KISS
KALINGA INSTITUTE OF SOCIAL SCIENCES

Kalinga Institute of Social Sciences (KISS)

Deemed to be University

(Declared U/S 3 of UGC Act, 1956)

(Organization in Special Consultative Status with the Economic and Social Council since 2015)

Associated with United Nations Department of Public Information (UNDPI)

A Home for more than 30000 tribal children

Date: 11.10.2023

APPEAL

7.1.4 Water conservation facilities available in the Institution: 1. Rainwater harvesting 2. Borewell /Open well recharge 3. Construction of tanks and bunds 4. Wastewater recycling 5. Maintenance of water bodies and distribution system in the campus Options:

A. Any 4 or all of the above
B. Any 3 of the above
C. Any 2 of the above
D. Any 1 of the above
E. None of the above (Opt any one)

This appeal document has been prepared in conformity with the data submitted for DVV and Self Study Report (SSR) of KISS Deemed to be University. This does not contain any new information. This document contains a total number of 14 pages. The data presented in this appeal document is true to the best of my knowledge and belief.

(Dr. Prashanta Kumar Routray)
Registrar, KISS-DU

REGISTRAR
KISS (Deemed to be University)
BHUBANESWAR

Water Conservation Initiatives

7.1.4 Water conservation facilities available in the Institution

1. Rainwater harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Wastewater recycling
5. Maintenance of water bodies and distribution system in the campus

Our response “A,” i.e. “Any 4 or all of the above” has been modified by DVV to “B,” i.e. “Any 3 of the above”.

KISS-DU has implemented all of the above, as highlighted by Peer Team:

Additionally, the University has implemented water conservation facilities such as rainwater harvesting, bore well/ open well recharge, construction of tanks and bunds, wastewater recycling, and maintenance of water bodies and distribution systems on campus. **Page 10 (Last Line) & 11 (First 2 Lines)**

The University has adopted a well-established system for the ***maintenance of bore wells****, college security management, CCTV installation, auditoriums, libraries, computers, and equipment related to reprographic facilities.* ***Page No 7 Line no. 8***

Peer Team visited the above facilities. The attached reports, geo-tagged photographs, videos and NAAC Peer Team Visit Schedule substantiate our claim.

Rainwater harvesting

KISS-DU has adopted a rooftop rainwater-based groundwater recharge system. Groundwater recharging is an excellent rainwater-capturing process. Any quantity of rainwater may be channelized to replenish the groundwater level of the surrounding areas.

Tabular representation of water recharged annually from the rooftop:

Rooftop Area of KISS Deemed to be University

Sl No	Infrastructure	Area in Square Feet
01	Administrative Building	12,400 sq.ft

02	Academic Building	17,100 sq.ft
03	Old Girls' Hostel	36,400 sq. ft
04	Academic Block	13,800 sq.ft
05	New Girls' Hostel	16,600 sq.ft
06	Boys' Hostel - 1	15,600 sq.ft
07	Boys' Hostel - 2	20,100 sq.ft

Calculations

Total Area	1,32,000 sq. ft = 12263 sq.mtr.	
Average rainfall in Bhubaneswar, Odisha	1628mm = 1.628 m	
Annual rainfall over rooftop	12263 sq, mtr. X 1.628 m	= 19964 Cu. M
Volume of water collected from the rooftop	1,99,64,000 ltr.	
Percentage of rainwater recharged	55%	Bore-well percolation in Bhubaneswar Area
Average water recharged annually from rooftop	19964 X .55	= 10980 Cu. M

From the above calculations we can deduce that the average water recharged annually from rooftop at KISS-DU is 10980 Cu. M

Rainwater Harvesting Equipment

Rainwater Harvesting Equipment

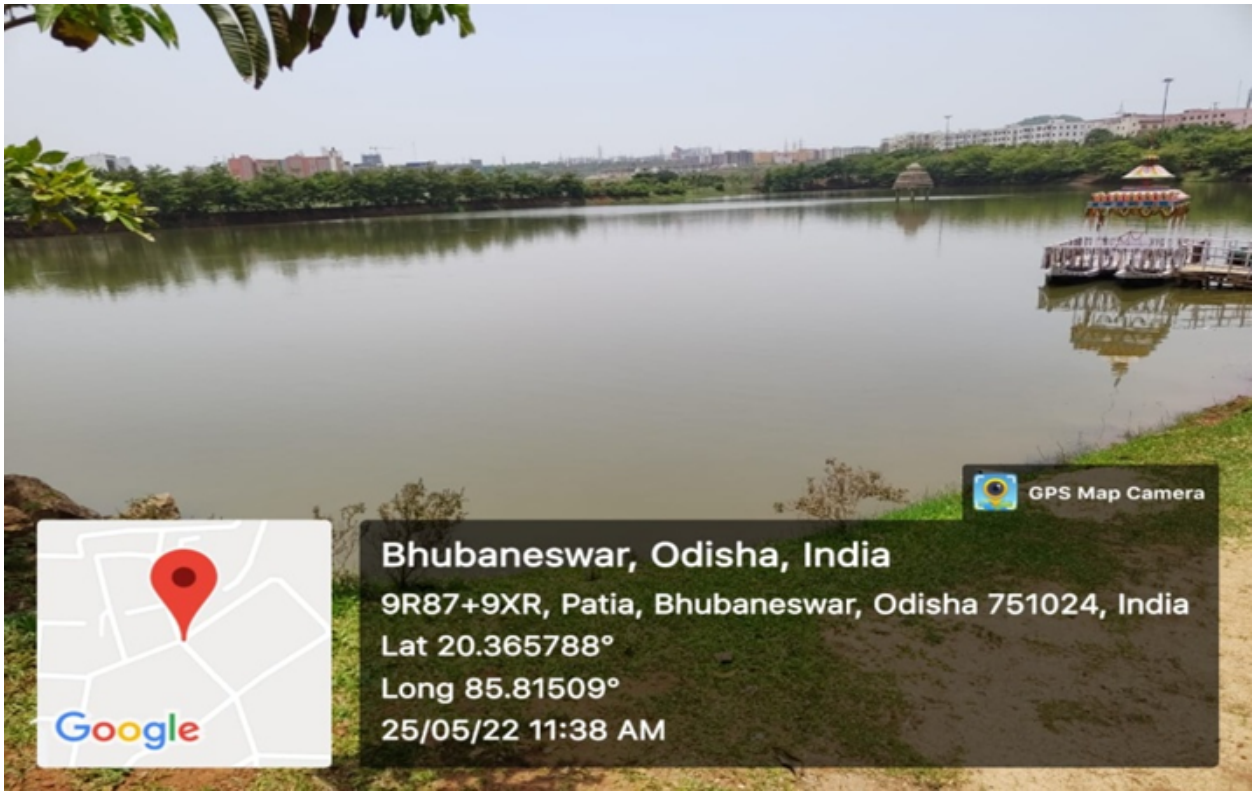
Borewell /Open well recharge

Rainwater collected at the rooftop in the various buildings is redirected through PVC pipes and dynamic rainwater filters to defunct and functioning borewells.

Construction of tanks and bunds

Storm water and surplus rainwater that cannot be channelized to the borewells is sent over to the large open waterbodies within the campus, such as pond 1 and pond 2, which together span a total area of 15.5 acres.

Pond - 1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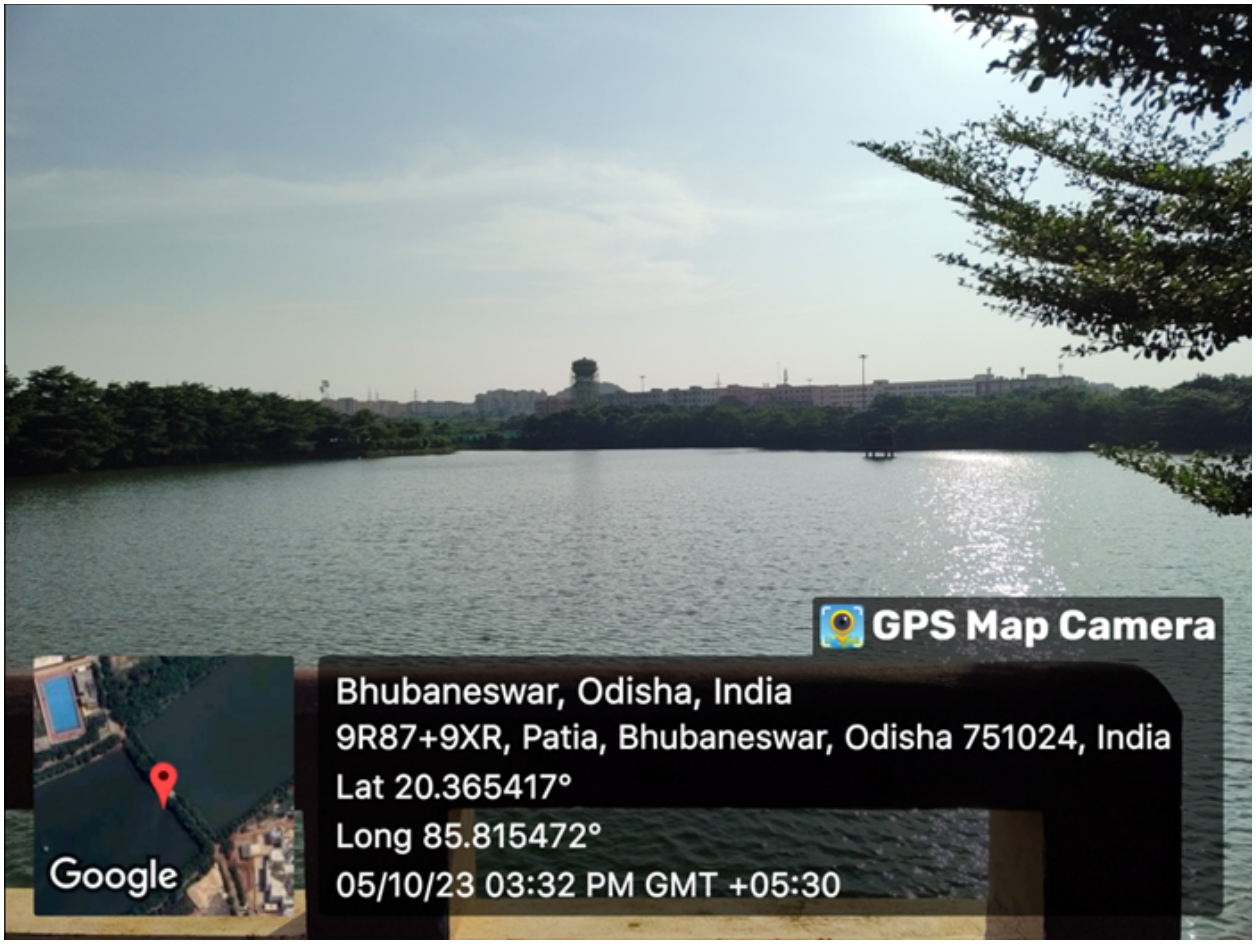
Google

(POND – 1 of KISS)



(POND – 2 of KISS)

Wastewater recycling

Wastewater from various academic buildings, hostels, and kitchens is treated in three Sewage Treatment Plant (STP), with a total capacity of 2750 Kilometers per day (KLD), meaning 2750000 litres per day. The treated water is pumped back for watering the plants on the various campuses.

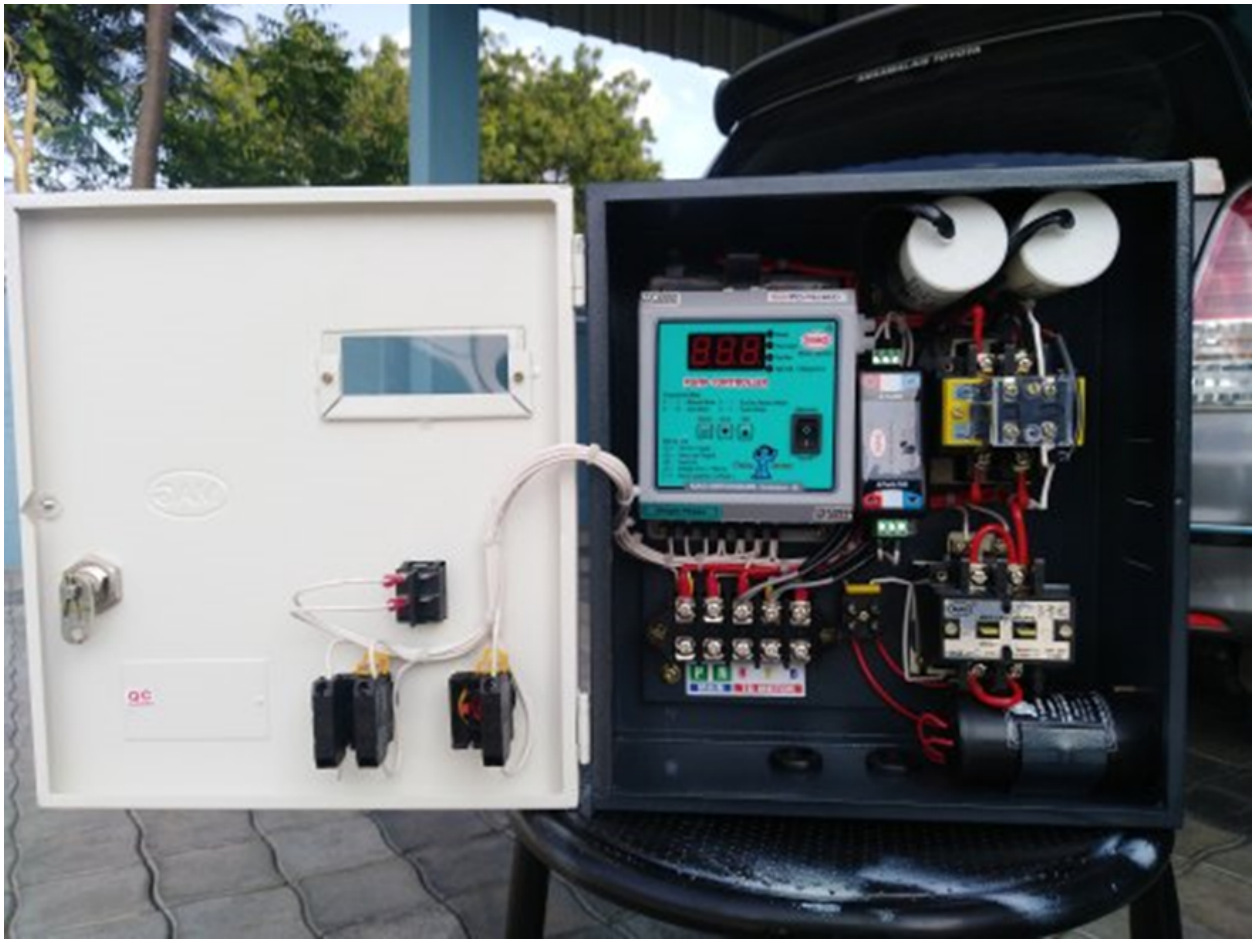
Wastewater is channelized to sewage treatment plants located at different locations. We have 450 KLD, 1000 KLD and 750 KLD STPs. The treated water from wastewater treatment plants is used for plantation and gardening purposes and excess treated water is allowed to drain out from the campus.

Maintenance of water bodies and distribution system in the campus

There are two ponds located on the premises of KISS. The sizes are 9 acres and 6.5 acres (respectively) and spread adjacent to the playground and plantation area. The entire pond bank is planted with large, selected trees (low leaf fall).
A team comprising gardeners and supervisors have been entrusted with the responsibility of taking care of the plantation and bond cleaning activities. The garden waste is put in composting pits located nearby.
The water body is in an open area so that it gets natural air. There are lot of IMC variety fishes in the pond and aquaculture facilities are facilitated. A fibre casted paddling boat moves inside the pond to feed the fishes. The ponds contribute to holding and enhancing of ground water level. Further, the quality of water is tested from time to time in order to monitor the common parameters. There is an arrangement to siphon the water from one pond to other for recirculation purpose.

KISS-DU has a structured and well-planned water distribution mechanism. The water is pumped from bore-wells to the overhead tanks located on each building. Then water is channelized for utilities through suitable sized pipes and valves. The pumping system is equipped with automatic overflow control / level controller. In order to ensure that the water is safe and free

from bacteria, high flow capacity UV chambers have been installed near each bore-well. The output from the pump is passed through UV chambers before entering to the overhead tanks. The UV treated water is allowed directly from the overhead tanks for general purposes. The water is fed to RO (Reverse Osmosis) based water treatment units located in different utility points specifically for drinking purposes. Separate tap points have been provided for the convenience of the students and for cooking purpose the water is supplied from solar heating system located on the rooftop by using warm water. This reduces the consumption of time and fuel.



AUTOMATIC WATER–LEVEL CONTROLLER FOR OVER HEAD TANKS

Central R.O. Based Water Treatment Plants

A central water treatment plant is installed at KISS for the purpose of supplying drinking water to taps throughout the day. It is a reverse osmosis based water treatment plant with TDS and pH regulation arrangement with UV chamber. The capacity is 5000 ltrs / hour. Umpteen number of taps have been installed in order to supply water to the students.


REVERSE OSMOSIS PLANT

Link to Website - [Water Conservation Initiatives - KISS Deemed to be University]