



ENVIRO-VIGIL

2020 GREEN AUDIT REPORT

**For
Sheth N.K.T.T. College of
Commerce and Sheth J.T.T.
College of Arts, Kharkar Alley,
Thane (W)-400601**

**PREPARED BY &
PRESENTED BY**

*Dr. Sanjay Joshi
Mr. Shubham Nikam
Green Living Consultancy*

This document contains the survey report of activities that we have performed in your college premises under Green Audit. This report includes observations that we have come across, and also recommendation and solutions for it which can be implemented to enhance the overall performance of the college.



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TIMELINE



- 31/08/2019 - First meeting was held with Dr. Jayashree Kulkarni
- 03/02/2020- Open meeting held in NKT college for Teaching, Non-Teaching Staff and students.
- 05/02/2020 & 06/02/2020 - Energy audit & water audit performed.
- 07/02/2020 - Bills and other required information was surveyed
- 09/02/2020 & 10/02/2020- Waste audit performed
- 24/04/2020 -Rough Draft Submitted

The main findings of the audit show that, in general, all the departments and students are aware about the need for environmental protection at a general level. However, on detailed review, it was observed that, as the college is implementing Green Campus Policy for the first time, many of the practices followed in the institution are still in nascent stage and needs further nurture. In addition, certain processes could benefit from further review in order to improve their efficiency, fairness and consistency.

EXECUTIVE SUMMARY



India has experienced revolutionary rapid industrial growth and urbanization over the past few decades. Due to this, we are observing severe depletion of natural resources, damages to the ecosystems and habitats, heavily polluted surface and ground water resources as well as resources such as soil and air etc. This has almost resulted in irreversible changes which might damage the eco-system and will enhance climate change and create diseases which will be difficult to control, if proper effective measures are not taken in time or if continuous vigilance is not maintained. In the developing countries like India, the educational institutions have been playing a significant role in promoting social inclusiveness, economic growth and environmental protection directly or indirectly and thus have been contributing to nation's growth since the time unknown. These institutes are indirectly aiming to achieve sustainable development goals which has become necessary in the current scenario.

Most of the educational institutions are thriving to provide a clean and healthy environment and are becoming more sensitive to the maintenance and sustenance of the environment within their campus by promoting good practices such as energy savings, recycling of waste, water management etc. However, these efforts are to be accounted for to the benefit of all the stakeholders associated with an institute. Such accounting will ensure a continuous vigilance with respect to environmental performance of the institute.

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2016–17 onwards that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures. In view of the NAAC circular regarding Green Auditing, the College Management decided to conduct an external Green Evaluation by a competent Green Auditor along with a Green Audit Assessment Team headed by Dr. Jayashri Kulkarni.

Enviro-Vigil is grateful to Sheth N.K.T College of Commerce and Science, for providing this opportunity to work together towards making day-to-day operations of the institution environmentally sustainable. We thank all the employees who participated in the staff survey and also the students who helped us for gathering the data and also the non-teaching staff and workers who co-operated with us and hope our recommendations will be used to create a model green institution and will benefit the institution for NAAC accreditation.

Dr. Sanjay Joshi,
Director, Green Living Consultancy.
Thane.

DISCLAIMER

Enviro-Vigil's Green Living Consultancy Team has prepared this report of Green Audit for NKT College based on input data submitted by the representatives of the college complemented with the best judgment capacity of the expert team. While all reasonable care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered. It is further informed that the conclusions are arrived at following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report. If you wish to distribute copies of this report external to your organization, then all pages must be included. Green Living Consultancy, its staff and agents shall keep confidential all information relating to your organization and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

INTRODUCTION TO THE GREEN-AUDIT PROGRAM



Green audit is the tool of management system used methodically for protection and conservation of the environment. It is also used for the sustenance of the environment. The audit suggests different standard parameters, methods, and projects for environmental protection. It can be adopted by any industry, organization, educational institutes and even by housing complexes. The green audit is useful to detect and monitor sources of environment pollution and it emphasizes on management of all types of wastes, monitoring of energy consumption, monitoring of quality and quantity of water, monitoring of hazards, safety of stakeholders and even the management of disasters.

The green audit was first implemented in the United States in the early 1970s by some companies in commensuration with Clean Air and Clean Water Act. The United Nations Conference on Environment and Development (UNCED), also known as Earth Summit Rio-1992 held at Rio de Janeiro, Brazil inspired the countries to review their environmental stand to act effectively to save the earth with sustainable approach. Most of the participating countries accepted their national strategy for sustainable development which includes the policy and programs aimed to promote geo-biodiversity and protect environment.

INDIA is the first country in the world to make environmental audits compulsory. The government of India, by its gazette notification dated March 13, 1992, made it mandatory for all industries to provide annual environmental audit reports of their operations, beginning with 1992-93. This required industries to provide details of water, raw materials and energy resources used, and the products and wastes generated by them.

In 2006, Government of India declared the National Environment Policy 2006 and made green audit mandatory to each industry. According to the policy it is a response to India's national commitment to a clean environment, mandated in the Constitution in Articles 48

A and 51 A (g), strengthened by judicial interpretation of Article 21 (National Environmental Policy 2006). It is recognized that the maintenance of the healthy environment is not the responsibility of the state alone. It is the responsibility of every citizen and thus a spirit of partnership is to be realized through the environment management of the country. The process of environmental audit was formalized by Supreme Audit Institution (SAI) according to the guidelines given in Manual of Standard Orders (MSO) issued by Authority of the Controller and Auditor General of India 2002. The Supreme Audit Institution of India is the highest national Institution of auditing in the country.

ABOUT NKT COLLEGE



The Sheth T.J.Education Society was founded in 1949. Since then, it has made significant contribution in the field of education. There are more than five thousand students who are being educated in the institutions run by the Society. A student admitted in the Montessori Class goes out with a degree either in Arts or Commerce or Post Graduate Degree in Commerce.

The college with the Commerce faculty was founded in August, 1990 to cater the educational needs of students passing the H.S.C. Examination from the Sheth N.K.T.T. Junior College, Thane. The Arts faculty was added to the Degree College from the Academic year 1993-94, as there was a great demand for Arts Section.Later on introduced BMS,BSc.IT,BBI courses for catering the changing need of higher education.Recently it also introduced BAFcourse.

Sheth N.K.T.T. College of Commerce and Sheth J.T.T College of Arts, permanently affiliated to the University of Mumbai is a multifaculty institution of higher education that has more than 2000 students on its rolls, pursuing studies in several undergraduate courses. In addition, the college imparts instruction to students pursuing studies through Yashwantrao Chavan Maharashtra Open University, Nasik. The college also conducts contact sessions for student pursuing education through the Institute of Distance Education, University of Mumbai.

The college has been reaccredited with a B+ Grade by National Assessment and Accreditation Council (NAAC) - An Autonomous Institution of the University Grants Commission. As well is ISO certified institution. The college encourages the all-round development of the students by providing them opportunities for participating in various co-curricular and extra-curricular activities.

ABOUT ENVIRO-VIGIL



Enviro-Vigil is an environmental organization working in Thane city for the past 17 years. We are working for a social cause with an objective to generate awareness among the masses regarding various issues related to the environment.

- **Our mission:** To build a strong and self sustained organization working for the cause of Environment.
- **Our Vision:** To empower the youth to accept challenges of changing world in tune with the sustainable development.

Organization's Program's

The environmental program's /projects initiated by Enviro-Vigil are as follows.

Municipal Solid Waste Management

- The most important aspect of MSW management is the community participation
- Common people are the generators of the waste and need to be made aware of health hazards of mismanaged MSW.
- Enviro-Vigil is trying hard in this area of awareness creation.
- For this, mass rallies and door-to -door campaigns are organized with the help of school and college students.
- Results have been quite encouraging.
- People are slowly waking up and trying to manage their own waste to certain extent.
- Enviro-Vigil is providing technical expertise free of cost to the residential complexes to take care of their waste.

Common Bio-medical Waste Treatment and Disposal Facility (ISO 9001-2000 certified)

- Bio-Medical waste management has been our major activity for the past 18 years.
- This kind of waste is being mistreated and mismanaged causing serious health hazards not only to the healthcare personnel, but also to the community.
- In managing Bio-medical waste, participation of healthcare community is crucial.
- Ministry of Environment and Forest (MoEF), Govt. of India along with Central Pollution Control Board (CPCB) have formulated Bio-Medical Waste (Handling and management) Rules, 1998.
- In accordance to these rules, Enviro-Vigil has set up a 'Common Bio-Medical Waste Treatment and Disposal Facility' (ISO 9001-2000 Certified) for treatment and safe disposal of BMW.

ABOUT ENVIRO-VIGIL



The Salient features of this facility:

- The whole system has been authorized by Maharashtra Pollution Control Board(MPCB) for Collection, Transportation, Treatment and Disposal of BMW
- The required land and infrastructure has been provided by Thane Municipal corporation on rental basis
- Routine medical check up and required vaccination is carried out for the our employees who handle and manage the BMW.
- We have also obtained Medi Claim Insurance for these employees.
- To create the sense of awareness amongst the people we encourage local school & college students and general public to visit our facility.
- This facility has received “Good Green Governance” (G-Cube or G3) award from ‘SRISHTI’ Publications, New Delhi for two consecutive years, i.e., 2006 and 2007.

Greeens

- Green Shoppe
- Green Living Consultancy
- Green Careers

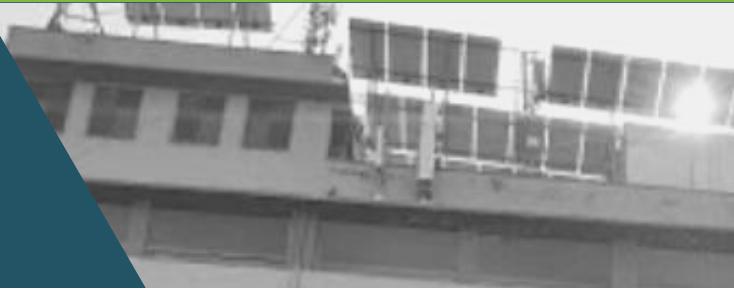
Green Living Consultancy provides consultancy and services to the cooperative housing societies, individual residences, educational institutes, hotels and restaurants, corporate offices etc. in the following sectors.

- 1)Energy Management.
- 2)Waste Management.
- 3) Water Management.
- 4) Biodiversity Management.
- 5) Management of Health and Environment.
- 6) Green Audit.

Ankur, The Theme Park.. Going Green!!

This theme park houses many important environmental projects which are user friendly.These projects include Biocomposting/ Vermicomposting for taking care of the biodegradable waste; biogas production unit; RWH unit; biomedical waste treatment plant etc. We encourage people and students to visit this park, learn about all these activities so that these can be started in their own establishments.

ABOUT ENVIRO-VIGIL



Recognitions Received from the Society

- Recipient of “Best Water NGO, 2006-2007” Award instituted by the Water Digest, New Delhi, in collaboration with UNESCO and CNBC TV 18
- The award is presented to various commercial organizations and the NGOs who have contributed in the area of water purification, waste water treatment and recycling, rainwater harvesting, water education and awareness creation etc.
- Recipient of Good Green Governance (G-Cube or G3) Award, for two consecutive years i.e., 2006 and 2007.
- This award is instituted by the Srishti Publications, New Delhi.
- Enviro-vigil was selected for this award for its work in the area of Bio-Medical Waste Management
- All of the above mentioned programs or projects are unique mainly because these address the local problems and help in solving these problems with the help of community.
- The geographical area of these activities is restricted to Thane city area and part of Thane district. The beneficiaries include school children, teachers, general people, healthcare workers etc.

Team Enviro- Vigil (Paryavaran Dakshata Mandal)

- Prof. Vidyadhar Walavalkar
- Dr. Vikas Hajirnis
- Dr. Sanjay Joshi
- Mrs. Sangita Joshi
- Mr. Prasad Date
- Dr. Prasad Karnik

METHODOLOGY

PDCA, sometimes called PDSA, the "Deming Wheel," or "Deming Cycle," was developed by renowned management consultant Dr William Edwards Deming in the 1950s. He called it as the "Shewhart Cycle," as his model was based on an idea from his mentor, Walter Shewhart. He wanted to create a way of identifying what caused products to fail to meet customers' expectations. His solution helps businesses to develop hypotheses about what needs to change, and then test these in a continuous feedback loop.

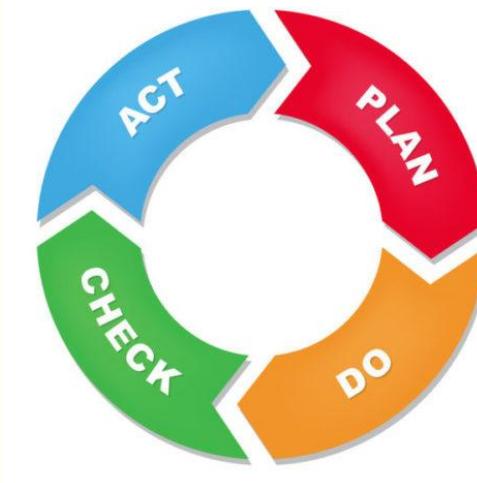


FIGURE 1: PDCA CYCLE

The four phases are:

- **Plan:** identify and analyse the problem or opportunity, develop hypotheses about what the issues may be, and decide which one to test.
- **Do:** test the potential solution, ideally on a small scale, and measure the results.
- **Check/Study:** study the result, measure effectiveness, and decide whether the hypothesis is supported or not.
- **Act:** if the solution was successful, implement it.

The PDCA / PDSA framework can improve any process or product by breaking it into smaller steps. It is particularly effective for:

- Helping to implement Total Quality Management or Six Sigma initiatives, and generally helping to improve processes.
- Exploring a range of solutions to problems, and piloting them in a controlled way before selecting one for implementation.
- Avoiding wastage of resources by rolling out an ineffective solution on a wide scale.
- You can use the model in all sorts of business environments, from new product development, project and change management, to product lifecycle and supply chain management.

METHODOLOGY

Benefits of PDCA cycle

- The model is a simple, yet powerful way to resolve new and recurring issues in any industry, department or process. Its iterative approach allows you and your team to test solutions and assess results in a waste-reducing cycle.
- It instils a commitment to continuous improvement, however small, and can improve efficiency and productivity in a controlled way, without the risks of making large scale, untested changes to your processes.
- While performing the green audit, we followed the PDCA cycle. The advantage of these cycle in achieving the goals of continuous improvement of the quality management system.

This report includes 4 stages as per:-

- Section 1 : Plan Phase (Includes Audit Plan)
- Section 2 : Do and Check Phase (Includes observation)
- Section 3: Act Phase (Includes Recommendations)

Section 1: Plan Phase

This phase includes proper planning on how and when the audit will be performed. Prior meetings were held with Principal and other teaching and non-teaching staff and also with students to inform them about these activities. Following are the details of these Pre-Audit Meetings that were held on 3rd February, 2020 in the college auditorium in two separate sessions for teaching- non teaching staff and the students respectively.

Session I

This session was conducted by Dr. Sanjay Joshi, Director, Green Living Consultancy, for the students to brief them about the importance of improving the environmental performance of their college through the green audit activity. They were given a brief idea about what Green Audit is and how they can contribute in this process and how it will benefit them and the college. We got a good response as the students were enthusiast to learn about the audit and wanted to work for the betterment of college environment. We received the list of students that wanted to help us in this audit. Students were divided into two task forces and were assigned the data collection tasks.

Session II

On the same day another session was held for the teaching and non-teaching staff in which they were also informed about the same by Dr. Sanjay Joshi.

METHODOLOGY

Section 2: Do and Check Phase

On 5th February, 2020 and 6th February, 2020 energy and water audit was performed simultaneously. The students of management studies and DLLE helped us in this process. Before collecting the data the students were given some instruction on how to collect the data for both the audit. The students performed the task in an excellent and impressive way. The observations that we recorded are all noted in Section 2 phase.

On 9th February, 2020 and 10th February, 2020 waste audit was performed with the help of the house keeping staff of the college. Before performing the audit the staff was given some instructions on why they are doing this and how they will segregate the waste. They were also provided with gloves and mask to ensure proper safety and to avoid injuries or ill effects. The observations that we recorded are all noted in Section 2 phase.

This phase includes the observations and depending on that we gave marks to it. The marks given are out of 5. On basis of this report we can properly understand in which section we shall focus and which are lacking behind to make improvements in it.



WASTE AUDIT



Random facts



THE GREAT PACIFIC GARBAGE PATCH, ALSO KNOWN AS THE PACIFIC TRASH VORTEX, SPANS WATERS FROM THE WEST COAST OF NORTH AMERICA TO JAPAN.

- MAHARASHTRA WAS RANKED THIRD AMONG THE BEST-PERFORMING STATE IN SWACHH SURVEY 2019.
- THANE'S RANKING TOO DROPPED TO 57 FROM 40 LAST YEAR (2019)
- THANE GENERATES AROUND 700 TONNES OF GARBAGE DAILY OF WHICH 425 TONNES IS WET WASTE.
- THE BEST PLACE TO START MAKING A DIFFERENCE IS RIGHT IN YOUR OWN HOME.
- FOLLOW THE 3R'S OF WASTE MANAGEMENT: REDUCE, REUSE, RECYCLE

SR. NO	CHECKLIST QUESTIONS	OBSERVATIONS	SCORE
1	Are there enough number of dustbins provided at various locations? If yes, specify the locations.	Yes. Each classrooms, laboratories, had a dustbin and each floor had large common bins in which the entire waste of floor was collected.	5
2	Whether the waste is being segregated into different categories or not?	No.	0
3	What type of waste was observed throughout the process?	Please refer to pie chart below. Fig.3	2
4	Are there visible signs to encourage recycling, save paper?	No. No signages was observed however after survey, we have seen that the concerned staff, office and staff room have been using the blank sides of already used or printed paper, thus reusing the waste papers.	3
5	The methods of disposal of dry waste?	Only paper and cardboards given to local vendors.	5
6	Used toner or ink cartridge refilled or returned to manufacturers?	Used toner or ink cartridge are refilled.	5
7	How do you dispose unwanted electronic equipment, cables, hardware's?	Depending upon the condition they are given to local vendors or in scrap	5
8	How are hot and cold beverages served for the guest?	Hot beverages are served in paper cups by chai-wala's that's why most of the dustbin had paper cup waste.	2
9	Are there any measures to recycle or dispose wet waste/bio-degradable waste?	No. There are no specific provision for treatment and disposal of wet waste or biodegradable waste. As of now this waste is directly disposed in Common Municipal bin.	1
		Total	28

WASTE AUDIT

FIGURE 2: FLOWCHART OF WASTE

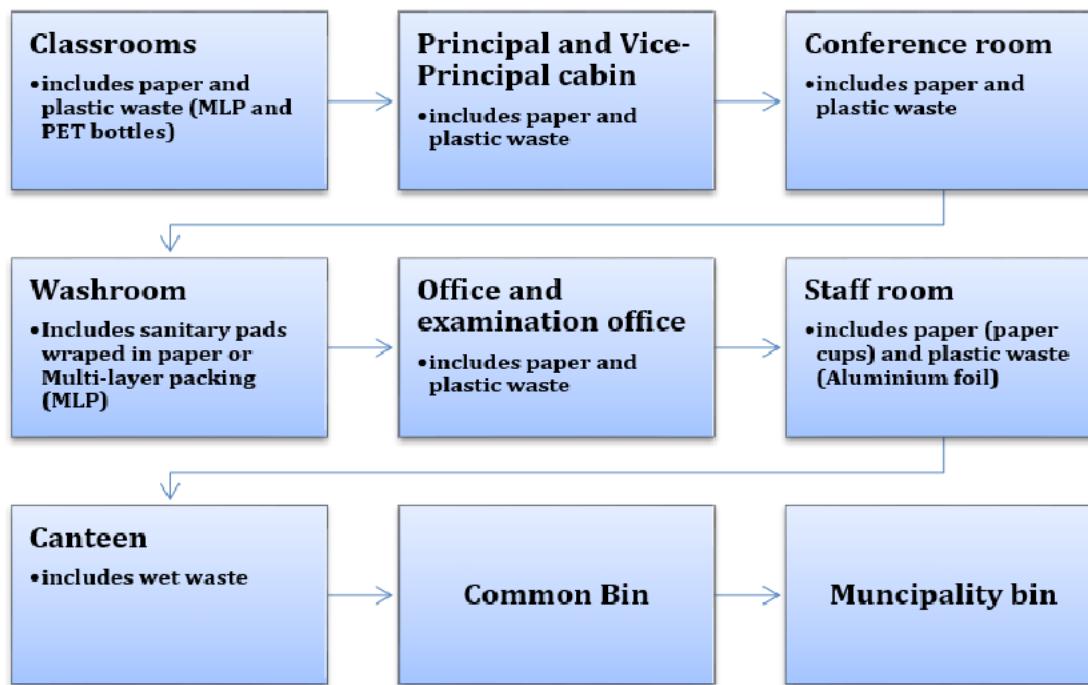
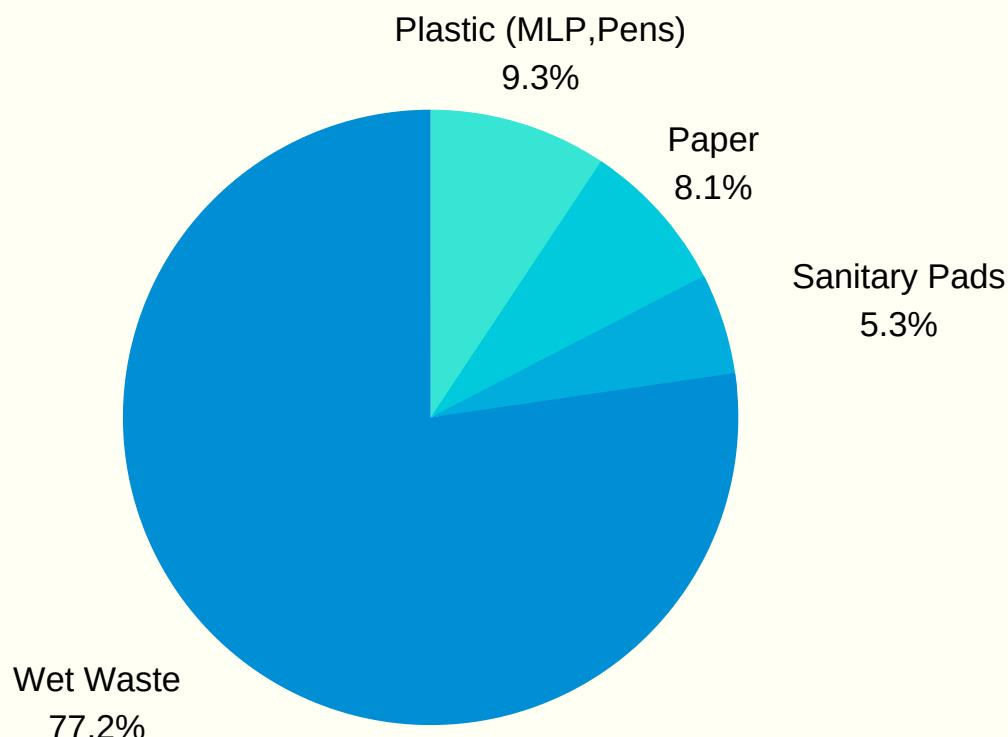


FIGURE 3: DIFFERENT TYPES OF WASTE AND THEIR PROPORTION





ENERGY AUDIT

Random facts



Adani Power Maharashtra Limited is the largest coal based Thermal Power Plant in the state of Maharashtra, India. With its total capacity of 3300 MW, Tiroda comprises of 5x660 MW units. All units at this location are of Supercritical Technology, driving efficiency in coal based power generation.

- The generation of electricity is one of the biggest sources of water consumption in the world.
- total generation of electricity from all power stations of maharashtra is 14400 MW,
- Maharashtra is the second largest power producing company in India.
- Mahagenco has the highest overall generation capacity and the highest thermal installed capacity amongst all the state power generation utilities in India.
- More than 65% of India's electricity generation capacity comes from thermal power plants, with 85% of the country's thermal power generation being coal-based. The ten biggest thermal power stations operating in India are all coal-fired, with five of them owned and operated by state-run National Thermal Power Corporation (NTPC).
- The Maharashtra State Electricity Distribution Company Limited met the record power demand of 21,570 MW in February,2020.

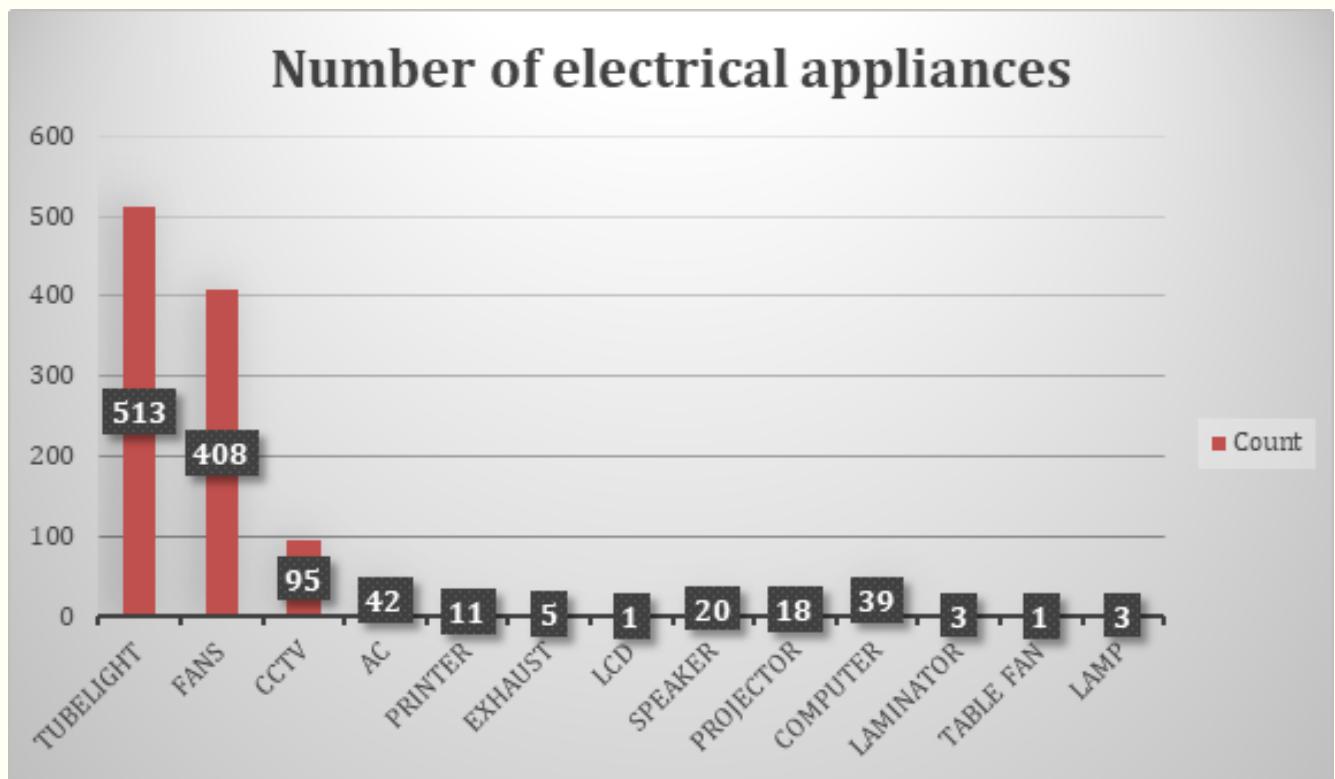
SR. NO	CHECKLIST QUESTIONS	OBSERVATIONS	SCORE
1	Type of Lightning's used for classrooms, premises, offices, laboratories?	See Figure no- 5	5
2	Were lights left off in unoccupied rooms?	Yes	5
3	Are there any sensors used for controlling on/off switching of lights?	No. There are no such sensors. But the students and teaching/non-teaching staff are used to switch off lights whenever illumination is not required	2
4	Is natural daylight being used optimally in spaces where it is seen to be sufficient?	Yes	5
5	Are there any solar panels fitted?	Yes. There are 240 solar panels fitted on the rooftop of building.	5
6	How the energy produced from solar is utilized?	The energy produced from solar panels is directly supplied to MSEB and then MSEB provide the college ad per their demand. Please refer to the figure 4	5
7	How much electricity is generated from solar panel? (Average)	Please refer to figure 6.	5
8	Is there any excess need for electricity? If yes, explain it	Yes depending upon the season (i.e. in summer season there is no disturbance in sunlight so the energy generated is more in proportion than any other season) and demand (If the college has some function or is closed during any vacation or due to any other reason) there is need for excess current depending upon the situation.	3
9	Has there been a reduction in the bill amount after installing solar panels?	Yes. there is a significant decrease in the amount of bills. Please refer to Page 21,22 &23	3
		Total	38

ENERGY AUDIT

FIGURE 4: Flow chart for supply of electricity

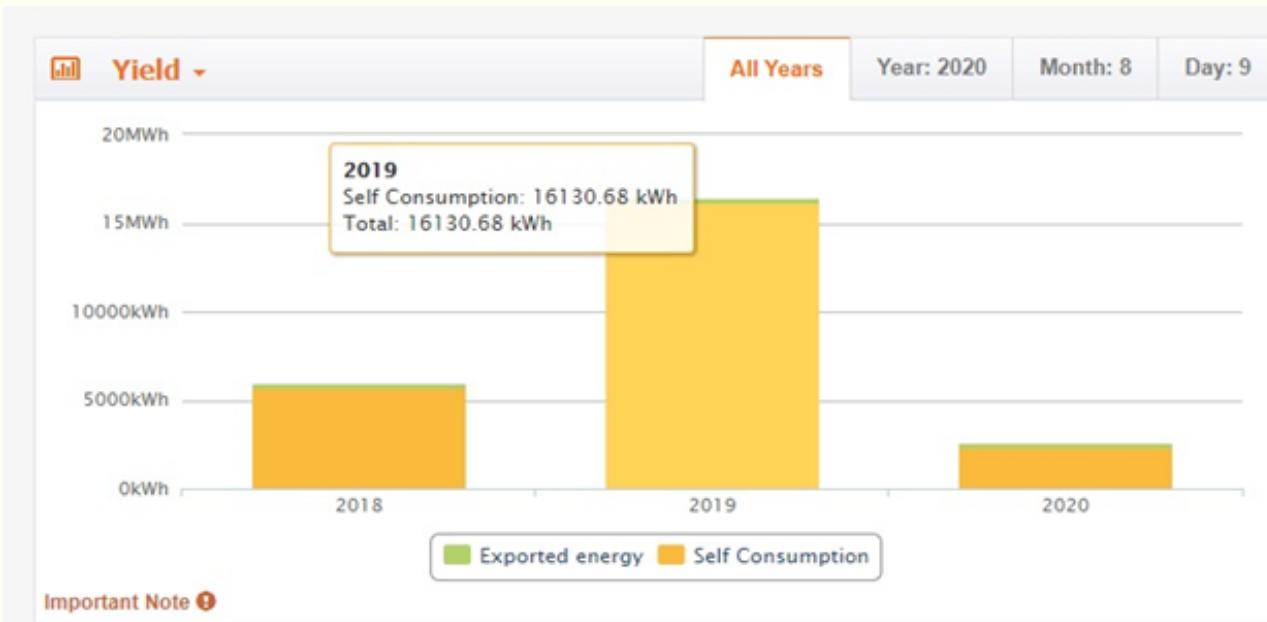


FIGURE 5: Bar Diagram of Electrical equipment's



ENERGY AUDIT

FIGURE 6: Bar graph of energy consumed by NKT college after installation



The image shows the graph of electricity that is generated in particular years :-

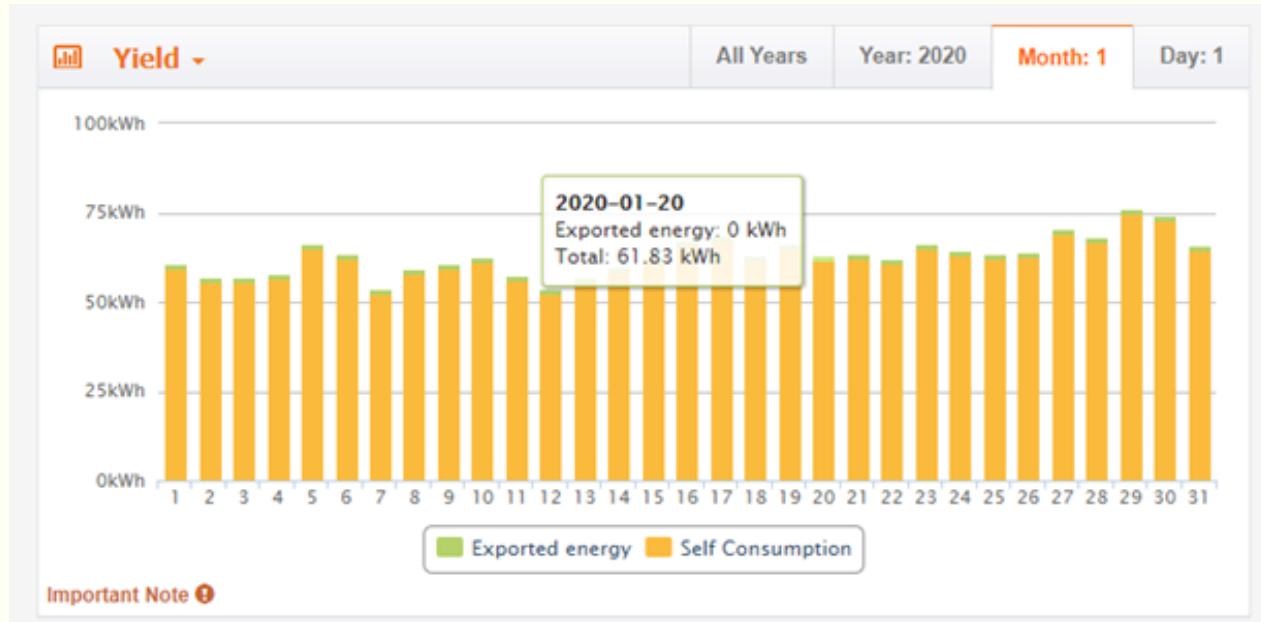
2018: 5691.74kWh

2019:- 16130.68kWh

2020- 2382.51 kWh

Below image shows the monthly consumption and exported energy of month January,2020.

FIGURE 7: Bar graph of energy consumed by NKT college in month January,2020



Comparison

NUMBERS & STATISTICS

In the month of april,2018 there were 4 meters working which showed a total reading of 14,953 kWh used in that particular month and the total amount that college payed to MSEB was Rs. 1,93,203.

**14,953
KWH**
April, 2018

RS.1,93,203
Total amount

MSEB bills showing readings of units consumed and amount of the bill in the month of April,2018.

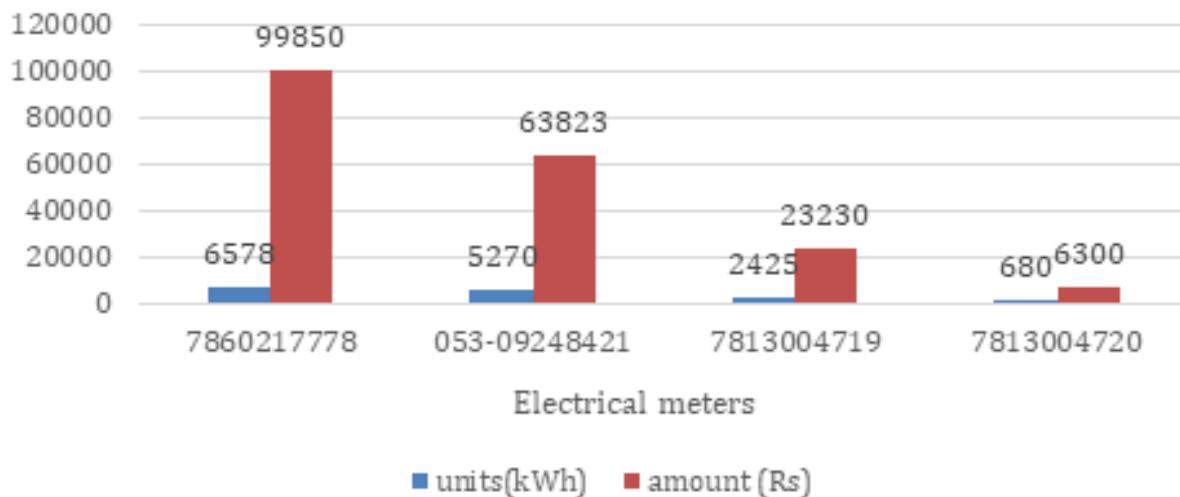


Figure 8 - Bar graph of MSEB electricity bills



Did you know?

A single mobile charger will consume 1 watt while plugged into the wall, even without a phone plugged into it!

The same mobile charger will also consume 4.5 watts of electricity with a cellphone plugged into it that is already fully charged!

The same mobile will consume 8 watts of power while charging a cellphone.

Devices that are plugged in consume energy even when the power is switched off min. 1 watt of electricity is consumed , which may not seem more but if you have 15+ appliances then it is 15 watts of energy that is consumed !

And this power consumption is different for every device. Therefore, unplug your devices when not in use.



Comparison

NUMBERS & STATISTICS

After installation of solar panel, in the month of April, 2019, the electricity generated from solar panel is 1604.78 kWh and the excess energy units used by the college was 2416 kWh which total accounts for only 4020.78 kWh and the college got a bill of Rs. 47,787.

**10,937.22
KWH**

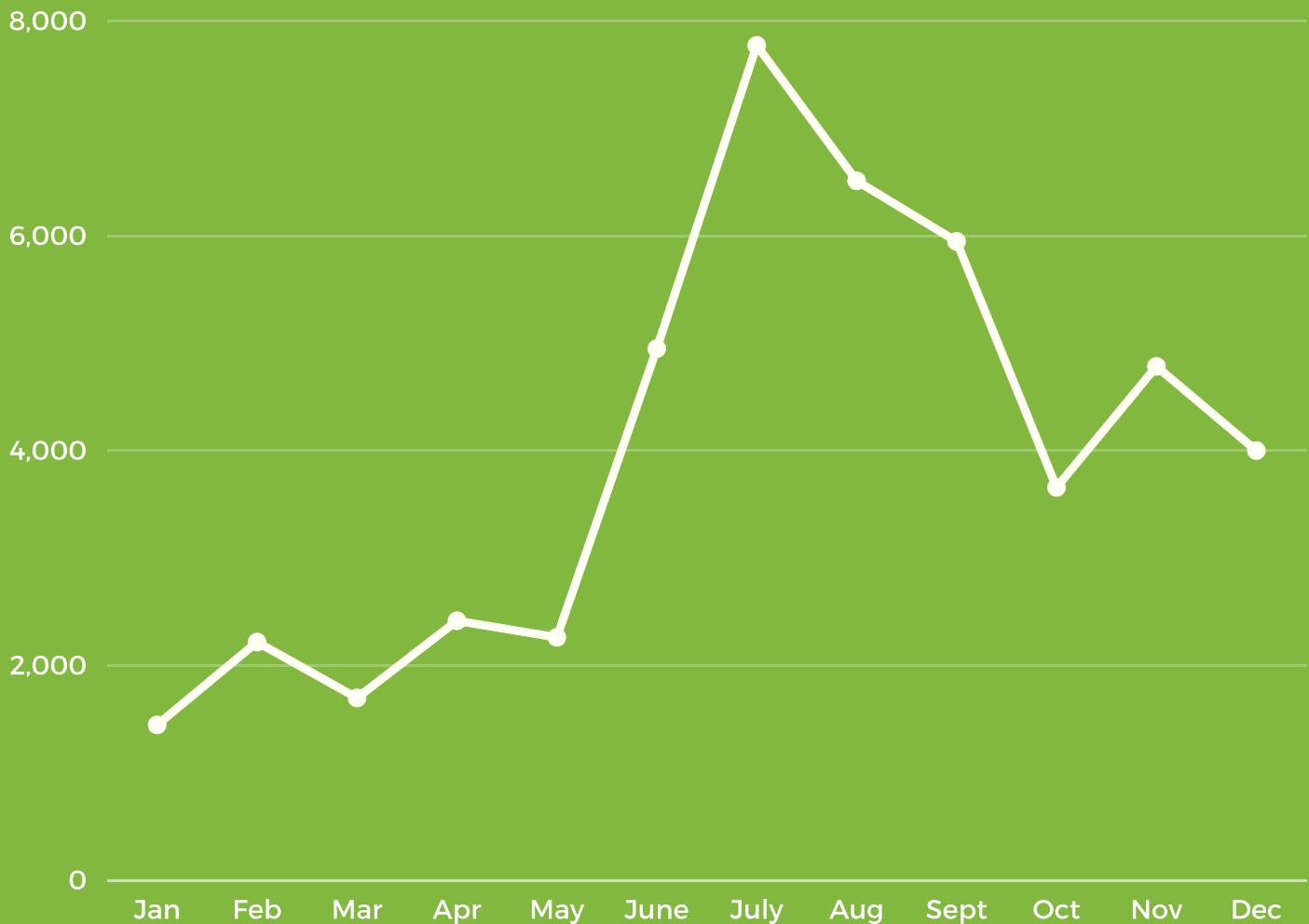
Energy consumption reduced

RS.1,45,416

*Total amount saved in
electricity bill of April 2019*

Figure 9- Line graph of energy units consumed and amount of month April, 2018 and April,2019



Figure 10- line graph of MSEB Electricity bills, 2019

STATISTICS

- The above graph shows the excess units of electricity that college requires on a monthly average is 3,971.75 kWh in year 2019.
- The amount of electricity consumption is equal to the exported energy.
- Installing solar panel was one of the best idea as the previous years bills showed a clear decrease in amount and the consumption and also the amount is reduced.
- On an average 60 kWh – 70kWh energy is produced daily.
- On monthly basis around 2000kwh energy is generated.
- Total Yeild till now is around 24.2 MWh.



Random facts

Wular Lake (also spelt Wullar) is one of the largest fresh water lakes in Asia. It is sited in Bandipora district in Jammu and Kashmir, India.



- Of all of the water on Earth, 97% is saltwater, leaving a mere 3% as freshwater, approximately 1% of which is readily available for our use.
- The ministry of water resources has estimated that with 2.5% of global landmass, India has 4% of the world's freshwater resources.
- In northern India, groundwater extraction for irrigation of crops such as wheat and rice have caused a rapid decline in available water, despite rainfall being normal throughout the period.

SR. NO	CHECKLIST QUESTIONS	OBSERVATIONS	SCORE
1	Sources of water to meet the daily need?	They have a bore well in their campus from which they get hard water. The drinking water is taken from Municipality.	3
2	How is the water distributed?	Please refer the flowchart below to understand the water flow	2
3	How many tanks are there to store the water? And what is there capacity?	They have 3 tanks to store water. One is at the Ground and the other 2 are at the top. Total Capacity is 20,000 liters.	3
4	How many taps are there in total in survey area?	There are total 103 taps out of which 1 is not working.	3
5	Were there any leakages seen?	Yes. Out of 103 only 2 taps had leakages.	4
6	Were there any water saving devices on sink, toilet taps?	No	1
7	Are there any sensors fitted on tanks to prevent overflow?	Yes There are sensors fitted on tanks	5
8	Are there any provisions for Rainwater harvesting?	No	0
9	What provision is there for drinking water for teaching, non-teaching staff, students and visitors?	Teaching, Non-teaching staff and students carry their water bottles and if there is excess need then there are water purifier system installed at the each floor for drinking water and which can also be used by visitors.	4
		Total	25

WATER AUDIT

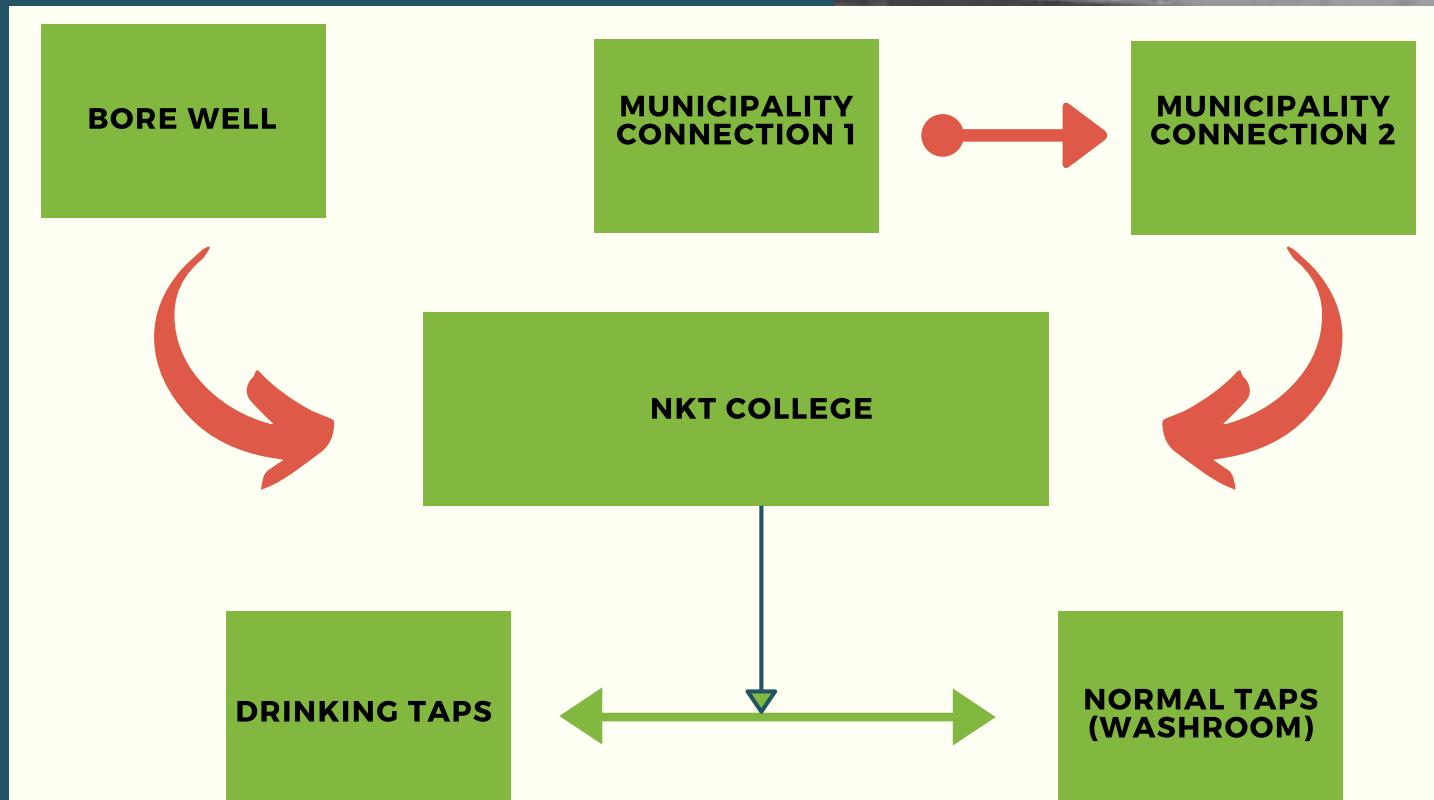
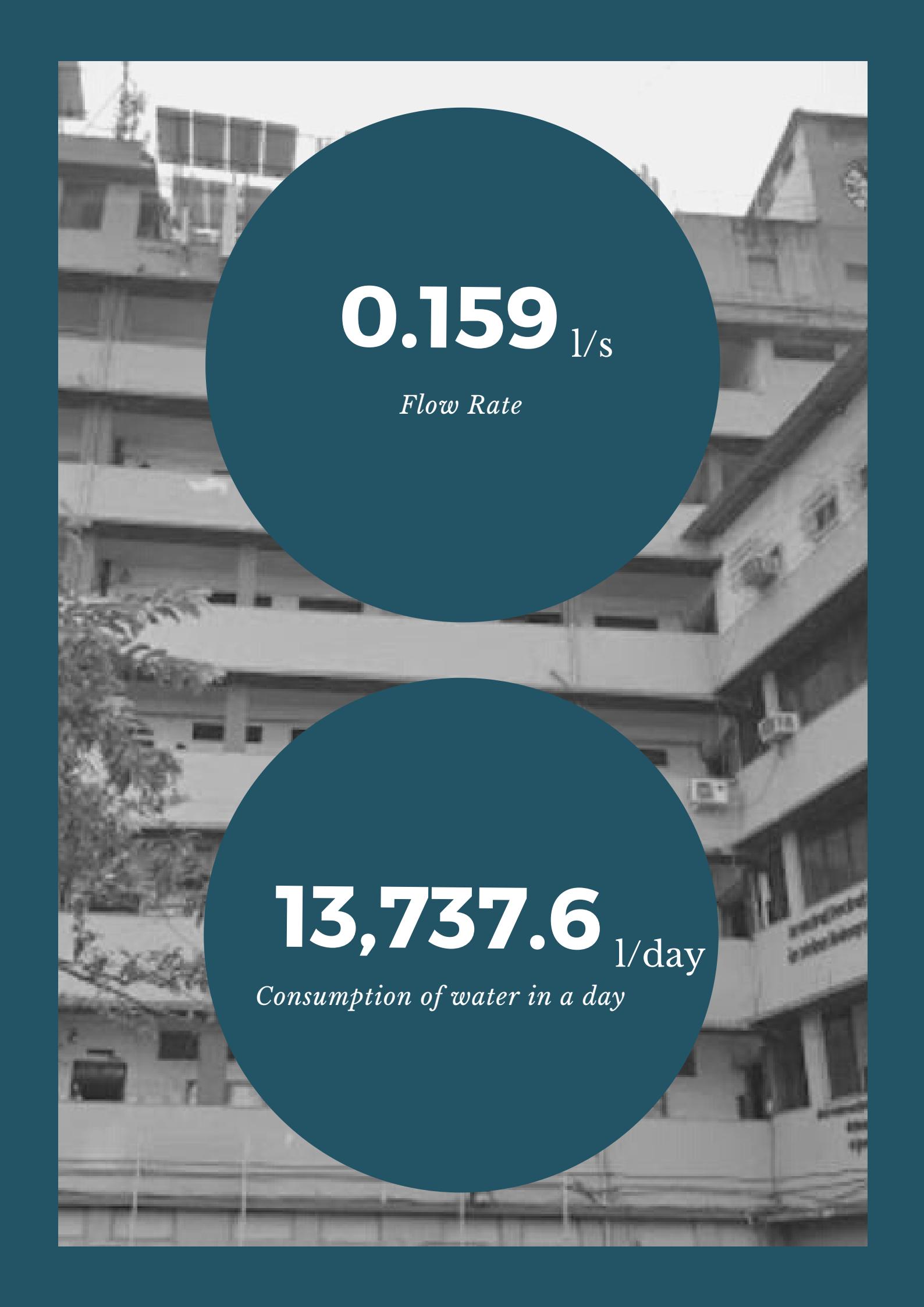


Figure 11 - Flow chart of water supply

STATISTICS

- There are total 3 tanks. Two at top and one at bottom.
- The drinking water is taken from Municipality.
- Around 20,000 liters of water is stored in these tanks.
- There are total 103 taps in Survey area.



0.159

Flow Rate

13,737.6

l/day

Consumption of water in a day

FINDINGS AND RECOMMENDATION



Section 3: Act Phase

Waste management:

The college campus was generally found to be clean during the audit period. Due to dustbins placed at various sources of waste generation, there was no waste seen inside the building or the premises. Most of the dry waste like paper, cardboard and the electronic waste is stored and handed over to a vendor/scrap dealer which is a good practice. However, the biological waste, that is food waste or kitchen waste from the canteen as well as from the caterer who manages the utility hall, is being disposed off in the community bins outside the college campus. It eventually gets mixed with other waste from the community and it ultimately results in foul smell and pollutes the environment.

Recommendation:

- Waste must be properly segregated to make sure that the dry and wet waste are not mixed.
- Since wet waste can be subjected to composting (Either Vermicompost or Biocompost), we strongly recommend that the college authorities should make provision for setting up vermi-or biocomposting units within the premises.
- This will not only result in the production of good quality compost but also will reduce the hazards of pollution from the community. This can also become a role model for the entire community around the college campus.
- Through Green Living Consultancy, we can help set up vermi-or biocomposting units.

Energy Management:

Energy sector is one of the crucial sectors when it comes to exploitation of natural resources. We are dependent upon electricity as a major source of light energy for our routine work or activities. Around 72% electricity is generated using coal as a fuel. Coal is a non-renewable resource and its use is hazardous for the environment. So it is essential that we reduce our dependency on coal and look for renewable energy resources like solar, wind, geothermal, tidal waves and so on. The NKT College management has taken a big leap a couple of years ago by installing around 240 solar panels on the building terraces. This initiative has not only reduced the expenditure on the electricity consumption, but also has set an example of how an institution can use cleanest form of energy thus helping for the betterment of the environment.

FINDINGS AND RECOMMENDATION



Water Management:

The college campus has a municipal water supply and two bore wells. The municipal water is generally used for drinking while the bore well water being 'hard water' is utilized for all other purposes. Data collected from all the sources where faucets are fitted indicate that water is being used judiciously by the occupants of the college premises. Hardly any tap was found to be leaking. So the water wastage is minimal although there are no specific measures adopted by college authorities for water conservation. Overall water consumption pattern is found to be satisfactory.

Biodiversity Management:

The college campus does not have any open space without a cement concrete cover. All the open spaces are covered with cement. Above all, there seems to be a space crunch. So there is no scope for any plantation inside the campus.

Recommendation:

We strongly recommend that the college should make some provision for greening the campus using different species of plants. This will not only beautify the campus, but will create greater amount of biodiversity in near future.



THANK YOU