Mega Lift Scheme

Tentulipadar, Odisha.

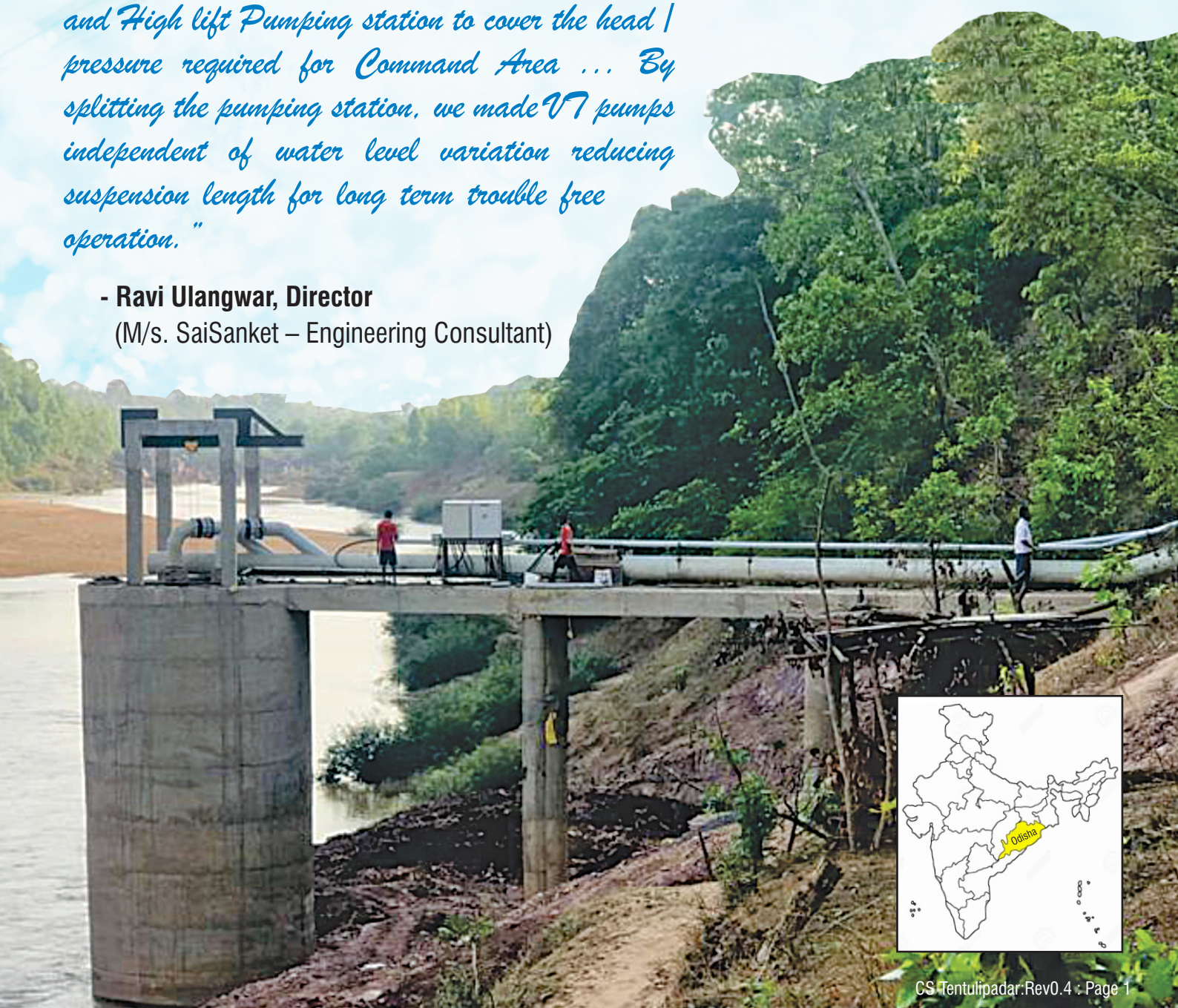
Tendulipadar Mega Lift Scheme -built in the Kolab River bed, in Koraput district of Odisha state, is a part of Cluster II LIS *(with CCA 515 Ha for total 8 villages).*

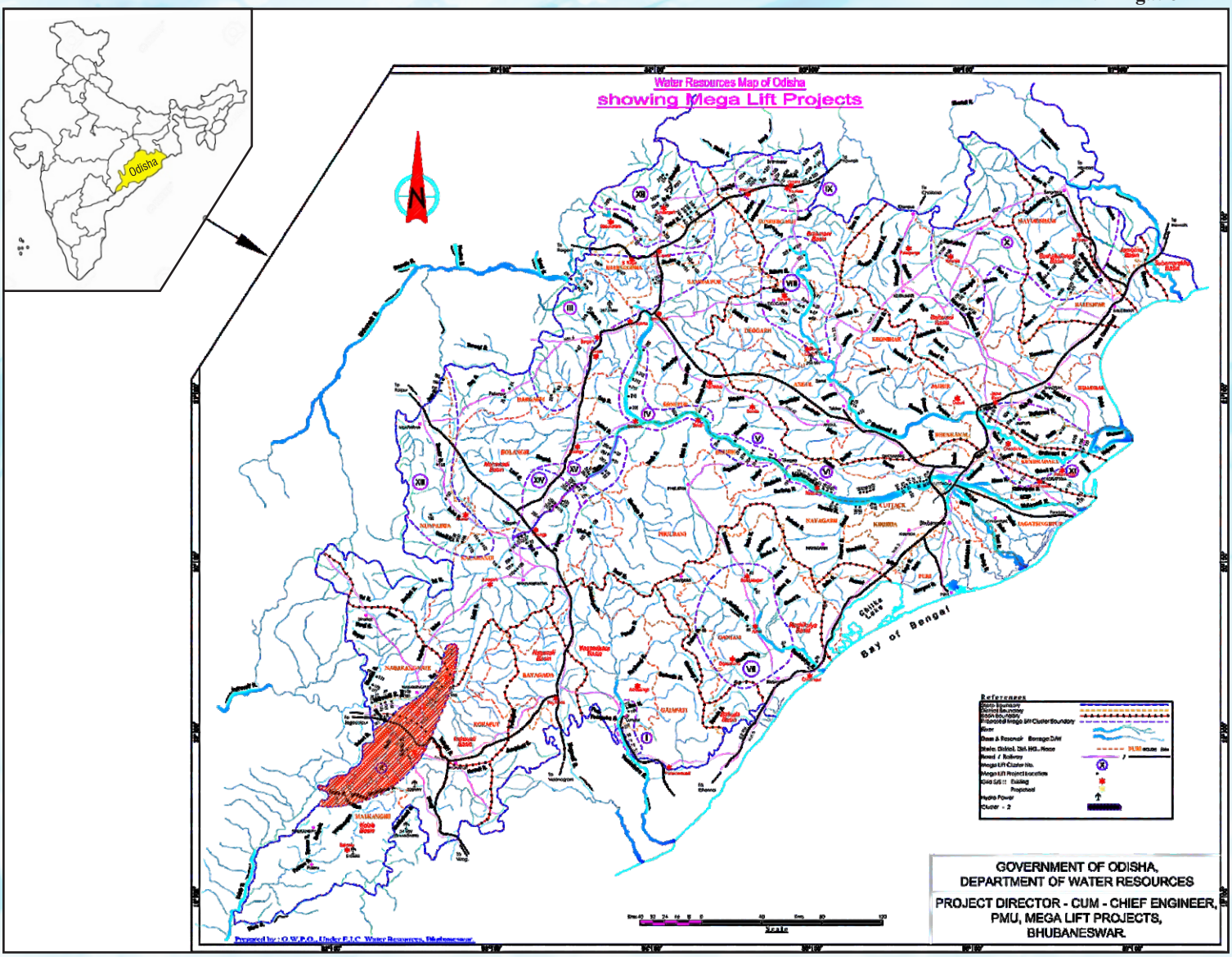
1. **Excessive Silt,**
2. **High Depth** *(the difference is almost 30m between low water level and HFL and river bank)* &
3. **Simple, Cost Effective Civil works**

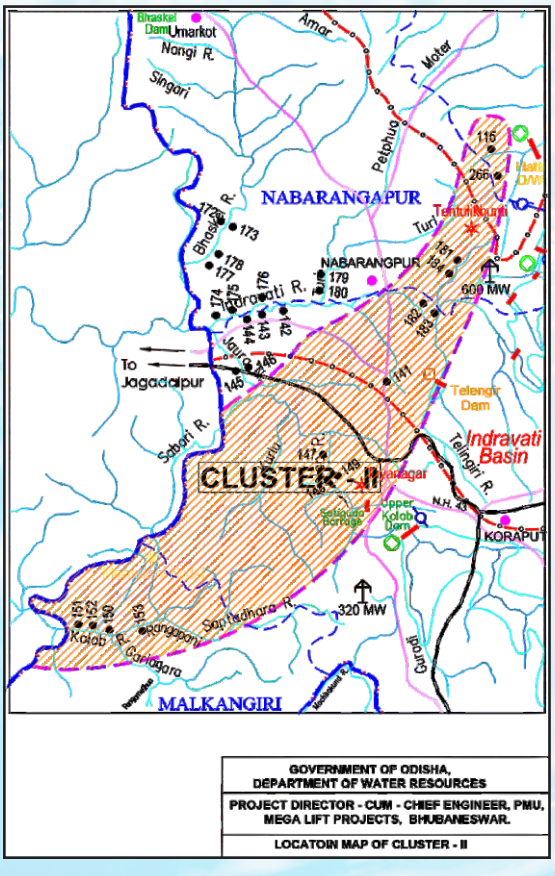
were the compelling reasons for client to go for Submerged pumpsets.

"We decided total head in two parts low lift for taking care of large variation in water level in River and High lift Pumping station to cover the head / pressure required for Command Area ... By splitting the pumping station, we made VT pumps independent of water level variation reducing suspension length for long term trouble free operation."

- Ravi Ulangwar, Director
(M/s. SaiSanket – Engineering Consultant)







"We are very satisfied with the operation of the Aqua Submerged pumpsets. Moreover, Civil construction cost & complexity has been also optimised than single large & massive pump house required for Suspended VT pumpsets"....

- Ravi Ulangwar, Director
(M/s. SaiSanket – Engineering Consultant)

Execution of 13 nos. of Lift Irrigation Schemes with intake points in Kolab, Indravati, Hati River and tail race Channel of Indravati power House having Command area between 500Ha. to 2000 Ha. in Cluster No.II in the districts of Kalahandi, Koraput, Nabrangpur and Malkangiri including its distribution network, up to 20 Ha Chak.

Tendulipadar Pumping Station (PS) is 1st stage Pumping Station *(Of total 2 stages)* based on Aqua make Submerged Centrifugal Pumpsets (SubCF) which feeds water to 2nd stage PS based on conventional VT pump sets. Both pumping stations form part of Cluster II LIS with CCA 515 Ha for total 8 villages.

Description	:	Submerged Pumpsets for Intake well for Tentulipadar Mega Lift Schemes Under Cluster:II
Name of Project	:	Tentulipadar Pump House, Mega Lift Project, Cluster No II
End Customer	:	Government of Odisha
Customer	:	GVPR Engineers Limited
Consultant	:	SaiSanket
Pump Type	:	SubCF Pumpset
Qty	:	2
Flow	:	973 m3/hr
Head	:	33.5 m
Motor Rating	:	170 hp/ 126.8 kW
No. of Stages	:	1 Stage
Voltage	:	415 V

GVPR ENGINEERS LIMITED

Saisanket

Project Information :

Originally Single PS based on conventional VT pumps was planned - however considering the following compelling reasons, 2 Stage pumping was endorsed by Department of Water Resources, M/s GVPR (the EPC Contractor) & its Engineering Consultants (M/s SaiSanket).

1. **High Silt content:** High Silt in river water makes VT pumps un-suitable.

   (VT pumps, as per IS 1710, are only suitable for clear cold water with max solid content of 3000 ppm).

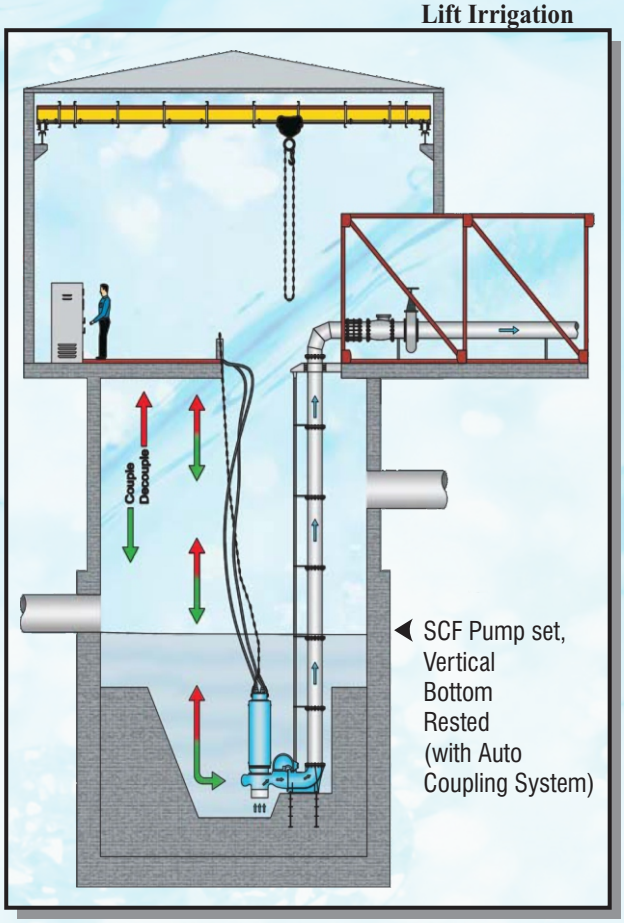
   (Any silt content beyond 3000 ppm makes these pumps prone to excessive wear and tear of rubber bush bearings, leading to higher maintenance costs & downtime)

   On the contrary, Submerged Centrifugal Pumpsets are highly reliable for such applications and hence adopted for this site.

2. **Huge Level difference:** About 30 m level difference between HFL *(High Flood Level)* and LWL *(Low water level)* required single large massive PS / deep Jack well to accommodate long suspension length VT pumps. Cost of Civil works for this design was exorbitant with added complexity and hence discarded.

Thus, 1st stage PS was constructed with Aqua's Submerged centrifugal pumpsets, which are most suited for handling silt and independent of water level fluctuation, feeding water to 2nd stage PS.

2nd stage PS was constructed with VT pumps which have lighter duty as they are relieved of level fluctuations & face less silty water, as compared to Submerged Centrifugal Pumpsets in 1st stage



SCF Pump set, Vertical Bottom Rested (with Auto Coupling System)

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