

Vamsadhara Project Phase-II of Stage-II, AP

- (1) It is to submit that the Detailed Project Report of Vamsadhara Project Phase-II of Stage-II (now renamed with prefix B.R.R.) was submitted to the Central Water Commission, New Delhi by the Superintending Engineer, B.R.R. Vamsadhara Project Circle, Srikakulam vide letter No. SE/SKLM/DEED/AEE.3/DPR dated 29.11.2006. It is also submitted that the detailed appraisal of the same by the Project authorities could not be completed at Central Water Commission and is presently being pursued.
- (2) In this context, a brief report on the Project Status is herewith presented.
- (3) The B.R.R. Vamsadhara Project in Srikakulam District of Andhra Pradesh is being taken up in two Stages i.e., Stage-I & Stage-II.
 - (i) The Vamsadhara Project Stage-I comprising of a Barrage at Gotta and left main canal to irrigate an ayacut of 59,990 ha. (1,48,228 acres) was cleared by the Planning Commission vide letter No. II 2(18)/71-01, dated 15.02.72 and completed and is under operation.
 - (ii) The Vamsadhara project Stage-II comprises of construction of a Barrage across Vamsadhara river at Neradi (about 48 km upstream of Gotta), excavation of Flood Flow Canal to feed Hiramandalam Reservoir and irrigation sluices on the right and left flanks to irrigate areas both in Andhra Pradesh and Orissa respectively.

Further, during the 41st TAC meeting of Central Water Commission, the Vamsadhar Project Stage-II with Neradi Barrage was examined in CWC and found to be techno-economically viable.

In the 51st TAC meeting of CWC, the techno-economic approval was given to the Vamsadhara Project Stage-II.

However, in as much as implementation of the Stage-II scheme is getting delayed for want of concurrence from Orissa Government, the project has been proposed to be taken up in two phase i.e., Phase-I of Stage-II and Phase-II of Stage-II.

- (iii) The Phase-I of Stage-II, contemplates the construction of Head Regulator at 750 m on upstream side of Gotta barrage on right flank and excavation of right main canal for a length of 52.973 km to irrigate an ayacut of 62,280 acres depending upon the available divertible flows at Gotta barrage during crop period. In the 73rd TAC meeting of

CWC, the Vamsadhara Project phase-I of Stage-II Right Main Canal taking off from Gotta Barrage is accepted and the Project is almost completed.

- (iv) As the concurrence from Orissa Government for the construction of Neradi Barrage under Phase-II is getting delayed, a Side Weir is alternatively thought of as a best choice temporarily to divert part of Andhra Pradesh share of Vamsadhara water (about 5.0 TMC) into proposed Hiramandalam Reservoir through Flood Flow Canal of 34.0 km length to achieve partial benefits. The Side Weir is proposed to be constructed on the right flank of Vamsadhara River at Katragada village in Andhra Pradesh boundary where the river is hugging right flank. This proposal ultimately forms an integral part of Neradi Barrage when it gets materialized after obtaining the concurrence of State of Orissa. The present proposal of Vamsadhara Project Phase-II of Stage-II with Side Weir component is not a separate project as it is only an additional component under the Vamsadhara Project Stage-II which is planned to reduce the time lag and cost overrun.

The works of Phase-II of Stage-II of the Project are in different stages.

4. At this juncture, the Government of Orissa objected for this proposal of Side Weir and while negotiations are going on at different levels in respect of Phase-II of Stage-II, the Government of Orissa filed a Writ Petition No. 443/06 in the Hon'ble Supreme Court of India for stoppage of works and constitution of a Tribunal. The Government of Orissa apprehended certain morphological changes of Vamsadhara River due to construction of side Weir, and affecting the existing irrigation and drinking water supply in their territory. However, the Technical Report of CWPRS, Pune, after conducting Physical Model Studies of Side Weir concluded that "even after the construction of Side Weir, the conditions may not alter drastically"
5. The Central Water Commission, New Delhi in the month of August 2007 has communicated the reassessed yield of Vamsadhara river at Gotta Barrage as 105 TMC accordingly the proposed utilization on A.P under Vamsadhara Project Stage-I and stage-II is with in its judicious share of 50% of Vamsadhara Water as per 1962 agreement between Government of Orissa and Andhra Pradesh.
6. The Hon'ble Supreme Court vide judgment dated 06.02.2009 has issued orders to maintain Status quo regarding construction of Side Weir and Flood Flow Canal at Katragada and ordered Government of India to constitute a Water Dispute Tribunal within 6 months to resolve the issues raised by the Government of Orissa.
7. The Central Government vide Gazette notification dated 24.02.2010; constituted Vamsadhara Water Disputes Tribunal with headquarters at New Delhi; to adjudicate the dispute between Government of Orissa and Andhra Pradesh as per the Judgement of the Supreme Court on the Writ Petition (Civil) No. 443 of 2006 of Orissa Government.

8. Subsequently, the states of Orissa and Andhra Pradesh filed respective interlocutory applications for passing interim directions.

9. Subsequently, the Chairman of the Tribunal Hon'ble Sir Justice BN Agarwal had resigned and a new Chairman Sri Dr. Justice Mukundam Sarma, Judge of Hon'ble Supreme Court was appointed as Chairman for the Vamsadhara Water Disputes Tribunal (VWDT) vide Gazette No. 537 of Government of India dated 30.03.2011.

10. The Hon'ble Vamsadhara Water Dispute Tribunal on date 17.12.2013 in the matter of IA-1/2010 preferred by Government of Orissa allowed the Government of Andhra Pradesh to construct the Side Channel Weir along with the ancillary works as proposed thereby enabling to utilize 8.0 TMC of Vamsadhara waters; but with certain conditions.

11. One of the conditions states that the Project proposal must get clearance from the Central Water Commission, Ministry of Water Resources, Ministry of Environment and Forest, Ministry of Tribal Welfare and other statutory clearance as would be required;

12. As of regard to the status of statutory clearance concerned, the following is submitted.

13. With regard to obtaining clearance from Ministry of Water Resources, Government of India, it is submitted that the Detailed Project Report of Vamsadhara Project Phase-II of Stage-II has been submitted to Central Water Commission, New Delhi in November, 2006 for granting necessary approval and certain correspondence was made in this regard.

14. The following status of compliance to the comments/ observations of various Directorates/ Divisions of Central Water Commission/ Ministry of Water Resources on the Detailed Project Report submitted in 11/2006 are herewith submitted.

15. Now, it is submitted that the Detailed Project Report of Vamsadhara Project Phase-II of Stage-II updating the cost with rates 2013-14 duly complying to the comments of Cost Appraisal (Irrigation) Directorate and Economics Directorate of Central Water Commission is prepared and the BC ratio arrived is 1.836. Hence the same is herewith submitted for favour of kind examination.

The following Officers are deputed for submission & appraisal of Detailed Project Report to your Office.

(1) Sri D.N.S.S Kumar, Deputy Executive Engineer

(2) Sri Ghono Shyam Goudo, Asst. Executive Engineer.

1. Construction of a 300m long side channel were of located 2km upstream of proposed Neradi Barrage on the sight flank of Vamsadhara River at Katragda village to draw flood waters. The side weir is proposed to draw flood flows in about 50 to 60 days during August to October.
2. The water through the side weir is collected in a small pond/ shifting basin when the flow in the Vamsadhara river is above 4000 cusecs. The tail pond is proposed to be created immediately below the Side Weir.
3. Water from the pond will be let into a Flood Flow Canal (Link Canal) of 6400 Cusecs capacity 1.6 km long andFlood Flow Canal which is put of Neradi Barrage Project.
4. Any Water drawn over and above 6400 cusecs will escape through escape regulator/ Scor sluice/ Silt Excluder into escape channel which empties into main river at about 1.1 Km d/s of Side Weir. The Side Weir was proposed to utilize about 8 TMC of water while during that period the flow in river downstream of Katragada village will not be less than 35 TMC. Once the construction of Neradi Barrage is completed, this Side Weir will automatically get submerged and become
5. The water Siplover the Side Weir will inlet into Hiramandalam Reservoir by Link Canal cum flood canal. An ayacut of 20000 areas is commanded under this flood flow canal en-route.
6. Another Link Canal from Hiramandalam Reservoir is proposed for connecting the Right Main canal at upstream of the proposed cross regulator @ km 2.670 of Right Main Canal . The capacity of the Link canal is 4000 cusecs. This Link Canal caters to the needs of the command under both right and left canals of Vamsadhara River.
7. A high level Canal of 30km length is proposed for irrigation of high-landwhich are un-commendable areas under R.M.C. This Canal is proposed for irrigation of 5000 areas.
8. The Physical Model Studies of the Side Weir was conducted in CWPRS, Pune. Project Authorities have mentioned that CWPRS in its study report inter-alia observed that for low as well as high flow stages in Vamsadhara Rivers, flow conditions with and without Side Weir were almost similar. It was further indicated in the technical report of Model Studies that for discharge of water equivalent to 5300 cusecs in Vamsadhara river,discharge of 7060 cusecs and 14120 cusecs in the river, the corresponding discharge passing over weir has 1025 cusecs and 5120 areas respectively.
9. Under this scheme, besides stabilization of 62280 areas under phase-I, 20000 of sugarcane gets assured water supply and new ayacut of 20000 areas under flood follow Canal getswater supply. The scheme also benefits the Left Main Canal ayacut of 1.48 Lakh acrs under Stage-I during the lean flows and deficit period. The entire ayacut is situated in Sri Kakulam District.

10. **Hydrology:** The joint study under guidance of CWC was carried for yield of Vamsadhara basin. The 75% dependable yield for Vamsadhara basin at Gotta Barrage, considering the generated yield series for the period 1982-2006 worked out as 105.00 TMC. The average yield of Vamsadhara. River as agreed by CWC during 2007 is 144 TMC.
11. **Inter State Matter:** State of Orissa and Andhra Pradesh have agreed in 1962 that yield of river at Gotta will be about 115 TMC and there waters shall be shared on half and half basin. The consent of Orissa Government was also conveyed for going ahead which the construction Barrage. Therefore, as per the agreement Andhra Pradesh can52.50 TMC at Gotta. The utilization by Government of Andhra Pradesh is a below:

SI No.	Name of Project	Water Utilization
1	Vamsadhara Project Stage-I	17.841 TMC
2	Vamsadhara Project Stage-II, Phase-I	7.353 TMC
3	Vamsadhara Project Stage-II, Phase-II	8.695 TMC
4	Drinking Water Supply	0.722 TMC
Total		34.611 TMC

Therefore, proposed utilization is within the 50% share of Andhra Pradesh i.e. 52.50 TMC.

Irrigation Planning: The total ayacut contemplated in Stage-II of Vamsadhara Project is 43414 Ha. Out of this 809.4 ha is contemplated under flood flow Canal, under thiramadalam Reservoir supplementation proposed to 33297 ha under R.M.C and 2023 ha. is proposed to be cultivated under high level Canal of taking from Hiramandalam Reservoir.

The following areas is proposed board on agriculturalof the locality and as approved by State Agriculture Department (Under Stage-II, Phase-II

SI No.	Crops	Area (Areas)
1	Paddy (Khariff)	57280
2	Sugarcane (Perennial)	20000
3	Chillies (Khariff)	30000
Total		107280 areas

- ❖ The crop water requirement are estimated by adopting modified penman Method.
- ❖ The Crops Irrigation Requirement proposed cropping patern works out to 33.889 TMC for Vamsadhara Project.
- ❖ The project is proposed to be completed in 3 years.
- ❖ The total cost of the project is 1858.97 crops at 2013-14 Price Level.
- ❖ Environmental clearance to the project was issued by MoEF on 21.03 2006.

UNIT-I PART-I: SIDE CHANNEL WEIR

- 1) The Vamsadhara Project Phase-II of Stage-II comprises of the following component of works:
 - i) Construction of Side Channel Weir at Katragada 50 Km u/s of Gotta with flood banks on right side on upstream, downstream side of the weir.
 - ii) A Link Canal (Flood Flow Canal) taking- off from the side channel weir at Katragada Village of about 34.00 Km length to carry Andhra Pradesh's share of water into a reservoir to be irrigate an ayacut of about 8094 Ha (20000 acres) under Link Canal (Flood Canal)
 - iii) Hiramandalam Reservoir with a capacity of about 19 TMC at FRL of +67.056 m (+220.000 ft)
 - iv) A High Level Canal taking off from Hiramandalam reservoir to irrigate an ayacut of about 2023 Ha (500 acres).
 - v) A Link Canal connecting the Hiramandalam Reservoir and Gotta Barrage through R.M.C.
 - vi) Supplementation of Water for an ayacut of 8094 Ha (20000 acres under R.M.C for sugarcane.

VAMSADHAR PROJECT

PHASE-II

Due to delay in concurrence for construction of proposed Naradi Barrage, a side channel weir is thought of as an alternate to draw water for filling one proposed Hiramandalam Reservoir, by a Flood Flow Canal of 34 km length & also irrigating an ayacut of 8094 ha.

A link Canal is to be drawn from Hiramandalam Reservoir, which would supply water to Right main Canal (Original from already existing Gotta Barrage). This River main Canal would irrigate an ayacut of 43,414 ha.

