

## **Status Note of ERM of Sukla Irrigation Project, Assam**

*(Latest File No. Assam/6/2018-PA (N))*

### **1.0 Background:**

Sukla river originates from Himalayan mountain range of Bhutan and flows through the Baksa district and amalgamate with Puthimari river in the district itself and in due course mingle with the mighty river Brahmaputra. Sukla Irrigation Project, the second largest completed irrigation projects of Assam, is on river Sukla, and network of canals with its headwork at village- Naokata (about 74 KM from Guwahati), Block- Goresswar, District- Baksa, Assam having command area in Baksa and Kamrup (Rural) districts of Assam.

The project was originally cleared by the Planning Commission in 1962 with an estimated cost of Rs. 67.00 lakh to cater to annual irrigation to the tune of 22400 Ha and subsequently the revised cost of Rs. 298.47 lakh with enhanced benefits to an area of 32699 Ha was cleared by Planning Commission in 1968. A second revised estimate of Rs. 490.00 lakh for annual irrigation of 23634 Ha (CCA-18267 Ha) with an irrigation intensity of 130% was accepted by Planning Commission in 1978. The project consists of a barrage, Head regulator, two Distributaries (D1&D2) and 21 Minors (12 from D1 and 9 from D2) besides large number of outlets in the two canals and canal structures.

The Project was completed and came in operation in 1978. The project never achieved its full potential as envisaged (CCA-18267 Ha). The maximum utilization of irrigation potential was 15635 Ha (Annual Irrigation) during the year 1982-83. Thereafter, the created potential decreased gradually due to damage in the irrigation system of the scheme like damage of Falling Shutter arrangement in the Spillway of Cross Regulator of Sukla Head works, damage of Cross –drainage work and canal system. The scheme became completely defunct in the year 2000 and the created potential was totally lost.

The system was under operation for 24 years and lacked proper maintenance for paucity in maintenance fund, unfavorable law and order situation prevailed during the agitation period and also damage like wear and tear of the earthen canal system due to recurring flood. In order to regain the lost potential and to develop the scheme to full strength, Govt of Assam took up the task of Modernization of the Project with Estimated cost of Rs. 2710.40 lakhs in 2007. In this task, installation of 14 nos of vertical lift gates over the spillway of the Headwork with other appurtenant works and 400 m canal lining in the main canal at the initial reaches could be completed. With this, resumption of water supply through the canal was achieved and the scheme again started functioning from October 2010. However irrigation facility to an area of 9500 Ha could be resumed as the FSL beyond 12.0 KM in the two main canals could not be achieved. Further, Head works along with its appurtenant configurations is in need for early refurbishment which occurred due to passing of age and other factors.

A project performance review of the project revealed that the project is not been functioning to deliver the designed benefits. The irrigation intensity has fallen from the designed level of 137% to 60%. The main reason for deficit in cabal performance can be attributed to the non-lining nature of the total canal network.

## **2.0 Location:**

- 1) State – Assam
- 2) Districts Benefitted – Baksa & Kamrup
- 3) River/Basin – Sukla / Brahmaputra

## **3.0 ERM Proposal**

Present proposal has been framed to restore the health of the project, Water availability has been reassessed using the latest available data, cropping pattern has been modified based on the farmers practice during last 30 years and the the entire physical system is reviewed and size up to meet the objectives. The present proposal envisages Extension, Renovation & Modernization (ERM) of the following;

- Lining of the Main Canal system namely D1 & D2 for a full length of 28.80 KM & 31.70 KM respectively for precention of major seepage and restoring the lost irrigation potential.
- Protection/ Renovation work of Head Works which includes repairing of piers, U/S amd D/S beds, inverted filters, CC blocksm crests of the barrage, operating platforms, replacement of rubber seals etc. Furtherm the gates of the head regulator, river sluices and the scouring sluices haven been proposed to be repaired and restored to their original designs.
- Renovation/Modernizations of Head Regulators, Cross regulators, Outlets and providing measuring devices.
- Renovations/Modernization/Re-construction of Falls, Culverts, RCC Bridges, Cross Drainage System, Escape Gates, etc.
- Miss items like Renovation of office buildings, creation of Deep Tubes etc.\

Live Storage	1400MCM
CCA	12150 HA
AI	16900 HA
Estimated Cost	296.26 crore at 2017-18 PL.

#### **4.0 Preliminary Project Report -PPR**

The PPR of this project was submitted by the BTC council to CWC, Shilling vide letter dated 09.04.2018. A general visit of the Project was conducted on 4th June, 2018 by Director, M& A Dte, Guwahati. Subsequently, vide letter No. 17/18/Appraisal/ERM-Assam/2014-M&AG/738-40 dated 11.06.2018, it was recommended for according the 'In-Principle Clearance' for preparation of the DPR of the Project from Screening Committee of CWC. Subsequently, In-Principle Clearance was accorded for preparation of DPR in the Screening Committee meeting held on 14.01.2019.

#### **4.0 Detailed Project Report (DPR)**

The DPR of the project was submitted by BTC Council vide letter No. BTC/Irri-26/2017/186 dated **21.02.2019** and the same was uploaded in e-PAMS on 26.06.2019 also. The appraisal process started.

#### **5.0 Appraisal Status**

##### **5.1 Hydrology (Hyd(NE) Dte)**

- Hydrology aspect was accepted as per the details below with reference to CWC letter No. 4/268/2018-Hyd(NE)/210 dated 30.10.2019.

<i>Dependability</i>	<i>Yield (MCM)</i>
50%	560
75%	295
<i>Average</i>	527

- Design flood and Sedimentation Study aspect were accepted as per the details below with reference to CWC letter No. 4/268/2018-Hyd(NE)/226 dated 22.11.2019

*Standard Project Flood of 1859 cumecs may be adopted for planning and design purposes.*

*Sediment load rate of 1.6547 Ha-m/100sqkm/year may be used for sediment management practices.*

##### **5.2 Construction Material (CSMRS)**

Two test report of M/s North East Engineers regarding construction material received from project authority vide letter dated 02.03.2020. CSMRS vide letter dated 19.05.2020 furnished their observations/comments which were communicated to SG.

**The compliance is awaited from SG.**

##### **5.3 Inter-State matter (ISM-2 Dte)**

**Inter State/ Environment/Forest Aspects**

The Master Plan of Puthimari sub basin (River Sukla is a tributary of Puthimari) has been prepared by Brahmaputra Board, DoWR, RD & GR, Guwahati. The Sukla Irrigation project is an existing project on River Sukla. There is no upstreram planned/committed/actual utilization so far except the proposed utilization/reservation of 301.74 MCM in respect of Sukla Irrigation Project. The Present proposal envisages the ERM works only. All the aspects were cleared during inception of Original project. The entire command/catchment area lies on territory of Assam. There is no inter-State matter involved in the project. There is no forest/environment issue involved in ERM project.

The project has been **accepted** from Inter-State aspects angle vide CWC letter no. 2/7/ISM-2/2017/263 dated **26.07.2019**.

#### **5.4 Irrigation Planning (IP-S Dte)**

Irrigation planning aspect has been examined and vide CWC letter No. 2/1542/IP(S)/2018/158 dated 30.04.2020 it has been communicated that no comments are to offer in this regard. Therefore, irrigation planning aspect is cleared.

However, the **BC Ratio is yet to be finalized** for want of the finalised Cost of the project.

#### **5.5 Barrage and Canal (E&NE)**

The latest Comment on this aspect was communicated to the SG vide letter No. 278/1/2020/BCD (ENE)/1999 dated 29.02.2020. The compliance from State Govt was received vide letter No. BTC/Irri-26/2017/202 dated 12.08.2020. The **clearance** of the DPR from the Barrage and Canal aspects subject to the conditions were communicated vide letter No.T-15014/8/2019-BCD (ENE) dated 15.09.2020.

#### **5.6 Equipment Planning (CMC and P&M Dte)**

Plant Planning and Design aspect has been **accepted** by CMC vide letter dated 24.02.2020.

#### **5.7 Cost Estimation (CA (Irrigation-1) Dte)**

Observation issued on 05.09.2019 and compliance received on 04.10.2019. A clarification on cost aspect was sent to PA on 18.11.2019. Revised document has been submitted by PA on 19.11.2019. Based on the clearance of BCD with conditions, the cost estimate for this project has been finalized as Rs.259.73crore @ October, 2020 PL as per the letter no. T-28014/6/2020-CA-I DTE dated 12.11.2020.

#### **5.8 Construction Material (CSMRS)**

The same is **pending**.