

WATER CONSERVATION IN KRISTU JAYANTI COLLEGE



Kristu Jayanti College (Autonomous) is an emerging academic institute of excellence situated in the northern part of Bangalore District which was a semi-urban/rural area that lacked educational and industrial development. In order to build a vibrant academic environment and to bring positive socio-economic changes in this geographical area, the College was established at K. Narayanapura, Kothanur region in 1999. The institution strives to fulfil its mission to provide educational opportunities to all aspiring youths to excel in life by developing academic excellence, fostering values, creating civic responsibility and building global competencies in a dynamic environment. Thus, it moulds every individual into integrated personalities who are intellectually competent, spiritually mature, physically strong and socially sensitive.

Kristu Jayanti College (Autonomous) envisions conservation and protection of energy resources for the future generation. Our Mother Earth nurtures and nourishes us in our daily life, hence it is our responsibility to preserve and conserve the same. Water scarcity is a growing concern,

especially in places like Bangalore where the groundwater levels have alarmingly decreased in recent years. In such a scenario, the College is committed to this objective and maintains an eco-friendly green campus to inculcate the idea of sustainable development in the minds of the youth. The institution has worked on the theme of 'Swachhta Hi Sewa' and became a role model for the neighboring communities. The presence of a large number of indigenous trees and more than 80 species of medicinal plants, water conservation by rainwater harvesting, usage of renewable sources of energy like solar energy and water recycling are some of the highlights of the same.

Kristu Jayanti College (Autonomous) has been rated as a "Green Campus" and secured the prestigious 'GOLD RATING' by the International Institute of Waste Management (IIWM) and All India Council for Technical Education (AICTE). The latest achievement of Kristu Jayanti College is Asia's Education Award 2019 conferred by the International Brand Consulting Corporation, USA. All of these strengthen the institutions' objective in becoming a niche to foster the overall development of a student into a socially responsible person.

Rainwater Harvesting-Conserve Energy for the Future

Water scarcity is one of the growing concerns of the present times, the only solution for which is water conservation. It is taken care of in different levels at the College, from rainwater harvesting, tree plantation to recycling water. Realizing that rainwater harvesting is imperative for the future water needs of the campus, Kristu Jayanti College has set up rainwater harvesting units within the College campus, which has the total storage capacity of up to 44 lakh litres. One rainwater-harvesting unit is of 24 lakh litres capacity and the other unit is installed in the new Administrative Building at the ground level with a tank capacity of 20 lakh litres. The conserved rainwater serves as a secondary source of water. The College adapted several rainwater harvesting methods according to the norms laid down by the Government which include rainwater barrels, roof-top harvesting units and surface run-off rainwater harvesting. Harvested rainwater is filtered through several layers of natural filters fixed across the inlet to the storage system and is cleaned on a regular basis. The rainwater set-up units satiate the requirements of water for the entire College. A large open area comprising of the College Ground and gardens allow the seepage of rainwater, thus recharging the water table.



Rain water Harvesting Unit

Roof top harvesting, Rainwater harrels. Surface run off rainwater harvesting are the methods used to collect the rain water

Conserved Rain water is used as a Secondary source of water

The stored water recharges the ground water level

For the 53.5% open area in College, two rain water harvesting set up of capacity 24 and 20 Lakh Liters are installed according to government norms

Harvested water undergoes filtration and purification before being stored in storage tank

The quantity of water conserved is efficiently utilized for usage in college premises

Water quality analysis performed in Life Sciences
Laboratory on a regular basis

Borewell / Open well recharge

The institution has decided to drill borewells only when necessary, and the existing bore wells are constantly replenished by constructing recharge pits. Regular maintenance and upkeep is carried out by the institution.

Construction of tanks and bunds

To rechannel water during heavy rains in the recent years, the institution has constructed additional storage tank/bund. The water stored has helped in meeting the daily requirements of the institution.

Sewage Treatment Plant for Waste Water Recycling

The College has set up two Tertiary Sewage Treatment Plants of 90,000 litres and 20,000 litres capacities, established in the campus and hostels respectively with the aim to recycle all the waste water generated within the campus. The water quality monitoring parameters are frequently analyzed by the Department of Life Sciences to determine the standard of water and counteractive measures are adopted for refurbishment of water.



Steps Towards Water conservation

Water meters with cloud and IoT based systems helps to monitor usage of water on a daily basis in different blocks and to get alerts for any leakage of water. The usage of water can be accessed via mobile phones which facilitates in regulating usage of water. Recycled water is used for gardening and connected to flushes with dual plumbing. Installation of sprinklers and drip irrigation has helped in saving water used for gardening. Installation of aerators in taps and dual flushing systems have contributed in conserving water.

Maintenance of Water Bodies and Distribution System

The institution has a well established procedure for the maintenance of existing water bodies and sustaining available resources.

The College ensures that the awareness of water conservation reaches the public by organising regular programmes in the form of Orientation, Guest Lecture Series by environmentalists, and hosting competitions on the theme of environmental issues, theme dance, mime and skits through various co-curricular and extracurricular clubs of the College.

Awareness Activities to instill Water Conservation among Young Minds

The Jayantian Extension Services comprising of Centre for Social Activities (CSA), National Service Scheme (NSS) and National Cadet Corps (NCC) together with the Environment Club, Life Sciences Club act to build the ethics of water conservation among the students and neighbouring community. Several Social Outreach Programmes (SOP) have been conducted to disseminate knowledge on the importance of water resources:

> Awareness Campaign on Water Resources- Rally/lecture series to create alertness/sustainability to ecological balance.





- > **Swachh Bharat Abhiyan** Cleanliness Drive to prevent water runoffs and clogging of the waste material into nearby water sources.
- > Save Water and Fuel Campaign- Educate individuals about cause and issue and boost public awareness on water sources.
- > Van Mahotsav- Planting saplings to enhance the underground water level



- > Swachh Campus drive- Clean Campus Drive with the support of all Jayantians to create Clean India-Green India.
- > **Gram Swachh** Awareness in nearby villages viz. Manchenahalli, Byalahalli, Thimmasandra, Alambady and Chimangala.
- > Swachh Bengaluru Campaign- Prevention of menace of garbage disposal near water bodies.
- > Swachhta Pakwada- Cleaning the Nagenahalli Lake in the neighbourhood and creating awareness on sanitation to public and nourishment of saplings in the lake area.

> Celebration of World Environment Day- Environment Club in collaboration with CSA of Kristu Jayanti College organised 'Jalshakthi Abhiyaan' (Rainwater harvesting) series of talks, to enlighten the students about the unscrupulous use of ground water and effect of overpopulation.





National Level Green India Essay Competition is being organised every year on various topics relating to environmental issues from a non-conventional point of view and to suggest

valid solutions to the ever increasing environmental issues. The topic for the Essay Competition during 2019 is 'Gen Y's solutions to Water Conservation.' By this, the College wished to stimulate students to think originally and inculcate a sense of responsibility towards a sustainable environment.



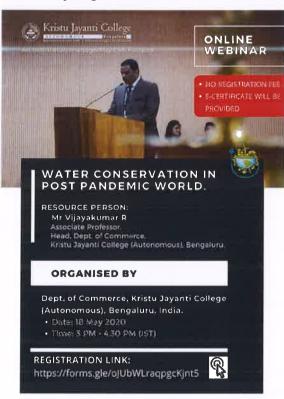


The Prize winners of the 7th National Green India Essay competition after the Felicitation Ceremony with the honorable Principal, Dean and HOD of the Life Sciences Department and the staff coordinators

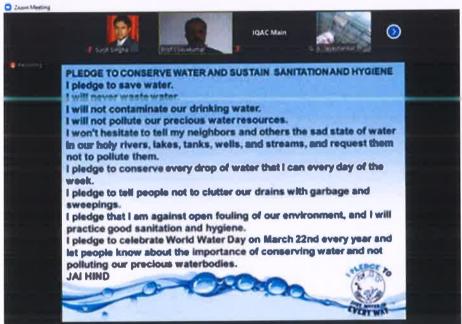
> Gramsamveditha- This rural exposure programme is organized annually to expose students to the problems and practices of the rural community. During this programme, the students educate the village community on environmental and health issues.



National Level Online Webinar on Water Conservation- Webinar had given an insight of the present situation of pandemic and how each one of us should be cautious when using water in our daily life. The session ended with a pledge to conserve water and sustain sanitation and hygiene.

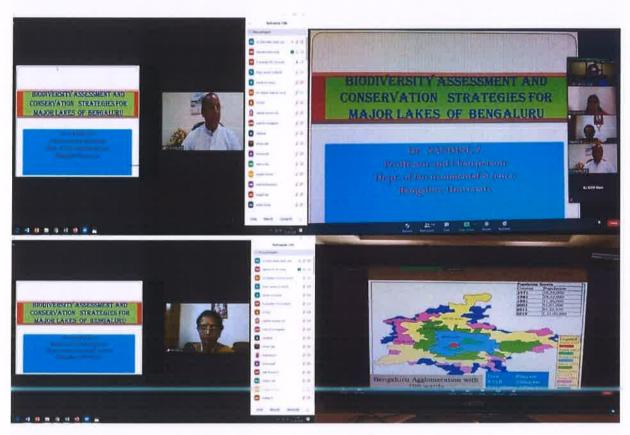






Webinar on "Biodiversity Assessment and Conservation Strategies for Major Lakes of Bengaluru"

The College instills moral responsibilities in the young minds of the students in saving and protecting lakes as it is crucial to preserve natural water resources by conducting webinars to reach to the society. Dr. Nandini, the resource person stressed on the necessity to conserve biodiversity; claiming that if we conserved it naturally, water bodies will be purified followed by quoting "If we protect nature, it will protect you back."



Community Based Participatory Approach- Highlights

> The College has a very vibrant Environment Club which conducts various activities in and around the campus. The Club in collaboration with Centre for Social Activities organized "Jalshakthi Abhiyan'- Water Conservation" which would create awareness in the participants and enable them to voice unique ideas for water conservation. The different Jayantian Extension services like NCC, NSS, and CSA had conducted varied activities with the theme of water conservation by showcasing different best practices that could be implemented. Field visits and various awareness programmes on water conservation have always been a part of the Extension activities. Tree plantation drives were carried out with a futuristic view of raising the underground water levels. The activities as part of the Environment Day Celebrations included 'Van Mahotsav,' an initiative conducted every year with the aim of fostering a green culture and celebrating the essence of nature as it being our life-giving force. The Tree Plantation Drive made students understand the importance of nature; improve their knowledge about their surroundings, and to create self-awareness to develop a green environment that helps in water conservation. The event enables every batch to realize and spread awareness about the role of trees in soil and water conservation. Jayantian Extension Services along with the Environment

Club and other community based projects strive to create a positive impact in the society by organizing different social activities.



- Programme to understand the challenges and opportunities in rural India and the means of rainwater harvesting. The students learnt the value of sharing and caring for others and the importance of social responsibility. The students are the active force, to whom we inculcate knowledge and make them aware of the need of the hour and further to pass on to social community at large. Their engagement in performing skits, one-act plays and other visual performances to spread awareness on the conservation of water and its importance, makes them more sensitive and concerned about these issues.
- > The College employs various innovative technologies which optimize water conservation practices. The College has installed a sewage treatment plant of 90,000 litres and 20,000 litres in campus and hostels with the aim to recycle all the wastewater generated within the campus. The treated water is used wisely. The rainwater harvesting plants in two different parts of the campus serves as a secondary source of water. The College has also adopted several rainwater

harvesting methods which include rainwater barrels, roof-top harvesting units according to the government norms. Thus the campus is kept green using reclaimed water. Students are made to take greater responsibility through the Environment Club and as volunteers in Environmental Comrades, being role models to fellow students in various conservation initiatives.

> The College nurtures an eco-friendly campus which has increased the groundwater levels. The community projects which are taken up by the College include water quality analysis taken from the nearby bore wells in different locations of Bangalore. Kristu Jayanti College considers Water Conservation and a sustainable campus as its priority and is committed to care for the environment and its resources.

Best practices of the College include the strategies adopted for conservation of water in and around the College premises:

- ✓ Minimizing water run-off by attaching faucets, thereby preventing wastage of water.
- ✓ Reducing evaporation losses and recharging groundwater by planting and maintaining trees.
- ✓ Use of recycled water for gardening and flush toilets.
- ✓ Installation of the sprinkler system to water plants and to avoid water loss.
- ✓ Watering of plants is carried out before 7 a.m. and after 5 p.m. to reduce evaporation loss.
- ✓ An active Environment Club with exclusive Staff Co-ordinators, Student Secretaries and volunteers chart various activities and programmes to create awareness on environmental issues among students.
- ✓ Continuous monitoring of water usage and misuse in the College by Student volunteers called 'Environment Comrades.'
- ✓ Display boards for instilling alertness to conserve precious water resources are fixed near all the water sources.
- ✓ Use of composting units and establishment of vermicomposting units in the campus to process dry and wet waste generated in the campus.
- ✓ Value Added Courses on Environmental Issues and Conservation, and Vermicomposting Technology are offered for students to enrich their awareness on environmental issues and solutions.

Thus the College takes utmost care to instill values in the minds of the growing generation and the public, through its valuable initiatives.

JAYANTIAN OATH

Every Jayantian takes the pledge to "CONSERVE, PROTECT AND SAVE WATER RESOURCES" For "TODAY, TOMORROW AND FUTURE"

Jayantian took Pledge to "CONSERVE AND SAVE WATER"

"I will never waste water I will not contaminate our drinking water I will not pollute our precious water resources I will not hesitate to tell our neighbors and community I will not dirt my holy river, lakes, wells and streams I will strive my best to save every drop of water I will pledge that I am against open fouling of our environment I will practice good sanitation and hygiene"

Water Conservation in College Campus Video links

- https://youtu.be/QtQJEHx2Gr4
- II. https://youtu.be/JbHqBlvcLSw

SNOW OR THE STATE OF THE STATE

Kristu Jayanti College Autonomous
K. Narayanapura, Kothanur PO
Bengaluru - 560077

Page **15** of **15**