances to water bodies that would be affected under lift number 4 (Udandapur reservoir) but the 2<sup>nd</sup> Respondent State of Telangana has been repeating the same environmental violation under other reservoirs also. The information on PR LIS downloaded from Telangana website <https://irrigation.telangana.gov.in/icad/projectsLisUp> on 18.09.2021 is filed herewith as **Annexure-3**. There are about 1098 minor irrigation tanks within 10 kms radius of these 6 reservoirs and the number of M.I tanks under each reservoir is filed herewith as **Annexure-4**. The phase-I works involve

  
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S. No.	Name of the Reservoir	No. of MI tanks @ 10 km radius	Length of bund (kms)	F.R.L. (m)	Capacity (TMC)	
					Gross	Live
1	Anjanagiri (@Narlapur)	60	6.647	345	8.51	7.95
2	Veeranjaneya (@Yedula)	318	7.716	445	6.55	5.91
3	Venkatadri (@Vattem)	178	14.75	542	16.74	16.4
4	Kurumurthiraya (@Karivena)	129	13.185	531	17.34	16.83
5	Udandapur	329	15.875	629	16.03	15.76
6	K.P. Lakshmidvipally	84	6.05	670	2.8	2.49
<b>TOTAL</b>		<b>1098</b>	<b>64.223</b>		<b>67.97</b>	<b>65.34</b>

5. It is submitted that the Ministry of Environment Forest and Climate Change (MoEF &CC) has issued EIA notification dated 14.09.2006 under Sub section 3 of Section 3 of Environment (Protection) Act 1986. In view of the admitted classification, PR LIS is one falling under category 'A' as per Clause 2(i) and Annexure 1(c) appended to the said notification. Any project which is so classified on the basis of material available is obligated to undertake the compliances mandated under Clause 4(ii) of the said Notification. PR LIS being one classified under item 1(c) of the Schedule to the EIA Notification is subjected to the procedure and process to be complied with under the said Notification. Clause 7(II)(ii) of the said notification categorically mandates that a prior Environmental Clearance is required for new projects.
6. It is submitted that the projects requiring the prior environment clearance are subject to a scrutiny indicated in

  
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Clause 7(i) comprises of 4 stages viz.,

- i) Stage (1) Screening (Only for Category 'B' projects and activities)
- ii) Stage (2) Scoping
- iii) Stage (3) Public Consultation
- iv) Stage (4) Appraisal

and the 2<sup>nd</sup> Respondent State has adopted different strategies to evade above said procedure of 4 stages by making prevaricate representations to the jurisdictional Tribunals. Initially, the contention of the 2<sup>nd</sup> Respondent is that PR LIS is limited only to drinking water purposes and therefore not subject to the rigor of the compliances under EIA Notification, dated 14.09.2006. In previous proceedings before this Hon'ble Tribunal, the Respondent No.2 has noticed orders passed by this Hon'ble Tribunal and had changed its stand to evade scrutiny and submission of the papers as required under EIA Notification and provisions of Act, 2014.

7. It is submitted that the 2<sup>nd</sup> Respondent state of Telangana has filed a Project notes before KWDT II showing the drinking water requirement and evaporation losses as 6.10. TMC out of 90 TMC proposed to be utilized under PR LIS. The 2<sup>nd</sup> Respondent State of Telangana has also filed TAC Report showing crop water requirement has 83.9 TMC. The witness of 2<sup>nd</sup> Respondent State of Telangana filed a crop water requirement of 84.85 TMC. Thus, as per the above two reports the drinking

  
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water requirement is only 6.1 TMC and 5.15 TMC respectively. From the above, by any stretch of imagination, the Infrastructure built under Phase-I of PR LIS is not for drinking water and it is for irrigation which mandatorily requires 'prior environmental clearance' as per EIA Notification Dated 14.09.2006 Phase-II involves providing Distributaries from the infrastructure created in Phase-I. Thus, the integrated operation of Phase-I and Phase-II would only enable the 2<sup>nd</sup> Respondent State of Telangana to utilise the irrigation component of either 83.9 TMC or 84.85 TMC. Thus, Phase-I of PR LIS is for providing irrigation and not for meeting the drinking water requirement. The extracts from TAC report dt:11.12.2017 and Affidavit of Telangana Witness Dr.K.Palanisami dated 13.02.2019 are filed herewith as **Annexures-5 and 6** respectively.

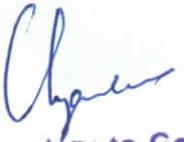
8. It is submitted that the 2<sup>nd</sup> Respondent State of Telangana filed an application for Environmental Clearance on 11.01.2017 for the entire PR LIS both for drinking and irrigation purposes for lifting 90 TMC of flood water from Srisailem Reservoir by constructing canals and storage reservoirs. The 2<sup>nd</sup> Respondent State of Telangana filed project notes before on-going Krishna Water Disputes Tribunal-II (KWDT-II) wherein, it has stated that out of 90 TMC, 83.90 TMC for irrigation and 6.10 TMC towards evaporation losses and drinking water requirement.

  
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9. It is submitted that the O.A.No.273 of 2016, one Harshavardhan challenged the actions of the 2<sup>nd</sup> Respondent State of Telangana is going ahead with construction of PRLIS without obtaining mandatory prior Environmental Clearances (herein after referred as EC). The 2<sup>nd</sup> Respondent State of Telangana on 17.02.2017 gave an undertaking before this Hon'ble Tribunal that it will execute the project only to the extent of Drinking water component and it will withdraw its application for Environmental Clearance submitted to MOEF on 11.01.2017. The order dated 17.02.2017 read as follows:

***“On behalf of Repondents Nos 2 and 3, the Chief Engineer, Palamuru Rangareddy Lift Irrigation Scheme filed an affidavit stating that the Government of Telangana would be withdrawing the application submitted for Environmental Clearance (EC) before the Ministry of Environment, Forests and Climate Change (MoEF& CC) on 11.01.2017. The affidavit also asserts that the State of Telangana would be implementing the disputed project only with regard to the supply of drinking water and not for irrigation.....”***

10. It is submitted that the application O.A.No.273/2016 was transmitted to Principle Bench at New Delhi and renumbered as O.A 2/2018. On 22.07.2019, the case was dismissed as not pressed by the petitioner therein. In fact, such a dismissal ought not to have been permitted by the Hon'ble Tribunal without verifying the nature of PR LIS and the infrastructure being created which requires several

  
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mandatory clearances to protect environment in the State of Telangana. Such an order would not operate as resjudicata as there is no adjudication on merits by this Hon'ble Tribunal.

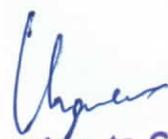
11. It is submitted that the 2<sup>nd</sup> Respondent State of Telangana submitted a fresh proposal for Environmental Clearance on 04.09.2017. The said proposal was accepted on 13.09.2017 and was considered in the 8<sup>th</sup> meeting of EAC on 22.09.2017 vide Item No.8.4. In the fresh proposal, the 2<sup>nd</sup> Respondent State of Telangana bifurcated the PR LIS into two phases. Phase - I is for drinking water and Phase - II is for irrigation. The 1<sup>st</sup> Respondent has issued TOR on 11.10.2017 and additional TOR was also issued for Phase-I. The pre-feasibility report of PR LIS submitted by the 2<sup>nd</sup> Respondent to the 1<sup>st</sup> Respondent is filed herewith as **Annexure-7**.

12. It is submitted that, it is clear from Executive Summary submitted by the 2<sup>nd</sup> Respondent State of Telangana for Environmental clearance of PR LIS during July, 2021 would show that in Phase - I of PR LIS, it is proposed to construct approach channels, open canals (50.490 km), tunnels (61.577 km), pump houses (5), reservoirs (6) with total storage capacity of 67.97 TMC for conveying water to various stages of lift and storing it for consumption use in drinking water, industrial use and irrigation. The reservoirs

  
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proposed in Phase - I are Anjanagiri, Veeranjaneya, Venkatadri, Kurumurthiya, Uddandapur, K.P.Lakshmidvipalli. The total length of the Bund in respect of these reservoirs, is about 64.223 Km, which requires large quantity of soil excavated from several lakes, tanks and other agricultural fields offending several water bodies causing several environmental concerns beside causing water, noise and air pollution and Phase - II of PR LIS involves construction of thirteen main canals totalling to a length of 915 km and distribution network to serve an ayacut of 4,97,976 hectares providing water for Kharif and Rabi irrigation season.

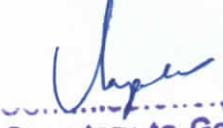
<b>Proposal submitted on 10.01.2017</b>	<b>Proposal submitted on 13.09.2017</b>
Presented as an Integrated Project	Present the proposal in two phases. i.e. Phase-I for drinking Phase-II for irrigation
90 TMC in 60 days	90 TMC in 60 days
4,04,858 Ha (10.00 L. Acres)	4,97,976 (12.30 L.Acres)
Submergence:	Submergence:
20 Nos Hamlets	Not mentioned
3 Villages	
24 M House holds	
11025 Population	
Land Acquisition	Land Acquisition
Non-Forest LA - 23778.96 Ha	Canals - 15,790 Ha
Forest LA - 229.04 Ha	
Under Reservoirs - 9664 Ha	
Conduit - 2198 Ha	
Canals - 12146 Ha	
Amarabad Tiger Reserve - 11.95 km from Forest Core area	Nor mentioned
Buffer area - 2.56 km	

  
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Ecosensitive Zone is 1.56 km away from Anjanagiri reservoir	
Break up of 90 TMC	
8.00 Drinking	Not mentioned
2.00 Industries	
80.00 Irrigation	

A perusal of the above table would show that under the guise of drinking water, the 2<sup>nd</sup> Respondent State of Telangana is executing major part of the Irrigation Project, misleading the ministry of Environment & Forests and also this Hon'ble Tribunal. The infrastructure sought to be created under the guise of drinking water project, involves substantial environmental issues for which, this Hon'ble Tribunal has originally stayed the execution of the project in OA 273/2016. The execution of the project is contemptuous as it is in violation of undertaking given before this Hon'ble Tribunal dated 17.02.2017 and which was recorded by this Tribunal on the even date. Executive Summary submitted by the 2<sup>nd</sup> Respondent State of Telangana for Environmental clearance of PR LIS during July, 2021 is filed herewith as **Annexure-8.**

13. It is submitted that a perusal of the Pre-Feasibility Report (PFR) of PR LIS shows that Phase – I involves construction of Six major reservoirs, canals, tunnels and lifts disproportionate to limited drinking water requirement, which can be carried in a pipeline. Thus, the infrastructure sought to be created in Phase-I of PR LIS undisputedly

  
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includes the infrastructure necessary for irrigation which mandatorily requires prior Environmental clearance which is offending the Environment in the State of Telangana due to various constructions being carried out as indicated above suppressing various submergence of 20 Nos hamlets, 3 villages, 24 M households, 11025 population specifically mentioned in proposal dated 11.01.2017. In fact, the 2<sup>nd</sup> Respondent called for common tenders for Phase I & II for the entire scheme and with an intention to mislead, entered into agreements excluding the distributary canals for irrigation purpose. This is nothing but ingenious way of executing the project without disclosing the scope of the entire work and quantities of raw materials needed for its construction and the source from which the raw material is procured needed for the construction. Thus, the 2<sup>nd</sup> Respondent State licentiously has chosen to proceed with PR LIS in scant disregard to the EIA Notification dated 14.09.2006 and the powers of scrutiny consecrated in this Hon'ble Tribunal. Thus, the 2<sup>nd</sup> Respondent State is misleading this Hon'ble Tribunal and MoEF & CC by adopting such tactics, which are condemnable.

14. It is submitted that the construction of PR LIS in phase I is to meet a meagre demand of 6.10 TMC for drinking water needs and evaporation losses, as per the project notes filed before KWDT-II on 28.06.2019 with all particulars on

  
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scientific basis. It is nothing but completing entire PR LIS project including irrigation demands without obtaining prior environmental clearance as mandated under EIA Notification, dated 14.09.2006. Further, every drinking water project does not require environmental clearance, is a misnomer, especially when the 2<sup>nd</sup> Respondent State of Telangana is creating a huge infrastructure for irrigation and simultaneously offending hydrological, geological, structural, climatological factors of environment in the State of Telangana in all possible ways and also by wasting thousands of crores of public money.

15. Further, it is submitted that in minutes of the 8<sup>th</sup> meeting of EAC categorically observed that

***“After deliberations and considering all the facts of the project as presented by the Project Proponent, the committee had the concerns about Techno-Economic Viability of the project. However, the EAC recommended for grant of scoping clearance/ToR for the proposed project with the following additional conditions along with standards ToR .i. The scheme in its first phase envisages lifting of 90 TMC of floodwater in 60 days during the flood season from the foreshore of the Srisailem project on Krishna river at Yellur village through five separate stages, ending at K.P. Laxmidevipally village. Therefore, water availability analysis at Yelluru village (point of drawl) during monsoon season is to be submitted to ascertain sufficiency of water available”.***

By this, it is clear that the TOR issued by the MoEF is for both Phase I & Phase II not just for Phase II which is the own assumption of the 2<sup>nd</sup> Respondent State.

16. It is submitted that, in fact, most of the drinking water

  
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needs of the 2<sup>nd</sup> Respondent State of Telangana, are met through Mission Bhagiratha, utilizing a quantity 23.4 TMC of water in Krishna Basin and the present ingenious attempt by the 2<sup>nd</sup> Respondent State of Telangana is with an oblique motive is to clandestinely completing the entire PR LIS under the guise of meeting the drinking water necessity without obtaining prior Environmental clearance knowing fully well it is not entitled such clearance as it cannot full fill all compliance legally required to be completed.

17. It is submitted that the 2<sup>nd</sup> Respondent State of Telangana is not submitting any detailed proposal/compliance report to the 1<sup>st</sup> Respondent and the 2<sup>nd</sup> Respondent State of Telangana by changing the scope of the Project and illegally procuring raw materials, mineral, granite and genesis, limestone, shales and basalt, clay & alluvial soil necessary for the project earthen bund of 64.223 Km without taking basic safeguards and approval of SEIAA/DEIAA.
18. It is submitted that the 2<sup>nd</sup> Respondent State of Telangana cannot take umbrage under the State Amendment Act 30 of 2013, when Environment is being offended in several ways and it is not open for the 2<sup>nd</sup> Respondent State in proceeding with construction of PR LIS under guise that phase-I is a drinking water project and there is no necessity of prior Environmental clearance. I submit that even for Phase-I no exemption from mandatory laws can be given in view of the

  
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massive construction, which includes the components required for irrigation, thus, Phase-I is not exclusively for drinking water alone, as admitted by the 2<sup>nd</sup> Respondent itself in its Executive summary for Environmental clearance of PR LIS of July, 2021.

19. It is submitted that, in fact, Krishna River Management Board vide letter dated 30.05.2020 directed the 2<sup>nd</sup> Respondent as instructed by 1<sup>st</sup> Respondent that not to proceed with the all the new projects which includes PR LIS. In fact, in the 12<sup>th</sup> KRMB meeting held on 04.06.2020 and in the 2<sup>nd</sup> meeting of the Apex council held on 06.10.2020 directed the 2<sup>nd</sup> Respondent to submit the DPR to get the appraisal from CWC and KRMB. The 2<sup>nd</sup> Respondent never cared to submit a DPR either to CWC or to KRMB. However, offending all the binding law and mandatory procedures to be followed, the 2<sup>nd</sup> Respondent State is proceeding with the construction, hence; there is every necessity to stop the construction of the project. Since, it is clouded in secrecy at every stage.

20. It is submitted that the 2<sup>nd</sup> Respondent cannot be permitted to construct PRLIS without obtaining the mandatory prior Environmental clearances under EIA Notification dated 14.09.2006 or appraisal and sanction of New project under provisions of Act, 2014 and with such construction the 2<sup>nd</sup> Respondent cannot project a case for ex-post facto

  
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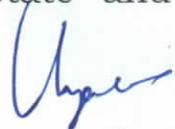
clearances, which is unknown to Environmental jurisprudence. In fact, ex-post facto clearances, envisaged vide EIA Notification 14.03.2017 is limited to projects in existence then not for new projects. It does not apply to PR LIS and construction of PR LIS is illegal and unauthorized.

21. It is submitted that there is no allocation to PR LIS and undertaking PR LIS without any allocations is not permissible. The water availability for the PR LIS is beyond the scope of allocations made by KWDT-I & II and also beyond the scope of provisions of Act, 2014. The 2<sup>nd</sup> Respondent State of Telangana proposing to draw flood water from +800 feet level from Srisailam reservoir and the question of drawing flood water at +800 feet level, does not arise and water available at that level in Srisailam reservoir is of dependable water. KWDT-II distributed water of Interstate River Krishna upto Average flows i.e., 2578 TMC, this is the theoretical upper limit for utilizable flows. Thereafter, the ongoing projects mentioned in para 10 of the Eleventh schedule have to get water to an extent of 172.50 TMC (227.50-25-30) (deducting 25 TMC allocated to Telugu Ganga Project by KWDT-II and 30 TMC under SLBC) and if any water is available over and above that, if the 2<sup>nd</sup> Respondent State is given any right to utilize remaining water over and above 2750.50 TMC (2578+172.50). Then only it can utilize any water if available for this project. The

  
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2<sup>nd</sup> Respondent State of Telangana due to its geographical dominance proceeding with the construction of PR LIS unilaterally without any right to draw dependable water from Srisaillam reservoir surreptitiously.

22. It is submitted that the actual hydrology as per the Central Water Commission gauge data at various reservoir sites in executing PR LIS need to be established after the demands of projects for which KWDT-I & II made allocations and also for on-going projects under para 10 of the Eleventh schedule of AP Re-organization Act, 2014 are met and the source of water cannot be shown as flood flows from Srisaillam reservoir as a simplifier without considering mandatory compliances to be obtained, the same is illegal and unjust.
23. It is submitted that as per the guidelines of Central Water Commission for the appraisal of projects, it need to be established that the project has legal allocation and such use does not impact the allocations of respective downstream projects within the 2<sup>nd</sup> Respondent State of Telangana on river Krishna as well as the downstream projects in the 6<sup>th</sup> Respondent State of Andhra Pradesh dependent on river Krishna are not affected. Even as per the check list under EIA Notification dated.14.09.2006 such impact need to be examined as any new project is constructed in the upstream would naturally changes the flow pattern available to the lowest riparian State and

  
Commissioner, C.A.D.A &  
Secretary to Government  
Water Resources Department,  
VIJAYAWADA, A.P

negatively impact the water available to the age old projects of the 6<sup>th</sup> Respondent State.

24. It is submitted that the assumption of 2<sup>nd</sup> Respondent State that Phase-I doesn't require Environmental Clearance is wrong as it is bringing up substantial infrastructure required for irrigation component of phase II and not just for drinking water alone and Ministry's TOR is very clear and it doesn't distinguish between phase-I and phase-II and Additional TOR is given for Phase-I in addition to Standard TOR. Further, the TOR of PR LIS expires on 10th October, 2021. Hence, hurriedly the 2<sup>nd</sup> Respondent State of Telangana called for public hearing which is not a legal compliance to the EIA Notification.
25. It is submitted that the perusal of TOR would indicate that it is meant for entire 90 TMC and it does not say that it is for Phase - I only. In fact, Phase - II is only a minor component of execution of distributary canals from the reservoir.
26. It is submitted that the perusal of the minutes of the 8<sup>th</sup> meeting of EAC clearly disclose that imposing additional condition along with standard TOR since the scheme involved lifting 90 TMC flood water in 60 days during the flood season from the foreshore of Srisaillam Reservoir of Inter-State River Krishna at Yelluru Village through 5 pumping stages. The water availability at Yelluru Village

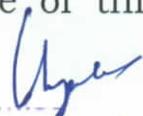
  
Secretary to Government  
Water Resources Department  
VIJAYAWADA, A.P

during monsoon season is to be ascertained sufficiency of water availability without affecting allocations of all the downstream projects.

27. It is submitted that the 2<sup>nd</sup> Respondent in violating all the mandatory laws is proceeding with the construction of PR LIS and try to complete the scheme by the end of December, 2021 as directed by its Chief Minister. The 2<sup>nd</sup> Respondent may operate some pumps to falsely claim that the project has become operational. Thus, there is absolute necessity not only stay the construction of PR LIS and but also to direct 2<sup>nd</sup> Respondent not to operate the scheme pending disposal of the above OA. The pumps should not be permitted to be installed, which can draw more than 90 TMC and up to 120 TMC. If the construction of PR LIS is completed and brought into operation either fully or partially, the 6<sup>th</sup> Respondent and its inhabitants will suffer irreparable loss and injury. Photographs showing the construction of PR LIS are filed herewith as **Annexure-9**.

28. In view of the above, this Hon'ble Tribunal may be pleased to restrain the 2<sup>nd</sup> Respondent State of Telangana from proceeding with PR LIS without obtaining prior clearances as mandated under the EIA notification, 2006, Act 6 of 2014 and in contravention to the undertaking given before this Hon'ble Tribunal.

29. It is submitted that this respondent craves leave of this

  
Secretary to Government  
Water Resources Department,  
VIJAYAWADA. A.P

Hon'ble Tribunal to raise additional counter in the course of proceedings, if required.

Hence, it is prayed that this Hon'ble Tribunal may be pleased to restrain the 2<sup>nd</sup> Respondent/ State of Telangana from the construction of PR LIS and pass such order or orders as this Hon'ble Tribunal deems fit and proper.



**DEPONENT**  
Secretary to Government  
Water Resources Department,  
VIJAYAWADA, A.P

Solemnly affirmed at Vijayawada  
District Andhra Pradesh on  
this the 20<sup>th</sup> day of September, 2021  
and signed his name in  
my presence

**BEFORE ME**



**ADVOCATE, Vijayawada**

**PENUMAKA AJAY BABU**  
ADVOCATE M.A.,LL.M.,  
HIGH COURT OF A.P.  
CELL: 9493494444, 9966370959



Secretary to Government  
Water Resources Department,  
VIJAYAWADA, A.P

**VERIFICATION**

I, J. Syamala Rao, S/o Sri. J. Satyanarayana Murthy (Late), aged about 54 years, Occ: Secretary, Government of Andhra Pradesh, R/o Vijayawada, do do hereby state that what is stated above in paragraphs 1 to 29 are true to the best of my knowledge and belief.

Dated at Vijayawada on this the 20<sup>th</sup> day of September 2021.



**DEPONENT**  
Commissioner, C.R.D.D.  
Secretary to Government  
Water Resources Department,  
VIJAYAWADA, A.P



Commissioner, C.R.D.D.  
Secretary to Government  
Water Resources Department,  
VIJAYAWADA, A.P

**Brief record of the discussion of the meeting held on 18<sup>th</sup> and 19<sup>th</sup> June, 2015  
to discuss issues related to regulation of water by  
Krishna River Management Board**

A meeting was held on 18<sup>th</sup> and 19<sup>th</sup> June, 2015 under the Chairmanship of Additional Secretary, MoWR, RD&GR to discuss the issues related to regulation of water use by Krishna River Management Board between Andhra Pradesh and Telangana State. In addition to the officials of Ministry of Water Resources, River Development and Ganga Rejuvenation, officials from Government of Telangana and Andhra Pradesh and Krishna River Management Board were present in the meeting. The list of participants is enclosed.

2. While welcoming the participants, Additional Secretary, MoWR, RD & GR requested the representatives of both the states to present their views in this regard.

3. The representative of Govt. of Andhra Pradesh requested to notify the projects for taking over under the jurisdiction of Krishna River Management Board urgently for the purpose of regulation of water. He also cited that at present the directives of the Board are not followed. Representative of the State of Telangana stated that before taking any decision regarding notification of projects and regulation of water, it is necessary that broad principles of water regulation and an appropriate implementation mechanism are worked out. In this regard, he highlighted that as per KWDT-I award the erstwhile State of Andhra Pradesh has been allocated 811 TMC for utilization in various projects as enbloc. However, as per the arrangement/various decisions taken by the erstwhile State of Andhra Pradesh revised allocations in both the parts of the State came to be 512 TMC in Andhra Pradesh and 299 TMC in Telangana.

4. The representative of Andhra Pradesh contested that the share of Telangana is only 279 TMC and additional 20 TMC will be available to them for Bhima Lift Project only after the completion of modernization of Krishna Delta System. The representative of Telangana contended that revised allocations statement submitted by the erstwhile Andhra Pradesh before KWDT-II has to be adhered to by both the states.

5. It was agreed in the meeting that the figures of share of the two states as mentioned in the list of projects dated 18.10.2013 (appended herewith as Annexure) may be followed as the working arrangement for the current year only without prejudice to the rights of the two states about their entitlements which have been raised or to be raised before appropriate fora.

6. The representatives of both the States agreed that they may utilize their share of water wherever they decide subject to availability of water at that place and without affecting the rights of other State.

7. Thereafter, project related issues were discussed and following working arrangements for the water year 2015-2016 only were agreed as a temporary measure.

**Nagarjuna Sagar Project:**

8. After detailed deliberations, it was agreed that the water share of both the States from this project would be as mentioned in the Annexure. KRMB would duly consider the requirements of both Andhra Pradesh as well as Telangana State as per existing practice while regulating the water of Left Bank Canal.

9. It was agreed that while considering the demands of two states the due priority would be given to the drinking water requirements of all the areas including the twin cities of Hyderabad and Secunderabad as per Schedule XI of AP Reorganisation Act, 2014.

**Krishna Delta System**

10. As per the Tribunal award, 181.2 TMC of water has been allocated for Krishna Delta Project, i.e. Prakasham Barrage at Vijayawada. However, as per Annexure enclosed the share of Krishna Delta is 151.2 TMC.

11. The water requirements for Krishna Delta are met from intermediate contribution supplemented by NSP. In so far as utilisable water yield downstream of Nagarjuna Sagar by Paleru, Munneru and Musi is concerned, Govt of Andhra Pradesh stated that this is only 20 TMC. According to representative of Govt of Telangana, this yield is 101.2 TMC. It was agreed that actual utilisable water from intermediate catchment may be taken into consideration by KRMB while determining releases to Krishna Delta. The utilisable quantity of water from the intermediate catchment downstream of Nagarjuna Sagar would be assessed by the CWC for consideration of KRMB by taking the flow data from Musi, Paleru and Munneru streams, storage in Pulichintala and measurement of actual discharges through the canals in Krishna Delta. That quantity shall be deducted from the total allocation and the same shall be supplemented through Nagarjuna Sagar Project for the irrigation and command of Krishna Delta System.

12. The representative of Govt of Andhra Pradesh mentioned that the cost of Krishna Delta Modernization should be shared by Govt of Telangana if 20 TMC of water is to be utilized for Bhima Project. Representative of Govt. of Telangana vehemently opposed this idea of cost sharing.

13. It was suggested that the water would be regulated at Nagarjuna Sagar Project duly considering the requirements of its Canal System and requirements of Krishna Delta System.

**Srisaillam Reservoir Project**

14. It was noted that there is 5 TMC requirement for Chennai Water Supply (AP and TS share) through Telugu Ganga Canal and another 19 TMC requirement for SRBC. It was agreed that while making releases for power generation the committed utilisations for Nagarjuna Sagar and Srisaillam Reservoir as mentioned above/in the Annexure may be ensured.

**Implementation Mechanism**

15. A Committee comprising of E-in-Cs of the two States and Member Secretary of KRMB would consider the indents raised by the project authorities

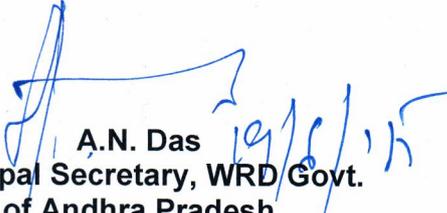
keeping in view of the overall availability of water and requirements raised by the concerned project authorities and make recommendation to KRMB. The decision taken by KRMB shall be implemented by the concerned State project authorities.

16. The above mentioned Committee will also regulate the release of water through K C Canal, Jurala and RDS as mentioned in the Annexure.

17. It was agreed that for current year the quantity of water available after allocation of 811 TMC would be shared proportionately. Similarly, the deficit below 811 TMC would also be shared accordingly.

18. The entire arrangements agreed for the current year would be without any prejudice to the stand of both the States before any forum.

The meeting ended with a vote of thanks to the Chair.

  
A.N. Das  
Principal Secretary, WRD Govt.  
of Andhra Pradesh

  
S.K. Joshi  
Principal Secretary, I&CAD  
Govt. of Telangana

  
Dr. Amarjit Singh  
Additional Secretary  
Ministry of WR, RD&GR



**Andhra Pradesh & Telangana projects in Krishna Basin**

Figures in TMC

S. No.	Name of the Project	As per Bachawat Report	Reallocation	Regionwise allocations			
				Rayalaseema	Coastal Andhra	Telangana	Total
1	2	3	4	5	6	7	8
<b>I</b>	<b>Specific projects in region</b>						
1	Krishna Delta	181.20	152.20		152.20		152.20
2	Muniyeru Project	3.30	3.30		3.30		3.30
3	Pakhal lake	2.60	2.60			2.60	2.60
4	Wyra	3.70	3.70			3.70	3.70
5	Palair	4.00	4.00			4.00	4.00
6	Dindi	3.70	3.50			3.50	3.50
7	Kurnool-Cuddapah Canal	39.90	31.90	31.90			31.90
8	Koilsagar	3.90	3.90			3.90	3.90
9	Tungabhadra Right Bank Low Level Canal	29.50	29.50	29.50			29.50
10	Tungabhadra Right Bank High Level Canal Stage-I&II	32.50	32.50	32.50			32.50
11	Rajolibunda Diversion Scheme	15.90	15.90			15.90	15.90
12	Bhairavanitippa	4.90	4.90	4.90			4.90
13	Musi	9.40	9.40			9.40	9.40
14	Lankasagar	1.00	1.00			1.00	1.00
15	Vaikuntapuram Pumping Scheme	2.60	2.00		2.00		2.00
16	Kotipallivagu	2.00	2.00			2.00	2.00
17	Guntur Channel	4.00	4.00		4.00		4.00
18	Okachettivagu	1.90	1.90			1.90	1.90
19	Gajuladinne	2.00	2.00	2.00			2.00
20	Jurala	17.84	17.84			17.84	17.84
21	Water supply to Twin cities of Secunderabad and Hyderabad	3.90	5.70			5.70	5.70
22	Minor Irrigation	116.26	111.26	12.24	9.87	89.15	111.26
	<b>Total(I)</b>	<b>486</b>	<b>445</b>	<b>113.04</b>	<b>171.37</b>	<b>160.59</b>	<b>445.00</b>
<b>II</b>	<b>Common Projects</b>						
23	Nagarjunasagar Project	281	280		174.30	105.70	280.00
24	Srisaillam(Evaporation losses)	33	33	11.00	11.00	11.00	33.00
25	Chennai city Water Supply		5	1.66	1.67	1.67	5.00
	<b>Total(II)</b>	<b>314</b>	<b>318</b>	<b>12.66</b>	<b>186.97</b>	<b>118.37</b>	<b>318.00</b>

*Amuz*

*29/6*

*8*

S. No.	Name of the Project	As per Bachawat Report	Reallocat ion	Regionwise allocations			
				Rayalase ma	Coastal Andhra	Telangana	Total
1	2	3	4	5	6	7	8
<b>III New Projects based on savings &amp; return flows</b>							
26	Srisaillam Right Branch Canal		19.00	19.00			19.00
27	Pulichintala Project		9.00		9.00		9.00
28	Rajiv (Bhima) Lift Scheme		20.00			20.00	20.00
29	Return flows	11.00					
	<b>Total(III)</b>	<b>11.00</b>	<b>48.00</b>	<b>19.00</b>	<b>9.00</b>	<b>20.00</b>	<b>48.00</b>
	<b>Total(I+II+III)</b>	<b>811</b>	<b>811</b>	<b>144.70</b>	<b>367.34</b>	<b>298.96</b>	<b>811.00</b>

**Note:**

- The above statement is prepared based on the location of the projects for which allocations are made by KWDT-I.
- Hyderabad water supply scheme was taken up with consumptive use of 3.3 TMC by making reallocations of 0.2 TMC from Dindi project, 0.6 TMC from Vikuntapuram P.S, 1.0 TMC from Nagarjunasagar project and saving of 1.50 TMC out of 3.9 TMC towards water supply to Twin cities. (Govt. of Andhra Pradesh Irr Dept GO Ms No.19 dated:5/2/2003).
- Bhima Lift Irrigation project in Mahabubnagar District(20 TMC) and Pulichintala project(9TMC towards evaporation losses) are takenup against the savings proposed by modernizing the Krishna delta. (CWC approval vide 64<sup>th</sup> meeting of the Advisory Committee letter no. 10/27/96-PA(N)/502-550 dt:16-04-96).
- Srisaillam Right Branch Canal was taken up with the return flow of 11 TMC allocated by Bachawat tribunal and 8 TMC by way of savings due to modernization of K.C. canal system. (CWC approval vide 58<sup>th</sup> meeting of the Advisory Committee letter no. 16/27/94-PA(N) dt: 4<sup>th</sup> July 1994).
- 5 TMC reallocated towards AP's contribution for Chennai water supply as per the Agreement dated 14.4.1976 among the Govt of A.P., Karnataka and Maharashtra. This 5 TMC is shown equally among three regions out of minor irrigation allocations.
- The evaporation loss of 33 TMC for Srisaillam reservoir is shown equally among three regions.
- The allocation of Nagarjunasagar project is shown as per "Nagarjunasagar Project, Third Revised project Estimate 2000" and the evaporation loss is included in proportion to allocations.

Yours faithfully,  
Sd/- dt 18.10.2013.  
Chief Engineer(OSD), IS & WR

For Chief Engineer(OSD)/IS & WR

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**LIST OF PARTICIPANTS****From Ministry of Water Resources, RD&GR**

- |                      |                                   |
|----------------------|-----------------------------------|
| 1. Dr. Amarjit Singh | Additional Secretary              |
| 2. Sh. K. Vohra      | Commissioner (Indus)              |
| 3. Sh. R.K. Pachauri | Commissioner (Pen.Riv.)           |
| 4. Dr. Naresh Kumar  | Sr. Joint Commissioner (Pen.Riv.) |

**Participants from KRMB**

- |                      |                  |
|----------------------|------------------|
| 1. Sh. S.K.G. Pandit | Chairman         |
| 2. Sh. R.K. Gupta    | Member Secretary |

**Participants from Govt. of Andhra Pradesh**

- |                              |                                |
|------------------------------|--------------------------------|
| 1. Shri Aditya N.Das         | Principal Secretary, WRD       |
| 2. Shri M. Venkateswara Rao  | Engineer-in-Chief (Irrigation) |
| 3. Shri D. Rama Krishna      | Chief Engineer (IS&WR)         |
| 4. Sh. B. P. Venketeshwaralu | Member, TAC                    |
| 5. Shri P. Rama Raju         | Member, TAC                    |
| 6. Shri P Ramakrishna Murthy | SE (IS & WR)                   |
| 7. Sh. K.B. Gangadhar Rao    | DEE                            |

**Participants from Govt. of Telangana**

- |                          |                             |
|--------------------------|-----------------------------|
| 1. Sh. R. VidyaSagar Rao | Advisor, Govt. of Telangana |
| 2. Sh. S.K. Joshi        | Principal Secretary (I&CAD) |
| 3. Sh. B.Negandra Rao    | Chief Engineer (IS & WR)    |
| 4. Sh.V. Ravinder Rao    | Legal Advisor               |

**GOVERNMENT OF TELANGANA**  
**ABSTRACT**

PALAMURU – RANGA REDDY LIFT IRRIGATION PROJECT - For Lifting of flood water in 60 days from foreshore of Srisailem Reservoir in Mahabubnagar district to serve net ayacut of 10.00 Lakh acres in drought prone areas of Mahabubnagar (7.00 Lakh acres), Rangareddy (2.70 Lakh acres) and Nalgonda (0.30 Lakh acres) Districts including providing drinking water facilities to enroute villages and industrial water use excluding the ayacut under Medium and Minor Irrigation tanks - Administrative approval for an amount of Rs 35,200 crore – Accorded – Orders – Issued.

=====

**IRRIGATION AND CAD (PROJECTS-I) DEPARTMENT**

**G.O.MS.No. 105**

**Dated:10-06-2015**

**Read:**

From the Engineer-in-Chief (Irrigation), Hyderabad, Lr No. ENC(I)/  
DCE-IV/OT4/ AEE10/ CE/PRLIS/2015, Dt:04-06-2015 & 09.06.2015.

\*\*\*\*\*

**ORDER:**

In the reference read above, the Engineer-in-Chief (Irrigation), Hyderabad has informed that the Palamuru -Ranga Reddy Lift Irrigation Scheme envisages to irrigate upland areas of about a net ayacut of 10 lakh acres, drinking water to Hyderabad city and industrial use in Mahabubnagar, Rangareddy and Nalgonda districts, by lifting 90 TMC of flood water in 60 days during flood season ( i.e., 1.50 TMC per day) from foreshore of Srisailem Project located on Krishna river in Mahabubnagar district to Laxmidevipally(V), Kondurg (M) near Shadnagar town (from +250.00 M to +675.00m) which is the highest elevation in between Mahabubnagar and Ranga Reddy districts with 5 stage lifting and then utilizing water by gravity. The scheme contemplates enroute Irrigation under different reservoirs as per their command ability. There are five stages in the project starting from foreshore of Srisailem Reservoir and ending with K.P.Laxmidevipally Reservoir. The work is proposed to be taken up during the year 2015-16 by calling tenders on e-procurement platform.

2. The ENC has requested to accord administrative approval to the project for an amount of Rs.35,250 crore with SSR 2014-15.
3. The Government after careful examination of the proposal of the Engineer-in-Chief (Irrigation), Hyderabad hereby accord Administrative approval to the Palamuru – Rangareddy Lift Irrigation Scheme for an amount of Rs 35,200 Crore (Rupees thirty five thousand two hundred crore only).
4. The Chief Engineer(Projects), Mahabubnagar shall take necessary action accordingly.

//2//

5. This order issues with the concurrence of Finance (W&P) Department, vide their U.O. No. 3526/133/WP/A1/15, dated:08.06.2015.

**(BY ORDER AND IN THE NAME OF THE GOVERNOR OF TELANGANA)**

**SHAILENDRA KUMAR JOSHI  
PRINCIPAL SECRETARY TO GOVERNMENT**

To  
The Engineer-in-Chief (Irrigation), Hyderabad  
The Chief Engineer(Projects), Mahabubnagar

**Copy to:**

The Accountant General, T.S., Hyderabad.  
The Director of Works & Accounts, Hyderabad.  
The Finance (W&P) Dept.  
The OSD to Minister for Irrigation.  
The P.S. to Prl. Secretary.

**//FORWARDED :: BY ORDER//**

**SECTION OFFICER**

**PALAMURU-RANGAREDDY LIFT IRRIGATION SCHEME**

**1. SCOPE OF THE PROJECT:**

Palamuru -Ranga Reddy Lift Irrigation Scheme envisaged to create irrigation potential in upland areas of Nagarkurnool, Mahabubnagar, Vikarabad, Rangareddy and Nalgonda districts for an ayacut of 10.00 lakh acres, (proposal for enhanced ayacut of 12.30 Lakh Acres is under consideration at Government)drinking water to enroute villages, GHMC and industrial use by lifting 2 TMC per day for 60 days during flood season (1.50 TMC for PRLIS + 0.50 TMC for Dindi L.I.S) from foreshore of SrisaillamReservoir on Krishna river near at Yellur(V), Kollapur(M) to K.P. Laxmidevipally(V), Kondurg (M) with 5 stage lifting and then utilizing water by gravity.The Government have accorded administrative approval for an amount of Rs. 35,200 crores vide G.O.Ms. 105, I&CAD (Projects-I) Dt: 10.6.2015.

**2. DETAILS OF LIFTS:**

Sl. No.	Lift/ Place	Lift Height	Pumps & Ratings	Pump capacity
1	Lift-1 near Yellur Village	104 m	8 x 145 MW	85 Cumecs
2	Lift-2 near Yedula Village	124 m	9 X 145 MW	75 Cumecs
3	Lift-3 near Vatttem village	121 m	9 X 145 MW	75 Cumecs
4	Lift-4 near Udandapur village	122 m	5 X 145 MW	75 Cumecs
5	Lift-5 K.P Laxmidevipally Village	72 m	3 X 75 MW	55 Cumecs

**3. DETAILS OF RESERVOIRS:**

Sl. No.	Name of Reservoir	Place	Bund Length (KMs)	F.R.L	Capacity (TMC)		Reservoir wise Ayacut in Ac.
					Gross	Live	
1	Anjanagiri	Narlapur village	6.647	+345.000 m	8.51	7.95	-
2	Veeranjaneya	Yedula Village	7.716	+445.000 m	6.55	5.91	-
3	Venkatadri	Vatttem village	14.750	+542.000 m	16.74	14.47	1,39,000
4	Kurumurthiraya	Karivena Village	13.185	+531.000 m	17.34	16.90	1,90,000
5	Udandapur	Udandapur Village	15.875	+629.000 m	16.03	15.61	4,88,000
6	K.P Lakshmidvipally	Lakshmidvipally village	6.050	+670.000 m	2.80	2.50	4,13,000
<b>Total</b>			<b>64.223</b>		<b>67.97</b>	<b>63.34</b>	<b>12,30,000</b>

**5. DETAILS OF LAND ACQUISITION DISTRICT WISE:**

Sl. No.	Name of District	Title of Land			Land Acquired			Land to be Acquired		
		Govt Land	Patta Land	Total Land	Govt Land	Patta Land	Total Land	Govt Land	Patta Land	Total Land
1	Nagar kurnool	3210.54	8681.53	11892.07	2560.80	6018.70	8579.50	649.74	2662.83	3312.57
2	Wana parthy	638.98	3562.64	4201.62	508.38	3466.04	3974.32	130.70	96.60	227.30
3	Mahabub nagar	1626.08	9131.52	10757.60	1576.87	6096.61	7673.48	49.21	3034.91	3084.12
<b>TOTAL</b>		<b>5475.6</b>	<b>21375.69</b>	<b>26851.29</b>	<b>4646.05</b>	<b>15581.35</b>	<b>20227.3</b>	<b>829.65</b>	<b>5794.34</b>	<b>6623.99</b>

**6. Details of R&R :**

S.No	Details of R&R	Total (Nos)	Payment made so far
1.	No. of Villages effected	3	-
2.	No of Thandas/Hamlets effected	20	-
3.	No. of House hold effected	2481	514 Nos
4.	Population effected	11,025	-
5.	Expenditure a) Structure Value b) Addl Amount for 2BHK		Rs.9.45 Crs Rs. 60.23 Crs
			<b>Rs.79.68 Crs</b>

- The **main conduit works** of PRLIS are divided into 21 packages, at present 18 packages i.e., from Narlapur to Udandapur Reservoir are entrusted to agencies and those works are in progress.
- **Survey Works** for ayacut under Reservoirs are divided into 7 packages, 6 works are entrusted to Agencies, and one package work being carried out through department staff which are in progress.

The Tenders for main conduit works from Udandapur to K.P.Laxmidevipally Reservoir are proposed to be invited.

## AYACUT DETAILS OF PALAMURU-RANGAREDDY LIFT IRRIGATION SCHEME (12,30,000 Acres)

S.No	District	Constituency	Mandal	Total Ayacut in Acres
1	MAHABUBNAGAR	DEVARAKADRA	ADDAKAL	18692
			BHOOTHPUR	13105
			MOOSAPET	6000
			DEVARKADRA	20655
			<b>Sub-Total</b>	<b>58452</b>
		JADCHERLA	BALANAGAR	30311
			RAJAPUR	10000
			JADCHERLA	38585
			MIDJIL	32097
			NAWABPET	25576
			<b>Sub - Total</b>	<b>136569</b>
		MAHABUBNAGAR	MAHBUBNAGAR (RURAL)	9692
			HANWADA	12527
			<b>Sub-Total</b>	<b>22219</b>
		MAKTAL	MAGANOR	264
			MAKTHAL	17549
			NARVA	5918
			UTKOOR	34281
			<b>Sub-Total</b>	<b>58012</b>
		NARAYANPET	DAMARAGIDDA	1207
			DHANWADA	15734
			KOILKONDA	25794
			NARAYANPET	16056
			<b>Sub-Total</b>	<b>58791</b>
		*PARGI	GANDEED	24414
			<b>Sub-Total</b>	<b>24414</b>

		*KODANGAL	KOSGI	26023
			MADDUR	28687
			<b>Sub-Total</b>	<b>54710</b>
	<b>DISTRICT TOTAL</b>			<b>413167</b>
2	<b>VIKARABAD</b>	*PARGI	DOMA	20473
			KULKACHARLA	10412
			PUDUR	11750
			PARGI	18587
		<b>Sub-Total</b>		<b>61222</b>
		TANDUR	BASHEERABAD	26982
			PEDDEMUL	19958
			TANDUR	29040
			YALAL	22112
		<b>Sub-Total</b>		<b>98092</b>
		VIKARABAD	KOTEPALLY(NEW)	11622
			BANTWARAM	5985
			DHARUR	21357
			MARPALLE	28049
			MOMINPET	18753
			VICARABAD	9286
		<b>Sub-Total</b>		<b>95052</b>
		*KODANGAL	BOMRASPET	29063
			KODANGAL	18003
			DOULATHABAD	8667
		<b>Sub-Total</b>		<b>55733</b>
		*CHEVELLA	NAWABPET	12276
		<b>Sub-Total</b>		<b>12276</b>
	<b>DISTRICT TOTAL</b>			<b>322375</b>

3	NAGARKURNOOL	ACHAMPET	VANGOOR	1357	
			CHARAKONDA	1000	
		<b>Sub Total</b>			<b>2357</b>
		NAGARKURNOOL	BIJINAPALLE	7712	
			THIMMAJIPET	23263	
			TADOOR	4082	
		<b>Sub-Total</b>			<b>35057</b>
		*KALWAKURTHY	URUKONDA	4482	
			KALWAKURTHY	18957	
			VELDANDA	39705	
		<b>Sub-Total</b>			<b>63144</b>
		<b>DISTRICT TOTAL</b>			<b>100558</b>
		4	RANGAREDDY	*KALWAKURTHY	AMANGAL
	KADTHAL				4922
MADGUL	30609				
TALAKONDAPALLE	24104				
<b>Sub-Total</b>				<b>70896</b>	
CHEVELLA	CHEVELLA			24028	
	SHABAD			25369	
	MOINABAD			28535	
	SHANKARPALLE			19331	
<b>Sub-Total</b>				<b>97263</b>	
SHADNAGAR	FAROOQNAGAR			21345	
	KONDURG			18395	
	CHODERGUDEM			13500	
	KOTHUR			18852	
	NANDIGAMA			10000	
	KESHAMPET			1969	

		<b>Sub-Total</b>		<b>84061</b>
		IBRAHIMPATNAM	MANCHAL	15621
			YACHARAM	28612
			IBRAHIMPATNAM	29185
			HAYATHNAGAR	12496
		<b>Sub-Total</b>		<b>85914</b>
		RAJENDRANAGAR	SHAMSHABAD	6601
		<b>Sub-Total</b>		<b>6601</b>
		MAHESHWARAM	MAHESHWARAM	8251
			KANDUKUR	10914
		<b>Sub-Total</b>		<b>19165</b>
	<b>DISTRICT TOTAL</b>			<b>363900</b>
5	<b>NALGONDA</b>	DEVARAKONDA	CHINTHA PALLE	10454
			CHANDAM PET	75
			GUNDLA PALLE	3682
			DEVARAKONDA	11773
		<b>Sub-Total</b>		<b>25984</b>
		MUNUGODU	MARRIGUDA	4016
		<b>Sub-Total</b>		<b>4016</b>
	<b>DISTRICT TOTAL</b>			<b>30000</b>
<b>GRAND TOTAL</b>			<b>74 Nos.</b>	<b>1230000</b>

37  
MI tanks information under 6 reservoirs dt:09.09.2021

Annexure: 4

Veeranjaneya Reservoir			Venkatadri Reservoir			Udanadapur Reservoir			
Mandal name(4)	village	No of tanks	Mandal name(4)	village	No of tanks	Mandal name(7)	village	No of tanks	
Kodair ( 97 Tanks)	BAWAIPALLE	4	Bijinapalle (58 Tanks)	BIJINAPALLE	7	Bhoothpur (27 Tanks)	AMISTAPUR	6	
	GANTRAOPALLE	1		BOYAPUR	4		BHOOTHPUR	3	
	JANUMPALLE	14		GUDLANARVA	3		HASNAPUR	2	
	KHANAPUR	4		KARUKONDA	3		KARVENA	2	
	KODAIR	10		KHANAPUR	6		KOTHUR	2	
	KONDRAOPALLE	1		LATPALLE	2		POTHULAMADUG U	1	
	MACHUPALLE	9		LINGASANIPALLE	1		TADPARTHY	11	
	MUTHIREDDIPALLE	11		MANGANUR	7		Hanwada (9 Tanks)	DACHEKPALLE	3
	NAGULAPALLE	11		none	1		GUDDIMALKAPUR	3	
	PASPULA	5		PALEM	2		KOTHAPETA	2	
RAJAPURAM	12	POLEPALLE	4	TANKARA	1				
SINGAIPALLE	1	VADDEMANU	2	Jadcherla (121 Tanks)	ALLOOR	9			
TEEGALAPALLE	3	VASANTHAPUR	3		AMBATAPUR	2			
TURKADINNE	5	VATTEM	4		BADEPALLE	6			
YETHAM	6	VELGONDA	7	BUREDDIPALLE	7				
Nagar_Kur nool (25 Tanks)	AURASPALLE	1	Nagar_Kurno ol (24 Tanks)	VENKATAPUR	2	BURUGUPALLE	7		
	CHANDUBATLA	2		NAGANUL	2	EARLAPALLE	1		
	GANYAGULA	6		NAGARKURNOOL	1	GANGAPUR	13		

Veeranjaneya Reservoir			Venkatadri Reservoir			Udanadapur Reservoir		
Mandal name(4)	village	No of tanks	Mandal name(4)	village	No of tanks	Mandal name(7)	village	No of tanks
	GUDIPALLE	4		NALLAVELLI	4		GOLLAPALLE	10
	NAGAPUR	1		SRIPURAM	8		JADCHERLA	12
	PEDDAMUDNUR	4		UNMAPPED	1		KHANAPUR	5
	PEDDAPURAM	3		UYYALAWADA	4		KISHTARAM	3
	THOODUKURTHY	3		YENDABETLA	4		KISTARAM	2
	VANAPATLA	1	Tadoor (39 Tanks)	AITHOLE	3		MACHARAM	2
Peddakoth apalle (119 Tanks)	ADIRALA	4		BHALLANPALLE	5		MALLEBOINPALLE	8
	CHANDRAKAL	12		CHERLAITIKYALA	4		NAGASALA	1
	CHENDRAKAL	1		INDRAKAL	9		POLEPALLE	28
	CHENNAPURAOPALLE	1		KUMMERA	2		VALLUR	5
	DEDINENIPALLE	1		PARVATHAYAPALLE	1	Mahabubnaga r_Urban (32 Tanks)	AMISTAPUR	1
	DEVALTHIRUMALPUR	5		TADOOR	5		BOYAPALLE	8
	DEVULATERUMALAPU	1		THIRUMALAPUR	2		DIVITI PALLY /EDHIRA	1
	GANTRAOPALLE	8		THUMMALALSUGU	2		MAHBUBNAGAR (M+OG)	2
	GANTRAOPALLY	1		YADIREDDIPALLE	3		PALAKONDA	3
	GANYAGULA	1		YATDHARPALLE	1		YEDIRA	11
	JONALABOGUDA	1		YATMATAPUR	2		YENUGONDA	5
	JONNALABOGUDA	1	Thimmajipeta (57 Tanks)	ALLAMPALLE	6		ZAINALLIPUR	1
	KALWAKOLE	2		APPAJIPALLE	1	Nawabpet (113 Tanks)	FATHEPUR	8
	MARRIKAL	3		BAJIPURAM	5		HAJILAPUR	1
	MUSTIPALLE	13		BHAVAJIPALLE	4		HANMASANIPALLE	4
	MUSTIPALLY	1		CHEGUNTA	2		IPPATUR	8
	NAKALAPALLY	2		GORITA	6		KAKARLAPAHAD	9

Veeranjaneya Reservoir			Venkatadri Reservoir			Udanadapur Reservoir		
Mandal name(4)	village	No of tanks	Mandal name(4)	village	No of tanks	Mandal name(7)	village	No of tanks
	NARAYANPALLE	1		KODUPARTHY	8		KARKONDA	7
	PASPULA	1		MAREPALLE	4		KAROR	4
	PEDDAKOTHAPALLY	1		NERELLAPALLE	3		KONDAPUR	6
	PEDDAKARPAMULA	20		POTHIREDDIPALLE	6		KUCHOOR	8
	PEDDAKOTHAPALLE	14		THIMMAJIPETA	5		LOKIREV	3
	PEDDAKOTHAPALLY	1		VEDIREPALLE	6		POLEPALLE	1
	PEDDSKARPAMULA	1		VELGONDA	1		RUDRARAM	11
	SATHAPUR	12			<b>178</b>		SIDDOTAM	5
	SATHSPUR	1					TEEGALAPALLE	5
	VENNACHERLA	9					THIRUMALAPUR	2
Revally (77 Tanks)	BANDARAIPAKULA	5					YEMMANAGANDL A	31
	CHEERKAPALLE	11				Rajapur (26 Tanks)	CHENNAVALLI	4
	CHENNERAM	6					DONDLAPALLE	4
	KESAMPETA	1					KUCHCHERKAL	2
	NAGAPUR	14					KUTHNEPALLE	3
	POLKEPAHAD	1					RAIPALLE	2
	REVALLY	14					RAJAPUR	3
	SHANAIPALLE	2					THIRUMALAPUR	8
	THALPUNUR	11				Thimmajipeta (1 Tanks)	MARIKAL	1
	VALLABHANPALLE	1						<b>329</b>
	VENNACHERLA	1						
	YEDULA	10						
		<b>318</b>						

Kurumurthy Reservoir			Lakshmidivipally Reservoir			Anjanaigiri reservoir			
Mandal name(5)	village	No of tanks	Mandal name(3)	village	No of tanks	Mandal name(2)	village	No of tanks	
Bhoothpur (57 Tanks)	GOPALPUR (KHURD)	1	Chowdergudem (58 Tanks)	CHEGIREDDY GHANPUR	4	Kollapur (44 Tanks)	ANKIRAOPALLE	4	
	KAPPETA	7		EDIRA	14		BOLLARAM	1	
	KARVENA	13		GUNJALAPAHAD	3		CHINTALAPALLE	1	
	KOTHAMOLGARA	4		GURRAMPALLE	1		CHOUTABETLA	3	
	MADDIGATLA	14		INDRANAGAR	2		CHUKKAIPALLE	6	
	PATHAMOLGARA	5		JAKARAM	4		DEVALTHIRUMALPUR	1	
	POTHULAMADUGU	1		JILLED CHOWDERGUEM	10		KALWAKOLE	1	
	YELKICHARLA	12		MALKAPAHAD	1		KOLLAPUR	4	
Bijinapalle ( 9 Tanks)	GOURARAM	3		PADMARAM	4		KUDIKILLA	6	
	LATPALLE	4		PEDDA YELKICHERLA	9		MACHINENIPALLE	3	
	MANGANUR	2		RAVIRYAL	2		MALABASWAPUR (D)	1	
Ghanpur (20 Tanks)	ALLAMAIPALLY	2		THOOMPALLE	2		MALACHINTAPALLE	5	
	ALMAIPALLE	2		VEERANNAPETA	1		NARLAPURAM	2	
	APPAREDDIPALLE	2		VENKIRYAL	1		WARDYAL	1	
	KAMALUDDINPUR	1	Kondurg (25 Tanks)	CHERUKUPALLE	5		YELLUR	5	
	MALKIMIANPALLE	4			KONDURG (E)	8	Peddakot hapalle (16 Tanks)	MAREDUMANDINNE	13
	MAMIDIMADA	5			KONDURG(WEST)	7		SATHAPUR	1
	SALKALAPUR	3		VENKIRYAL	4			THIRUMALAMPALLE	2

Kurumurthy Reservoir			Lakshmidvipally Reservoir			Anjanaigiri reservoir		
Mandal name(5)	village	No of tanks	Mandal name(3)	village	No of tanks	Mandal name(2)	village	No of tanks
	THIRUMALAIPALLE	1		VISWANATHPUR	1			<b>60</b>
Jadcherla (8 Tanks)	ALWANPALLE	1	Nawabpet (1 Tanks)	KOLLOOR	1			
	GANGAPUR	1			<b>84</b>			
	IPPALAPALLE	1						
	NASRULLABAD	5						
Thimmajipeta (35 Tanks)	AVANCHA	3						
	CHEGUNTA	3						
	GORITA	2						
	IPPALAPALLE	9						
	MARIKAL	7						
	PULLAGIRI	8						
	THIMMAJIPETA	3						
		<b>129</b>						

Kurumurthy Reservoir			Lakshmidivipally Reservoir			Anjanaigiri reservoir		
Mandal name(5)	village	No of tanks	Mandal name(3)	village	No of tanks	Mandal name(2)	village	No of tanks

**Annexure-5**

**BEFORE THE KRISHNA WATER DISPUTES TRIBUNAL  
NEW DELHI**

(In the matter of Reference by the Union of India in terms of Section 89  
of the AP Reorganisation Act 6 of 2014)

State of Telangana

Vs.

State of Andhra Pradesh

To  
The Hon'ble Chairman and  
His companion Hon'ble Members of  
The Krishna Water Disputes Tribunal,  
New Delhi

**Annexure 7 of**

**Affidavit of Sri Ghanshyam Jha in lieu of Chief Examination on issues relating to  
Project wise specific allocation.**

**Water requirements in the State of Telangana from Krishna River  
(In three separate volumes)**

S.No	Description	Page No.
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2	Volume - II	1-67
3	Volume - III	1-144



**BEFORE THE KRISHNA WATER DISPUTES TRIBUNAL,  
NEW DELHI**

(In the matter of Reference by the Union of India in terms of Section-89  
of the AP Reorganisation Act 6 of 2014)

IN THE MATTER OF –

**STATE OF TELANGANA  
Vs  
STATE OF ANDHRA PRADESH**

To  
The Hon'ble Chairman and  
His companion Hon'ble Members of the  
Krishna Water Disputes Tribunal,  
New Delhi

**CORRECTED AFFIDAVIT OF SRI K. PALANISAMI  
ON ASSESSMENT OF IRRIGATION WATER REQUIREMENT  
OF MAJOR PROJECTS IN TELANGANA AND ANDHRA PRADESH**

*Received  
G.K. Swami  
13/2/2019*

**Filed by:**

**KRISHNAMURTHI SWAMI  
Advocate on Record,  
State of Telangana**

**Filed on : 13-02-2019**

**Table - 13**  
**Gross irrigation requirement for the ongoing projects - Telangana**  
**(Revised)**

<b>1.IRRIGATION WATER REQUIREMENT FOR PALAMUR RANGAREDDY LIS (PRLIS)</b>									
Season	Crop details	Cropping pattern in Acres	Sowing date	Crop period in days	CWR at field in mm	ER in mm	NIR in mm	GIR in mm	GIR in TMC
1	2	3	4	5	6	7	8	9	10
<b>Mahabubnagar District</b>									
Kharif	Maize	135000	16th June	110	431.7	255.7	176.1	293.4	5.66
	Redgram	150000	16th June	180	630.3	274.9	355.4	592.3	12.70
	Castor	100000	16th June	180	572.4	278.3	294.1	490.1	7.01
	Cotton	85000	16th June	180	647.6	281.9	365.7	609.4	7.41
	Groundnut	100000	15th Sep	120	434.5	79.2	355.3	592.1	8.47
	Jowar	100000	10th Sep	120	360.3	81.2	279.2	465.3	6.65
Rabi	Bengalgram	30000	10th Oct	110	368.7	39.0	329.8	549.6	2.36
Total		700000							50.26
<b>Ranga Reddy District</b>									
Kharif	Redgram	125000	16th June	180	580.0	308.0	272.0	453.3	8.10
	Cotton	100000	16th June	180	597.4	311.5	288.9	481.5	6.88
Rabi	Jowar	100000	10th Sep	120	364.8	87.1	277.7	462.8	6.62
	Vegetables	75000	1st Sep	100	338.0	133.2	204.8	341.3	3.66
	Groundnut	100000	15th Sep	120	378.6	81.3	297.2	495.4	7.08
Total		500000							32.34
<b>Nalgonda District</b>									
Kharif	Maize	10000	16th June	110	431.7	218.9	212.8	354.7	0.51
	Redgram	10000	16th June	180	624.2	269.2	355.1	591.8	0.85
	Cotton	10000	16th June	180	650.9	276.7	374.2	623.7	0.89
Total		30000							2.25
<b>Total for PRLIS</b>		<b>1230000</b>							<b>84.85</b>

## Annexure-7

### PRE-FEASIBILITY REPORT

FOR THE PALAMURU – RANGAREDDY LIFT IRRIGATION SCHEME (PRLIS)  
FROM FORESHORE OF SRISAILAM RESERVOIR NEAR  
YELLUR(V),KOLLAPUR(M) TO K.P.LAKSHMIDEVIPALLY RESERVOIR AT K.P  
LAKSHMIDEVIPALLY(V), KONDURG (M), MAHABUBNAGAR DISTRICT,  
TELANGANA STATE

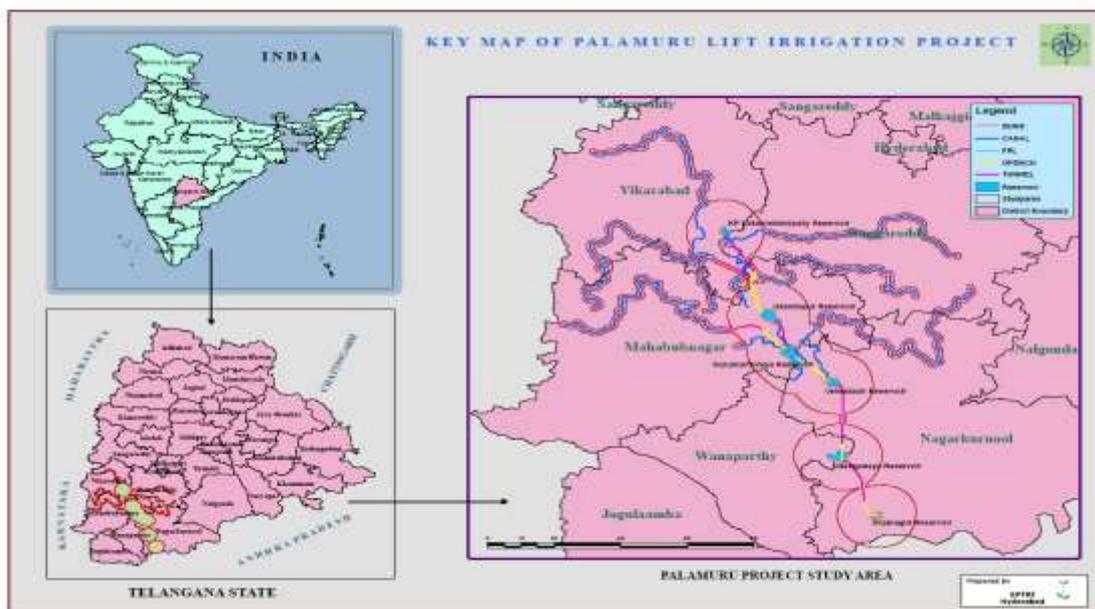
SUBMITTED TO

The Ministry of Environment Forest & Climate Change,  
New Delhi

by



CHIEF ENGINEER, PRLIS,  
I&CAD Department,  
Telangana State





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## Executive Summary

### 1.0 Introduction

Telangana State is situated in the central stretch of the Indian Peninsula on the Deccan Plateau. It is the 29<sup>th</sup> state of India and twelfth-largest state in the country with an extent of 114,840 square kilometres and a population of 35.3 Millions (2011 census). The region is drained by two major rivers namely Godavari and Krishna. The climate in this region is semi-arid and has skewed distribution of rainfall in space and time necessitating water management. The culturable area in the state is 75.21 lakh ha and net irrigated area is 22.89 lakh ha (30.43% of culturable area).

The economy of Telangana is mainly driven by agriculture. About 73% of the population is rural. The economy of the state is predominantly agrarian; agriculture contributes about 50% of the state's income and employs about 70% of the work force. Since agriculture is the main activity and it has close links with the development in other sectors, for overall economic progress of the state. Achieving faster agricultural growth is imperative. Thus there is an urgent need for increasing food and fiber production to meet the demands of increasing population as well as for providing rural employment.

The normal rainfall of Mahabubnagar district is 604 mm, the net irrigated area under different sources is less than 19%, which is lowest in the State. Mahabubnagar district is situated entirely in the Krishna basin and has suffered in the past due to the re-organization of the State in 1956. The district has been deprived of the benefits of Tungabhadra left bank canal of Tungabhadra dam. Even though two large rivers Krishna and Tungabhadra flow through the district, the district is deprived of its legitimate share of irrigation water. It is necessary to provide irrigation facilities in the upland areas of district by lift irrigation.

The project implementation involves;

- Supply of Drinking water from the foreshore of Srisailem Reservoir to enroute villages & Hyderabad.
- Drawing 90 TMC of flood water in 60 days from the foreshore of Srisailem reservoir on Krishna river for irrigating 4,04,858 Ha. in the districts of Mahaboobnagar, Rangareddy & Nalgonda through Lift Irrigation Scheme. In this process construction of 6 nos. of following new reservoirs is envisaged.

The aim of the project is to irrigate upland areas of about 4,04,858 ha (10.00 lakh acres), in addition drinking water facility to en route villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy, and Nalgonda districts, by lifting 90 TMC of flood water in 60 days (1.50 TMC per day) during flood season from foreshore of Srisailem reservoir at Yellur (V), Kollapur (M) in Mahabubnagar district to K.P Laxmidevipalle (V), Kondurg (M) Rangareddy (D) (from +240 m to + 670 m)



which is the highest elevation in between Mahabubnagar and Rangareddy districts with 5 stage lifting and then by gravity.

The five stage pumping details are as follows:

1st Lift –An approach channel takes off from the foreshore of Srisailam reservoir near Yellur (V), Kollapur (M),Mahabubnagar(D). The water is drawn through tunnel connected to it and lifted to fill the proposed Anjanagiri reservoir at Narlapur village.

2nd Lift –An approach channel takes off from Anjanagiri reservoir. The water is drawn through the canal and tunnel connected to it and lifted to fill the proposed Sri Veera Anjaneya Reservoir at Yedula.

3rd Lift –An approach channel takes off from Sri Veera Anjaneya Reservoir. The water is drawn through the canal and tunnel connected to it and lifted to fill the proposed Venkatadri Reservoir at Vattem village and Kurumurthyraya Reservoir at Karvena village by linking both reservoirs with gravity canal from Venkatadri Reservoir.

4th Lift –An approach channel takes off from Kurumarthyraya Reservoir. The water is drawn through the canal and tunnel connected to it and lifted to fill the proposed Udandapur Reservoir.

5th Lift –An approach channel takes off from Udandapur Reservoir. The water is drawn through canal and tunnel connected to it and lifted to fill the proposed K.P. Lakshmidvipally reservoir.

20 No.s of Hamlets and 3 villages will come under submergence. Approximately 2481 households and 11025 population will be affected due to submergence.

An area of **23778.96 ha.** of non- forest land and **229.04 ha.** of Forest land shall be used for different components of the project.

- Submergence area under Reservoirs – **9664 ha.** (23,870 Ac.)
- Conduit Area – **2,198 ha.** (5,429 Ac.)
- Canal distribution Network area – **12,146 ha.** (30,000 Ac.)

The total power requirement of the project is 2944 MW and the total energy consumption of the project is 4366 Million units per annum. Total Power will be supplied by DISCOMS of the Telangana state.

The total water requirement during construction phase for construction and colonies is estimated as **3100 KLD.**



The total forest area involved for the project is **229.04 ha.** (approximately). Amrabad Tiger Reserve forest core area is 11.95 km, buffer area is 2.56 km and Eco-sensitive Zone (ESZ) is 1.56 km away from the Anjanagiri Reservoir.

The estimated cost of the project is **Rs.35,200 crores.**

**B.C RATIO:**

Considering all the benefits and costs incurred on all components of the project the B.C. Ratio works out to **1.23.**



## 2

## INTRODUCTION OF THE PROJECT / BACKGROUND INFORMATION

### 2.1 Identification of the Project

The normal rainfall of Mahabubnagar district is 604 mm, the net irrigated area under different sources is less than 19%, which is lowest in the State. Mahabubnagar district is situated entirely in the Krishna basin and has suffered in the past due to the re-organization of the State in 1956. The district has been deprived of the benefits of Tungabhadra left bank canal of Tungabhadra dam. Even though two large rivers Krishna and Tungabhadra flow through the district, the district is deprived of its legitimate share of irrigation water. Hence it is necessary to provide irrigation facilities in the upland areas of district by lift irrigation.

The aim of the project is to irrigate upland areas of about 4,04,858 ha (10.00 lakh acres), in addition drinking water facility to en route villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy, and Nalgonda districts, by lifting 90 TMC of flood water in 60 days (1.50 TMC per day) during flood season from foreshore of Srisailem reservoir at Yellur (V), Kollapur (M) in Mahabubnagar district to K.P Laxmidevipalle (V), Kondurg (M) Rangareddy (D) (from +240 m to + 670 m) which is the highest elevation in between Mahabubnagar and Rangareddy districts with 5 stage lifting and then by gravity.

Project Proponent is Chief Engineer, Palamuru-Rangareddy Lift Irrigation Scheme. I&CAD Department of Telangana is attempting to use latest technologies in the field of Water Resources and Information Technology to transform I&CAD as one of the most modern and service driven department.

### 2.2 Brief Description of the nature of the project

Palamuru - Rangareddy Lift Irrigation Scheme envisages to irrigate upland areas of Mahabubnagar, Rangareddy, and Nalgonda districts for a command area of 4,04,858 ha (10.00 lakh acres), in addition drinking water facility to en route villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy, and Nalgonda districts, by lifting 90 TMC of flood water in 60 days (1.50 TMC per day) during flood season from foreshore of Srisailem reservoir.



### **2.3 Need for the Project and its importance to the country or region**

Mahabubnagar district is the largest district in Telangana in terms of its geographical area (18432 Sq.km), i.e. 43.73 lakh acres. Mahabubnagar is also known as Palamur. The project falls in Mahabubnagar district where major economic activity is due to agriculture, which is monsoon dependent. However, due to the inconsistent monsoons and erratic rainfall, the overall agricultural production and consequently the per capita income and the overall economy of the region is low. This area lies in the Krishna basin which is mostly semi-arid, often experiences drought. The ground water level is also low in the district.

Rangareddy district also lies in Krishna basin only with 18.80 lakh acres of geographical area. The rivers Musi and Kagna also flow through the district. From Musi water is being diverted to meet domestic and industrial needs of Hyderabad city. There are no major irrigation projects, owing to higher elevation. The nearest source of water is Krishna river from where it is required to lift and convey water.

Nalgonda district also lies in Krishna basin only with 14.974 lakh acres of geographical area. Major project Nagarjunsagar is located in the district. Owing to higher land elevation, major portion does not come under command of Nagarjunsagar Project. The total annual rainfall is less than 750 mm and further most of the mandals are having high fluoride levels causing diseases like dental and skeletal fluorosis.

In view of the above, as these districts are drought hit and backward. It is necessary to provide irrigation facilities in the upland areas of district by lift irrigation. This proposed project provides irrigation facilities to 4,04,858 ha (10.0 lakh acres), in addition to drinking water facility to enroute villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy and Nalgonda districts by lifting 90 TMC of flood water in 60 days during flood season from foreshore of Srisailem reservoir. This scheme improves the agricultural output and the per-capita income of the people of the region, while also improving groundwater scenario and clean drinking water to the people in the three districts.

### **2.4 Demand - Supply Gap**

In the state of Telangana out of total cultivable area, 30-35% is only the net irrigated area. Though there is large tract of cultivable and fertile land in the command area, lack of irrigation facility has been depriving farmers of better yield. Through supply of water from foreshore of Srisailem reservoir in Mahabubnagar district, about 4,04,858 ha (10.00 lakh acres) are cultivated and there will be an increase in the irrigated areas leading to higher productivity and better yield.

### **2.5 Imports Vs Indigenous Production**

The project leads to enhancement of indigenous food grain production.



## **2.6 Export Possibility**

This project may ultimately lead to export of excess food grains.

## **2.7 Domestic / Export Markets**

The project produce will have favourable impact on domestic and export markets.

## **2.8 Employment Generation**

The implementation of Irrigation scheme will create employment opportunities in the project area. The employment is associated with improved farming practices as well as the construction of the irrigation scheme. A total of about 10000 unskilled, Semi Skilled & Skilled workers will be hired during construction of reservoirs, canals, tunnels, pump houses and surge pools. The people will be spread over the entire project area which comprises of **6 nos. of reservoirs and 5 lifts.**

With irrigation additional farm labour would also be required as a result of higher cropping intensity providing employment opportunities to local people within and outside the vicinity of the project area.

Further establishment of agro and ancillary industries would give rise to employment to the local people.



### 3

## PROJECT DESCRIPTION

### 3.1 Type of Project Including Interlinked and Interdependent Projects, If Any

As per the EIA notification, 2006 and its subsequent amendment issued on 25<sup>th</sup> June 2014, the Environment clearance (E.C) is required by the Government of India as per schedule 1(c) of Irrigation Projects having more than 10,000 ha of Culturable Command Area (CCA). The PRLIS has been contemplated to provide drinking water facilities to 1131 villages, and irrigation facilities to 10.00 lakh acres in three districts i.e Mahabubnagar, Rangareddy and Nalgonda. The project has been divided into 18 packages upto Uddandapur Reservoir. The proposed project consists of water transmission system and distributary system for irrigation will be taken up. The project is proposed to lift water from the foreshore of existing srisailam reservoir without disturbing river morphology.

#### General conditions

The proposed project is fully in the Telangana State. However, it attracts the general conditions of interstate issues with Andhra Pradesh State as a part of the study area falls in Andhra Pradesh State. The proposed project area is not falling under Amrabad Tiger reserve forest as forest core area is 11.95 km, buffer area is 2.56 km and Eco- Sensitive Zone (ESZ) is 1.56 km away from the Anjanagiri reservoir.

### 3.2 Location (Map Showing general location, specific location and project boundary with project layout) with coordinates.

The Main Conduit of the Palamuru Rangareddy Lift Irrigation Scheme is starting from Narlapur (v) near Kollapur Mandal in Mahabubnagar District to K.P Lakshmidvipally (v) of Kondurg Mandal in Mahabubnagar District with 6 numbers of reservoirs and 5 stages of lifting.

Location of source for the scheme.

**Latitude** : **16° 06' 04" N**  
**Longitude** : **78° 23' 59" E**

The location map is shown in Figure 3.1.

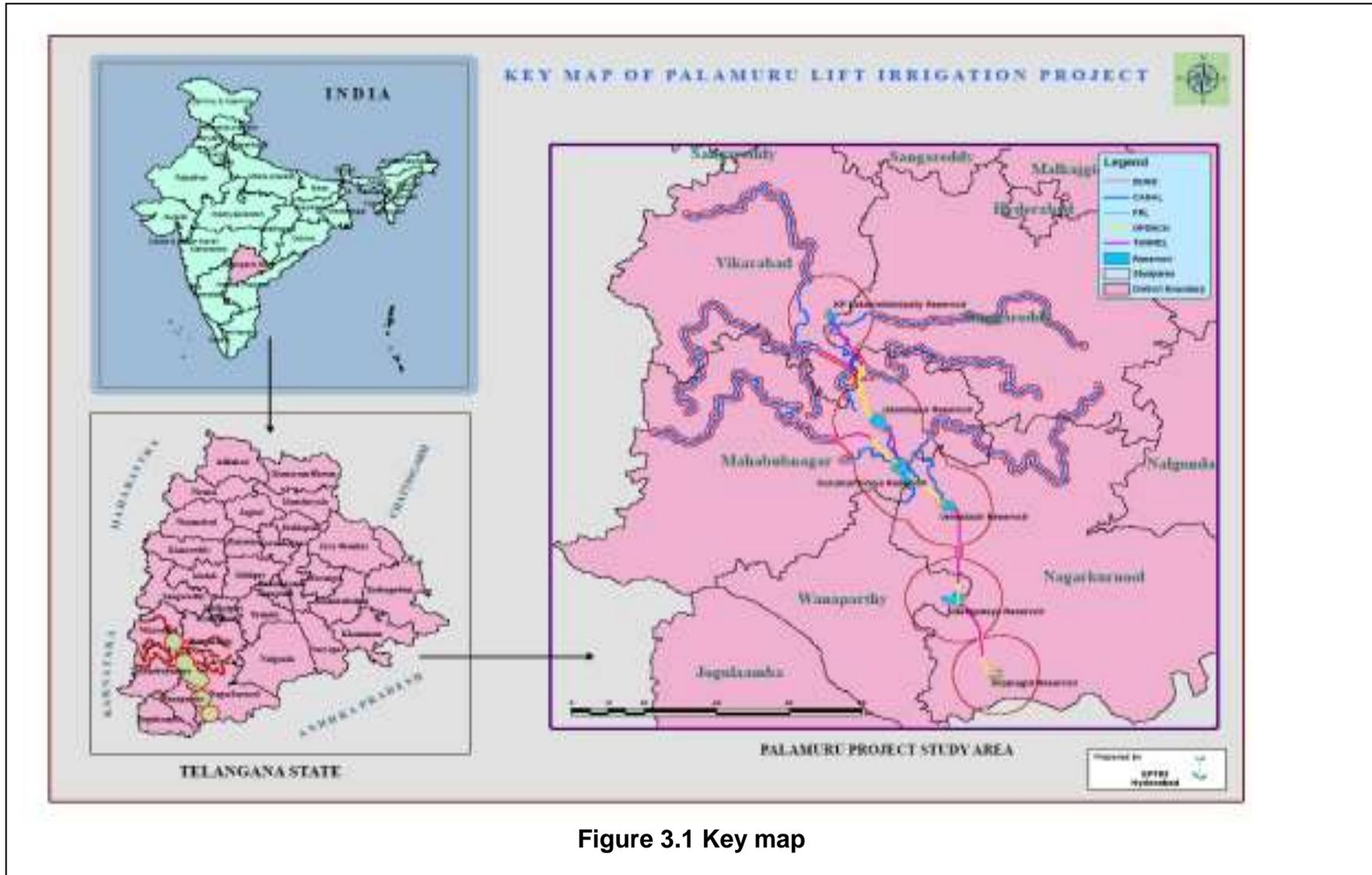


Figure 3.1 Key map



### **3.3 Details of Alternate Sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted.**

The project is envisaged to lift water from foreshore of either Jurala Reservoir (OR) Srisailam reservoir to K.P.Lakshmidivally. A detailed study had been carried out for lifting water from Jurala Reservoir. However, lifting of water from Jurala Reservoir had been dropped in view of less storage capacity.

#### **ALTERNATIVE SITE ANALYSIS**

There were only two sources of water. Either water for the project has to be drawn from Jurala Indira Priyadarshini Reservoir OR Srisailam Reservoir. Both are lift irrigation schemes and there are no chances for gravitational flow. There is no third alternative with regard to source of water. Though Jurala is advantageous from the point of gradient, it could not be considered, because there is no adequate storage capacity in the project. The gross storage capacity of Jurala at FRL is 11.94 TMC, while the water requirement of proposed project is 90 TMC. Further, sufficient flood water is not available in Jurala. Hence it is not feasible to lift 90 TMC from Jurala Source. The gross storage capacity of Srisailam Reservoir is 215 TMC. Thus we are proposing to the water from Srisailam Reservoir, which is having sufficient capacity. With regard to Srisailam Reservoir two alternatives are explored. The details are as follows

With reference to alignment and Pump House, based on involvement of forest land we opted for Underground Pump House. Details are furnished below



**Two (2) alternative alignments have been considered from foreshore of Srisailam reservoir to Anjanagiri reservoir.**

S.No	DESCRIPTION	ALIGNMENT -1 (Open Pump house from foreshore of Srisailam)	ALIGNMENT - 2 (Underground Pump house from foreshore of Srisailam)
1	Land Use and Land Pattern	The land along the main conduit is partly barren and partly sandy and rocky.	The land along the main conduit is partly barren and partly sandy and rocky.
2	Forest Land	309.54 ha. (approx.)	229.04 ha. (approx.)
3	Major Advantages	-----	<ul style="list-style-type: none"> <li>The forest land submergence is reduced from 309.54 Ha. to 229.04 Ha.</li> <li>Muck generation is less.</li> <li>Less impact on Ambient Noise levels during operation.</li> </ul>
4	Major disadvantages	<ul style="list-style-type: none"> <li>More Deforestation</li> <li>Delay in obtaining clearances which might impact the project cost.</li> </ul>	None
5	Social Issues	<ul style="list-style-type: none"> <li>This proposal involves displacement of 11,025 no's of humans and rehabilitation of 3 no of villages and 20 no of hamlets.</li> <li>It reduces agrarian distress prevailing in the project area.</li> </ul>	<ul style="list-style-type: none"> <li>This proposal involves displacement of 11,025 no's of humans and rehabilitation of 3 no of villages and 20 no of hamlets.</li> <li>It reduces agrarian distress prevailing in the project area.</li> </ul>
6	Techno-economic Aspects	<ul style="list-style-type: none"> <li>Open pump house</li> </ul>	<ul style="list-style-type: none"> <li>Underground pump house and marginally cost effective.</li> </ul>
7	Conclusions	<ul style="list-style-type: none"> <li>Even though this proposal is feasible in certain aspects the forest submergence is more in this alternative.</li> </ul>	<ul style="list-style-type: none"> <li>Alternative- 2 is environmentally superior because of less submergence of forest land than alternative -1.</li> <li>This proposal is technically feasible and economically viable.</li> </ul>



The below Toposheet showing proposed finalized project location & Two (2) alternative Alignments.



Figure 3.2 Alternative site Maps



### 3.4 Size or Magnitude of Operation

The overall water demand of the scheme consists of irrigation requirement, domestic water supply for the en route villages, industrial requirements in Mahabubnagar, Rangareddy and Nalgonda districts and water supply to Hyderabad.

The total demand for these purposes comes out to be **90 TMC**. The storage reservoir details are given below:

Sl. No.	Name of Reservoir	Place (Village)	F.R.L (m)	Capacity (TMC)	Ayacut (ha).
1	Anjanagiri Reservoir	Narlapur	345.000	8.51	-
2	Veeranjaneya Reservoir	Yedula	445.000	6.55	-
3	Venkatadri Reservoir	Vattem	542.000	16.74	52239
4	Kurumurthiyaya Reservoir	Karivena	531.000	17.34	80972
5	Udandapur Reservoir	Udandapur	629.000	15.91	197571
6	K.P Lakshmidvipally Reservoir	Lakshmidvipally	670.000	2.80	74076
				<b>67.85</b>	<b>4 04 858</b>

#### **Break-up of 90 TMC Utilisation :**

Irrigation	: 80.00 TMC
Drinking water requirement for enroute villages & Hyderabad	: 8.00 TMC
Industrial requirement	: 2.00 TMC

### 3.5 Project description with process details

Palamuru - Rangareddy Lift Irrigation Scheme envisages to irrigate upland areas of Mahabubnagar, Rangareddy and Nalgonda districts for an ayacut of 4,04,858 ha (10.00 lakh acres), in addition drinking water facility to en route villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy and Nalgonda districts, by lifting 90 TMC of flood water in 60 days (1.50 TMC per day) during flood season from foreshore of Srisaillam reservoir at Yellur (V), Kollapur (M) in Mahabubnagar district to K.P Laxmidvipally (V), Kondurg (M) Mahabubnagar (D) (from + 240 M to + 670 M) which is the highest elevation in between Mahabubnagar and Rangareddy districts with 5 stage lifting and then by gravity. The scheme contemplates en route Irrigation under different reservoirs as per their commandability. There are five stages in the project starting from foreshore of Srisaillam Reservoir and ending with K.P.Laxmidvipally Reservoir.



Table – 3.1 : Details Of Open Canals &amp; Tunnels

SI.No.	Lift	Open Canal length (km)	Tunnel Length (km)	Tunnel Dia. (m)	Discharge (cumecs)
1	Lift-1	1.250	0.150	2 x 11.50	656
2	Lift-2	5.675	16.005	2 x 11.50	656
3	Lift-3	3.100	22.000	2 x 11.50	656
4	Lift-4	9.750	8.845	2 x 8.50	377
5	Lift-5	18.800	14.400	8.00	161

Table – 3.2 : Details of Lifts

SI.No.	Lift	Lift Height (m)	Pumps & Ratings (MW)	Pump capacity (cumecs)
1	Lift-1	104	8 x 145	85
2	Lift-2	124	9 X 145	75
3	Lift-3	121	9 X 145	75
4	Lift-4	126	5 X 145	75
5	Lift-5	72	3 X 75	55

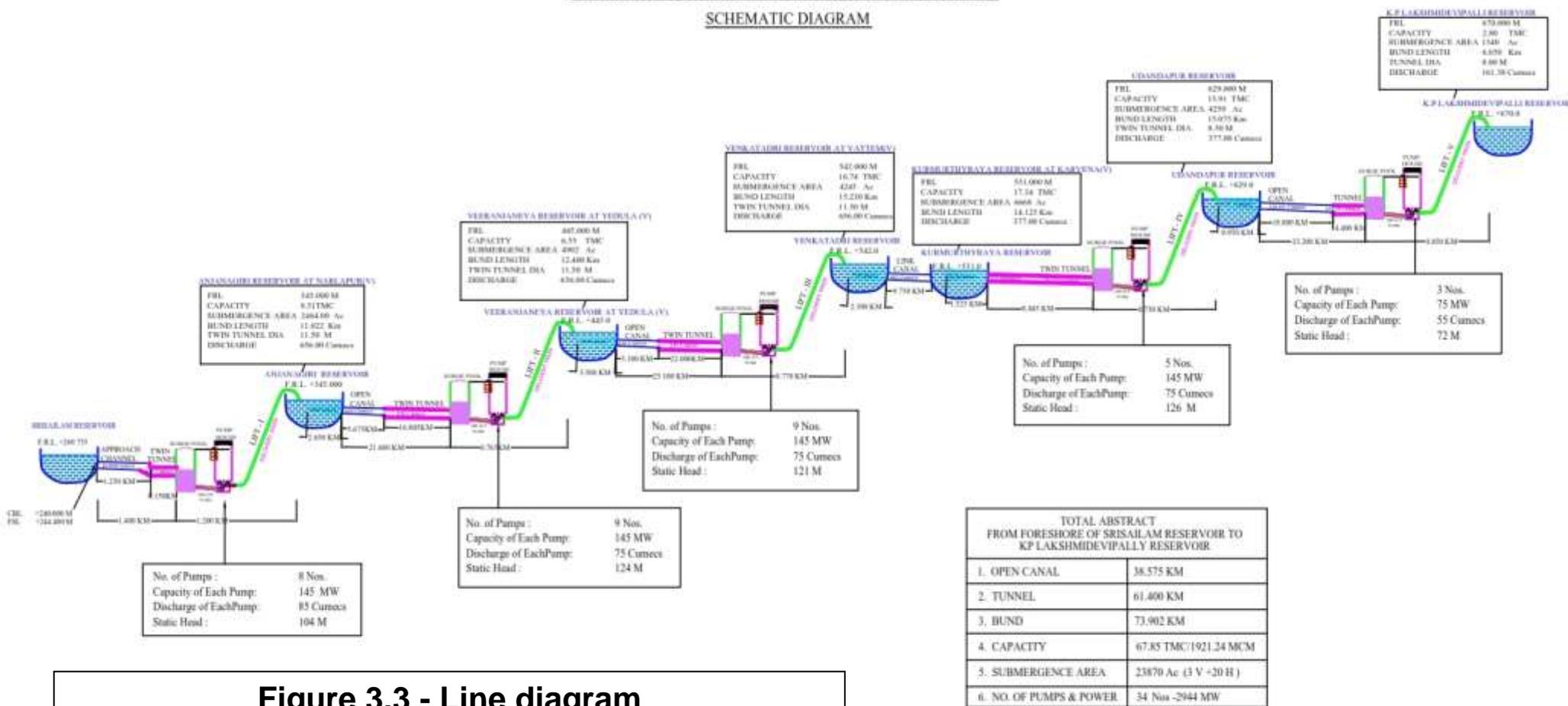
Table – 3.3 : Details of Reservoirs

Sl. No.	Name of Reservoir	Place (Village)	F.R.L (m)	Capacity (TMC)	Ayacut (ha.)
1	Anjanagiri Reservoir	Narlapur	345.000	8.51	-
2	Veeranjaneya Reservoir	Yedula	445.000	6.55	-
3	Venkatadri Reservoir	Vattem	542.000	16.74	52239
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6	K.P Lakshmidevipally Reservoir	Lakshmidevipally	670.000	2.80	74076
				<b>67.85</b>	<b>404858</b>



**PALAMURU RANGAREDDY LIFT IRRIGATION SCHEME**

**SCHEMATIC DIAGRAM**



**Figure 3.3 - Line diagram**



### **3.6 Raw Material Required Along With Estimated Quantity, Likely Source, Mode of Transport of Raw Material**

The construction materials are required for various project components i.e. series of reservoirs, water conveyor system consisting of gravity canal and tunnel, lift system, CM & CD structures and Distributory network system. The construction material needed for this project include cement, sand, coarse aggregates, revetment stones, reinforcement steel and structural steel. These quantities of the material are estimated as Revetment: 70,27,000 cum (1,12,43,200 MT) Coarse Aggregate: 57,62,000 cum (89,31,100 MT) Fine Aggregate: 1,33,87,000 cum (1,94,11,150 MT) Soils : 28,92,76,000 cum (52,06,96,800 MT).

Locally available materials, using excavated rock and soils. The construction materials will be procured from respective sources to the work sites.

### **3.7 Resource Optimization/recycling and reuse envisaged in the project**

Resource Optimization / recycling and reuse are envisaged in this project. The excavated soil and rubble emanating from the construction of reservoirs, canals, tunnels etc. will be utilized for Earth bund, revetment, riprap & filters of the earthen dam & Aggregates for concrete if found suitable and filling of low lying areas and also for green belt development.

### **3.8 Availability of Water, Its Source, Energy / Power Requirement & Source Water requirement**

The total quantity of water required during construction period for the construction activities and colonies is estimated **3100 KLD**. The water will be sourced from local sources.

### **3.9 Power requirement**

The total power requirement of the project is 2944 MW in all the 5 stages of Pumping Stations. The Power consumption of the project is 4366 Million units per annum. As the project is basically a lift irrigation project there is no power production in this project. Required Power will be supplied by DISCOMS of Telangana.



### **3.10 Quantity of Wastes to Be Generated (Liquid and Solid) and Scheme for Their Management/Disposal**

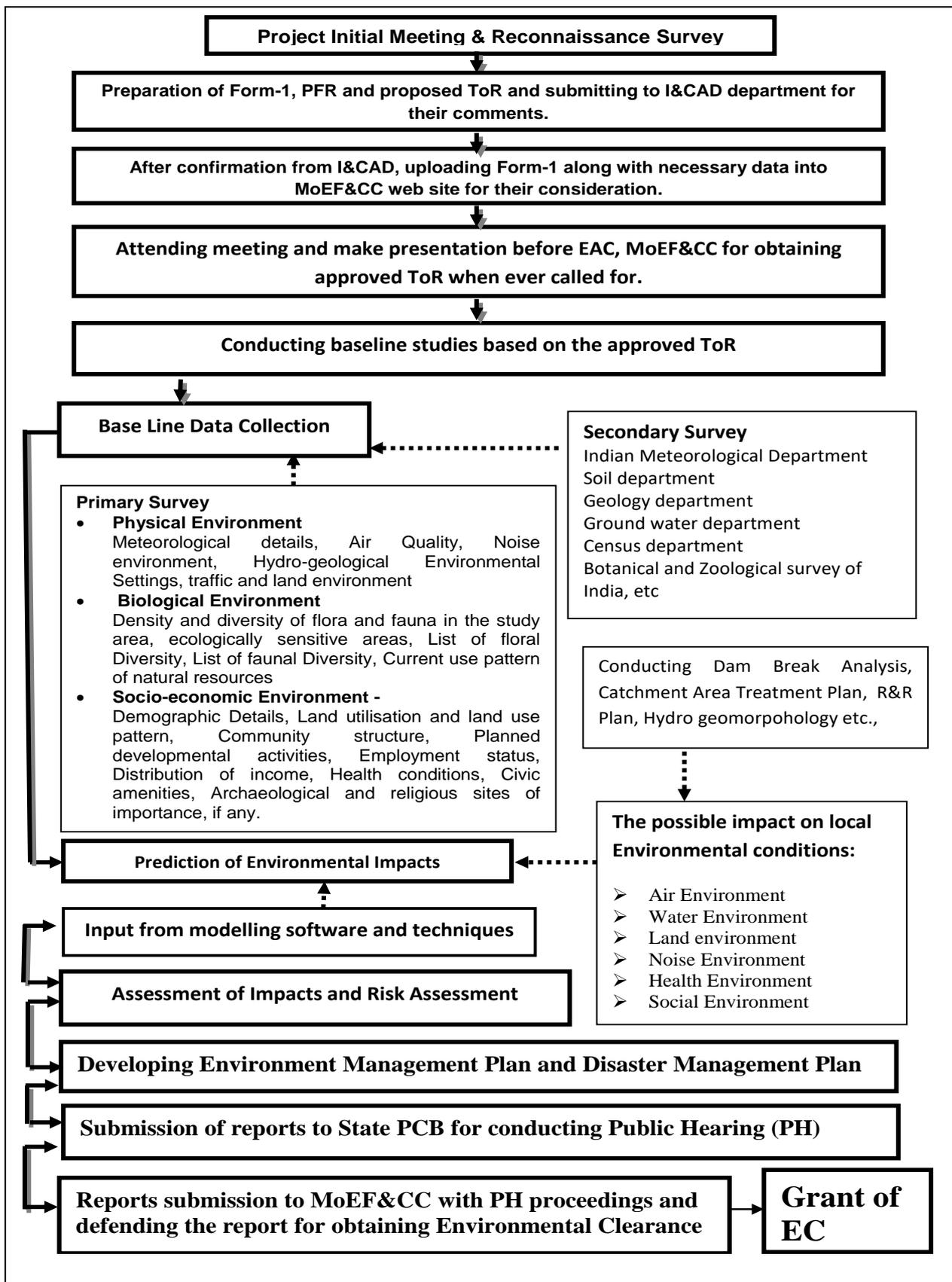
A large quantity of muck is likely to be generated as the result of construction and tunnelling activities. The excavated soil and rubble emanating from the construction of reservoirs, tunnels etc. will be utilized for Earth bund, revetment, riprap & filters of the earthen dam & Aggregates for concrete if found suitable and filling of low lying areas and also for green belt development.

All these construction sites would be properly levelled. The levelling or reclamation of these sites will be made mandatory for the contractor, involved in the construction.

Any municipal solid waste generated in the project complex / project colony / labour colony, will be managed and handled in accordance with SWM Rules, 2016.

Regarding sanitary wastewater management septic tanks followed by subsurface dispersion be provided.

### **3.11 Schematic representations of the feasibility drawing which give information of EIA purpose**





## 4

## SITE ANALYSIS

### 4.1. Connectivity

The project site is approachable by road and the nearest town is Kollapur at a distance of 8 km. The nearest railway station is “Wanaparthy Road” at a distance of 63 km. The nearest airport is Hyderabad in at a distance of 130 km. Mahabubnagar is the District Head quarter, Jadcherla, Kalwakurthi, Narayanpet, Bhutpur, Devarakadra, Korangal, Shadnagar in Mahabubnagar District & Ganded, Tandur, Dharur, chevalla, vikarabad and Pargi of Rangareddy district are the major towns located in the project area.

The Secunderabad - Bangalore Railway line of SC Railway and Hyderabad - Bangalore National highway NH-44 and State highways SH-4 & SH-21 pass through the mid region of the project area and serve as important means of commuting.

### 4.2. Landform, Land use & Land ownership

Palamuru – Rangareddy Lift Irrigation Scheme is planned for irrigating about 4,04,858 ha (10.00 lakh acres) of cultivable command area (CCA) in the districts of Mahabubnagar, Rangareddy and Nalgonda districts. Most of the command area is drought prone area. Currently, the command area doesn't have assured water supply. The common crops grown in this area are paddy, jowar, maize, vegetables and pulses etc.,

### 4.3. Existing Land use Pattern

Land proposed for utilization under this project is agriculture land, homesteads and some forest area. A total of **23778.96 ha.** of non- forest land and **229.04 ha. of Forest land** will be acquired for the purpose of construction of Reservoirs, tunnels, pump house, surge pool, canals & distributary network etc..

### 4.4. Topography

The proposed project is located in Deccan plateau of India. Topography is relatively mild to higher slopes.

### 4.5. Environmental Sensitivity

Anjanagiri reservoir is constructed near the Kolhapur protected forest area and about **229.04 ha.** shall be acquired for the purpose of the construction of the reservoir. Amrabad Tiger reserve forest core area is 11.95 km, buffer area 2.56 km and ESZ area is 1.56 km away from the reservoir.



#### 4.6. Existing Infrastructure

The project site (Head works) is approachable by land at distance of 8.0 km and National High way (NH-44) is at distance of 41 km, Minor roads are connected to the villages within the command area.

#### 4.7. Soil Classification

Mahabubnagar district is mainly covered by three types of soils Viz. red sandy soil (Dubbas and Chalkas) Red earth (with loamy sub-soils and Chalkas) and black cotton soils. Red sandy soils and red earth are permeable and well drained whereas the Nalgonda district soil comprises of red soil, black soil, alkaline soil and alluvium. The red soil constitutes 85 % of the area. Black soil is found over the limestone area, in the south- eastern part of the area. Alkaline soil occurs as limited patches in the central part. Alluvial soil occurs along Alair, Musi and Kagna rivers. Red Soils predominate in the Rangareddy district followed by Black soils.

#### 4.8. Climatic data from Secondary sources

The average annual rainfall for 2005-2014 in the project area is 657.56.mm. The yearly rainfall for last ten years (2005 to 2014) has been presented in Table-4.1 and depicted graphically in Figure-4.1.

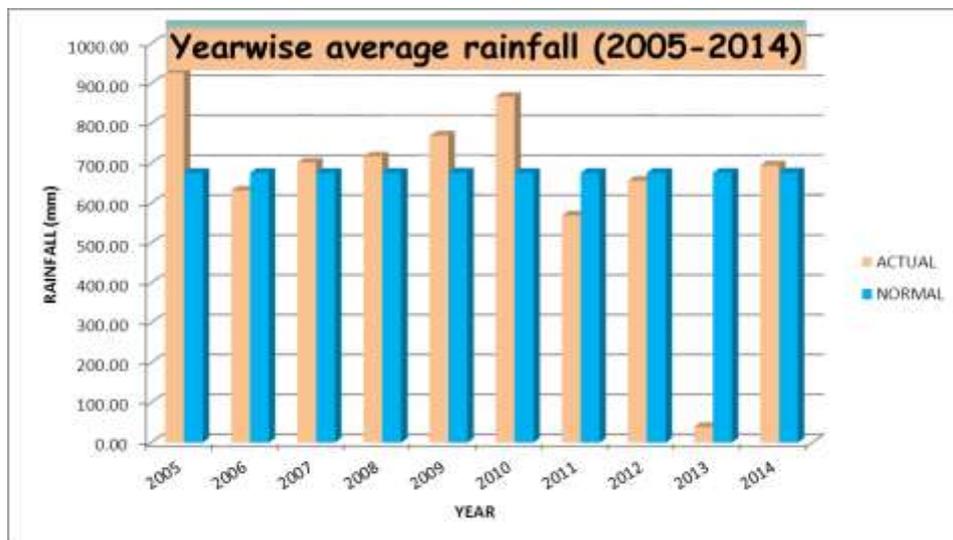
The mean seasonal rainfall distribution is 496.34 mm in South-West monsoon (June-September) to 82.65 mm in North-East monsoon (Oct-Dec), 3.41 mm rainfall in winter (Jan-Feb) and 66.54 mm in summer (March – May). The percentage distribution of rainfall, season-wise, is 76.48 % in South-West monsoon, 12.74 % in North-East monsoon, 0.54 percentage in winter and 10.25 % in summer.

Table 4.1 – Average annual Rainfall in the District

YEAR	January	February	March	April	May	June	July	August	September	October	November	December	Total
2005	3.6	7.7	15.0	25.0	16.8	52.3	236.0	137.7	231.1	195.4	5.9	0.7	927.14
2006	0.0	0.0	33.6	58.6	68.5	114.2	70.0	84.3	159.8	17.0	26.1	0.0	631.97
2007	0.0	0.0	0.0	0.0	12.8	187.1	79.2	141.7	216.1	32.8	33.0	0.0	702.65
2008	0.0	13.1	137.6	15.7	6.0	68.0	93.3	225.3	118.2	25.4	13.0	2.0	717.39
2009	0.0	0.0	2.6	4.0	21.3	96.0	53.6	215.7	203.9	142.3	27.8	1.5	768.78
2010	4.3	1.3	0.1	8.1	16.5	86.6	265.2	205.6	184.2	76.3	16.2	3.1	867.41
2011	0.0	4.2	0.4	30.6	29.1	49.6	198.0	172.0	49.2	36.1	0.2	0.0	569.27
2012	0.0	0.0	0.6	37.3	8.2	94.5	159.3	144.6	98.5	79.1	34.6	0.0	656.71
2013	0.0	0.0	0.3	3.4	1.0	18.7	5.2	3.7	7.1	0.0	0.0	0.0	39.45
2014	0.0	0.0	23.5	17.0	72.2	53.2	115.1	187.2	82.3	37.6	15.8	4.7	608.75



Figure 4 .1 – Year wise average rainfall



The annual rainfall varies from 927.14 mm to 550.00 mm during the period from 2005-2014. The years 2006, 2011, 2012 and 2013 experienced drought conditions in the project area as the annual rainfall recorded in these four years is 7%, 16%, 3% and 93% less than the long period average (LPA) respectively. The project area experiences semi-arid climate. The peak temperature recorded in the year 2014 was 41°C in the month of April and the lowest temperature of 19°C was recorded in December, 2014.

As per the SAPCC Telangana the districts which are highly exposed to the drought are Mahabubnagar and Nalgonda mainly due to their geographic location and influence of parameters like distribution of rainfall.

#### 4.9. Social Infrastructure

In the proximity of the project site, educational, religious and transportation facilities are found. The nearest Railway station is "Wanaparthy Road" at a distance of 63 km. railway station are available. The habitants have a good transportation facility as they are accessible easily. Overall it is clearly seen that the social infrastructure in and around the project site is of a good standard.



## 5

## PLANNING BRIEF

### 5.1. Planning Concept (type of industries, facilities, transportation etc) town and country planning/development authority classification

Transportation facilities -Wanaparathi Road railway station at a distance of 63 km. The habitants have a good transportation facility as there are accessible easily.

The aim of the scheme is to irrigate upland areas of about a net ayacut of 4,04,858 ha (10.00 lakh acres) in Mahabubnagar, Rangareddy and Nalgonda Districts.

### 5.2. Population Projection

As the course of the project is long involving different components in different locations, no centralized congregation OR influx of people is expected. Locally available manpower shall be utilized in the nearest place of work. During the peak period about 10,000 Unskilled, Semi Skilled & Skilled personnel will be deployed along the entire stretch of the project. At any point of time and place the number of people on the work site shall not be more than 300. The people will be spread over the entire stretch of the project area which comprises of 5 lifts and 6 storage reservoirs. No labour colonies are proposed, but Workshops, Workers Rest house, Sanitation & Staff quarters will be provided at close proximity to the work site.

### 5.3. Land use planning

Based on the classification of soils and crops grown in the area, the tentative cropping pattern proposed under the project is as follows:

Only irrigation dry (I.D) crops in Kharif season are proposed to extend irrigation facilities to 4,04,858 ha by utilizing about 90 T.M.C of water.

**Existing & proposed cropping pattern details are furnished in table 5.1 & 5.2;**



Table 5.1 : Existing Cropping pattern in the Command Area of PRLIS

S.No.	Type of Crop	Kharif		Rabi		TOTAL Area Karif & Rabi	
		Area in Ha.	%	Area in Ha.	%	Area in Ha.	%
1.	Paddy	52364	12.93	12268	3.03	64632	17.74
2.	Maize	67692	16.72	1479	0.37	69171	18.99
3.	Sorghum	24684	6.10	6172	1.52	30856	8.47
4.	Greengram	12439	3.07	---	---	12439	3.41
5.	Blackgram	3555	0.88	---	---	3555	0.98
6.	Redgram	61984	15.31	---	---	61984	17.01
7.	Cotton	64310	15.88	---	---	64310	17.65
8.	Castor	20621	5.09	---	---	20621	5.66
9.	Vegetables	7759	1.92	---	---	7759	2.12
10.	Groundnut	---	---	14980	3.70	14980	4.11
11.	Bengalgram	---	---	957	0.24	957	0.26
12.	Sunflower	---	---	1985	0.49	1985	0.55
13.	Safflower	---	---	1207	0.30	1207	0.33
14.	Others	1963	0.48	7858	1.94	9821	2.70
<b>TOTAL</b>		<b>317372</b>	<b>78.39</b>	<b>46907</b>	<b>11.59</b>	<b>364277</b>	<b>100</b>

Table 5.2 : Proposed Cropping pattern in the Command Area of PRLIS after the Project Implementation

S.No.	Type of Crop	Kharif		Rabi		TOTAL Area Karif & Rabi	
		Area in Ha.	%	Area in Ha.	%	Area in Ha.	%
1.	Paddy	41266	10.19	33824	8.35	75090	10.57
2.	Maize	75992	18.77	56735	14.01	132727	18.69
3.	Chillies	67287	16.62	38740	9.57	106027	14.93
4.	Greengram	25182	6.22	0	0	25182	3.54
5.	Blackgram	16599	4.10	0	0	16599	2.34
6.	Redgram	36842	9.10	0	0	36842	5.19
7.	Cotton	68280	16.87	0	0	68280	9.61
8.	Castor	2300	0.57	0	0	2300	0.32
9.	Vegetables	63846	15.77	2300	0.57	66146	9.31
10.	Groundnut	0	0	97125	23.99	97125	13.67
11.	Bengalgram	0	0	7171	1.77	7171	1.00
12.	Sunflower	0	0	57854	14.29	57854	8.15
13.	Safflower	0	0	4735	1.17	4735	0.66
14.	Others	5637	1.39	8502	2.1	14139	1.99
<b>TOTAL</b>		<b>403232</b>	<b>99.60</b>	<b>306987</b>	<b>75.83</b>	<b>710217</b>	<b>100</b>



#### **5.4. Assessment of Infrastructure Demand (Physical & Social)**

Project aims towards construction of reservoirs and main canal for providing water to irrigation, drinking and industrial purpose. The proposed project envisages to utilise 90 TMC of flood water in 60 days from Krishna river providing irrigation facility to 4,04,858 ha (10.00 lakh acres) of upland areas, drinking water to en-route 1131 villages of 66 mandals and Hyderabad city, water to Industrial use in Mahabubnagar, Rangareddy and Nalgonda districts.

#### **5.5. Amenities/Facilities**

Proper site services such as First Aid, Canteen / Rest Shelter, Drinking Water will be provided to the construction workers. Various facilities to be provided during construction and operation of the project are as follows:

1. Electricity will be provided by transmission lines and DG sets.
2. Drinking water will be provided to the workers by Tankers during construction.
3. To provide the first aid for any sort of injuries encountered during the operation, one first aid room will be provided. First aid kit and sufficient stock of material / medicines needed for first aid shall be provided as per requirement.
4. In future if women workers are employed, arrangement for a crèche will be made as per the requirement.
5. Necessary arrangement will be made for conducting refresher course as laid down in vocational training rules to upgrade skills of the persons involved in the project.
6. Construction workers engaged in forest areas of the project will be provided with LPG/Kerosene for cooking purpose to prevent possible tree felling in forest areas for firewood.

**6****PROPOSED INFRASTRUCTURE****6.1 Industrial area/Residential area/Green belt/Social Infrastructure**

Proposed Project does not involve any additional infrastructure for Industrial area, residential area, Green belt, social infrastructure etc. Project involves only infrastructure which are required for irrigated agriculture and R&R of PAFs / PDFs.

**6.2 Sewerage System**

Sewage generated from the colonies is proposed to be sent to septic tank followed by subsurface dispersion which are designed and constructed as per IS 2470 Part-I & Part-II.

**6.3 Industrial waste management**

Not Applicable

**6.4 Solid waste management**

Domestic solid waste will be disposed as per the SWM Rules, 2016.

**6.5 Power requirement & Supply / Source**

The total power requirement for the project is **2944 MW** in all the 5 stages of Pumping Stations. As the project is basically a lift irrigation project there is no power production in this project. The power required will be supplied by DISCOMS of Telangana.



## **7 REHABILITATION & RESETTLEMENT (R&R) PLAN**

- The project envisages acquisition of **23778.96 ha.** of non- forest land and **229.04 ha.** of forest land for various project appurtenances. A resettlement & Rehabilitation (R&R) Master Plan highlighting the guidelines of land acquisition and provision for rehabilitation measure will be formulated. The rehabilitation policies of the state government of Telangana and RFCTLARR Act, 2013, Government of India will serve as basis for preparation of the R& R plan for the project affected families.

**Table 7.1 Details of Land Acquisition**

Extent of land required (ha)	Title of land (ha)	
	Govt land	Patta land
24,008	4,802	19,206

**Table 7.2 Reservoir wise submergence of villages/Hamlets**

Name of the reservoir	No.of Households	Population
Anjanagiri reservoir	218	908
Veerajaneya reservoir	541	2360
Venkatadri reservoir	259	1032
Kurumurthyraya reservoir	188	840
Udandapur reservoir	1275	5885
KP- Lakshmidvipally reservoir	0	0
<b>Total</b>	<b>2481</b>	<b>11025</b>

### **Forest Land**

Around **229.04 ha.** of forest land is affected in the project.



## 8

**PROJECT SCHEDULE & COST ESTIMATES****8.1 Likely Date of Start of Construction and Likely Date of Completion**

The project consisting of Reservoirs, tunnels, pump houses, excavation and lining of canals of all links and other structures such as super passages, aqueducts, drops, bridges etc. will be completed in 30 months from the date of signing agreement.

**8.2 Estimated Project Cost Along With Analysis In Terms Of Economic Viability of the Project**

The project comprises of the following major components.

1. Reservoirs
2. Excavation of canals
3. Construction of tunnels
4. CM and CD works
5. Land acquisition
6. Lift system
7. Underground pump houses
8. Sub-stations etc.

**Table 8.1 financial requirement for project works**

<b>S.No</b>	<b>Item</b>	<b>Cost (Rs. Crores)</b>
1	Work Items	29827.91
2.	L.S.Provisions	2153.09
3.	Non work items	2570.00
4.	Rehabilitation & Resettlement	588.00
5.	Unforeseen works	61.00
	<b>Total</b>	<b>35,200</b>

The total amount of the estimate is worked out to **Rs. 35,200 crores.**



## 9

## ANALYSIS OF PROPOSAL

### 9.1 Financial and Social Benefits with Special Emphasis on the Benefit to the Local People Including Tribal Population, If Any, In the Area

Palamuru –Rangareddy Lift Irrigation Scheme envisages to irrigate the upland areas of about a net ayacut of 4,04,858 ha (10.00 lakh acres), in addition drinking water facility to enroute villages, Hyderabad city and industrial use in Mahabubnagar, Rangareddy, and Nalgonda districts, by lifting 90 TMC of flood water in 60 days(1.50 TMC per day) during flood season from foreshore of Srisailem reservoir near Yellur(V),Kollapur(M) in Mahabubnagar district to K.P Laxmidevipalle (V), Kondurg (M) ,Rangareddy (from +240 to + 670 m) which is the highest elevation in between Mahabubnagar and Rangareddy districts with 5 stage lifting and then water flows by gravity.

The importance of irrigation is to increase agricultural output and employment. The proposed project is expected to provide employment in different activities such as construction, transportation and plantation activities during construction phase and subsequently in agro - and other industries. The total man power requirement for the construction period is 10000. The people will be spread over the entire project area which comprises of 6 nos. of Reservoirs.

It is contemplated to irrigate a command area of 4,04,858 ha (10.00 lakh acres) in three districts and provide drinking water to en route villages as well as Hyderabad and industrial requirements. The cost of the project is **Rs. 35,200 crores**.

**Table -9.1 Benefits without and with project**

Item	Without project (in Lakhs)	With project (in Lakhs)
Net value of produce	29051.14	820784.08
Net Annual benefits		791732.94
Drinking water supply		11506.63
Industrial water supply		8304.33
Fisheries returns		8505.25
<b>Total Annual benefits</b>	<b>29051.14</b>	<b>1640833.23</b>



The Benefit - Cost Ratio works out to be 1.23.

**Table – 9.2 Total cost for B-C ratio  
PALAMURU RANGAREDDY LIFT IRRIGATION SCHEME**

Sl.No	PARTICULARS	Rs. In Lakhs	
		BEFORE IRRIGATION	AFTER IRRIGATION
<b>A.</b>	<b>GROSS RECIEPTS</b>		
1	Gross Value of the farm produce	57039.42	1053785.25
2	Dung Receipts @ 30% of the fodder expenditure	2566.77	31613.56
3	Total (A): Gross Reciepts(1+2)	59606.20	1085398.81
<b>B.</b>	<b>EXPENSES</b>		
1	Expenditure on Seeds	16466.32	78094.74
2	Expenditure on Manure		
3	Expenditure on Pesticides		
4	Expenditure on Hired Labour		
5	Fodder expense @ 15%/10% of Gross value of farm produce	8555.91	105378.53
6	Depreciation on implements @ 2.7% of Gross value of farm produce	1540.06	28452.20
7	Share & Cash rent @ 5%/3% of total gross value of farm produce	2851.97	31613.56
8	Land revenue @ 2% of total gross value of farm produce	1140.79	21075.71
9	Total (B): Expenses (1 to 8)	30555.06	264614.73
<b>C.</b>	<b>NET VALUE OF PRODUCE</b>		
1	Total Gross Reciepts	59606.20	1085398.81
2	Minus total expenses	30555.06	264614.73
3	NET VALUE OF PRODUCE	29051.14	820784.08
<b>D.</b>	<b>ANNUAL BENEFITS</b>		
1	Net value after irrigation		820784.08
2	Net value before irrigation		29051.14
3	Net annual benefits		791732.94
4	Revenue from Domestic water supply 227 M cum @ 50.69 Lakhs per M cum.		11506.63
5	Revenue from Industrial water supply 57 M cum. @ 145.69 Lakhs per M cum.		8304.33
6	Fisheries (Average Reservoirs Area*Rate as per Fisheries Department)		8505.25
	Total (D)		820049.15
<b>E.</b>	<b>ANNUAL COSTS</b>		
1	Interest on Capital @ 8% of estimated total cost of the project Rs 35,200 Cr		352000.00
2	Depreciation of the project @ 1 % of the project cost Rs 35,200 cr		3520.00



3	Annual operation and maintenance charges @ Rs. 223/Ha	902.83
4	Maintenance of Head works @ 1% of the cost of Head works Rs 14500 Cr	14500.00
5	Depreciation of Pumping System @ 3.33% of the estimate cost of Pumping station assuming life of the system as 30 Years. Rs 14500	48285.00
6	Power charges for lift irrigation Rs 248980 Lacs	248980.00
7	Total ( E ):	668187.83
	<b>BENEFIT COST RATIO</b> <b>820049.15 / 668187.83</b>	<b>1.23</b>

1	at 10% Interest if Benefit reduces by 10%, BC Ratio is	1.104
2	at 10% Interest if Cost increases by 10%, BC Ratio is	1.115
3	at 10% Interest rate if Benefit reduces by 10% & Cost increases by 10% BC Ratio is	1.004



**GOVERNMENT OF TELANGANA  
IRRIGATION AND CAD DEPARTMENT,  
HYDERABAD (TS)**

**EXECUTIVE SUMMARY**

**ENVIRONMENTAL CLEARANCE OF PALAMURU  
RANGAREDDY LIFT IRRIGATION SCHEME**



**July, 2021**

*Foreshore of Srisailem Dam*

*Consultant:*

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## 1 EXECUTIVE SUMMARY

### 1.1 BACKGROUND

Telangana State, situated in the southern part of India, is the 29<sup>th</sup> state of India, formed on 2<sup>nd</sup> June 2014 with 1,12,077 Sq. km. of area and has a population of over 35 million. Analysis of last 30 years data on drought in Telangana State indicates the state has experienced 23 years as droughts affected in some or other mandals. Further, non-availability of sufficient irrigation facilities and limitations w.r.t. ground water exploration makes Telangana State drought prone. The agricultural statistics for 2015-16 indicate that Nalgonda, Mahabubnagar, Rangareddy and Medak districts are susceptible to droughts in Telangana. Being a new state, the government is making every effort for optimal use of available water resources for agriculture, industrial sector as well as providing drinking water for overall development.

### 1.2 NEED FOR THE PROJECT

The newly re-organized districts Mahabubnagar, Nagarkurnool, Rangareddy, Vikarabad and Nalgonda of Telangana State are the one of the drought prone and distressed areas in country. Further, there is significant shortage of drinking water; as a result, a large part of the population of these districts is being forced to migrate to other parts of the country. The situation is further compounded due presence of fluoride in water. The percentage of net cropped area in Mahabubnagar, Nagarkurnool, Nalgonda, Rangareddy and Vikarabad districts is only 23.8%, 13.2%, 24.4%, 24.2% and 18.1% respectively. In order to redress this situation, the Government of Telangana has taken up the Palamuru Rangareddy Lift Irrigation Scheme (PRLIS) for alleviating the misery of these drought prone areas.

### 1.3 LOCATION AND APPROACH

The command area (Ayacut) is located between Longitude 77°21'51"E to 78°54'23"E and latitude 16°26'54"N to 17°38'09" N. Venkatadri reservoir at village Vatem, Bijinapally Mandal, District Mahabubnagar is the first reservoir from which the water lifted from Srisailem reservoir shall be harnessed for irrigation. The main canal network is approachable by road from the nearest towns. The nearest railway station is "Jadcherla" at a distance of 23 km. The nearest airport is Hyderabad at a distance of 93 km. Mahabubnagar is the District Head quarter, Jadcherla, Kalwakurthy, Narayanpet, Bhutpur, Devarakadra, Kodangal, Shadnagar, Gandeed, Tandur, Dharur, Chevella, Vikarabad and Parigi are the major towns located in the project area. The Secunderabad - Bangalore Railway line of S C Railway and Hyderabad - Bangalore NH-44 and SH-4 & SH-21 pass through the mid region of the project area and provide easy accessibility to canals and distribution system.

### 1.4 PROJECT FEATURES

The works under Phase-I, primarily involves construction of series of approach channels, open canals (50.490 km), tunnels (61.577km), pump houses (5) and reservoirs (6-with total storage capacity 67.97 TMC) for conducting water to various stages of lift and storing it for consumptive use in drinking water, industrial uses and irrigation. In Phase –II, the project activities shall involve construction of 13 main canals (Total length 915 km) and distribution network to serve an ayacut of 4,97,976 ha with area under Kharif and Rabi irrigation shall be 495835 ha (99.57%) and 77,887 ha (15.64 %) respectively. The annual intensity has been assessed as 115.21 % of the CCA. The main canals shall be lined and canal capacity has been fixed on the basis of peak requirement that includes 10% extra for rush irrigation. The irrigation water requirement of

the command area is assessed to be 1410.91 MCM (49.83 TMC) consisting of 1156.65 MCM (40.85 TMC) during Kharif season and 254.26 MCM (8.98 TMC) during Rabi season excluding losses. The total cost of the project is Rs.52,056.31 crores of which the cost of main canal and distribution system for irrigation shall be Rs.8069.03 crores. The B.C. Ratio has been assessed as 1.25:1.

## **1.5 ENVIRONMENT IMPACT ASSESSMENT**

M/s. Voyants Solutions Pvt. Ltd, Gurugram, Haryana, has conducted the Environment Impact Assessment Study as per approved ToR issued by the MoEF&CC, New Delhi, vide letter no. J-12011/31//2017-IA-I (R), dated 11.10.2017.

## **1.6 METHODOLOGY**

The methodology and techniques used for studying the various parameters of the environment viz. land, air, noise, water, flora, fauna and socio-economics in the study area are described as follows:

### **1.6.1 Air Quality Assessment**

To generate, a database on the existing status of the pollutants, the study area was evaluated for setting up six locations to conduct air quality monitoring in respect of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>.

### **1.6.2 Sound Level Measurement**

The sound level was measured at six locations by sound level meter

### **1.6.3 Soil Quality Assessment**

Physical and chemical characteristics of the soil were studied in respect of six samples taken from the study area.

### **1.6.4 Water Environment Assessment**

For evaluating physical, chemical and biological characteristics of surface and ground water samples were taken from ten locations.

### **1.6.5 Floral Study**

It is based on extensive field survey of the area. In this the phytosociology of plants and diversity of the forest vegetation was determined.

### **1.6.6 Faunal Study**

Various transects were identified along the villages to carry out faunal studies as the village trails were the best options to cover-up the complete area. Observer walked at a constant pace for their observation.

### **1.6.7 Socio-economic Study**

The data on socio economic and dependency aspects were collected. In order to gather information on public perception of the proposed project the attitude/psychology survey was carried out which depicts the prevailing awareness and acceptance/no-acceptance about the project. Data collection from secondary sources has also been made to validate some of the information and to supplement the data on demographic aspects.

## 1.7 EXISTING STATUS OF ENVIRONMENT

### 1.7.1 Land use/Land Cover

The dominating land use classes are agricultural land Kharif cropped area accounted for maximum 3,39,562 ha (38.41% of the gross command area) followed by agricultural land double cropped area and agricultural fallow lands and agriculture land Rabi/summer cropped with 2,16,735 ha (24.52%) 1,47,959 ha (16.74%) and 33,728 ha (3.82%) respectively.

### 1.7.2 Total Land Requirement for Construction of the Project

The total Patta land required for the main canal and for distribution system shall be 6195 ha and 6897 ha respectively. No residential structure, shop and cattle shed shall be acquired.

### 1.7.3 Archaeological / Historical Monuments/Sensitive Area

No archaeological monument of national importance lies either in the project area or in its submergence area. No National Park, Sanctuary, Defence Establishments, Archaeological Monuments, Notified Eco-sensitive areas or protected area under Wild Life (Protection) Act exists within the project area or within 10 km from it.

### 1.7.4 Soil Quality

The results of the soil analysis show that the soil is neutral to slightly basic at all the locations having pH varying from 7.20 to 7.65. The texture of the soil varies from sandy clay loam to clay. Available nitrogen content in the surface soils ranges between 133.5 to 185.2 kg/ha thereby indicating that soils are low in available nitrogen content. Available phosphorus content ranges between 12.1 to 15.9 kg/ha) thereby indicating that soils are medium in available phosphorus. Available potassium content in these soils ranges between 167.3 to 204 kg/ha, thereby indicating medium to high in potassium content. The organic carbon varies from 0.49 % to 0.73% thereby implying that soils have low to medium organic carbon.

### 1.7.5 Air and Noise Environment

The pollutants concentration in the air is well below the permissible limit (PM<sub>10</sub>: 18.3–49.3 µg/m<sup>3</sup>; PM<sub>2.5</sub>: 9.9 – 26.9 µg/m<sup>3</sup>; NO<sub>x</sub>: 7.5-18.3 µg/m<sup>3</sup>) and SO<sub>2</sub>: 5-7.4 µg/m<sup>3</sup> as there are no industries in the area and the density of vehicular traffic is not alarming. The noise monitoring shows that day and night time noise levels are within the prescribed limits.

### 1.7.6 Water Environment

The analysis results have been compared with the Tolerance limits for inland surface waters, Class – C as set forth in IS: 2296-1982. The pH values of all analysed samples ranged between 7.60-8.16 and was within the permissible limit (6.5-8.5). The TDS levels ranged from 151 to 248 mg/l and were well below the desirable limit of 500 mg/l. The chlorides level in surface water samples ranged from 24.6 to 50 mg/l and were below the desirable limit of 250 mg/l. The sulphates level ranged from 18.5 to 37.2 mg/l and were below the desirable limit of 200 mg/l. The fluorides level ranged between 0.10 to 0.30 mg/l was lower than the desirable limit of 1.0 mg/l. The nitrate level ranged between 2.6 to 4.1 mg/l and was lower than the desirable limit of 45 mg/l. The ground water had all parameters within the desirable limits.

## 1.7.7 Status of Biological Environment

### 1.7.7.1 Flora of the Project Area

- During the surveys, an inventory of different plant groups found in the study area was prepared. In the study area 57 species of plants were recorded. These include 32 trees, 12 shrubs, 13 species of herbs and 6 species of grasses.
- About 14 economically important plant species were recorded from the study area.
- About 17 important medicinal/ethnobotanical importance plant species were recorded
- No RET species falling under IUCN Red List was recorded/reported from study area.

### 1.7.7.2 Fauna

The faunal study for the proposed project was carried out in both the submergence and influence zone of both upstream and downstream

- 16 mammalian species were recorded /reported during the survey of which one(wolf) belongs to Schedule-1 of WPA, 1972.
- 50 bird species were observed /reported during the survey.
- As many as 5 species of herpetofauna were recorded /reported.
- 15 species of fishes were recorded.

## 1.7.8 Social and Cultural Background of the Area

### 1.7.8.1 Demography of Mandals covered under Ayacut

There are 7,71,354 households with a total population of 35,61,580 in Mandals covering the ayacut. The male and female population in all mandals under ayacut is 17,98,712 and 17,62,869 respectively with overall sex ratio of 980 females per 1000 male. The total population of Scheduled Cast and Scheduled Tribe in mandals of Ayacut is 6,67,434 (18.7%) and 3,75,372(10.5%) respectively. The literacy rate is 54.20%. The percentage of Main workers and marginal workers in the mandals of ayacut is 43.07% and 7.82% respectively, while non-workers constitute 49.11%.

### 1.7.8.2 District-wise Land to be Acquired and PAF

The total Patta land required for the main canal and for distribution system shall be 6195 ha and 6897 ha respectively. No residential structure, shop and cattle shed shall be acquired (**Table 1.1**).

**Table 1-1 : District Wise Land to Be Acquired And PAF**

S.N.	District	No. of PAF	Patta Land to be Acquired for main canal (ha)	Patta Land to be Acquired for branches distributaries and minors (ha)	Total Patta Land(ha)	Other Assets		
						Houses	Shops	Cattle Shed
1	Mahabubnagar	4046	2247	2235	4482	-	-	-
2	Ranagreddy	1195	870	560	1430	-	-	-
3	Nalgonda	185	0	200	200	-	-	-
4	Vikarabad	3670	1878	2100	3978	-	-	-
5	Nagarkurnool	5795	1200	1802	3002	-	-	-

S.N.	District	No. of PAF	Patta Land to be Acquired for main canal (ha)	Patta Land to be Acquired for branches distributaries and minors (ha)	Total Patta Land(ha)	Other Assets		
						Houses	Shops	Cattle Shed
<b>Total</b>		<b>14,891</b>	<b>6,195</b>	<b>6,897</b>	<b>13,092</b>	-	-	-

## 1.8 IDENTIFICATION, PREDICTION AND EVALUATION OF IMPACTS

### 1.8.1 Impacts on the Micro-Climate of the Area

Due to construction activities, there shall be temporary and nominal effect on the ambient temperature and humidity. The operation stage project may not create any impact on the meteorology and climatology of the area.

### 1.8.2 Change in Land use / Land Cover

#### 1.8.2.1 Construction Phase

For construction of the main canal and distributary system about 13092 ha land will be acquired from private owners. The land use of patta land and revenue land (2698ha) under canal shall change permanently in water body and built-up area (Project Components)

#### 1.8.2.2 Operational Phase

During the operation phase no change in land use is expected. Many of the redundant areas having no further usage will be brought under plantation.

### 1.8.3 Soil Erosion and Siltation

#### 1.8.3.1 Construction Phase

Soil erosion due to excavation of different components of the project, construction of roads will accelerate soil erosion.

#### 1.8.3.2 Operational Phase

Soil erosion due to project activities will not exist in the operation phase as the construction would be completed and landscape restoration work would also be implemented

### 1.8.4 Impact on Geology

The intensity of anticipated environmental impact on geology of the area will be weak and extent of anticipated impact will be local. No impact is anticipated on the geology of the area during the operation phase.

### 1.8.5 Impact on Hydrology

The project envisages lifting of 90TMC @1.50 TMC in about 60 days during the flood season from the fore shore of the Srisailam Reservoir project on Krishna river at Yellur village in Kollapur mandal of district Mahabubnagar. Therefore, the most obvious impact hydraulic impact shall be alteration of the downstream flow regime during the period the water from the reservoir shall be lifted for storing in reservoirs for drinking /industrial and irrigation purpose. The daily abstraction of water shall be about 656

cumecs during period of abstraction. The most common attribute of water abstraction shall be a decrease in the magnitude of flood peaks downstream of the dam.

Ground water recharge from implementation and operation of PRLIS system shall be due to seepage from reservoir, losses from canal system and field application. The total recharge due to project shall be 1291.02 MCM. Accounting for unavoidable natural discharge (10%), the net ground water recharge shall be 1161.92 MCM.

The rise in water table shall be minimum for Nalgonda district (0.03m/yr) and maximum for Mahabubnagar district (0.65m/yr). Therefore, necessary water management strategies, such as conjunctive use of surface and groundwater are necessary in these areas.

#### **1.8.6 Environmental Degradation due to Labour Immigration**

During the construction phase congregation of approximately 7000 workers is likely to take place in the project area, which will increase pressure on land and water resource. Conflict between the migrants and the local population may occur for employment. Labour engaged in construction activity will also move away once the project work is completed; therefore, no additional impact is expected.

#### **1.8.7 Impacts on Air Environment**

Temporary changes in air quality during construction phase are expected due to emission of hydrocarbons from vehicles and gases from blasting operations. The maximum predicted GLC due to excavation activities at the head reaches of Venkatadri Main Canal taking off from Venkatadri reservoir, High level canal taking off from Kurumurthyraya reservoir. Low Main Canal taking off Udanapur reservoir and North Main Canal taking off from KP LakshmidiviPally reservoir was found to be  $14.97\mu\text{g}/\text{m}^3$ ,  $21.15\mu\text{g}/\text{m}^3$ ,  $23.50\mu\text{g}/\text{m}^3$  and  $15.53\mu\text{g}/\text{m}^3$  respectively. The resultant impact due to construction activities (excavation and crushing) on the Ambient air quality for PM10 at the Head reach of main canals and the nearest villages are within the NAAQS.

Due to increased transportation during construction phase at 25 m, predicted concentration for PM10 is  $12.4\mu\text{g}/\text{m}^3$ , which reduces to  $7.7\mu\text{g}/\text{m}^3$ ,  $3.4\mu\text{g}/\text{m}^3$  and  $1.4\mu\text{g}/\text{m}^3$  at 50m, 150m and 500m respectively. Thus, the impact on the pollutant level (PM10) due to increased traffic due to transportation of mineral shall be minimal. The increased GLC in respect of NO<sub>x</sub> were insignificant being  $0.13\mu\text{g}/\text{m}^3$  up to 25m and  $0.11\mu\text{g}/\text{m}^3$  up to 50m and  $0.10\mu\text{g}/\text{m}^3$  up to 1km.

#### **1.8.8 Impacts on Noise Environment**

Temporary increase in noise levels are expected during construction phase only. The estimated noise levels including the background level at these receptors at different locations, due to running of construction machinery, shall be lesser than the standard values

#### **1.8.9 Impacts due to Ground Vibration and Air -overpressure due to Blasting**

Due to blasting, the resulting PPV shall be between 1.71 mm/sec to 3.68mm/s which shall be considerably lower than the limiting values 5.0 mm/sec for excitation frequency less than 8 Hz, in case of temporary structures. Predicted air over pressure due to blasting at Badua and Karapura shall range between 103.2 - 109.8 dB(A) respectively and is lower than 120 dB(A).

### 1.8.10 Impacts on Water Environment

During the construction phase, the water environment of the waterbody due to proposed project shall be impaired due to increase in silt rate from the discharge coming out open air works, batching and crushing plants and from the foundation works. The leakage of POL and washings of workshop floors and washing of vehicle and equipment bring oil and grease with it and shall increase the concentration of oil and grease in water, if discharged into the river section. The impact shall be felt during construction with the slight increase in turbidity in the river/ water bodies despite resorting to de-siltation of silt laden discharge coming from various excavation points, but the transparency of the water shall not be impaired to the extent that the available sunlight ceases to power the photosynthetic reactions. Apart from ground water recharge from the application of water in command area, quality of ground water will also improve in the entire area as the quality of surface water to be applied conforms to class "C" water as per IS:2296-1982.

In operation phase due to running of canals and application of water in fields in such area where water table is high, water logging and soil salinity development can occur due to heavy losses of water due to seepage from canals, distributaries and water courses

### 1.8.11 Impacts on Flora

It is evident from the study that from the project zone and influence zone of the proposed project none of tree species, shrub, herb or any climber or grass species are either vulnerable or endangered. Interestingly the vegetation composition of the project zone is also widely distributed in the influence zone in abundance and there will be no significant loss to the habitat. However, any loss of vegetation during the project activity period will be restored in due course of time. The floral abundance of the project area in post construction phase will increase by many folds as the plantation under green belt, restoration and landscaping will be completed.

### 1.8.12 Impacts on Fauna

As the project activity is not going to affect all the major habitats, there is little concern for these niche birds. There will be no alteration to the existing habitat of endangered and threatened species. There is also no wildlife sanctuary, national park and biosphere reserve near the project area. Increase in temporary stress levels of wildlife during construction phase due to noise, human interference and reduction in present habitat. Threat due to poaching might increase. Due to reservoir creation, there will be improvement in the habitat for mainly water birds, reptiles, mammals, amphibians and plankton and improvement in food chain of some reptiles, birds and carnivorous mammals due to creation of reservoir and increase in humidity level.

### 1.8.13 Summary of Positive and Negative Impacts

#### 1.8.13.1 The positive impacts

- Irrigation potential shall be created in area (4,97,976ha)
- Better living Standards for famers of command area.
- Employment opportunities/to locals in project work and fisheries.
- Benefits to economy and commerce.
- Access to improved infrastructure facilities.
- Recreation and tourism potential may boost

- Improvement in environment through implementation of different plans.
- Command Area Development.
- Better opportunities for cattle rearing.
- Increase in groundwater level

#### 1.8.13.2 The negative impacts

- Due to project 14,891 families shall be affected due to land acquisition for phase-II works
- The loss of agriculture land (13,092ha) and agriculture produce.
- Loss of livelihood and income.
- Likely decrease in agriculture and horticulture production due to air pollution
- Disturbance to the fauna of the study area during construction
- Pressure on the existing provincial / state road will increase.

### 1.9 IMPACT MANAGEMENT

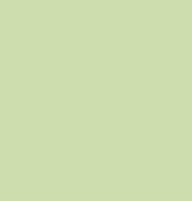
To ameliorate the negative effects of the project construction and overall improvement of the environment following management plans are formulated for implementation concurrent to the project construction. The cost of the management plans is shown in **Table 1.2**

**Table 1-2: Summary of Total Cost Estimate of EMP**

S.N.	Plans	Cost (Rs. In Lakh)
1.	Catchment Area Treatment Plan	00.00
2	Command Area Development Plan	132153.00*
3	Compensatory Afforestation Scheme	00.00
4	Wildlife and Bio-diversity Management plan	80.00
5	Fisheries Management Plan	100.00
6	Resettlement & Rehabilitation Plan	156686.00
7	Green Belt Development Plan	2964.00
8	Reservoir Rim Treatment Plan	00.00
9	Muck Management Plan	7125.00
10	Landscape and Restoration Plan	76.00
11	Restoration Plan for Quarry Sites	76.00
12.	Disaster Management Plan	35.00
13	Water, Air and Noise Management Plan	250.00
14	Public Health Delivery Plan	600.00
15	Labour Management Plan	345.00
16	Sanitation and Solid Waste Management Plan	1080.00
17	Local Area Management Plan	4035.00
18	Environmental Safeguards During Construction Activities Including Road Construction	320.00
19	Energy Conservation Measures	400.00
20	Environmental Monitoring Plan	228.00
<b>Grand Total</b>		<b>174400.00</b>

\*The cost of works under CAD Scheme has been excluded, as it will be funded under Central Plan with State share in prescribed proportion.

<b>STATEMENT SHOWING MANDAL WISE AYACUT DETAILS OF PRLIS IN NARAYANPET DISTRICT</b>				
<b>S.NO</b>	<b>District Name</b>	<b>Mandal Name</b>	<b>No. of Villages</b>	<b>Total Ayacut (Ac)</b>
1	NARAYANPET	Kosgi	26	25856
		Maddur	30	27528
		Narayanpet	22	18493
		Dhanwada	9	11065
		Damargidda	16	6703
		Marikal	7	4348
		Makthal	14	19359
		Narwa	5	5276
		Utkoor	26	42327
	<b>Total</b>	<b>9</b>	<b>155</b>	<b>1,60,955</b>



Photographs of PR LIS

