


IRCLASS Systems and Solutions Pvt. Ltd.	 <small>SYSTEMS AND SOLUTIONS PRIVATE LIMITED</small>	
Green, Environmental and Energy Audit Report	IV IRQS:FORM:GEE:03:00	Page 1 of 41
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	Developed by NR	Approved by HEAD-IRQS

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Section – 1 General Introduction about Green, Environmental and Energy Audit

1.1. Green Audit

The Green audit process began with an intention of identifying the activities carried out in a given institution or company. This was initiated against the background of growing concern over changing climate and related aspects. Green audit is a tool to identify the range of environmental impacts and assess the compliance of the operations on the development and regular activities within an organization. It may also assess the compatibility of the operations within an organization or a company with existing applicable laws and regulations and the expectations of their various stakeholders. It further assesses the possible implications and effect of pollution due to the operations within the organization. The audit also seeks to identify possible means and methods to save investments, enhance work quality, improve health and safety of their employees, reduce liabilities and reduce the rate of environmental pollution. A continuous process of such audit might result in maintaining the quality of these aspects within the premises of any organization.

Most companies, government and non-government bodies and other institutions conduct green audit aiming:

- to ensure that the performance of the institution with respect to environmental activities they are involved in, is in compliance with existing laws and regulations.
- To check the functionality and their operating success including water supply, energy related matters and other similar matters that are related to green operations in the campus
- To formulate or update the institution's environmental policy, if warranted.
- To measure the environmental impact of operational process related to green activities in the campus.
- To measure the performance of each green related operations and actions in the campus.
- To generate a database of green activities for continuous monitoring to assess the success of each of them.
- to identify future potential liabilities.
- to align the institution's developmental and day to day activities with the stated vision, mission, strategies, etc.
- to identify possible ways to reduce expenditure and running costs on equipment's, appliances, etc. or try enhance revenue income.
- to improve process and materials efficiency, and in response to stakeholder requests for increased disclosure.

The process of green audit based on operational activities within an institution happens not necessarily based on laws and regulations. It might be largely based on awareness and concerns on environmental performances within and outside the institute's premises. This further strengthens the fact regarding social responsibilities of the organization. Majority of the institutions that conducted green audits in the recent past has realized the importance of the same as they could easily manage their operational costs and provide good atmosphere to their stakeholders. The green audit also provides opportunities to identify full range of operations within an organization, the impacts of maintaining and functioning of its operational goods and services, the actual source of raw materials for different activities within the organization, the costs of operations of its offices, functional units, and other facilities. It also provides chances to understand the relationship with employees, material suppliers, stakeholders, etc. The recommendations, findings and suggestions that emerge during green audit would certainly help the management of the organization to set up future action plan that best suits to them.

1.2. General steps involved in Green, Environmental and Energy Audit

1. Systematic and exhaustive data collection.
2. Evidence based documentation of activities.
3. Regular monitoring.
4. Provide standards and methods for improvement by establishing cost effective green action plan.

Section – 2:

Name of the Organization:	Datta Meghe Institute of Higher Education and Research (DMIHER)	Name of the Auditor:	Indian Register Quality system, Mumbai Rep By Capt R E Balasubramanian Mrs. Radhika Buwa Mr Mahendra Patil
Location:	Sawangi (Meghe), Wardha-442107, Maharashtra, India.	Contact No. of Auditor:	022 - 71199808
Name of the Organization Representative	Dr Lalitbhushan Waghmare, Vice Chancellor Rep By Dr Chetan Chodhary	Date of Audit:	22-11-2022 to 25-11-2022
Contact No. of Representative:	9765404007	Audit Criteria:	Based on National Building Code – 2016, Chapter 11, ISO Standards of 14001:2015, ISO 50001:2018.

2.1. Brief History**Datta Meghe Institute of Higher Education and Research**

DMIHER was granted the status of a Deemed to be University, by the University Grants Commission on 24th May 2005. It has also been included in the list of Deemed to be University under Section 3 of UGC Act 1956.

DMIHER is Declared as Deemed to be University under Section 3 of UGC Act, 1956

Conferred 'A' grade Status by HRD Ministry, Govt. of India

Re-accredited by NAAC (3rd Cycle) with 'A+' Grade (Score 3.53 on 7 Point Scale) in 2017

(NAAC is awarding Max less than 4 as per NAAC Criteria – DMIHER has now set a goal to achieve 3.65 during the current year)

2.2. Geography

Located in Sawangi-Meghe (Wardha) about 80km away from Nagpur (Maharashtra), Datta Meghe Institute of Higher Education & Research (DMIHER) [Deemed to be University]] is pursuing academic programs in Medicine, Dentistry, Nursing, Physiotherapy, Ayurveda, Pharmacy, Allied Sciences, Allied Health Sciences, Epidemiology through graduate, postgraduate & research fellowships & PhD programs.

Integrated Post-graduate and PG Diploma courses are also available in other disciplines of higher learning viz. Management and humanities.

Besides on-campus learning, DMIHER has also transitioned to imparting External Education through Online Distance Learning and Virtual Learning. Continuing Professional Education courses are also offered providing broad access to DMIHER' constantly evolving body of knowledge & expertise both In-Person & through online Expert Programs.

Nestled in the heartland of India, this sprawling 125-acre campus affords the tranquility of a quiet rural ambience with the advantages of well-connected urban locales in Wardha and neighboring cities. The University is a self-sustaining complex, well-connected by road, rail, and air (via Nagpur) to all the major cities in the country.

Rail Connectivity: Wardha Junction Railway station is 2.4km away from Sawangi while Sewagram Junction Railway station is 6.4km-away

Road Connectivity: Wardha City is also well connected to the major cities viz. Nagpur, Pune and Hyderabad through Highways and trunk roads. Wardha is located on the Maharashtra State Highway 255 connecting Nagpur and its other satellite districts. It also connects the MSH-3 at Seloo. Wardha is also connected to the Trunk roads on the Varanasi-Nagpur-Hyderabad-Bangalore-Kanyakumari Highway. Besides private taxis, State Buses and Volvo Buses are also popular modes of public transport.

Air Connectivity: Dr. Babasaheb Ambedkar International Airport is 77.80km distant from Sawangi.

Lat- 20.714209 - Long- 78.575827

2.3. General Information

DMIHER – Primary Activity – Imparting Knowledge on Medicine, Dentistry, Nursing, Physiotherapy, Ayurveda, Pharmacy, Allied Sciences, Allied Health Sciences, Bio Medical Engineering

No of Students admitted on the first year with Approval as follows

Medicine, - BS – 250, Dentistry – 100, Physiotherapy- 100 Ayurveda- 100 Nursing 100 Pharmacy 100 Engineering 260

A food court to cater the faculty / students' needs exists

Students Hostel Details as follows – Student are provided Hostel rooms with AC or Non-AC are per their requisite

HOSTEL NAME	TOTAL ROOM	BED CAPACITY	HOSTEL NAME	TOTAL ROOM	BED CAPACITY
JIAU Girls	100	282	DURGA Girls	79	237
SHARDA Girls	72	216	SHALINTA PG Girls	104	110
INDIRA Girls	116	213	RADHIKA PG Girls	125	155
GAYATRI Girls	104	252	SAI HOSTEL Boys	58	167
VAISHNAVI Girls	62	190	Sarsawati Hostel	160	477
SHIVAJI Boys	37	110	Ragobaji PG Boys	75	122
GANESH Boys	38	112	Yashoda Boys	56	118
PARMHANS I Boys	38	80	Laxmi Hostel	45	90
PARMHANS II Boys	48	142	Kanya sadan 2 Hall (Dormitory)	-	36
VIVENAND Boys	59	159	PG House Girls (1)	18	36

2.4. Previous Green Audit

Conducted Internal assessment – in July 2022 based on Educational and Corporate requirements and found complying to the requirements

2.5. Role of Management in Green Management

Management promotes various green campus activities throughout the year.

For Green campus assessment, time to time Audits are conducted.

Recommendations of the Green Audit report are incorporated in the activities to maintain green campus

Pollution Controlled board inspection was held in Oct. 2022 and recommendation are compiled for obtaining consent for Sharda Pawar Dental college

Section – 3 Audit Preparations

3.1. Management

The following were different criteria set forth for the present Green, Environment and Energy audit.

- a) Green Practices
- b) Water Management
- c) Energy Management
- d) Carbon Footprint

3.2. Teaching Staff and Students

The following table illustrate the details of internal audit team involved at various levels of this audit process;

Sr. No	Name	Designation	Part Played	Audit Involved
1	Chetan Choudhary	Director Advance Learning	Director audit	Green audit
2	Dr Ashish Anjankar	Professor JNMC	Main for audit	Green audit
3	Dr Swapnil Mohod	Associate Professor, SPDC	Horticulture Audit	Horticulture Audit
4	Dr Shashank Gotarkar	Assistant Professor, JNMC	Water management	Water management
5	Dr Subrat Samal	Associate Professor, RNPC	Energy Audit	Energy Audit
6	Dr Roshan Jha	Tutor, JNMC	Carbon Foot Print management	Carbon Foot Print management
7	Prasad Gulawani	Chief Engineer	Audit data compilation and technical support	Audit data compilation and technical support
8	Mangesh Fantige	Property manager	Technical support	Technical support
9	Vynkatesh Maklwar	Junior Engineer	Water management	Technical support
10	Mayur Thakre	Transport manager	Carbon Foot Print management	Carbon Foot Print management
11	Ms. Gauri Kakkad	JNMC 2020 Batch	Student	Student
12	Mr Aditya Sarda	JNMC 2020 Batch	Student	Student
13	Mr. Toshida Tarare	MGAC 2019 Batch	Student	Student
14	Ms. Hrishika Chattani	SPDC 2017 batch	Student	Student

3.3. The Green, Environmental and Energy Audit Process:

The Auditee team has been explained in the opening meeting following audit process planned Green, Environmental and Energy Audit Assessment

1. Selection of area/activities/parts of the campus.
2. Planning of visit to campus to discuss about the audit process.
3. Scope of audit process was identified in consultation with the auditee.
4. A meticulous plan of action was designed.
5. A team consisting of teachers, non-teaching staff and students was constituted with specific tasks and a proper time schedule.
6. Data pertaining to identified parameters for green auditing of the campus were collected directly through an on-site visit.
7. Available background information on the identified activities and other parameters were collected.
8. The role of each stakeholder in green related activities has been collected.
9. Historical aspects of green activities in the campus including flora fauna, water usage and waste generation, etc. were collected.
10. A questionnaire based on the preliminary visits and other evaluations was communicated to the authorities who are involved in the in-house data collection.
11. Data collection based on questionnaire.
12. Visit to the campus by audit team.
13. Data analysis and evaluation.
14. Discussion on the findings.
15. Report preparation.

3.4. Onsite audit activities

1. The preliminary visit and meeting with the campus authorities was the first step between the audit team and auditee.
2. Site inspection for determining parameters for audit was established in consultation
3. Site visit and evaluation of collected information of the audit team.
4. Meeting with the Pro Vice Chancellor, Coordinator, Faculty and Admin representative and students were held
5. Meeting with the in-house audit team for evaluation and clarifications.

Section – 4 Green Audit

4.1. Inspection

Visited the university **DMIHER CAMPUS** and the following centers in the campus
JNMC, SPDC, AUDITORIUM, UNIVERSITY OFFICE, Admin Building, DG operations area, STP area, Herbal Garden, FOOD
CORT, to review Environment and Green aspects and Impacts
Observed that the, 30 years Plus, JNMC, the medical college, Ground floor is under renovation and one of the labs
renovated fully and now in use. Lighting and ventilation found adequate.
Reviewed Structural stability certificates of the buildings in the campus and found evidenced as follows

STRUCTURAL STABILITY CERTIFICATES AT DMIHER CAMPUS - Structural Architect - Ar. Satish Raipur

Name of Building	Certificate. No.	Date	Name of Building	Certificate No.	Date
JNMC	SSR/20-21/06/23	07.05.2020	COLLEGE BUILDING MGAC	SSR/20-21/06/45	07.05.2020
FOOD CORT	SSR/20-21/06/27	07.05.2020	DEMOSTRETION HALL MGAC	SSR/20-21/06/43	07.05.2020
SPDC	SSR/20-21/06/62	07.05.2020	RASSHALA	SSR/20-21/06/42	07.05.2020
AUDITORIUM	SSR/20-21/06/14	06.05.2022	MEGHDOOT APARTMENT- 02	SSR/20-21/06/39	07.05.2020
UNIVARSITY OFFICE	SSR/20-21/06/64	07.05.2020	MEGHDOOT APARTMENT 1,3,4,6	SSR/20-21/06/40	07.05.2020
SRMMCOM	SSR/20-21/06/47	07.05.2020	SAI HOSTEL	SSR/20-21/06/10	19.06.2020
DURGA GIRLS HOSTEL	SSR/20-21/06/25	07.05.2020	VIVEKANAND HOSTEL	SSR/20-21/06/08	19.06.2020
SHARDA GIRLS HOSTEL	SSR/20-21/06/59	07.05.2020	SHIVAJI HOSTEL	SSR/20-21/06/60	07.05.2020
JIJAU GIRLS HOSTEL	SSR/20-21/06/32	07.05.2020	GANESH HOSTEL	SSR/20-21/06/28	07.05.2020
RADHIKABAI GIRLS HOSTEL	SSR/20-21/06/54	07.05.2020	MESS	SSR/20-21/06/41	07.05.2020
INDIRA GIRLS HOSTEL	SSR/20-21/06/31	07.05.2020	PARAMHANS HOSTEL	SSR/20-21/06/51	07.05.2020
SHALINATA GILRS HOSTEL	SSR/20-21/06/58	07.05.2020	COLLEGE OF PHARMACY	SSR/20-21/06/52	07.05.2020
P. G. HOSTEL BUILDING	SSR/20-21/06/50	07.05.2020	SHALINITAI MEGHE COLLEGE OF NURSING	SSR/20-21/06/46	07.05.2020
GYM BUILDING	SSR/20-21/06/30	07.05.2020	Admin Building	SSR/20-21/06/13	06.05.2020
SANKALP BUNGLOW	SSR/20-21/06/19	07.05.2020	Workshop Building	SSR/20-21/06/66	07.05.2020
STAFF ACCOMMODATION BUILDING	SSR/20-21/06/09	19.06.2020	Canteen Bld.	SSR/20-21/06/20	07.05.2020
GAYATRI GIRLS HOSTEL	SSR/20-21/06/29	07.05.2020	MEGHE HEIGHT 1	SSR/20-21/06/37	07.05.2020
VAISHNAVI GIRLS HOSTEL	SSR/20-21/06/65	07.05.2020	MEGHE HEIGHT 2	SSR/20-21/06/38	07.05.2020
RAGHOBABI PG HOSTEL	SSR/20-21/06/55	07.05.2020	MEGHE HEIGHT 3	SSR/20-21/06/36	07.05.2020
YASHODA PG HOSTEL	SSR/20-21/06/67	07.05.2020	MEGHE HEIGHT 4	SSR/20-21/06/35	07.05.2020
SARWASWATI HOSTEL	SSR/20-21/06/56	07.05.2020			
KANNYA SADAN	SSR/20-21/06/57	07.05.2020			

4.2. Questionnaire

Methodology adopted for audit

Check list containing Questionnaire placed at **Section – 9: Annexures [Audit Checklist] - Annexure – I to IV was used for Interaction with Auditee and collection of Data for Final analysis**

Annexure – I - Auditing for Green campus management

Annexure – II - Auditing for Water Management Auditing

Annexure – III - Auditing for Energy Management Audit

Annexure – IV - Auditing for Carbon footprint Auditing

Information and data obtained are Documented in succeeding paragraphs under para 4.4.1 to 4.4.4

4.3. Evaluation of documents and reports

The audit team has evidenced and verified Appropriate relevant Information available with DMIHER in respect the activities performed in DMIHER. Detailed report is documented in various section below

The audit team also has verified randomly some of the applicable legal compliances for its compliance by DMIHER to the extent possible within limited time and found evidenced. However, it shall be the responsibility of the DMIHER to ensure compliance to applicable legal requirements in toto as and when need from various authorities

4.4. Findings and Analysis

Information and data obtained are Documented in succeeding paragraphs under para 4.4.1 to 4.4.4

Overall, the effective control on the Energy, Green and Environmental activities to conform to the planned programs of conservations.

Energy management Green, Environment Impact controls found evidenced.

No deviation from programs and Noncompliance to legal requirements evidenced

DMIHER also planned programs for Energy, Green and Environmental Conservations developments in the campus the same listed in succeeding paragraphs

4.4.1. Analysis of Green Practices

4.4.1.1. Gardens

Table – 1. Campus Flora - List of campus flora plants with details, including scientific name, family, approximate number of plants, etc.). Groves are available but not listed

Name	No of plants	Name	No of plants	Name	No of plants
Azadirachta indica	15000	Cascabela thevetia	2000	faykas	900
Alstonia scholaris	3000	Saraca asoca	1500	God Limbu	200
Carissa carandas	3000	Phyllanthus emblica	500	Eucalyptus	100
Fabaceae	2000	Mangifera indica	500	Agspera	500
Millettia pinnata	15000	Ziziphus mauritiana	200	Bogwaliya	1000
Mimusops elengi	3000	Annona squamosa	300	Juniper	50
Bambusa vulgaris	2000	Leucaena leucocephala	2000	Pulperima	500
Gisariya	3000	Punica granatum	1000	Almeda	500
Prosopis juliflora	3000	Rose	500	Faykas	500
Cassia fistula	2000	Thuja	100	Faykas	200
Delonix regia	1000	Royal Pam	900	Cocos nucifera	200
indigo berry	3000	Combretum indicum	900	Konex	50
Pride Of India	2000	Manilkara zapota	200	Bisnmarkia	50
Tectona	2000	royal pam	500	Mussaenda	200
				Shiras	1000

Table – 2. Plants in the Botanical Garden

Sr. No.	Name of plants	No. of plants
	Instead of Botanical Garden Campus has developed Concept Herbal Garden and details given below	

Table – 3. Vegetables and other Crop Plants

Sr. No.	Species of plants	Approximate Yield (kg)
	No vegetable garden maintained by the Campus	

4.4.1.2. Arboretum

Table – 4. List of Plants in the Arboretum -

Herbal Garden Bhavmishra Vatika - Mahatma Gandhi Ayurved College Hospital and Research centre Details given below - **List the species planted by the students**

Name - Species of plant	No of Plants	Name - Species of plant	No of Plants
Azadirachta indica	15000	Mangifera indica	500
Alstonia scholaris	3000	Ziziphus mauritiana	200
Carissa carandas	3000	Annona squamosa	300
Fabaceae	2000	Leucaena leucocephala	2000
Millettia pinnata	15000	Punica granatum	1000
Mimusops elengi	3000	Rose	500
Bambusa vulgaris	2000	faykas	900
Gisariya	3000	God Limbu	200
Prosopis juliflora	3000	Eucalyptus	100
Cassia fistula	2000	Agspera	500
Cascabela thevetia	2000	Total	61200
Saraca asoca	1500		
Phyllanthus emblica	500		

200 plants of Guggul (comiphora mukul) are planted and 20 each plant of Amalaki, Haritaki, Udumbar are planted by students

4.4.1.3. Fruit Yielding Plants

Table – 5. List of Fruit Yielding Plants

Trees name	No of plants	Trees name	No of plants
Awala	80	Nimbu	105
Peru	35	Bor	35
Chikku	51	Kel	10
Mango	104	Mosambi	10
Sitafal	32	Karwand	850
		Total	1312

4.4.1.4. Medicinal Plants

Table – 6. Medicinal Plants Total Identified 329 Plants and Listed below

Name	Botanical Name	Name	Botanical Name
Aakarkarabh	<i>Anacyclus pyrethrum</i>	Ashoka	<i>Saracaasoka</i>
Aakhuparni	<i>Ipomoea reniformis</i>	Ashvattha	<i>Ficus religiosa</i>
Aavartani	<i>Helicteres isora</i>	Ashwagandha	<i>Withania somnifera</i>
Aayapan	<i>Eupatorium triplenerve</i>	Ashwagandha sp.	<i>Withania coagulance</i>
Adhapushpi	<i>Tricodesma indicum</i>	Asthishrunkhala	<i>Cissus Quadrangularis</i>
Agastya	<i>Sesbania grandiflora</i>	Atibala	<i>Abutilon indicum</i>
Agnimantha	<i>Clerodendrum phlomidis</i>	Australian bamboo	<i>Arunda donax</i>
Agnimantha Species	<i>Premna corymbosa</i>	Babool	<i>Acacia Arabica</i>
Ain	<i>Terminalia tomentosa</i>	Bakayan nim	<i>Melia azedarach L.</i>
Akarkarabh sp	<i>spilanthus calva dc</i>	Bakuchi	<i>Psoralea carylifolia</i>
Akarkarabh sp.	<i>Spilanthus acmella</i>	Bakula	<i>Mimusops elengi</i>
All vitamins	<i>Sauropus androgynus</i>	Bala species	<i>Sida acuta</i>
All Spice	<i>Pimentadiaoica</i>	Balam Khira	<i>Kijelia pinnata</i>
Amalaki	<i>Emblia officinalis</i>	Banafsha	<i>Viola odorata</i>
Ambastha	<i>Hibiscus cannabinus</i>	Bartondi	<i>Morinda citrifolia</i>
Amlika	<i>Tamarindus indica</i>	Basmati	<i>Tandanus sp.</i>
Amra	<i>Mangifera indica</i>	Beejaka	<i>Pterocarpus marsupium</i>
Ankot	<i>Alangium lamarkii</i>	Bhadraksha	<i>Scaevola taccada</i>
Apamarga	<i>Achyranthes aspera</i>	Bhallatak	<i>Semicarpus anacardium</i>
Aparajeeta (Shweta)	<i>Clitoria ternatea</i>	Bhandira	<i>Clerodendrum infortunatum</i>
Aparajeeta (nila)	<i>Clitoria ternatea</i>	Bhavya	<i>Dillenia indica</i>
Aragvadha	<i>Cassia fistula</i>	Bhramarachhalli	<i>Hymenodictyon excelsum</i>
Aralu	<i>Ailanthus excelsa</i>	Bhramaraksha	<i>Alocasia indica</i>
Ardrak	<i>Zingiber officinale</i>	Bhrungaraj	<i>Eclipta alba</i>
Aristaka	<i>Sapindus trifoliatu</i>	Bhumyamalaki	<i>Phyllanthus niruri</i>
Arjuna	<i>Terminalia arjuna</i>	Bibhitak	<i>Terminalia belerica</i>
Arka	<i>Calotropis procera</i>	Bilva	<i>Aegle marmelos</i>
Arka sp.	<i>Calotropis gigentia</i>	Bimbi	<i>Coccinia indica</i>
Arrowroot	<i>Maranta indica</i>	Bramhi	<i>Bacopa moniari</i>
Ashmantak	<i>Ficus rumphi</i>	Bruhati	<i>Solanum indicum</i>
Chakramarda	<i>Cassia tora</i>	Gautichaha	<i>Cymbopogon flexuosus</i>
Champak variety	<i>Plumeria sp</i>	Ghaneri	<i>Lantana camara</i>
Chandan Rakta	<i>Pterocarpus santalinus</i>	Gojivha	<i>Elephanta scabra</i>
Chandan Shwet	<i>Santalum album</i>	Gojivha	<i>Onosma bracteatum</i>
Charoli	<i>Buchanania lanzan</i>	Gokshur	<i>Tribulus terrestris</i>
Cherry	<i>Mutangia calabura</i>	Gudmar	<i>Gymnema sylvestre</i>
Chiku	<i>Manilkara zapota</i>	Gokarna tree	<i>Clitoria terna TEA</i>

Chira bilva	<i>Holoptelia integrifolia</i>	Guduchi	<i>Tinospora cordifolia</i>
Chitraka	<i>Plumbago zeylanica</i>	Guduchi sp.	<i>Tinospora crispa</i>
Chitraka Rakta	<i>Plumbago rosea</i>	Guggul sp.	<i>Commiphora caudata</i>
Coffee	<i>Coffea Arabica</i>	Guggula	<i>Commiphora mukul</i>
Dadimba	<i>Punica granatum</i>	Guggula species	<i>Commiphora roxburgiana</i>
Danti	<i>Baliospermum montanum</i>	Gulabakshi	<i>Mirabilis jalpa</i>
Daruharidra sp.	<i>Cocineum fenestratum</i>	Gunja (Krishna)	<i>Abrus precatorius</i>
Dhataki	<i>Woodfordia fruticosa</i>	Gunja (Rakta)	<i>Abrus precatorius</i>
Dhatura species	<i>Dhatura stramonium</i>	Gunja (shweta)	<i>Abrus precatorius</i>
Draksha	<i>Vitis vinifera</i>	Harandodi	<i>Wattakaka valvulis</i>
Dronapushpi	<i>Leucas cephalotes</i>	Haridra	<i>Curcuma longa</i>
Dugdhika	<i>Euphorbia thymifolia</i>	Haridra (amra Gandhi)	<i>Curcuma amada</i>
Dugdhika species	<i>Euphorbia hirta</i>	Haridra krishna	<i>Curcuma caesia</i>
Edilimbu	<i>Citrus aurantium</i>	Haritachap	<i>Artabotrys odoratissimus</i>
Ela	<i>Eletaria cardamomum</i>	Haritaki	<i>Terminalia chebula</i>
Eranda	<i>Ricinus communis</i>	Hijjal	<i>Barringtonia acutangula</i>
Eranda karkati	<i>Carica papaya</i>	Hnuman phala	<i>Annona muricata</i>
Eranda species	<i>Jatropha nana</i>	Ikshu	<i>Saccharum officinarum</i>
Falgu	<i>Ficus carica</i>	Ingudi	<i>Balanites aegyptiaca</i>
Gajapippali	<i>Piper retrofractum</i>	Insulin plant	<i>Costus ignea</i>
Gambhari	<i>Gmelina arborea</i>	Jala pippali	<i>Phyllanthus nodiflora</i>
Gandhaprasarani	<i>Paederia foetida</i>	Jambu	<i>Eugenia jambolana</i>
Garambi	<i>Entada scandus</i>	Japa	<i>Hibiscus rosa-sinensis</i>
Jati	<i>Jasminum grandiflorum</i>	Mandukparni	<i>Centella asiatica</i>
Jatiphala	<i>Myristica fragrans</i>	Mansarohini	<i>Soymida febrifuga</i>
Jeetsaya	<i>Spermatoclyon sauec</i>	Marich	<i>Piper nigrum</i>
Jivanti	<i>Leptidenia reticulata</i>	Mausambi	<i>Citrus sinensis</i>
Jyotishmati	<i>Celastrus paniculatus</i>	Mayalu	<i>Basella alba</i>
Kadam sp. (Dhuli kadamb)	<i>Myrtagyna parvifolia</i>	Mayurshikha	<i>Actinopterys dightoma</i>
Kadamba	<i>Anthocephalus indicus</i>	Medashringi	<i>Dolichandron falcata</i>
Kaidarya	<i>Murraya koenigii</i>	Mint – japanese	<i>Mentha viridis</i>
Kailashpati	<i>Corouppita guinensis</i>	Mint Indian	<i>Mentha piperata</i>
Kajutaka	<i>Anacardium occidentale</i>	Mogali Erand	<i>Jatropha curcus</i>
Kakaudumbara	<i>Ficus hispida</i>	Muchkunda	<i>Pterospermum acerifolium</i>
Kala Vala	<i>Povonia odorata</i>	Musali – krishna	<i>Curculigo orchoides</i>
Kalmegh	<i>Andrographis paniculata</i>	Musali Shwet	<i>Asparagus adscendens</i>
Kamal	<i>Nelumbo nucifera</i>	Mushakarni	<i>M. emerginata</i>
Kampillak	<i>Mallotus philipinensis</i>	Musta	<i>Cyperus rotundus</i>
Kanchanar	<i>Bauhinia variegata</i>	Nadihingu	<i>Gardenia gummifera</i>
Kanchanar species	<i>Bauhinia acuminata</i>	Nagakesara	<i>Mesua ferrea</i>
Kanchanar species	<i>Bauhinia purpurea</i>	Nagvel	<i>Piper betle</i>
Kandol	<i>Sterculia urens</i>	Nandruk	<i>Ficus retusa</i>
Kapikacchu cultivated	<i>Mucuna pruriens</i>	Narakya	<i>Mappia foetida</i>
Kapikacchu-krishna wild	<i>Mucuna pruriens</i>	Narikela	<i>Cocos nucifera</i>
Kapittha	<i>Feronia elephantum</i>	Nimba	<i>Azadiracta indica</i>
Karanja	<i>Pongamia pinnata</i>	Nimbuka	<i>Citrus acida</i>
Karmarda	<i>Carrisa carandus</i>	Nirgundi	<i>Vitex negundo</i>
Karpasa	<i>Gossypium Herbaceum</i>	Nirgundi sp.	<i>Wedelia trilobata</i>
Karpur	<i>Cinamomum camphara</i>	Nirgundi sp.	<i>Vitex trifolia</i>

Kartoli	<i>Momordica dioca</i>	Nishottar	<i>Operculina turpethum</i>
Karveer-pita	<i>Thevetia neriifolia</i>	Odomos	<i>Cintronella thumbani</i>
Karveer-Shweta	<i>Nerium odorum</i>	Padmak	<i>Prunus cerasoidis</i>
Karvellak	<i>Momordica charantia</i>	Palandu vana	<i>Urginea indica</i>
Karvi	<i>Sprobilanthes callosus</i>	Palash	<i>Butea monosperma</i>
Kasamarda	<i>Cassia occidentalis</i>	Panasa	<i>Artocarpus integrifolia</i>
Kashtdaru	<i>Polyalthia longifolia</i>	Paribhadra	<i>Erythrina variegata</i>
Ketaki	<i>Pandanus trifolius</i>	Parijataka	<i>Nyctanthes arborescens</i>
Khanduchakka	<i>E. levis</i>	Parish pippal	<i>Thespesia populnea</i>
Krushana vat	<i>Ficus krushana</i>	Parnabeeja	<i>Bryophyllum calycinum</i>
Krushna kamala	<i>Passiflora incarnata</i>	Parushaka	<i>Grewia asiatica</i>
Ksheer vidari	<i>Ipomoea Imauritiana</i>	Pashanbheda	<i>Coleus forskohil</i>
Kumbhi	<i>Careya arborea</i>	Passion fruit	<i>Passiflora caerulea</i>
Kupilu	<i>Strychnous nuxvomica</i>	Patala	<i>Stereospermum suaveolense</i>
Kushta kulingen	<i>Alpinia galanga</i>	Patalgarudi	<i>Cocculus hirsutus</i>
Kuta Shalmali	<i>Ciba pentandra</i>	Patha	<i>Cissampelos pareira</i>
Kutaja	<i>Holarrhena antidysenterica</i>	Perukam	<i>Psidium guajava</i>
Kutaja species	<i>Wrightia tinctoria</i>	Pippali	<i>Piper longum</i>
Lajjalu	<i>Mimosa pudica</i>	Pippali sp. 2	<i>Piper species</i>
Lajjalu viparit	<i>Bryophytum sensitivum</i>	Pippali sp.1	<i>Piper species</i>
Lakshmana phala	<i>Annona muricata</i> Linn	Pitabhrngaraja	<i>Wedelia chinensis</i>
Langali	<i>Gloria superba</i>	Plaksha	<i>Ficus lacor</i>
Latakaranja	<i>Caesalpinia crista</i>	Priyangu	<i>Callicarpa macrophylla - Vahl.</i>
Latakasturi	<i>Hebiscus abelmoschus</i>	Prushniparni	<i>Pseudarthia viscid</i>
Lavanga	<i>Syzygium aromaticum</i>	Punarnava	<i>Boerhvia diffusa</i>
Leechi	<i>Leechi chinensis</i>	Punarnava species	<i>Boerhvia purpurea</i>
Lodhra	<i>Symplecos racemosus</i>	Punnag	<i>Calophyllum inophyllum</i>
Madanphala	<i>Randia dumetorum</i>	Putiha	<i>Mentha spicata/ Mentha arvensis</i>
Madayantika	<i>Lawsonia inermis</i>	Putranjeevaka	<i>Putranjiva roxburghii</i>
Madhuka	<i>Madhuca indica</i>	Rakta Vel	<i>Ventiligo madrasapattanam</i>
Madhuka - dakshini	<i>Madhuca longifolia</i>	Ram phala	<i>Annona reticulate</i>
Mahalunga	<i>Citrus medica</i>	Ran dhanyak	<i>Eryngium foetidum</i>
Mallika	<i>Jasminum sambac</i>	Ran Lasun	<i>Allium sativum</i>
Mammajak	<i>Enicostemma littorale</i>	Ratan gunja	<i>Adenanthera pavonina</i>
Rohitak	<i>Amoora rohitaka</i>	Vatama (Deshi)	<i>Terminalia catappa</i>
Rubber plant	<i>Ficus elastica</i>	Veta	<i>Calamus rotang</i>
Rudraksha	<i>Elaeocarpus ganitrus</i>	Vidanga	<i>Embelia robusta</i>
Sabja	<i>Ocimum basilicum</i>	Vidari kand	<i>Pueraria tuberosa</i>
Sahadevi	<i>Vernonia cinerea</i>	Vikankatha	<i>Iacourtia ramontchi</i>
Saireyaka- shweta	<i>Barleria cristata</i>	Vilayat chinch	<i>Pithecellobium dulce</i>
Saireyaka-Nila	<i>Barleria sp.</i>	Vit khadira	<i>Acacia farnesiana</i>
Saireyaka-pita	<i>Barleria prionitis</i>	Vrikshamala	<i>Garcinia indica</i>
Samudraphala	<i>Barringtonia acutangula</i>	Vrishchikali	<i>Pergularis extensa</i>
Samudrashopha	<i>Argyrea speciosa</i>	Vyagranakhi	<i>Capparis zeylanica</i>
Santra	<i>Citrous sinensis</i>	Yastimadhu	<i>Glycyrrhiza glabra</i>
Saptaparna	<i>Alstonia scholaris</i>	Yuthika	<i>Jasminum auriculatum</i>
Sariva	<i>Hemidesmus indicus</i>	Zandu	<i>Tagetes erecta</i>
Sariva –Jambupatra	<i>Cryptolepis buehneri</i>	Tebu	<i>Coctus speciosa</i>
Sariva sp.	<i>Decalepis hamiltonii</i>	Badara	<i>Zizipus sativus</i>

	<i>Sariva sp</i>		
Sarja	<i>Vateria indica</i>	Vrukshamra	<i>Garcinia indica</i>
Sarpagandha	<i>Rauwolfia serpentina</i>	Vikankata	<i>Flacourtia ramoutchi</i>
Sarpagandha sp	<i>Raulfia tetrphylla</i>	Kebuka	<i>Costus speciosus</i>
Shaka	<i>Tectona grandis</i>	Kakanasa	<i>Martinia annua</i>
Shal dhupa	<i>Shorea robusta</i>	Sherani	<i>Cucumis melo</i>
Shallaki	<i>Boswellia serrata</i>	Shigru	<i>Moringa pterygosperma</i>
Shalmali	<i>Salmalia malabarica</i>	Shikekai	<i>Acacia concinna</i>
Shalparni	<i>Desmodium gangeticum</i>	Shimshipa	<i>Dalbergia sissoo</i>
Shami	<i>Prosopis cineraria</i>	Shirish sp.	<i>Albezzia procera</i>
Shara(sher)	<i>Saccharum munjo</i>	Shirisha	<i>Albizzia lebbeck</i>
Sharapunkha	<i>Tephrosia purpuria</i>	Shivlingi	<i>Bryonopsis laciniola</i>
Shatavari	<i>Asparagus racemosus</i>	Shlesmantak	<i>Cordia dichotoma</i>
Shathi sp.	<i>Hedycham coranenum</i>	Shonak	<i>Oroxylum indicum</i>
Snuhi prajati (Nagphana)	<i>Euphorbia species</i>	Shrilankan Madukaparni (gotu kola)	<i>Centella asiatica</i>
Snuhi saptadhara	<i>Euphorbia species</i>	Sinduri	<i>Bixa orellana</i>
Somavella	<i>Sarcostamma acidum</i>	Sitaphala	<i>Anona squamosa</i>
Stevia	<i>Stevia rebaudiana</i>	Sitaranjan	<i>Cithrexlum subseratum</i>
Surana rana	<i>Amorphophallus bulbifer</i>	Snuhi – tridhara	<i>Euphorbia nerifolia</i>
Surapunnag	<i>Ochrocarpus longifolia</i>	Udumbara	<i>Ficus glomerata</i>
Tamal patra	<i>Cinnamomum tamala</i>	Ushira	<i>Vitis vinifera</i>
Tamalapatra sp.	<i>Cinnamomum zeylanicum</i>	Vacha	<i>Acorus calamus</i>
		Vamsha	<i>Bambusa arundinaceae</i>
		Vanilla	<i>Vanilla orchids</i>
Taruni	<i>Rosa centifolia</i>	Varahi kand	<i>Dioscorea alata</i>
Tejovati	<i>Zanthoxylum armatum</i>	Varahi kand	<i>Dioscorea bulbifera</i>
Tikhadi	<i>Cymbopogan martinii</i>	Varasa	<i>Heterophragna quadril</i>
Tulasi	<i>Ocimum sanctum</i>	Varun	<i>Crataeva nurvala</i>
Tulasi – vaijanti	<i>Ocimum tenuiflorum</i>	Vasa	<i>Adhatoda vasica</i>
Tulasi sp.	<i>Ocimum sp.</i>	Vasa Krishna	<i>Justicia gendarussa</i>
Tuthi	<i>Morus indica</i>		
Vasa (kala)sp.	<i>Genderusa vulgaris</i>		
Vata	<i>Ficus bengalensis</i>		

Auditing for Green campus management -

Information and data Details reviewed - Documented as per Annexure – I - Check List)

The college and its campus are having huge and beautiful garden which is maintained by outsourced agency which extended up to 18 Acre.

Concept based gardens are also available. Mr. Vaibhav Meghe is in charge of gardens. Dr. Chetan from the organization with outsourced agency Ram nursery is looking after the smooth functioning of the activity

Herbal Garden Bhavmishra Vatika -

Mahatma Gandhi Ayurved College Hospital and Research centre Salod (H) Wardha.

Salient Features

The objective of establishing this garden is for the purpose of education to expose our students to maximum common and rare genuine medicinal plants species which comprehensive knowledge of identification of various medicinal plants in fresh as well as in dry form and its various therapeutics uses. As many as **1995 total no. of plants** (Herbs, Shrubs, Trees, and Climbers) & **328 species** with **103** species are of rare and endangered category are there in the garden.

Saplings in Nursery **2018**

Approx 2 Hours students Spend time for study purposes, meditation, reassertion etc.

In Herbal Garden scientific names of plants are displayed in the campus.



Outlook of Herbal Garden



Poly House

Maintaining a Poly house in Herbal Garden for the conservation of endangered medicinal plants in India & also the cultivation of genuine medicinal plants (raw materials) required for our In-house Pharmacy to prepare various products. Recently, there are **1075 seedling & 103 rare species** (Raktachitrak, sarpagandha, kupilu, Lavang, Jatiphal, Tamalpatra, Odomos, Coffee plant, Lodhara, Rudraksha, Sarjya, Nagkeshar, Kusum, Kailaspati, Kampillak, Vidang, Punlag, Surpunnag, Marich, Pashanbhed All spices etc.) in poly house & cultivation of Mandukparni, Pippali & Ashwagandha No threatened plant species planted/conserved in the premises of the institute.



Cultivation



Seeding in Polyhouse





Following evidenced in the garden

Approx 2600 No of Medicinal Plants will be planted in the campus. No external funding for developing gardens in the campus.

Treated effluent form STP is utilized in the garden. - STP treated water is used in the campus.

Cloropiripast - 10 Lit; Monoprotocock - 10Lit; Glaicel Widiside - 50 lit are the pesticides and fertilizers used in the gardens.

Composting from the biodegradable waste in premises with the help of composter and composting pit. Compost pit in premises and manure generated is utilized in our garden.

Different irrigation system like drip irrigation and traditional pipeline is in the campus

Vegetation in the surrounding area identified

Name	No of Plants	Name	No of Plants
Azadirachta indica	15000	Punica granatum	1000
Alstonia scholaris	3000	Rose	500
Carissa carandas	3000	Thuja	100
Fabaceae	2000	Royal Pam	900
Millettia pinnata	15000	Combretum indicum	900
Mimusops elengi	3000	Manilkara zapota	200
Bambusa vulgaris	2000	royal pam	500
Gisariya	3000	faykas	900
Prosopis juliflora	3000	God Limbu	200
Cassia fistula	2000	Eucalyptus	100
Delonix regia	1000	Agspera	500
indigoberry	3000	Bogwaliya	1000
Pride Of India	2000	Juniper	50
Tectona	2000	Pulperima	500
Cascabela thevetia	2000	Almeda	500
Saraca asoca	1500	Faykas	500
Phyllanthus emblica	500	Faykas	200
Mangifera indica	500	Cocos nucifera	200
Ziziphus mauritiana	200	Konex	50
Annona squamosa	300	Total Identified	40 No
Leucaena leucocephala	2000		

Public programs on green conservation. Students reach out to the public in conveying the message of nature conservation and **NSS Activities**

Name of the activity	Coordinating Unit	Name of the activity	Coordinating Unit
Tree Plantation Drive	JNMC, MGAC, RNPC (2 nd -4 th week July 2020)	World Population Day	FNTCN (11 th July 2020)
Swaccha Bharat Abhiyaan:	JNMC (2 nd week July 2020)	Nutrition week	JNMC & SRMMCON (1-7 th Sept 2020)

Swaccha Bharat Abhiyaan:	SPDC, MGACRH (2 nd week August 2020)	Swaccha Bharat Abhiyan	All Colleges (2 nd October 2020)
Jijau Girls Hostel		Swaccha Bharat Abhiyaan:	JNMC, RNPC (2 nd Week December 2020)
Laxmi Girls Hostel		<i>Vaishnavi Girls Hostel,</i>	
Durga Girls Hostel		Paramhans Boys Hostel	
Ayurveda Day	MGACHRC (13 th November 2020)	Vivekanand Boys Hostel	
		Swaccha Bharat Abhiyaan	SRMMCON (9 th January 2021)

Students reach out to the public in conveying the message of nature conservation via plantation drive, environmental awareness program, swachhata pakhwada like initiatives by college authorities.

Once in a three month we conduct public programs on green conservation.

Students are participating in Plantation, Watering, Garden, Cleaning like activities in the garden.

6 Acre area of the campus is under tree cover

Development of Miyavaki & Bamboo Garden along with plantation of trees is our future plan for further improvement of green cover in our campus.

Component of community services & Awareness in a competency-based curriculum drive regular programs are planned including tree plantation cultivation and spreading awareness in the society.

4.4.1.5. Awareness Programs

- **Environment Related**

Total 61200 Plants and 200 plants of Guggul (comiphora mukul) and 20 each plant of Amalaki, Haritaki, Udumbar are planted by students increasing Environmental awareness

- **Conservation Activities**

At every water cooler and centralized RO system awareness posters has been pasted. Like Save water. Also participated and organized water conservation campaigns like Jal Shakti abhiyan in the campus detailed below

- **Best Practices**

Tool box talk regarding the Energy conservation

SOP established to save energy and control by all in All Areas

Introduced E vehicle in the campus to reduce Pollution with charging stations

- **Trainings and Workshops**

Public programs on green conservation. Students reach out to the public in conveying the message of nature conservation through **NSS Activities**

- **Campaigns**

Swachhata Pakhwada Week” - GREEN AND CLEAN CAMPUS Drive was conducted in the University with Tag - GO GREEN. The glimpse is shared from 6 to 13 Nov 2022 – Increasing Env Green and Energy needs. All scrapes are eradicated in phased manner





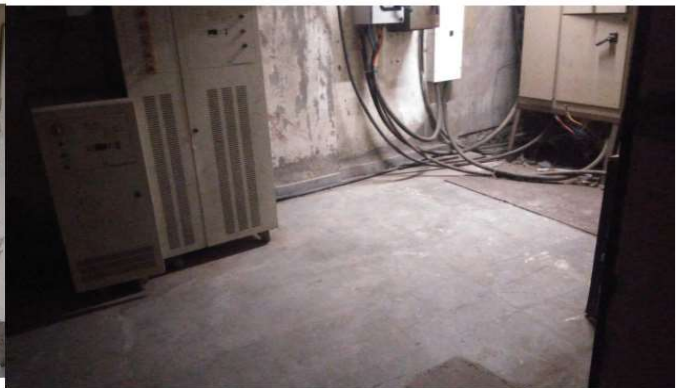
Auditorium Panel Room



Before



After



DMIHER Sawangi (Meghe), Wardha 442004 | Maharashtra | India

4.4.2. Water Management

Water Management Audit -

(Information and data Details reviewed - Documented as per Annexure – II - Check List)

1. The total area of the campus is 150.3 Acre
2. Number of total teachers, non- teaching staff and students in the campus.

Total teachers, non- teaching staff and students in the campus.				
Gender	No of students	No of Teachers	No of non-teaching staff	Total
Male	2199	329	1284	3906
Female	3533	304	1275	5142
Transgender	0	0	0	0
Total	5732	633	2559	9048

3. Different uses of water in the campus
Drinking purpose, Cleaning, Gardening, food preparation, Recreational purposes, In laboratories, Flushing and Domestic needs
4. Different sources of water in college campus
MJP, Chandak Layout Borewell, Gayatri Dug Well, Saraswati Hostel Dug Well, Durga Hostel Borewell, Auditorium Borewell, Meghe Height Borewell, Dr. Quarter Borewell, Back Side Uday Sir Qtr. Borewell
JNMC Dugwell, Animal House Dugwell, A. G. House Borewell, Timande Borewell & Dugwell, Kate Layout Borewell, AVBRH Dugwell
5. Wells in the college Campus, Electric motors used for pumping and Electric motors Horse power used for pumping each well (One well Each)

Name of source	HP	Name of source	HP	Name of source	HP
Chandak Layout Borewell	7.5	Auditorium Borewell	7.5	Animal House Dugwell	7.5
Gayatri Dug Well	7.5	Meghe Height Borewell	7.5	A. G. House Borewell	2
Saraswati Hostel Dug Well	5	Back Side Uday Sir Qtr. Borewell	5	Timande Borewell & Dugwell	7.5
Durga Hostel Borewell	1.5	Dr. Quarter Borewell	5	Kate Layout Borewell	5
AVBRH Dugwell	7.7				

6. Depth of Wells in Campus

Name of source	Depth in Feet
Gayatri Dug Well	50
Saraswati Hostel Dug Well	55
JNMC Dugwell	52
Animal House Dugwell	60
AVBRH Dugwell	50
Timande Dugwell	45

7. Centralized water storage system (ESR) available having capacity of 7.5L
8. Capacity of the Overhead Water tank in the Campus, Sawangi (M), Wardha – In Liters and Nos

Institution Type of Tank	Capacity	Nos	Institution Type of Tank	Capacity	Nos
JNMC	-				
Overhead tank (Dome 1)	68,120.00	1			

Overhead tank (Dome 2)	68,120.00	1	Overhead tank (Dome)	68,120.00	1
Overhead sintex tank (R.O)	2,000.00	3	Overhead sintex tank (R.O)	1,000.00	1
Nursing College			Auditorium		
Sintex tank overhead	5,000.00	2	Overhead tank	15,000.00	2
Sintex tank overhead (RO)	1,000.00	1	Iskrupa Hostel		
Sarswati Hostel			Overhead Sintex tank	5,000.00	2
Overhead tank (RCC)	19,440.00	3	New University Building,		
Overhead tank (RCC)	15,550.00	1	Sintex tank overhead	5000	3
Overhead sintex tank (R.O)	3,000.00	1	Yashoda P.G. & Raghobaji Hostel		
Meghdoot Appratement			Sintex tank for mess	3,000.00	3
Overhead tank	11,340.00	5	Overhead sintex tank	5,000.00	3
Sai Boys hostel			Overhead tank (RCC)	12,000.00	1
Overhead tank (RCC)	29,160.00	2	Overhead Sintex tank (R.O.)	1,000.00	2
Sintex tank for mess	3,000.00	1	Overhead Sintex tank	2,000.00	1
Overhead sintex tank (R.O)	1,000.00	1	Laxmi Girls		
Vivekanand Boys hostel			Overhead tank (RCC)	12,880.00	1
Overhead tank (RCC)	29,160.00	2	Overhead sintex tank (R.O)	1,000.00	1
Shivaji & Ganesh Boys Hostel			Paramhans new boys' hostel		
Overhead tank (RCC)	12,960.00	4	Overhead tank (RCC)	12,000.00	1
Sintex tank for mess	5,000.00	1	Overhead Sintex tank (Solar)	2,000.00	1
Overhead sintex tank (R.O)	1,000.00	2	Overhead sintex tank (R.O)	1,000.00	1
Arihant Appartment			Overhead RCC Tank (New)	40,986.00	1
Overhead tank	10,363.00	2	Underground sump (new)	51,030.00	1
Jijau Girls Hostel, Sawangi (M), Wardha.			Overhead Sintex tank	5,000.00	1
Overhead tank	28,350.00	2	Durga Girls Hostel, Sawangi (M), Wardha.		
Sintex water tank	2,000.00	1	Overhead tank (RCC)	28,350.00	2
Sharda Girls Hostel, Sawangi (M), Wardha.			Overhead sintex tank (R.O)	1,000.00	1
Overhead tank	28,350.00	2	Gayatri Hostel, Wardha.		
Overhead sintex tank (R.O)	1,000.00	1	Overhead sintex tank	5,000.00	2
Sintex water tank	2,000.00	2	Sintex tank (RO)	1,000.00	1
			Overhead RCC Tank	17,920.00	1
Vaishnavi Hostel, Sawangi (M), Wardha.			Meghe Highte, Sawangi (M), Wardha.		
Overhead sintex tank	3,000.00	2	Overhead sintex tank	2,000.00	2
Overhead sintex tank	5,000.00	2	Overhead sintex tank	1,000.00	2
Sintex Tank (RO)	1,000.00	1	Overhead sintex tank	5,000.00	1
Health Club, Sawangi (M), Wardha.			Shalinta PG Hostel, Sawangi (M) Wardha		
Overhead Sintex tank	2,000.00	2	Overhead Sintex tank	5000	5
Overhead Sintex tank	2,000.00	2	Kanya Sadan, Sawangi (M) Wardha		
Overhead Sintex tank (G. House)	1,000.00	1	Overhead Sintex tank	2,000.00	1
Overhead RCC tank (G. House)	16,000.00	2	Radhika Girls Hostel, Sawangi (M) Wardha		
Overhead RCC tank	19440	1	Overhead RCC tank	51,172.00	1
Ayurvedic College and Hospital, Wardha.			Indira Girls Hostel, Sawangi (M) Wardha		
Overhead sintex tank (college)	5,000.00	1	Overhead Sintex tank	5,000.00	1
Overhead sintex tank (Hosp.)	5,000.00	3	Overhead RCC tank	54468	1
Overhead sintex tank (Rasshala)	3,000.00	1	Overhead Sintex (RO)	1000	1

Overhead sintex tank RO (Rasshala)	1,000.00	1	SOS, Sawangi (M) Wardha		
DMITER, Sawangi (M) Wardha			Overhead Sintex tank	5,000.00	2
Overhead Sintex tank	2,000.00	2	Overhead Sintex tank	2,000.00	1
Overhead RCC tank (1 Tank Fire & 1 Drinking Water)	25,920.00	2	Overhead Sintex tank	1,000.00	1
Overhead Sintex tank (1 Admin + 5 College + 1 Work Shop)	5,000.00	7			
			Grand Total	124	

9. Water consumption analysis for six months has carried out: Example of Oct 21 and Feb 22 given below

Quantity of water pumped - FROM 25-10-2021 12.20 PM to 25-11-2021 12.20 PM (in litres)

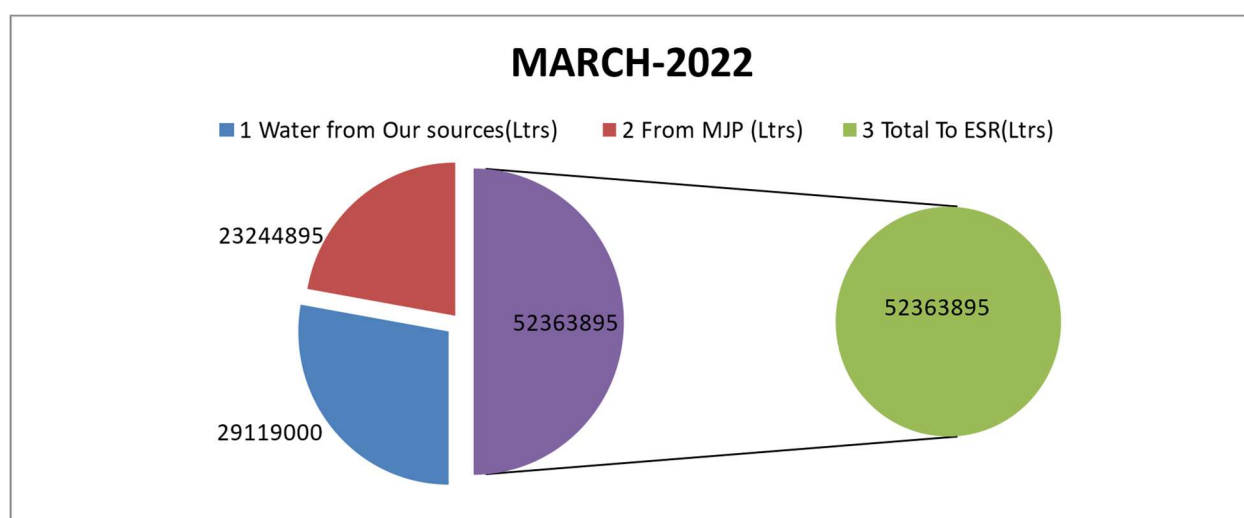
SR.No.	Name of Location	Meter Reading (m3)	Meter Reading (m3)	IN LTRS	REMARK
1	JNMC DUGWELL	1132	1315	183000	New Water meter was installed on 20th Oct but not working properly need to be replaced.
2	ANIMAL HOUSE DUGWELL	183492	190586	7094000	
4	SARASWATI DUGWELL	306	504	198000	
5	OLD GUEST HOUSE BOREWELL (BEHIND A1 QTR.)	134229	137265	3036000	Motor repaired and installed on 18/08/2021
6	BOREWELL ADJACENT TO LAUNDRY	35532	36275	743000	
7	AUDITORIUM BOREWELL	182438	185594	3156000	Pipeline Broken during road construction work on 16th Oct and repaired on 22nd Oct 2021
8	MEGHE HEIGHT/ Vaishnovi BOREWELL	465582	473370	7788000	
9	AVBRH DUGWELL	72603	74068	1465000	
10	TIMANDE LAYOUT DUGWELL	45774	48639	2865000	Motor Repaired and installed on 27th Oct 2021.
11	TIMANDE LAYOUT BOREWELL	877	9047	8170000	New Water meter was installed on 26th Oct.2021.
Water supply TO ESR from our sources - 34698000					
12	MJP	239308560	244152976	4844416	

Quantity of water pumped - FROM 25-02-2022 12.20 PM to 25-03-2022 12.20 PM (in litres)

SR.No.	Name of Location	Meter Reading (m3)	Meter Reading (m3)	IN LTRS	REMARK
1	JNMC DUGWELL	19503	27090	7587000	Water meter was replaced on 8th Dec.2021. Working satisfactorily.
2	ANIMAL HOUSE DUGWELL	203540	208828	5288000	
4	SARASWATI DUGWELL	2978	4059	1081000	
5	OLD GUEST HOUSE BOREWELL (BEHIND A1 QTR.)	153791	154396	605000	Motor repaired and installed on 19th April.2022

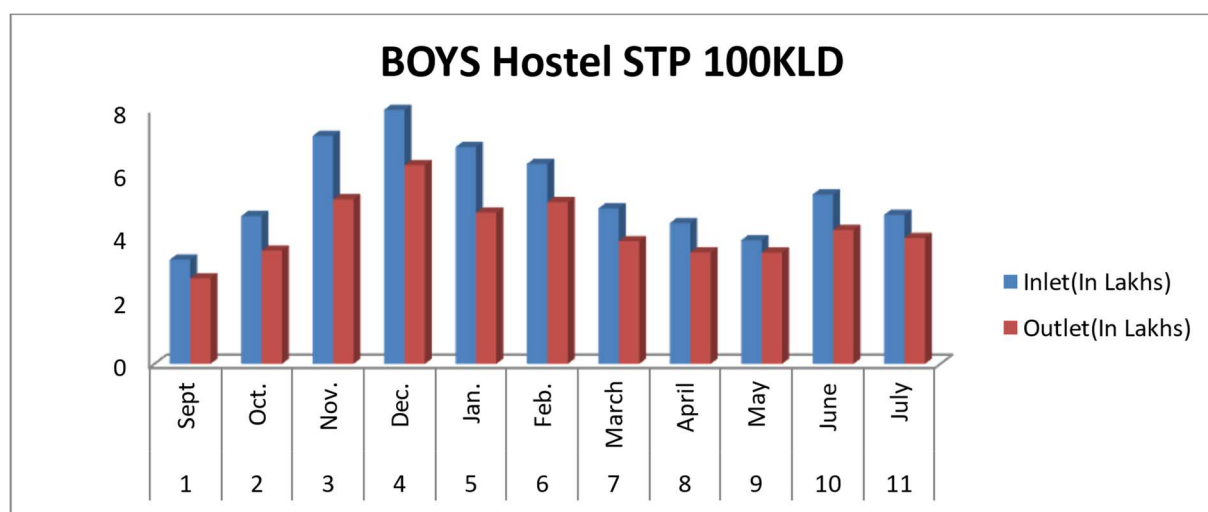
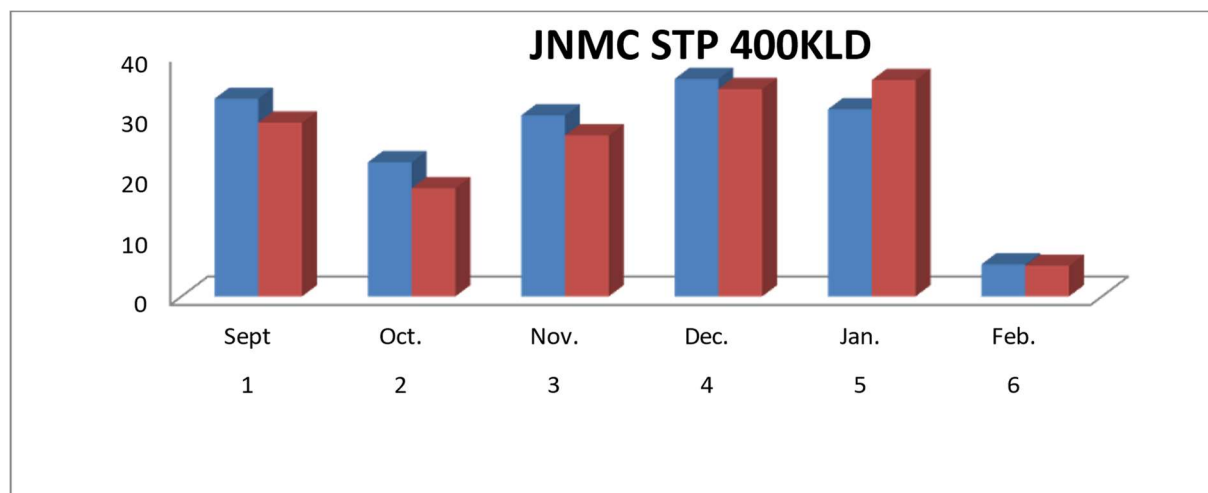
6	BOREWELL ADJACENT TO LAUNDRY	40596	41826	1230000	
7	AUDITORIUM BOREWELL	193857	196203	2346000	
8	MEGHE HEIGHT/ Vaishnovi BOREWELL	497011	503523	6512000	
9	AVBRH DUGWELL	78514	79657	1143000	
10	TIMANDE LAYOUT DUGWELL	60842	62368	1526000	
11	TIMANDE LAYOUT BOREWELL	22884	24685	1801000	New Water meter was installed on 26th Oct.2021.
Water supply TO ESR from our sources - 29119000					
12	MJP	294528823	317773718	23244895	

Water from own sources (Ltrs)	29119000	From MJP (Ltrs)	23244895	Total To ESR (Ltrs)	52363895
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10. Water wastage from centralized RO system and ejected waste water utilizing in STP as raw water through Drainage system. . Example

SR. No	Month	JNMC STP (400KLD)		Boys Hostel STP (100KLD)	
		Inlet (In Lakhs)	Outlet (In Lakhs)	Inlet (In Lakhs)	Outlet (In Lakhs)
1	Sept	32.60	28.67	3.28	2.69
2	Oct.	22.12	17.84	4.65	3.56
3	Nov.	29.86	26.57	7.17	5.18
4	Dec.	35.88	34.21	7.99	6.25
5	Jan.	30.88	35.70	6.82	4.76
6	Feb.	5.28	5.05	6.29	5.09
7	March			4.89	3.86
8	April			4.43	3.51
9	May			3.89	3.50
10	June			5.33	4.21
11	July			4.69	3.96



11. Initiatives taken for conservation of water. - As medical college is having 2000 beds hospital along with OPD in nearby area hygiene is utmost important though the rain water harvesting, automated over flow protection system for Overhead tanks, STP plants, Natural Water conservation are some of the initiatives taken for conservation of water

12. FACILIO app (Complaint management system) for users if there is any leakages or pipeline damaged in the campus can raised the complaints through app, technician available 24*7 to resolved issues which was not available previously. Each area QR code attached. Document attached. No. of plumbing complaints raised and resolved through CMS system-

Sr No	Total Complaints 1 Nov 22 To 23 Nov 22				Completed	Pending
1	1870				1643	227
No	Department	Total	Completed	Pending	Remark	
1	Electrical Complaints	575	519	56		
2	Plumbing Complaints	654	572	82	Plumbing complaints from 1st Nov to 22nd Nov 2022.	
3	Carpentry Complaints	484	439	45		
4	AC Complaints	13	11	2		
5	Civil & Maintenance Complaints	144	102	42		
Total		1870	1643	227		

QR CODES



**DATTA MEGHE INSTITUTE OF
HIGHER EDUCATION &
RESEARCH,
SAWANGI MEGHE, WARDHA**

FACILIO COMPLAINT MANAGEMENT SYSTEM

SPDC-Sharad Pawar Dental College



❖ How to raise the complaint.
1. Scan the QR code.
2. Enter Name, Mobile Number & Email id (Mandatory).
3. Select Location, Department and Types of Complaint.
4. Raise your complaint query and Submit.






**DATTA MEGHE INSTITUTE OF
HIGHER EDUCATION &
RESEARCH,
SAWANGI MEGHE, WARDHA**

FACILIO COMPLAINT MANAGEMENT SYSTEM

University Building



❖ How to raise the complaint.
1. Scan the QR code.
2. Enter Name, Mobile Number & Email id (Mandatory).
3. Select Location, Department and Types of Complaint.
4. Raise your complaint query and Submit.






**DATTA MEGHE INSTITUTE OF
HIGHER EDUCATION &
RESEARCH,
SAWANGI MEGHE, WARDHA**

FACILIO COMPLAINT MANAGEMENT SYSTEM

Central Admin Block



❖ How to raise the complaint.
1. Scan the QR code.
2. Enter Name, Mobile Number & Email id (Mandatory).
3. Select Location, Department and Types of Complaint.
4. Raise your complaint query and Submit.




13. Water wastage from centralized RO system ejected waste water and domestic waste water generation, canteen waste water is transferred to STP through drainage system for treatment. Collected waste water goes to STP.

14. Waste water generated from all labs is sent to STP for further treatment through proper channel.

15. As proper closed drainage system is available for flow of waste water generated at source up to STP so no chances of mixing with ground water.

16. Any type of waste water generated is diverted to STP for the treatment. No direct discharge without treatment. Water is getting treated through conventional STP which is constructed in year 2005.

17. The water which gets in this STP treated up to tertiary level and reused for gardening and flushing purpose with separate pipeline

18. Domestic waste water treated in STP reused for gardening and flushing purpose.

Total toilets - 560 No's - Number of waters - 50000 liter's /Day

(No fire-wood is used in the canteen kitchens. No ash is getting collected as no firewood is used in canteen kitchen.

19. Analysis of STP water for last one year where treated water used for gardening and flushing. No of taps -250 2. Amount of Water used per day - 2500 LTR

20. STP water providing for gardening all over campus.

21. **Sources of waste water in the campus** - Serviced baths / Toilets / Sinks/ Food preparations / RO ejected water

22. Total use of water in all campus from each type of tank. In Liters

Institution Type of Tank	Capacity	Consumption Per day	Institution Type of Tank	Capacity	Consumption per day
JNMC	-		Nursing College		
Overhead tank (Dome 1)	68,120.00	68120	Sintex tank overhead	5,000.00	10000
Overhead tank (Dome 2)	68,120.00	68120	Sintex tank overhead (RO)	1,000.00	2000
Overhead sintex tank (R.O)	2,000.00		Total		12000
Total		136240	Auditorium		
S.P.D.C.			Overhead tank	15,000.00	15000
Overhead tank (Dome)	68,120.00	68120	Total		15000
Overhead sintex tank (R.O)	1,000.00	1000	Iskrupa Hostel		
Total		69120	Overhead Sintex tank	5,000.00	10000
New University Building,			Total		10000
Sintex tank overhead	5000	15000	Vivekanand Boys hostel		
Total		15000	Overhead tank (RCC)	29,160.00	29160
Sarswati Hostel			Total		29160

Overhead tank (RCC)	19,440.00	58320	<u>Shivaji & Ganesh Boys Hostel</u>		
Overhead tank (RCC)	15,550.00	31,100.00	Overhead tank (RCC)	12,960.00	12,960.00
Overhead sintex tank (R.O)	3,000.00	3000	Sintex tank for mess	5,000.00	5,000.00
		92420	Overhead sintex tank (R.O)	1,000.00	1,000.00
<u>Meghdoot Appratement</u>				Total	18,960.00
Overhead tank	11,340.00	11340	<u>Yashoda P.G. & Raghobaji Hostel</u>		
	Total	11340	Sintex tank for mess	3,000.00	3,000.00
<u>Sai Boys hostel</u>			Overhead sintex tank	5,000.00	5,000.00
Overhead tank (RCC)	29,160.00	29,160.00	Overhead tank (RCC)	12,000.00	12,000.00
Sintex tank for mess	3,000.00	6,000.00	Overhead Sintex tank (R.O.)	1,000.00	1,000.00
Overhead sintex tank (R.O)	1,000.00	1,000.00	Overhead Sintex tank	2,000.00	2,000.00
	Total	36,160.00		Total	23,000.00
<u>Laxmi Girls</u>			<u>Arihant Apartment</u>		
Overhead tank (RCC)	12,880.00	25760	Overhead tank	10,363.00	10,363.00
Overhead sintex tank (R.O)	1,000.00	1,000.00		Total	10,363.00
	Total	26760	Jijau Girls Hostel, Sawangi (M), Wardha.		
<u>Paramhans new boys' hostel</u>			Overhead tank	28,350.00	28350
Overhead tank (RCC)	12,000.00	12,000.00	Sintex water tank	2,000.00	4000
Overhead Sintex tank (Solar)	2,000.00	2,000.00		Total	32,350.00
Overhead sintex tank (R.O)	1,000.00	1,000.00	Sharda Girls Hostel, Sawangi (M), Wardha.		
Overhead RCC Tank (New)	40,986.00	40,986.00	Overhead tank	28,350.00	28,350.00
Underground sump (new)	51,030.00		Overhead sintex tank (R.O)	1,000.00	1,000.00
Overhead Sintex tank	5,000.00	5,000.00	Sintex water tank	2,000.00	2,000.00
	Total	60,986.00		Total	31,350.00
Gayatri Hostel, Wardha.			Durga Girls Hostel, Sawangi (M), Wardha.		
Overhead sintex tank	5,000.00	5,000.00	Overhead tank (RCC)	28,350.00	28,350.00
Sintex tank (RO)	1,000.00	1,000.00	Overhead sintex tank (R.O)	1,000.00	1,000.00
Overhead RCC Tank	17,920.00	17,920.00	Meghe Highte, Sawangi (M), Wardha.		
	Total	23,920.00	Overhead sintex tank	2,000.00	4000
Vaishnavi Hostel, Sawangi (M), Wardha.			Overhead sintex tank	1,000.00	2000
Overhead sintex tank	3,000.00	9,000.00	Overhead sintex tank	5,000.00	15000
Overhead sintex tank	5,000.00	15,000.00		Total	21000
Sintex Tank (RO)	1,000.00	1,000.00	Health Club, Sawangi (M), Wardha.		
	Total	25,000.00	Overhead Sintex tank	2,000.00	4000
Shalinta PG Hostel, Sawangi (M) Wardha			Overhead Sintex tank	2,000.00	4000
Overhead Sintex tank	5000	25000	Overhead Sintex tank (G. House)	1,000.00	1000
	Total	25000	Overhead RCC tank (G. House)	16,000.00	16000
Kanya Sadan, Sawangi (M)			Overhead RCC tank	19440	19440

Wardha					
Overhead Sintex tank	2,000.00	6000		Total	44440
	Total	6000	Radhika Girls Hostel, Sawangi (M) Wardha		
Ayurvedic College and Hospital, Wardha.			Overhead RCC tank	51,172.00	51,172.00
Overhead sintex tank (college)	5,000.00	5000		Total	51,172.00
Overhead sintex tank (Hosp.)	5,000.00	10000	Indira Girls Hostel, Sawangi (M) Wardha		
Overhead sintex tank (Rasshala)	3,000.00	3000	Overhead Sintex tank	5,000.00	5,000.00
Overhead sintex tank RO (Rasshala)	1,000.00	1000	Overhead RCC tank	54468	54468
		19000	Overhead Sintex (RO)	1000	1000
DMITER, Sawangi (M) Wardha				Total	60,468.00
Overhead Sintex tank	2,000.00	2,000.00	SOS, Sawangi (M) Wardha		
Overhead RCC tank (1 Tank Fire & 1 Drinking Water)	25,920.00	25,920.00	Overhead Sintex tank	5,000.00	10000
Overhead Sintex tank (1 Admin + 5 College + 1 Work Shop)	5,000.00	5,000.00	Overhead Sintex tank	2,000.00	2000
	Total	32,920.00	Overhead Sintex tank	1,000.00	1000
				Total	13000
Total water used per day - 9,71,116.00 Ltrs					

23. **Water Fountains - locations JNMC - 4 - SPDC 1 - Functioning only in Ganesh festivals**

24. Rain water harvesting system in the campus rooftop type (Storage 5000Ltr capacity - Recharge pit capacity -5000litrs)

Near meghe-height-01 in front of vaishnavi girls' hostel - Rain water collecting from roof top through pipeline then it will pass through recharge pit then into dugwell

North side of JNMC building - Collecting rain water from rooftop and stored in RWH tank then lift to STP inlet drainage system, after tertiary treatment use for gardening and flushing

25. All separate water pipeline has been installed for all gardens from STP. Water provided twice in all the Garden (Early Moring, Afternoon)

26. Total Buses - 35 no Weakly washing - 175 liters of water

27. Pvision Blok - 25000sq feet Concrete area - 10000Sq feet.


Making rejuvenations of pond and traditional water bodies is in pipeline to increase ground water level in the campus.

Water management system - Improvements

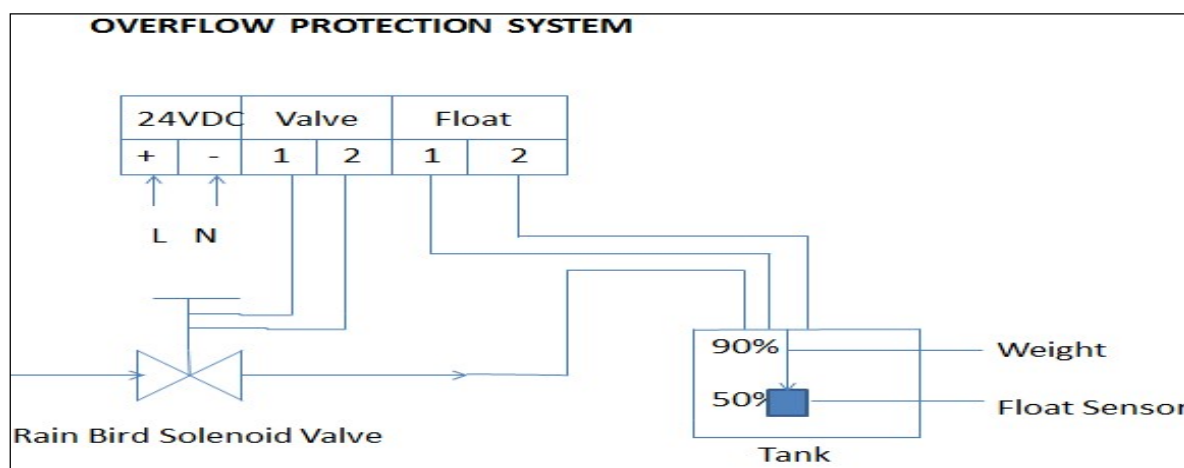
28. At every water cooler and centralized RO system awareness posters has been pasted. Like Save water.

29. Also participated and organized water conservation campaigns like Jal Shaki abhiyan in the campus.

Feedback: Jal Shakti Abhiyan: Catch the Rain -2022**Institute: Datta Meghe Institute of Medical Sciences (DU), Sawangi Meghe Wardha**

S. No.	Activity	Photograph
1	Maintenance work for Reusable water system (STP). On the eve of World water day on 22 nd March 2022, Cleaning campaign for feeder channel of JNMC campus STP sump (near Kavyasadan) had been organised. Aim was to clean the channel and ensure efficient flow of water to STP sump for reuse purpose.	

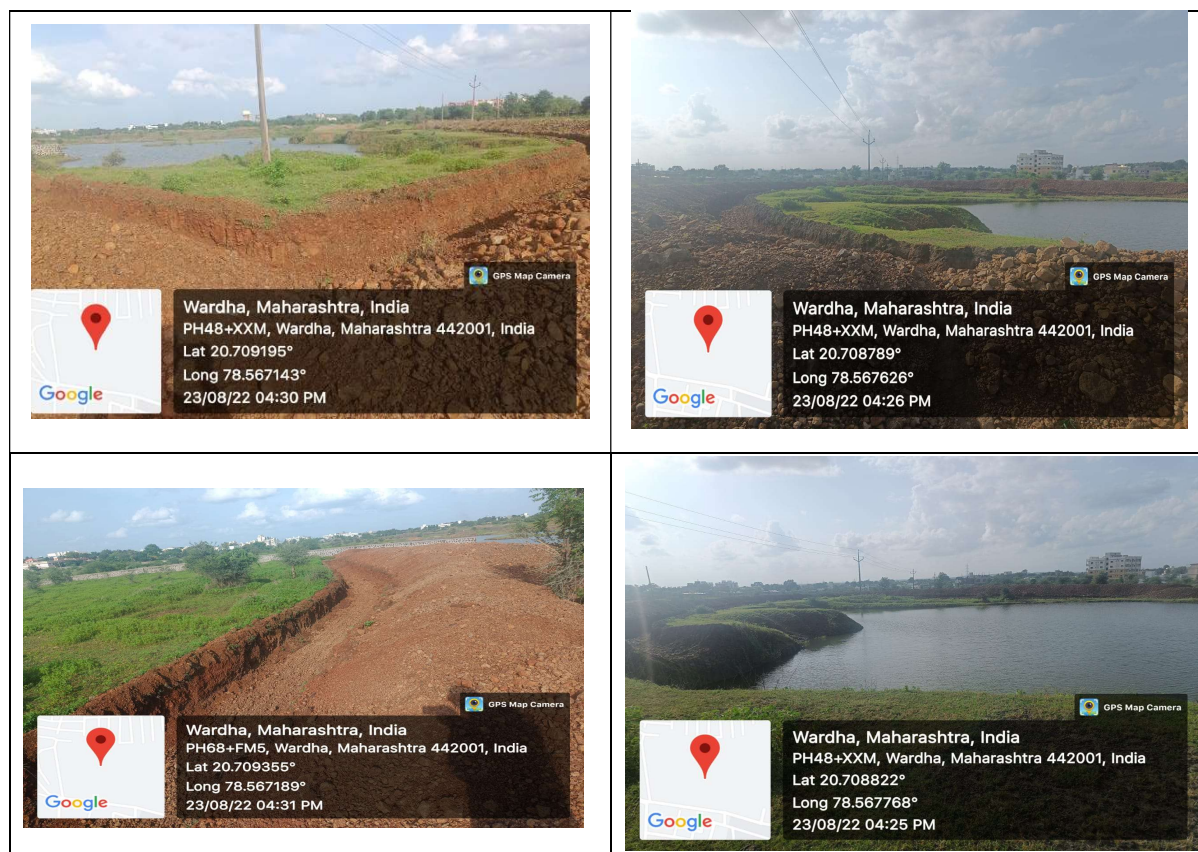
Overflow protection of overhead tank has been installed to avoid overflow from overhead tanks. (Sensor base system)



Name of location	Efficient Appliances		
University Building	PLC, Float Level sensor-based overflow protection system to avoid water loss for overhead Tanks	Meghe_Heights-2	PLC, Float Level sensor-based overflow protection system to avoid water loss
SPDC	Sensor based automatic overflow protection system for Overhead tanks	Meghe_Heights-3	PLC, Float Level sensor-based overflow protection system to avoid water loss
JNMC	Sensor based automatic overflow protection system for Overhead tanks	Indira Hostel	PLC, Float Level sensor-based overflow protection system to avoid water loss
SRMCON	PLC, Float Level sensor-based overflow protection system to avoid water loss	Radikabai Hostel	PLC, Float Level sensor-based overflow protection system to avoid water loss
Saraswati Hostel	PLC, Float Level sensor-based overflow protection system to avoid water loss	Sharda Hostel	PLC, Float Level sensor-based overflow protection system to avoid water loss
Vaishnavi Hostel	PLC, Float Level sensor-based overflow protection system to avoid water loss	Durga Hostel	PLC, Float Level sensor-based overflow protection

			system to avoid water loss
Meghe_Heights-1	PLC, Float Level sensor-based overflow protection system to avoid water loss	Ortho building	Sensor based automatic overflow protection system
		NSB building	Sensor based automatic overflow protection system

Water conservation program Implementation - Name of Location –
Forest Land near ESR tank – Pond near Shivaji Ganesh Boys Hostel



4.4.2.1. Major Findings.

Table- 7. Details of water analysis
Different uses of water in the campus - Drinking purpose, Food preparation, In laboratories, Cleaning, Gardening, Flushing and Domestic needs
Number of total teachers, non- teaching staff and students in the campus 9048
13 Water Motor Pumps total HP 67.5 of diff capacity Pumping to Overhead tanks – 124 of Diff capacity
Total water used per day - 9,71,116.00 Ltrs
Total toilets - 560 No's - Number of waters - 50000 liter's /Day
Amount of STP treated Water used per day - 2500 LTR
waste water in the campus - Serviced baths / Toilets / Sinks/ Food preparations / RO ejected waste

4.4.2.2. Suggestions

Since the campus and consumption is large about **9,71,116.00 Ltrs** through 124 Overhead tanks for use of 9048 members other than visitors, single point water balancing not feasible and difficult to undertake. A water Ring main be established with different consumer usage like Boys Hostel, Girls Hostel, University area, Food court etc and Water Analysis may be considered for each consumer account if possible, depending upon interconnectivity of Bore wells and Pumps etc to ascertain the consumption rate and loss.

4.4.3. Energy Management - Energy Management Audit - (Information and data Details Documented as per Annexure – III - Check List)

Energy usage in the campus. – Primary - Electricity (with Renewal Solar Energy Interfaced)

List of Electrical Instruments						
Sr. No.	Name Instruments	No. of Instruments				
Energy usage in the campus. - Primary Source: Electricity (Equipment Used: electric stove, kettle, microwave, LPG, Petrol, diesel and SOLAR As Renewal Energy). - List of equipment's and details are Given below						
SR.No.	Name of the Premise	Ceiling Fan	Tube Light	CFL	Geyser	AC
1	SMMRCON	171	214	89	0	6
2	JNMC	145	230	156	0	70
3	SPDC	842	1261	444	0	69
4	UNIVERCITY BUILDING	632	789	200	0	65
5	ISHKRUPA BUILDING	57	64	86	0	22
6	DMIETR BUILDING	72	145	35	0	12
7	ACADEMIC FEAT BUILDING	288	337	26	0	10
8	DMPC	186	261	45	0	10
9	SMCON	215	212	26	0	8
10	RNPC	260	299	50	0	10
11	MGAC	199	264	20	0	13
12	MGACH	311	406	110	18	18
	Research Lab	5	189	5	0	3
13	Sai Hostel	130	150	15	6	0
14	Vivekanand Hostel	135	135	48	68	28
15	Shivaji Hostel	76	76	93	32	26
16	Ganesh Hostel	54	54	73	26	18
17	Paramhans -1 Hostel	64	64	32	20	23
18	Paramhans -2 Hostel	89	88	79	45	24
19	Raghoba PG Hostel	76	154	75	75	52
20	Yashoda PG Hostel	165	183	58	58	23
21	Vaishnavi Hostel	108	108	108	56	47
22	Meghe Height 1	48	48	48	16	0
23	Meghe Height 2	48	48	48	16	9
24	Meghe Height 3	80	80	80	16	9
25	Meghe Height 4	70	70	70	14	10
26	Laxmi	92	132	46	46	29
27	Gayatri Hostel	174	238	107	85	65
28	Jijau Hostel	181	182	91	72	77
29	Radhika Hostel	131	173	256	128	75
30	Indira Hostel	165	193	198	88	83
31	Durga Hostel	204	252	60	8	0
32	Sharda Hostel	114	111	5	55	47
33	Shalinitai Hostel	130	192	242	110	82
34	Saraswati Hostel	364	424	10	8	0
35	VIP Guest House	9	9	4	4	4
36	PG Guest House	19	19	19	19	11
37	Guest House	28	28	28	28	28

38	Sankalp Bunglow	20	30	40	20	22
39	Barbarian Gym	5	40	10	2	6
40	Food Court	20	48	5	0	4
	Total	6182	8000	3240	1139	1118

12 Month Energy Consumption in KWh from Oct 21 to Sep 22 - Energy Consumption, kWh/12 Months

Sr. No	Name of the Area / C No Instrument	
Sr. No	Institute Name - Consumer No.	Total KWh Units
1	Boys Hostel-JN Medical College – C No 510019005330	193765
2	Health Club-JN Medical College – C No 510019005680	390014
3	Mahatma Gandhi Ayurvedic College – C No 510019005990	28977
4	DMIETR/FEAT – C No 510019006170	32574
5	DMIMS (JNMC/SPDC/University) – C No 510019020230	315130
6	Meghdoot Apartment – C. No 510019013450	72588

Monthly Energy Utilization by Different appliances in the campus Total Energy in KWh

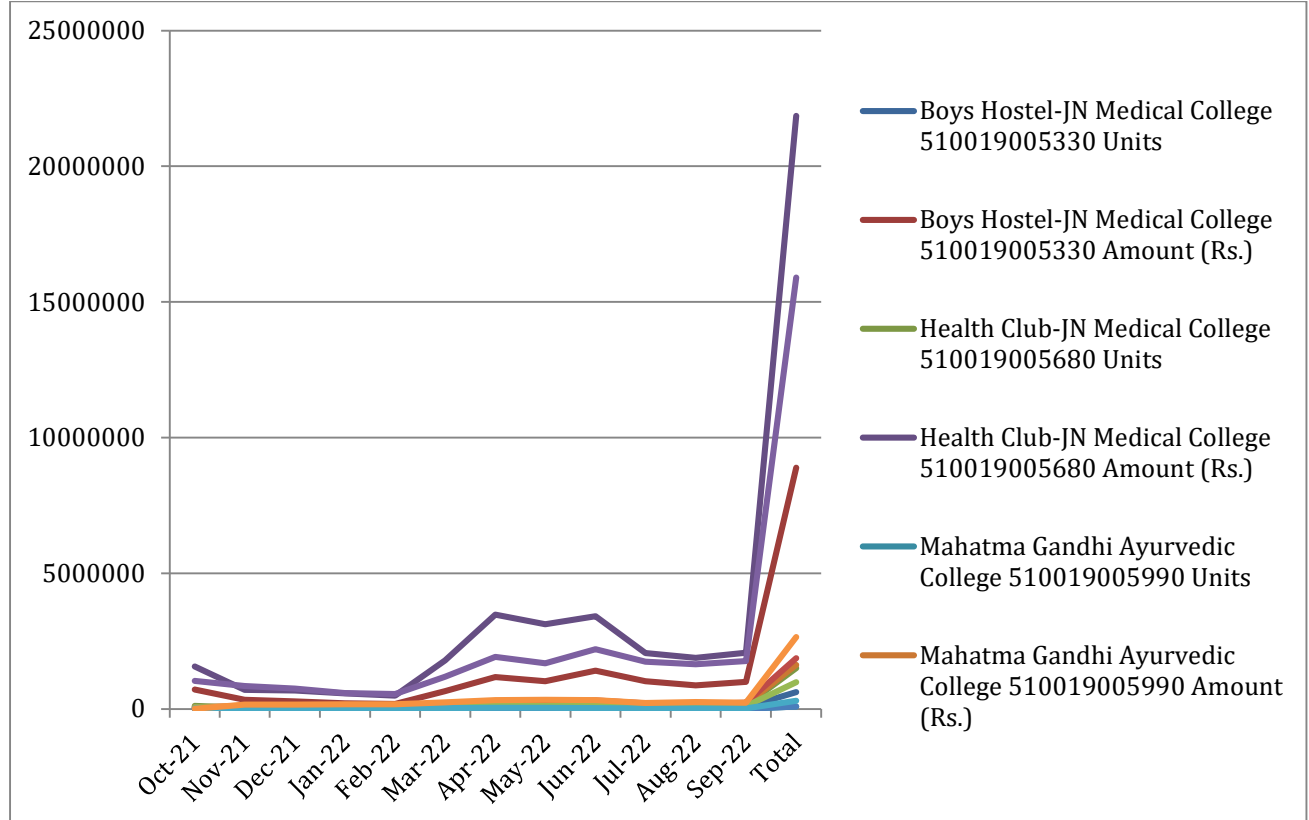
Name of Equipment	Ceiling Fan	Tube Light	CFL	Geyser	AC
No. of Hours Used per Day			10		
Total	6182	8000	3240	1139	1118
Energy Consumption per Month	1,48,368	57600	8165	34170	241488

Electricity bill amount for the last ONE years. - EB data - Rs. 5,28,19,899/year

Consumption data and amount paid from Oct 21 to Sep 22 given below

SN	Institute Name	Consumer No.		Oct-21	Nov-21	Dec-21
1	Boys Hostel-JN Medical College	510019005330	Units	55096	21894	17356
			Amount (Rs.)	719399	334273	285019
2	Health Club-JN Medical College	510019005680	Units	117838	44412	41072
			Amount (Rs.)	1560121	708432	675422
3	Mahatma Gandhi Ayurvedic College	510019005990	Units	1439	8045	6177
			Amount (Rs.)	51115	132441	109064
4	DMIETR/FEAT	510019006170	Units	2649	2242	2689
			Amount (Rs.)	63527	59036	64270
5	DMIMS (JNMC/SPDC/University)	510019020230	Units	64082	53737	46215
			Amount (Rs.)	1030431	842360	753074
6	Meghdoot Apartment	510019013450	Units	21709	17399	18645
			Amount (Rs.)	18858	157560	166608
SN	Institute Name	Consumer No.		Jan-22	Feb-22	Mar-22
1	Boys Hostel-JN Medical College	510019005330	Units	10672	9214	49164
			Amount (Rs.)	210302	195007	657911
2	Health Club-JN Medical College	510019005680	Units	32592	25278	135447
			Amount (Rs.)	578060	494635	1793588
3	Mahatma Gandhi Ayurvedic College	510019005990	Units	1660	1316	5454
			Amount (Rs.)	54052	49475	101888
4	DMIETR/FEAT	510019006170	Units	1526	1718	7827
			Amount (Rs.)	51980	53471	126381
5	DMIMS (JNMC/SPDC/University)	510019020230	Units	31653	29416	80052
			Amount (Rs.)	584634	559929	1183430
6	Meghdoot Apartment	510019013450	Units	20430	18959	29278
			Amount (Rs.)	179570	168888	247217

SN	Institute Name	Consumer No.		Apr-22	May-22	Jun-22
1	Boys Hostel-JN Medical College	510019005330	Units	91797	78754	95053
			Amount (Rs.)	1178046	1028652	1409625
2	Health Club-JN Medical College	510019005680	Units	261240	231885	226929
			Amount (Rs.)	3479830	3128306	3419895
3	Mahatma Gandhi Ayurvedic College	510019005990	Units	15160	11203	14101
			Amount (Rs.)	218490	177264	235940
4	DMIETR/FEAT	510019006170	Units	15578	15823	17704
			Amount (Rs.)	285437	243135	317663
5	DMIMS (JNMC/SPDC/University)	510019020230	Units	124974	118037	134018
			Amount (Rs.)	1915472	1681304	2204406
6	Meghdoot Apartment	510019013450	Units	39619	40187	34155
			Amount (Rs.)	329206	338009	327556
SN	Institute Name	Consumer No.		Jul-22	Aug-22	Sep-22
1	Boys Hostel-JN Medical College	510019005330	Units	68728	57856	67181
			Amount (Rs.)	1019415	866539	997893
2	Health Club-JN Medical College	510019005680	Units	134042	121095	134877
			Amount (Rs.)	2065830	1881351	2070285
3	Mahatma Gandhi Ayurvedic College	510019005990	Units	11252	7505	10220
			Amount (Rs.)	189248	136582	174318
4	DMIETR/FEAT	510019006170	Units	11141	8852	12581
			Amount (Rs.)	207450	174932	227708
5	DMIMS (JNMC/SPDC/University)	510019020230	Units	107330	98938	108862
			Amount (Rs.)	1747387	1643143	1760604
6	Meghdoot Apartment	510019013450	Units	22716	26150	23722
			Amount (Rs.)	226735	255615	235200



SN	Institute Name	Consumer No.	Total Units	Amount (Rs.)
	Boys Hostel-JN Medical College	510019005330	193765	2883847
	Health Club-JN Medical College	510019005680	390014	6017466
	Mahatma Gandhi Ayurvedic College	510019005990	28977	500148
	DMIETR/FEAT	510019006170	32574	610090
	DMIMS (JNMC/SPDC/University)	510019020230	315130	5151134
	Meghdoot Apartment	510019013450	72588	717550

4.4.3.1. Renewable Source of Energy – Solar Power Plants

Total 4 Solar Plant – 22 Invertors - **Solar Power reading Jan to Sep - Power Generated 9 Months - Savings 482010 KWH**

Sr No.	Location	Inverter No.	Make	Serial no.	Jan-22	Sep-22	9 Months Value
1	University building	1	SMA	1901212161	139840	158700	18860
		2	SMA	1901212010	142150	161170	19020
		3	Fronius	28271758	142090	171350	29260
		4	Fronius	28264449	164300	194750	30450
2	Nursing College	1	SMA	1901212724	156200	178780	22580
		2	SMA	1901212004	161110	184010	22900
		3	SMA	1901212960	163570	186690	23120
		4	SMA	1901213117	142470	159870	17400
		5	SMA	1901212280	159460	182070	22610
3	SPDC	3	SMA	1901212011	168300	191770	23470
		4	SMA	1901212224	161500	184230	22730
		2	SMA	1901212664	157070	175570	18500
		5	SMA	1901212016	118000	136340	18340
		1	SMA	1901212101	173960	197660	23700
		6	SMA	1901212267	168720	192660	23940
4	JNMC	7	SMA	1680000423603	175090	192040	16950
		6	SMA	1680000423637	168640	192270	23630
		5	SMA	1680000424045	149360	169930	20570
		1	SMA	1680000423774	144090	164700	20610
		2	SMA	1680000423607	149320	169890	20570
		3	SMA	1680000424298	153390	175070	21680
		4	SMA	1680000424302	153390	174510	21120
		22			3412020	3894030	482010 KWH

4.4.3.2 Energy data – analyzed and appended below

1. Amount paid for LPG cylinders for last three years. - Avg 360 kg LPG Require per day - Approx Amount is 36720/-

2. Other payments towards energy related matters for last three years in the campus

AMC per year for DG Sets 6 No – JNMC Rs 21600, University Rs 15694, SVL Rs 12600, MGACH Rs 12600 Eng C Rs 10000 Sunkalp Buglow Rs 8000

Solar 4 Set – in the building - Internal maintenance with competent team

3. Any other energy saving methods employed in college. APFC panels for transformer, LED Tube lights, Energy saving BLDC ceiling fans, LED street lights

4. Energy used by each electrical equipment per month? (KWh)

Total energy utilization by each type of bulb per month. - 57600 kwh/month

CFL bulbs installed (Hours used/day for how many days in a month) - 8165 kwh/month

Energy used by all fans per month? (kwh) - 148368 kwh/month

Energy used by all air conditioners per month? (kwh). 241488 units/month

Summery - DMIHER - Electrical Asset Details and Power Consumption

SR.No.	Name of the Premise	Ceiling Fan	Tube Light	CFL	Geyser	AC
	Total	6182	8000	3240	1139	1118
	No. of Hours Used per Day			10		
	Energy Consumption per Month	1,48,368	57600	8165	34170	241488

5. Energy usage by all computers per month? (kwh) - 49693 kwh/month

6. Energy used by all photocopier per month? (kwh)- 550 kwh/month

7. Energy used by all cooling apparatus per month? (kwh) 241488 units/month (5.5 Hours/day for 27 days in month)

8. Total Energy for Cooling Units in Food Courts - Not assessed

9. Energy used by each inverter per month? (kwh) - 12600 KWh/ month

10. Electrical equipment used in different labs – All equipment's accounted in each college campus area

11. Heaters used in the canteen of your college - NIL

12. Energy used by each heater per month? (kwh) - 34170 kwh/month

13. Energy used by all street lights per month? (kwh) - 83200KW

14. Alternative energy sources/nonconventional energy sources – Example (Photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) NIL

15. "Switch off" drills at college? NO. Being Planned with Other Mock Drills Included SOP

16. Computers and other equipment put on power-saving mode?

YES. All equipment's are installed with power saving Mode. After the Office hours we are putting standby mode and while going to our side

17. Machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?

Two Hours out of 9 working hours for each equipment

18. Energy conservation methods adapted

The DMIHER uses only Electrical Energy (which Includes Solar Power) and no other form of Energy Used

19. Public awareness systems informing necessity of energy conservation in the campus?

Tool box talk regarding the Energy conservation

SOP established to save energy and controlled by All Areas evidenced as follows

Details of Process / Procedures

1. Mapping of electric load consumption in all premises.
2. Segmentation of individual meters and load distribution.
3. Identify the areas where energy saving to be carried out.
4. Review fortnightly energy saving trend which will be prepared by maintenance team.
5. Load distribution and maintaining the power factor to avoid penalties from MSEDCL.
6. To perform PPM and other necessary parameters as per desired operation.
7. Review & Comparison of the power consumption trend on monthly basis.
8. Submission and revalidation of monthly report for further improvement and take comment from authorities and suggest corrective measures on monthly basis.
9. Energy saving will be carried out in two ways i.e., Best Practices and Remodeling.

Best Practices

1. To carry out public awareness program for energy saving initiated by maintenance team on quarterly basis also Maintenance team will educate technicians in view of energy saving initiative.
2. Keep posters for energy savings in premises.
3. Turn off office and laboratory equipment, lights, Turn off lights and equipment in common areas at the end of the workday and over the weekend.

4. Close windows and doors of conditioned spaces when the building is heating or cooling.
5. Use task lighting and day lighting for office work rather than overhead lighting whenever possible.
6. The use of personal electric heaters in buildings or offices is prohibited unless authorized by Facilities Operations
7. Turn off personal computers and equipment at the end of the workday and over the weekend; utilize devices that power down automatically when not in use.

New construction and major remodels-

1. The decision process for construction and remodels includes energy life cycle costing analyses.
2. New construction and remodels use high- efficiency lighting and lighting controls, including emerging technologies, where the life cycle cost is favorable.
3. Decrease energy consumption through alternative energy sources, such as solar water heating, day lighting, and other strategies.
4. Give primary consideration to connecting and/or extending central utility systems for heating, cooling and other mechanical systems.
5. Meet year-round cooling needs by utilizing the most energy efficient systems (e.g., free cooling or economizer cycles based on life cycle cost analysis).
6. Keep interior decorative lighting to a minimum and minimize exterior decorative lighting.
7. Disconnect all beverage vending machine lamps and specify use of energy saving vending miser devices.
8. Increased use of day lighting and day lighting controls as an integral part of project design.
9. Set heating and cooling set points to minimize energy use while maintaining occupant comfort.
10. Facilities Operations utilizes the most energy efficient means of supplying heating or cooling for approved off-hour/holiday requests.
11. Facilities Operations evaluates requests for temperature set point and occupancy schedule exemptions on an individual basis
12. Set Heating, Ventilation and Air Conditioning (HVAC) occupancy schedules through discussions with Facilities Operations and Facilities Liaisons. In general, the setback schedule takes effect when the majority of the building is unoccupied. During setback periods, utilize override push button applications where available.
13. Exceptions to HVAC occupancy schedules include special areas such as libraries, animal care units or research facilities that require constant or specific temperatures.
14. Use window air conditioners only in areas that lack central cooling or proper air balance, and operate the units consistent with energy conservation.
15. Report areas that are too cold or too hot to the Facilities Customer Service Center.
16. Monthly report on the energy saving and further implementation to improve the power factor and load distribution to Director Office

4.4.3.3. Findings

All efforts in hand to conserve Electrical energy

Diesel is used bare min when there is power failure since solar energy augments power failure

APFC panels for transformer, LED Tube lights, Energy saving BLDC ceiling fans, LED street lights are used and efforts in hand to replace conventional equipment's

4.4.4. Carbon Footprint Audit (Details evidenced as per Annexure – IV - Check List)

1. Total number of students and teachers in the College				
Gender	No of students	No of Teachers	No of non-teaching staff	Total
Male	2289	333	1284	3906
Female	3557	310	1275	5142
Transgender	0	0	0	0
Total	5846	643	2559	9048
2. Total Number of vehicles used by the stakeholders of the college/per day.	975	600	2260	3835
3. No. of cycles used/day in the campus.	30	20	10	60
4. No. of two wheelers used (average distance travelled, cc of two wheelers and quantity of fuel and amount used/day). 2-Wheeler – Data				
Unit	Teaching	Non-teaching		Student day Scholler
JNMC/SPDC/Nursing/Other	50	1080		300
Meghdoot – Apartments	40	10		0
FEAT campus – Eng / Technology	100	150		500
MGAC – Ayurvedic College	40	150		100
Total of vehicle	230	1390		900
Total CC, Average and Run				
	2-Wheeler			
Unit	Teaching	Non-teaching		Student day Scholler
Total Run	2300	13900		9000
CC	140	140		140
Avg Fuel Per Lit	46	278		180
5. No. of cars used (average distance travelled, power of engine (cc) and quantity of fuel and amount used/day).				
Collage Vehicle				
Unit	4-Wheeler / Bus			
	Teaching	Non-teaching		Local Student
JNMC/SPDC/Nursing/Other	20	30		597
Meghdoot	0	0		0
FEAT campus	0	0		188
MGAC	2	2		250
Total of vehicle	22	32		1035
Summery				
Total Run	1080	1800		320
Avg Fuel Per Lit	90	150		45.71
6. No. persons using common (public) transportation (average distance travelled and quantity of fuel and amount used/day). - NIL				
7. No. of persons using college conveyance (general transportation) by the students, nonteaching staff and teachers (average distance travelled and quantity of fuel and amount used per day) ----- - Same as Item No 05				
8. Number of parent-teacher meetings in a year Parents turned up (approx.) 4 in year. Approx 5000 Parents turned up				

9. Number of visitors with vehicles per day 4-Wheeler / Bus – Visitors – 500 – Vehicles - 350
10. Number of generators used/day (hours). quantity and amount for fuel usage/day. 50 hours per month when power failure
11. Number of LPG cylinders used in the campus. quantity and amount of fuel used /day. Avg 360 kg LPG Require per day which Includes Food Court and Laboratory Approx Amount is 36720/-
12. Quantity of kerosene used in the canteen/labs (quantity and amount of fuel used per day and amount spent). No Kerosene Used
13. Use of any other fossil fuels in the college (amount of fuel used per day and amount spent). Nil Used
14. Methods adopt in the future to reduce the quantity of fuel used by the stakeholders/ students/teachers/non-teaching staff of the college. Restricted students' vehicles in campus Shuttle bus service for student movement 2. E-scooters for students & staff it is rental service.

4.4.4.1. Major Findings

DMIHER is promoting use of E Vehicle inside the campus for students and faculty movements
8 Shuttle bus inside the campus for students Faculty to reduce Fuel consumption / Air pollution and road movements among students (from Hostel to college campus)

4.4.5 Waste Management as per Environment Management Systems

4.4.5.1 /2 Air Pollution and water pollution monitored regularly

Pollution control board consent is under renewal

Water quality tested regularly through the Hospital

4.4.5.3 Solid Waste Management.

All scrapes disposed regularly through vendors and Municipal waste through local authority

4.4.5.4 E-waste Management

All e waste disposed regularly through vendors and through buy back system

Section – 5 Recommendations

5.1. General recommendations	<ol style="list-style-type: none"> 1. Consider setting up BIO Gas plant for waste management from Kitchen 2. Canteen committee to include Nutrition and Dietitian to reduce food waste 3. Identification of Aging of Trees and their protection may be considered
5.2. Water Management	<p>Since the water consumption is large about 9,71,116.00 Ltrs through 124 Overhead tanks for use of 9048 members and other than visitors, single point water balancing not feasible and difficult to undertake</p> <p>A water Ring main be established with different consumer usage like Boys Hostel, Girls Hostel, University area, Food court etc and Water Analysis may be considered for each consumer account, if possible, depending upon interconnectivity of Bore wells and Pumps etc to ascertain the consumption rate and loss</p>
5.3 Energy Management	<p>Solar Park May be considered to reduce Electricity consumption, if Roof Top Solar not feasible any further for addition</p> <p>Identify and replace conventional bulbs with LED Bulbs to reduce power consumption</p>
5.4 Carbon Footprint	NIL

Section – 6 Future Action Plans

DMIHER is planning Development of Miyavaki & Bamboo Garden along with plantation of trees for further improvement of green cover in the campus
 2600 No of Medicinal Plants are being planned for planting in the campus

Section – 7 Conclusions

1. Concentrated efforts are made through Continual Improvement Initiative to enhance the Energy, Green and Environment (EGE) Systems of DMIHER
2. Deployment of Tool Box meeting for communication EGE System awareness evidenced
3. Top Management Commitment and Commendable efforts to renovated old Buildings in stages to maintain EGE initiative evidenced
4. All buildings in the campus meeting Structural Stability requirements meeting green building Norms

Section – 8 Acknowledgements

On behalf of the management of our IRQS and the Audit team, we would like to **THANK** the management of DMIHER for having bestowed the confidence upon IRQS and entrusted the job of Energy, Green and Environment audit of your esteemed Institution

Audit Team sincerely acknowledges all the Co-operation, Transparency, Logistics and Hospitality support provided by your team to successfully complete audit

Section – 9: Annexures [Audit Checklist]**Annexure – I****Auditing for Green campus management**

1. Is there a garden in your college? Area?
2. Is there concept-based garden (star plants, medicinal plants, endemic species, agriculture, etc.), specify area for each.
3. Do students spend time in the garden? If so, approximate time and purpose. (Lists with priority Annexure-I).
4. List the plants (scientific names, Family, etc.) in the garden, with approx. numbers of each species (Annexure-II).
5. List of campus flora (attach a list of plants with details, including scientific name, family, approximate number of plants, etc.) in your campus
6. Name and number of the medicinal plants in your college campus.
7. Any threatened plant species planted/conserved (provide a list with their threat status).
8. List the plants to be planted on your campus in the next three years. (Trees, vegetables, herbs, etc.)
9. List the species planted by the students, with numbers (Annexure –III).
10. Have you got any external funding for developing gardens in the campus? If yes, year, agency, and amount of funding.
11. Explain how you utilized funds for gardens.
12. Whether you have displayed scientific names of the plants in the Campus?
13. What are the vegetables cultivated in your vegetable garden? (Mention the quantity of harvest in each season).
14. How much water is used in the vegetable garden and other gardens?
15. Mention the source and quantity of water used (per month).
16. Are you using any type of recycled water in your garden?
17. Who is in charge of gardens in your college?
18. Is there any permanent staff to look after gardens in the campus?
19. List the name and quantity of pesticides and fertilizers used in your gardens?
20. Are you doing any organic practice in your campus? List them?
21. Do you have any composting pit (specify what compost) in your college? If yes, what you do with the compost generated?
22. Do you have a vegetable garden on the campus?

23. If yes, how the harvested vegetables are utilized? Do you have any market in the campus?
24. Is there a nature club in your college? If yes what are the activities?
25. Is there any arboretum in your college? If yes details of the trees planted.
26. Is there any fruit yielding plants in your college? If yes details of the trees planted.
27. Are there any groves in your college? If yes details of the trees planted.
28. Is there any irrigation system in your college?
29. What is the type of vegetation in the surrounding area of the college?
30. What are the nature awareness programs conducted in the campus? Provide a list (annexure-IV)
31. What is the involvement of students in the green cover maintenance? Planting saplings and maintenance
32. What is the total area of the campus under tree cover? Or under tree canopy?
33. Share your future plans for further improvement of green cover.
34. Have you incorporated green conservation aspects in your curriculum?
35. How often you conduct public programs on green conservation?
36. Do students reach out to the public in conveying the message of nature conservation?

Annexure – II**Auditing for Water Management Auditing**

1. What is the total Area of the campus?
2. Number of total teachers, non- teaching staff and students in the campus.
3. Provide a list with different uses of water in the campus (Annexure 2-I).
4. Name different sources of water in your college?
5. How many wells are there in your college?
6. Number of electric motors used for pumping water from each well?
7. What is the total horse power of each motor?
8. What is the depth of each well?
9. What is the present depth of water in each well?
10. How does your college store water?
11. Capacity of the overhead water tank/s in the campus? (In litres)
12. Quantity of water pumped every day? (In litres)
13. How do you justify that the water usage is judicious in the campus?
14. Is there any water wastage? If yes, specify why and how.
15. Is there any mechanism to identify water wastage in the campus, explain (Annexure 2-II)
16. What are the possible ways to check wastage of water?
17. Is there any waste water generation happening in the campus?
18. What are the possible sources of waste water in the campus?
19. Where does the waste water go?
20. Are you reusing the waste water after recycling it?
21. What are the systems of management of water used in your labs, especially Chemistry lab (or labs where experiments are happening involving chemicals)?
22. Does this water get mixed with ground water?
23. Is there any treatment for the lab water after usage?
24. Is there a system of practice of green chemistry in your campus? Give details.
25. Record of water use from the college water meter for six months.
26. Amount of water used per day in the toilets?
27. Amount of fire-wood used in the canteen kitchens?
28. How much ash collected after burning fire wood per day in the canteen?
29. Amount of water used per day for irrigation purpose.
30. Number of waters taps in laboratories. Amount of water used per day in each lab?
31. Total use of water in each hostel?
32. Provide a list of month wise water usage in different areas in the campus
33. Is there any water used for agricultural purposes?
34. Is there any rain water harvest system in the campus? If yes, details of the storage capacity?
35. Report on the status of their functioning.
36. Provide number of damaged taps in the campus? Amount of water lost due to damaged taps or water supply system per day?
37. How do you convey the message of water conservation in the campus?
38. How many water fountains are there?
39. How often the garden is getting irrigated?
40. Amount of water used to water the ground?
41. Amount of water used for college bus cleaning? (Liters per day)
42. Is there any other way by which water is being utilized?
43. Area of the college land which is under concrete tiles.
44. Is there any future plan for the water management in the campus?
45. Is there any water saving techniques followed in your college? Explain?
46. Is there any mechanism by which message on water conservation is been conveyed to staff and students.

Annexure – III**Auditing for Energy Management Audit**

1. List out ways of energy usage in the campus. (Electricity electric stove, kettle, microwave, incinerator; LPG, firewood, Petrol, diesel and others).
2. Electricity bill amount for the last three years.
3. Amount paid for LPG cylinders for last three years.
4. Any other payments towards energy related matters for last three years in the campus
5. Is there any energy saving methods employed in your college? If yes, please specify.
6. Provide the total energy utilization by each type of bulb per month.
7. How many CFL bulbs has your college installed? Mention use (Hours used/day for how many days in a month)
8. Energy used by all fans per month? (kwh)
9. Energy used by all air conditioners per month? (kwh).
10. Energy used by each such electrical equipment per month? (kwh).
11. Energy usage by all computers per month? (kwh)
12. Energy used by all photocopier per month? (kwh) Mention use (Hours used/day for how many days in a month)
13. Energy used by all cooling apparatus per month? (kwh) Mention use (Hours used/day for how many days in a month).
14. Energy used by each inverter per month? (kwh)
15. How many electrical equipment used in different labs (methods that are not included in the above calculations) in the campus? Mentions use (Hours used/day for how many days in a month)
16. How many electrical equipment's are available in all labs in the campus?
17. Energy used by all equipment's together per month? (kwh)
18. How many heaters used in the canteen of your college? Mention their use (Hours used/day for how many days in a month)
19. Energy used by each heater per month? (kwh)
20. Energy used by all street lights per month? (kwh)
21. Does the camp us have any alternative energy sources/nonconventional energy sources? (Photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.
22. Do you run "switch off" drills at college?
23. Are your computers and other equipment put on power-saving mode?
24. Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?
25. What are the energy conservation methods adapted by your college?
26. Are there any public awareness systems informing necessity of energy conservation in the campus?


Annexure – IV

Auditing for Carbon footprint Auditing

1. Total number of students and teachers in your college?

Gender	No of students	No of Teachers	No of non-teaching staff
Male			
Female			
Transgender			
Total			

2. Total Number of vehicles used by the stakeholders of the college/per day.
3. No. of cycles used/day in the campus.
4. No. of two wheelers used (average distance travelled, cc of two wheelers and quantity of fuel and amount used/day). (C.F-Annexure-I).
5. No. of cars used (average distance travelled, power of engine (cc) and quantity of fuel and amount used/day). (C.F-Annexure-II).
6. No. persons using common (public) transportation (average distance travelled and quantity of fuel and amount used/day).
7. No. of persons using college conveyance (general transportation) by the students, nonteaching staff and teachers (average distance travelled and quantity of fuel and amount used per day)
8. Number of parent-teacher meetings in a year? Parents turned up (approx.)
9. Number of visitors with vehicles per day?
10. Number of generators used/day (hours). Provide quantity and amount for fuel usage/day.
11. Number of LPG cylinders used in the campus. Provide quantity and amount of fuel used /day.
12. Quantity of kerosene used in the canteen/labs (Provide quantity and amount of fuel used per day and amount spent).
13. Use of any other fossil fuels in the college (Give the amount of fuel used per day and amount spent). (C.F-Annexure-III).
14. What are the methods you might adopt in the future to reduce the quantity of fuel used by the stakeholders/students/teachers/non-teaching staff of the college.

Name of the Client	Date of Audit	Audit Team		Date and Signature
		Name	Role	
Datta Meghe Institute of Higher Education and Research (DMIHER)	22-11-2022 to 25-11-2022	Capt R E Balasubramanian	Team Leader and Auditor	 7-12-22
		Mrs. Radhika Buwa	Auditor	
		Mr Mahendra Patil	Auditor	