



Certificate of Registration

This is to certify that
Quality Management System
of

GLOBAL ECO TECH SOLUTIONS

PLOT NO: 2309, 1ST CROSS, MAHANTESH NAGAR BELGAUM - 590016, INDIA

has been independently assessed and is compliance with the
requirement of:

ISO 9001:2015
Quality Management System
For the following scope of activities

**SCIENTIFIC WORKS, TESTING QUALITY OF AIR OF CAMPUS,
SOIL AND WATER TESTING, MINOR LIFT IRRIGATION SCHEME,
L-SECTIONS, ELEVATIONS, CONTOURING.ENERGY AUDITS,
SOLAR PLANT INSTALLATION AND MAINTENANCE**

Certificate Number: UKAI-GLHV-23-1619178

Validity of this certificate can be verified at www.ukai.org.uk

Date of Certification	12 th January 2023
Issuance Date	12 th January 2023
1 st Surveillance Due	11 th January 2024
2 nd Surveillance Due	11 th January 2025
Re-Certificate Due	11 th January 2026



UK Assessment & Inspection Ltd.

CAR ADDRESS: 61 Maple Road, Surbiton, England, KT6 4AG

Validity of this certificate is subject to annual surveillance audits to be done successfully. This certificate is the property of UK Assessment & Inspection Ltd. and shall be returned immediately on request. UK Assessment & Inspection Ltd. is an independent Systems Products and Personal assessment Body, UK Assessment & Inspection Ltd. is accredited by UG AC.ORG



Booley
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MAHASATEE ARTS,
COM. & SCI. COLLEGE
ULGA, KAPWAR - 581 325

GREEN AUDIT
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*Global Eco Tech and Solutions, # 2309, I - cross Mahantesh nagar
Belgaum -16 Cell No : 9902428248*



UKAI-GUHV-23-169178



2311, I - Cross Mahantesh Nagar, BELGAUM - 16
 e-mail: bccubc91@gmail.com
 Cell No : 99024 28248. Reg No : UD-KR-04-058972

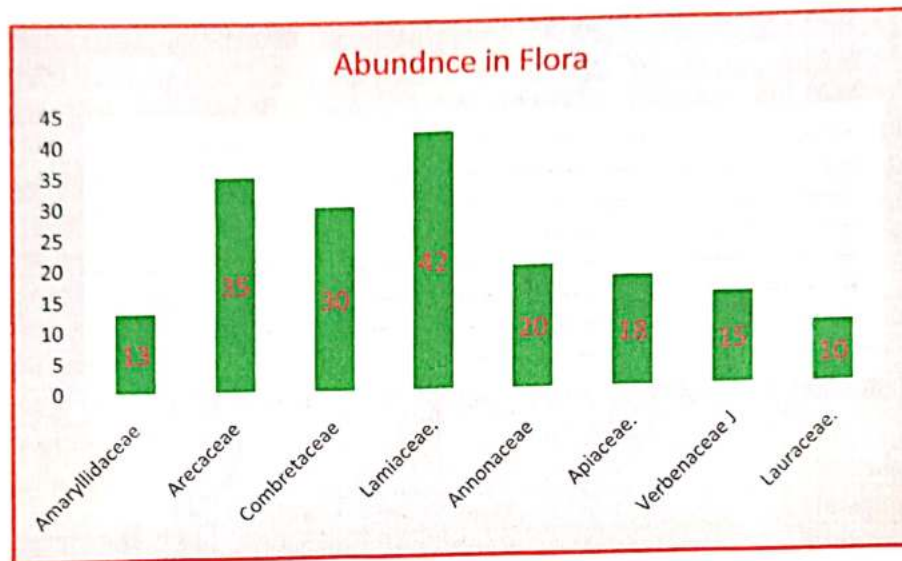
FLORA OF THE CAMPUS

S.No	Scientific name	Family	Vernacular name	Number
1.	<i>Ziziphus jujuba</i>	Rhamnaceae	Bari hannu	
2.	<i>Terminalia catappa</i>	Combretaceae	Kadu Badam	30
3.	<i>Ziziphus oenoplia</i>	Rhamnaceae	Jackel Jujube	7
4.	<i>Saraca indica L.</i>	Fabaceae	Real Ashoka	7
5.	<i>Polyalthia longifolia</i>	Annonaceae	False Ashok	20
6.	<i>Duranta erecta</i>	Verbenaceae J	Golden dew drop	15
7.	<i>Tamarindus indica</i>	Tamarindus	Hunase	5
8.	<i>Phyllanthus emblica</i>	Phyllanthaceae	Guddadnelli	3
9.	<i>Lindera benzoin (L.)</i>	Lauraceae.	Spice wood	10
10.	<i>Araucaria columnaris</i>	Araucariaceae	Christmas Tree	1
11.	<i>Impatiens balsamina</i>	Balsaminaceae	Gouri hoovu	2
12.	<i>Ocimum gratissimum</i>	Lamiaceae.	Katte tulasi	18
13.	<i>Ocimum sanctum</i>	Lamiaceae.	Ram Tulasi	25
14.	<i>Ipomoea quamoclit</i>	Convolvulaceae	Sarswati balli	1
15.	<i>Syzygium cumini</i>	Myrtaceae	Nerale	1
16.	<i>Caladium bicolor</i>	Araceae	Angel wing	13
17.	<i>Euphorbia milii</i>	Euphorbiaceae	Christ thorn	7
18.	<i>Crinum asiaticum,</i>	Amaryllidaceae	Nagadamani	13
19.	<i>Cocos nucifera</i>	Arecaceae	Coconut	35
20.	<i>Physalis alkekengi</i>	Solanaceae	Chainese lantana	5
21.	<i>Athyrium filix-femina (L.)</i>	Athyriaceae	Lady fern	6
22.	<i>Centella asiatica (L.)</i>	Apiaceae.	Mandookparni	18
23.	<i>Butea monosperma</i>	Lycaenidae	Jungle fire	1
24.	<i>Mangifera indica</i>	Anacardiaceae	Maavu	5
25.	<i>Tabernaemontana divaricata</i>	Apocynaceae	SwasticHoovu	6
26.	<i>Leucaena leucocephala</i>	Leguminosae	Wild Tamarind.	4
27.	<i>Opuntia humifusa</i>	Cactaceae	Cactus	3
28.	<i>Bougainvillea</i>	Nyctaginaceae.	KagadHoovu	8
29.	<i>Rauvolfia serpentina (L.)</i>	Apocynaceae	Indian snake root	2
30.	<i>Anacardium occidentale L.</i>	Anacardiaceae	Godambe	7
31.	<i>Santalum album</i>	Santalaceae	Chandan	4
32.	<i>Rosa Rubiginosa</i>	Rosaceae	Gulabi	2



Abundance in Flora

S.No	Family	Number
1	<i>Amaryllidaceae</i>	13
2	<i>Areaceae</i>	35
3	<i>Combretaceae</i>	30
4	<i>Lamiaceae.</i>	42
5	<i>Annonaceae</i>	20
6	<i>Apiaceae.</i>	18
7	<i>Verbenaceae J</i>	15
8	<i>Lauraceae.</i>	10



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Fauna

S.No	Scientific name	Family	English name	Vernacular name
1.	<i>Bucerosbicornis</i>	Bucerotidae	Great Horn bill	Mangatte
2.	<i>Pavo Cristatus</i>	Phasianidae	Peacock	Naveelu
3.	<i>Columba livia</i>	Columbidae	Pigeon	Pariwal
4.	<i>Corvus spp</i>	Corvidae	Crow	Kaage
5.	<i>Chaetura pelagica</i>	Apodidae	Chimney swift	Gubbi
6.	<i>Acridotheres tristis</i>	Sturnidae	Common Myna	Goravank
7.	<i>Cyanocitta cristata</i>	Corvidae	Blue Jay	Neel Kanth
8.	<i>Ardea alba</i>	Ardeidae	Great egret	Dodda belanki
9.	<i>Sturnus vulgaris</i>	Sturnidae	<i>Sturnus vulgaris</i>	kabbaki
10.	<i>Copsychussauralis</i>	Turdidae	Magpie robins	Madiwalhakki
11.	<i>Alcedo atthis</i>	Alcedinidae	King Fisher	Minchulli
12.	<i>Ophiophagus hannah</i>	Elapidae	King Cobra	Kaling Sarp
13.	<i>Oxyuranus scutellatus</i>	Elapidae	Coastal Taipan	BhayanakHaavu
14.	<i>Opheodrysaestivus</i>	Colubridae	Rough green snake	Hasiru Chikki Haavu
15.	<i>Nerodiasipeton</i>	Colubridae	Pond snake	Neeru Haavu
16.	<i>Chamaeleochamaeleon</i>	Chamaeleonidae	Chameleon	Gosumbe
17.	<i>Hemidactylus frenatus</i>	Lacertidea	Common lizard	Halli
18.	<i>Lacerta agilis)</i>	Lacertidae	Sand Lizard	Maralu Halli
19.	<i>Varanus bengalensis</i>	Varanidae	Bengal monitor	Uda
20.	<i>Lithobatesclamitans</i>	Ranidae	Green frog	Hasirukakke
21.	<i>Bufo bufo</i>	Bufo	Toad	Nelagappe
22.	<i>Rana tigrina</i>	Ranidae	Rana	Kappe
23.	<i>Canis lupus familiaris</i>	Canidae	Dog	Naayi
24.	<i>Felis catus</i>	Felidae	Cat	Bekku
25.	<i>Bos indicus</i>	Bovidae	Indian cow	Aakalu
26.	<i>Bubalus bubalis</i>	Bovidae	Baffelo	Emme
27.	<i>Eudynamysscolopaceus)</i>	Cuculidae	Koel	Kogile



SOLID AND HAZARDOUS WASTE MANAGEMENT

The university has deep concern regarding sustainable practices to protect the environment, health and wellbeing through implementation of effective waste management practices such as segregation. Recycling, composting and solid wastes are classified as

1. BIODEGRADABLE WASTE :

Litter, food waste, canteen waste and waste from toilets etc.

Biodegradable kitchen waste from mess and canteen, such as dried leaves, twigs, and plant clippings is collected from all around the campus and used for vermin composting. Dustbins have been installed throughout the campus for waste segregation.

2. NON-BIODEGRADABLE WASTE.

Waste like Plastic, metals, glass, waste bottle (dry waste) are systematically collected, segregated and sold to authorized Vendors for its recycling purpose

3. RECYCLABLE WASTE

Newspaper, cardboard, and stationery write off books are collected and sold to authorized vendors

4. SOLID WASTE MANAGEMENT:

College has a tie-up with Town Municipality to collect solid waste from the campus every day. The waste is segregated at a source and later collected by Pourakarmikas to dispose of properly to the dumping yard of HDMP.

5. LIQUID WASTE MANAGEMENT:

The liquid wastes are mainly drained to improve the ground water level. The grey water from the hostels and canteen is discharged to the recharge pit. Neutralized water from the above process is allowed to sediment in a tank to remove solid suspended waste and later this water is utilized for gardening and landscaping around Campus.

6. SANITORY WASTE

Biomedical waste disposed off as per the Bio-medical Waste Management Rules 2016. Biomedical waste is collected in color-coded bags, disposed and managed as per norms of as per the standard Protocol of Karnataka State Pollution Control Board, in Girls' hostels provided with incinerators for the Disposal of menstrual waste material.

7. e-WASTE MANAGEMENT

The e-wastes generated from Computer Section, Library, Examination section, academic and administrative offices. It includes out of order equipment or obsolete items like circuits, desktop, laptop and accessories, printers, charging and network cable, Wi-Fi devices, sound system, display unit, UPS, Biometric Machine, Electronic instruments etc. All such equipment which cannot be reused or recycled are disposed through authorized e-waste recyclers.





A handwritten signature in black ink, appearing to be "A. J. S." with a flourish.



REAPING THE BENEFITS

1. It shall help to protect the environment of the campus.
2. Identify the cost saving methods through waste minimization and judicious use of energy.
3. Find ways and means to over come the prevailing and forthcoming complications.
4. Empower the organization to frame better environmental policies for the yeas to come.
5. It shall portrait a good image of Institution through its clean and green campus.

PHOTO GALLERY

S.No	Item Description	Geo tag Photos (main)/ images
1	Vanamahotsav by staff	 <p>GPS Map Camera Uttara Kannada, Karnataka, India V6JV+F3V, Karnataka 581328, India Lat 14.881186° Long 74.242261° 01/07/23 12:03 PM GMT +05:30</p>
2	Plantation of Saplings by students	

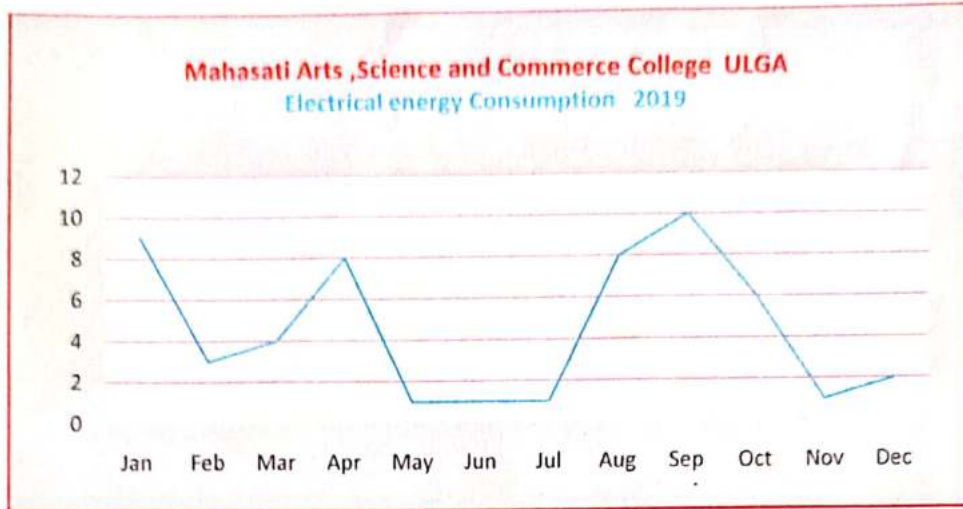


<p>3&4</p>	<p>Waste bins a) Dry b) wet</p>		
<p>5 & 6</p>	<p>Waste bins a) Recyclable b) Sanitary</p>		
<p>6 & 7</p>	<p>a) Starrated Powersaving fridge b)Drip Watersaving system</p>		
<p>9&10</p>	<p>a)FireExtinguisher b)First aid box</p>		

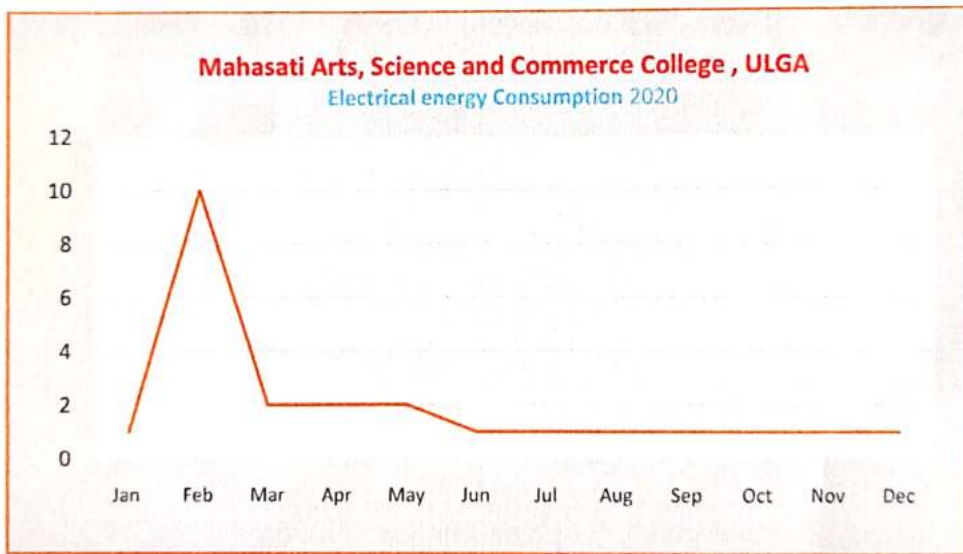
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Mahasati Arts, Science and Commerce College, ULGA
TaKarwarDist : Uttar Kannada
Electric energy Consumption

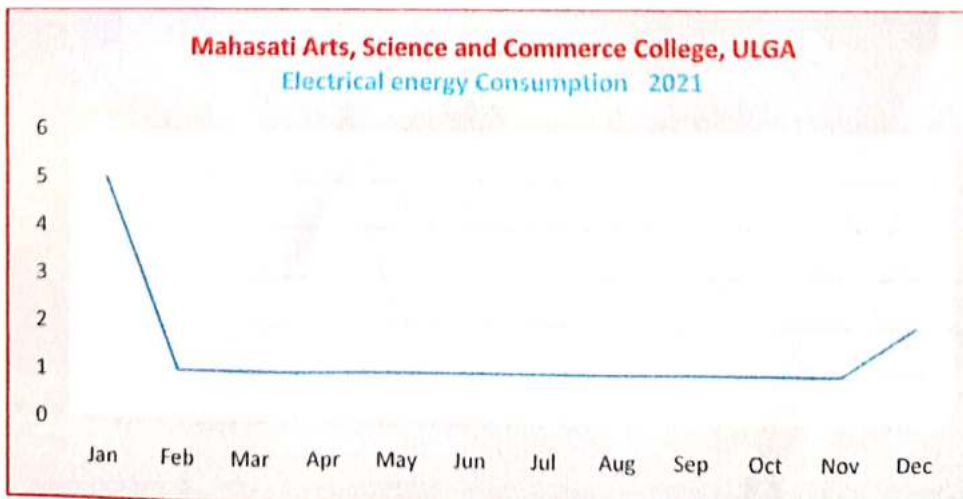
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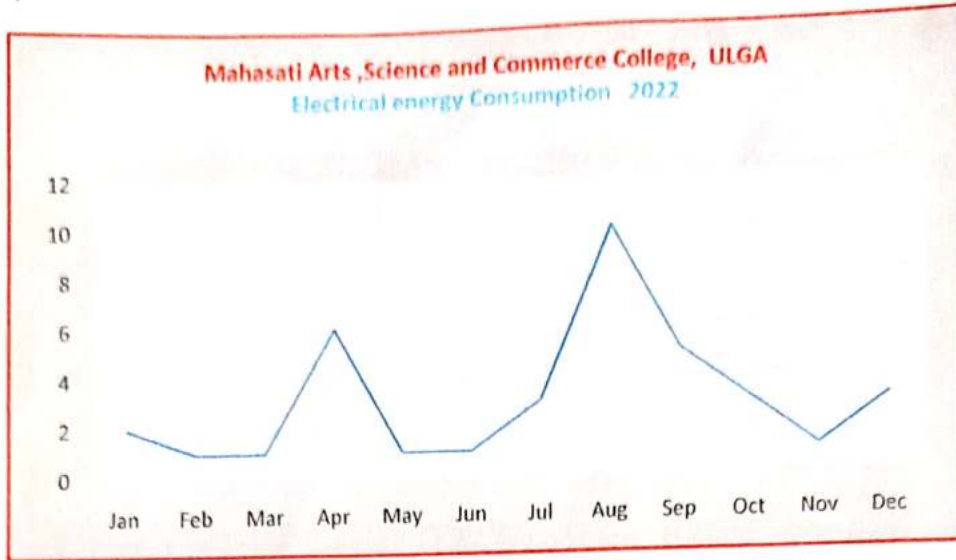
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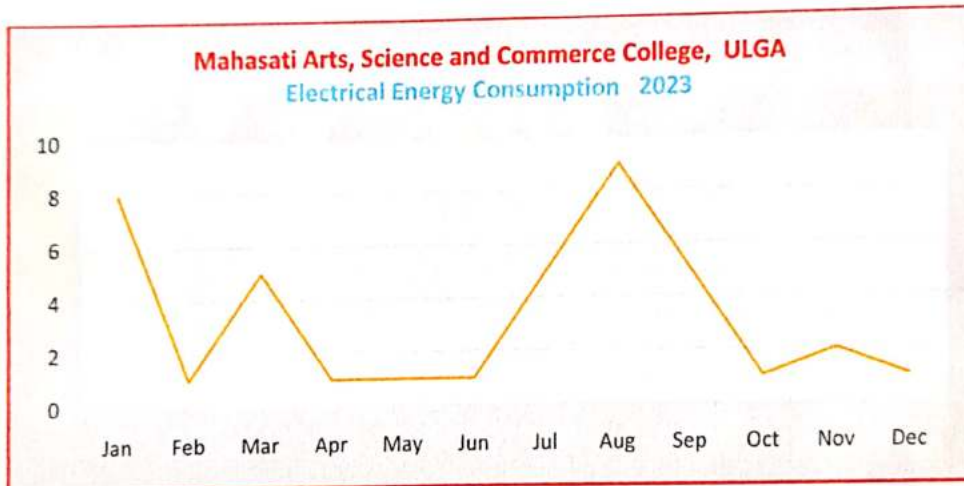
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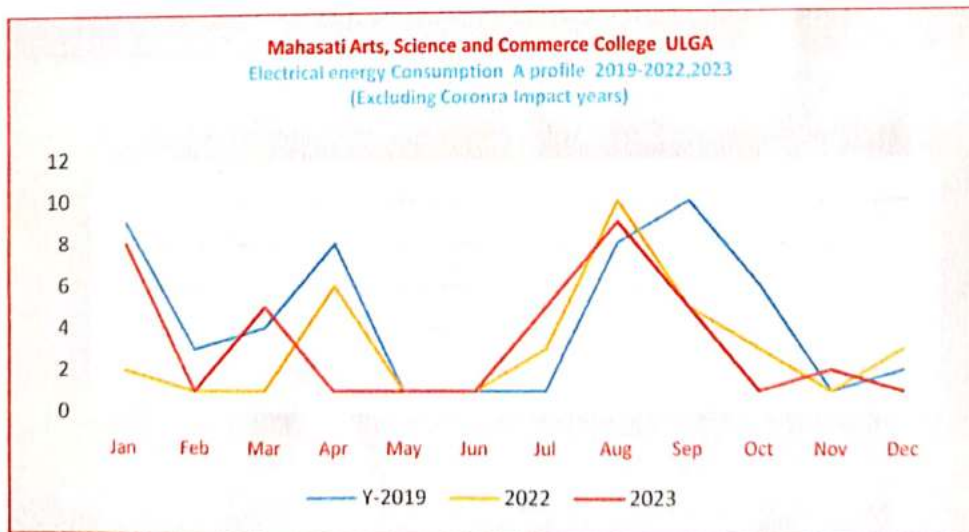
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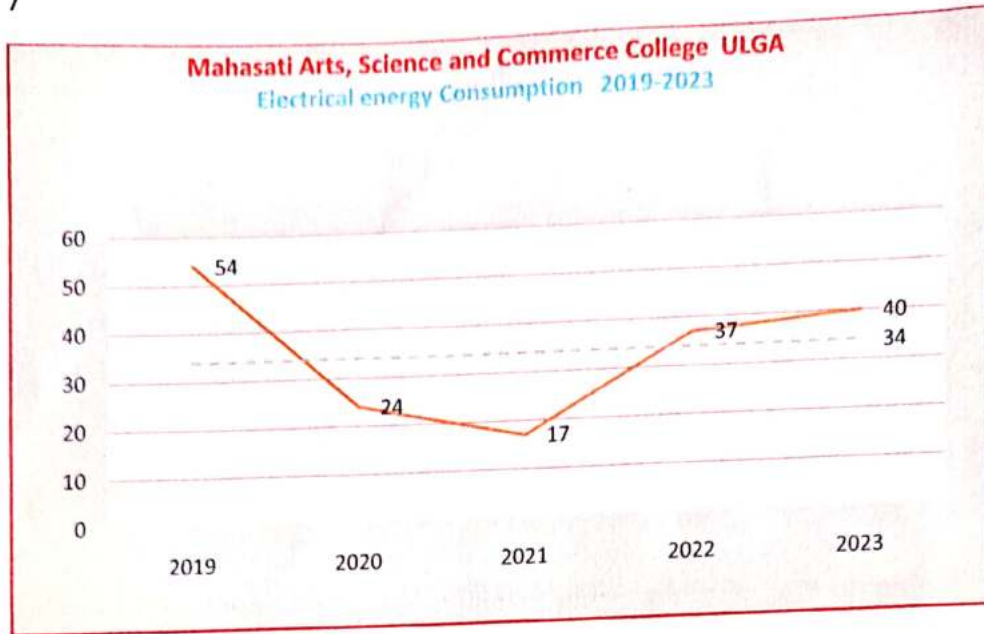
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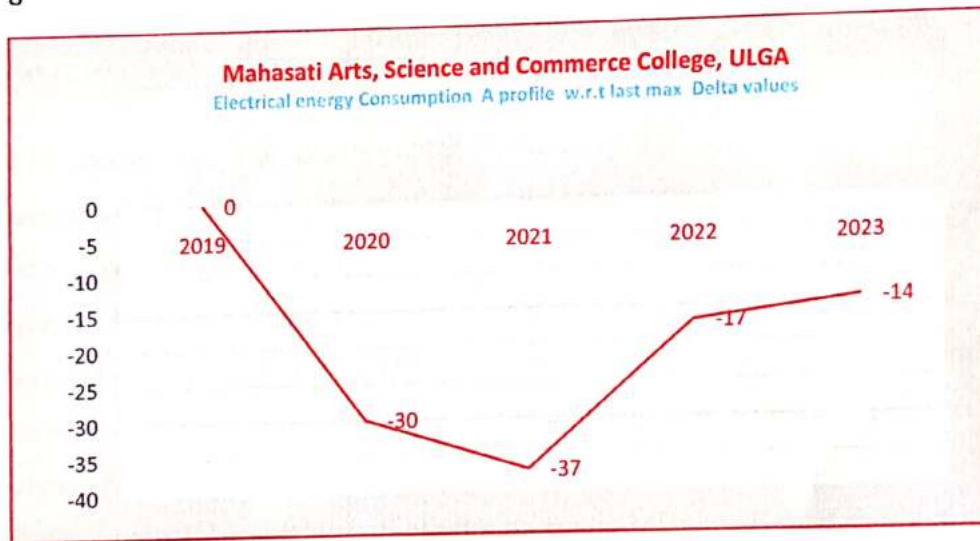
Note* (Excluding Corona Impact period / years)



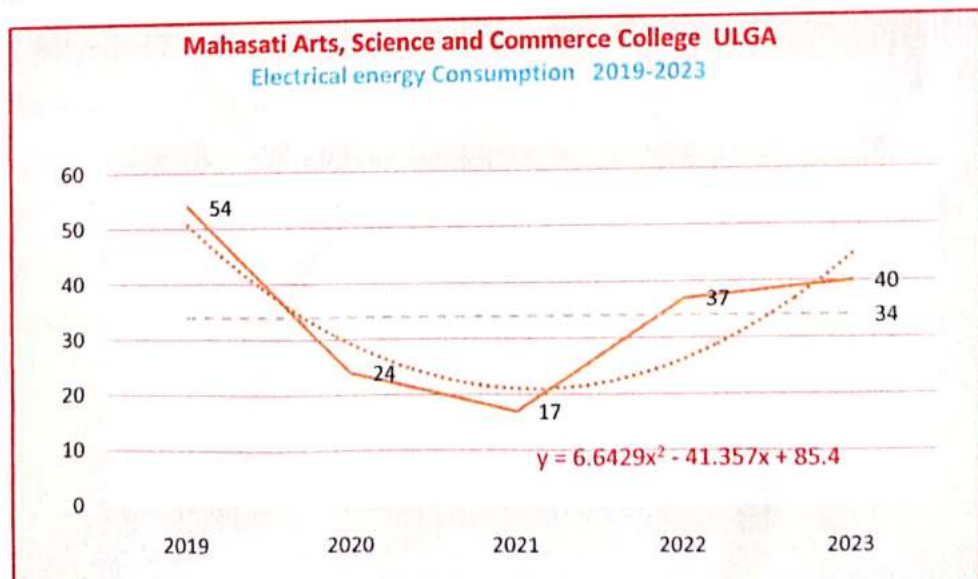
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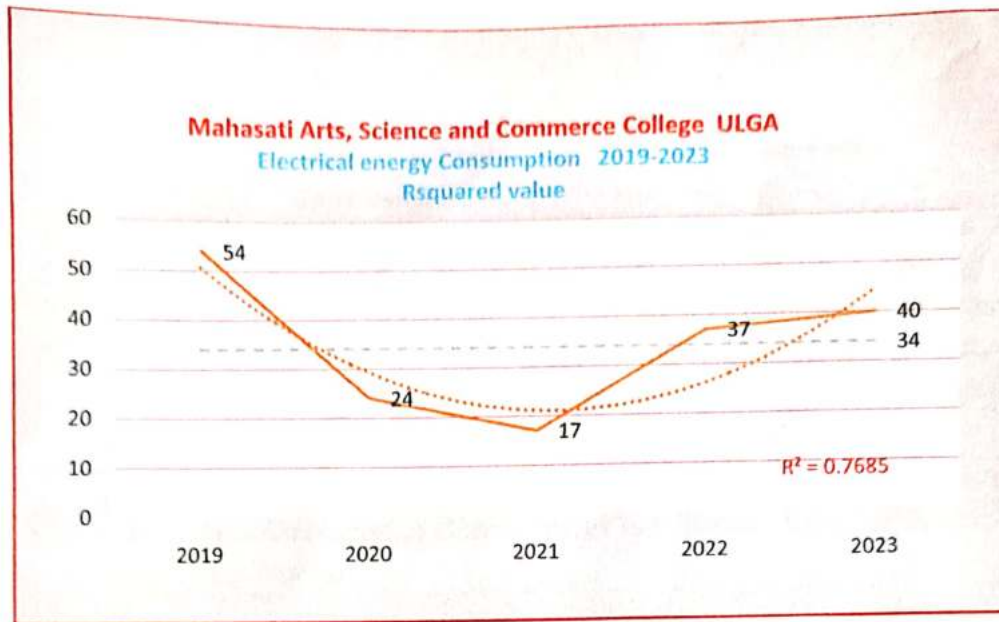


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Analysis

OPTIMUM ENERGY UTILIZATION POLICY

1. Energy sensitization programs are set up in the campus.
2. Awareness is spread among the staff and students regarding judicious use of electrical energy
3. Additional stand alone solar units are installed at prime location of the campus
4. The energy utility curve has a initial exponential decreasing trend later exponential increasing trend has appeared (slope of energy curve is negative compared to previous years)
5. The average monthly utilization of electric energy is 34Units (KWH)
6. A polynomial equation fits the energy utilization curve .
7. The polynomial equation is $y = 6.6429x^2 - 41.357x + 85.4$
8. Order of the polynomial =2
9. R squared value = $R^2 = 0.7685$ is in a **quite acceptable value**
10. Since R^2 value is more than 0.5 the polynomial fits the data
11. Slope $m = -0.160$ negative slope
12. Negative slope is **Good Practice** of using Electric energy is used very judiciously



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	Year	Average Power units consumed	Remarks
1	2019	54	A graphical analysis shows that there is initial decreasing in the beginning. It is found that there is "increasing decreasing trend in the two three year because post Corona period and Development of infrastructure
2	2020	24	
3	2021	17	
4	2022	37	
5	2023	40	
	Average	34	
		*Achievement	- 37.03 % as compared to last max reading
*Note :However conservation of electric energy is followed (Adopting modern electric appliances)			

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ENVIRONMENT AUDIT



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*Global Eco Tech and Solutions, # 2309, I - cross Mahantesh nagar
Belgaum -16 Cell No : 9902428248*

THE GREAT HORN BILL

A Philosophicalbird



A PRIDE OF UTTAR KANNADA DISTRICT

Monogamous (single life partner)

State bird of Kerala

State bird of Arunachal Pradesh

Nagaland festival in the name of Horn bill

If male bird dies during breeding season, female and young die and buried in nest

FEEL PROUD OF ITS LIFE STYLE



Belga



Mahasati Arts, Science and Commerce College, ULGA
Ta : Karwar Dist: Uttar Kannada

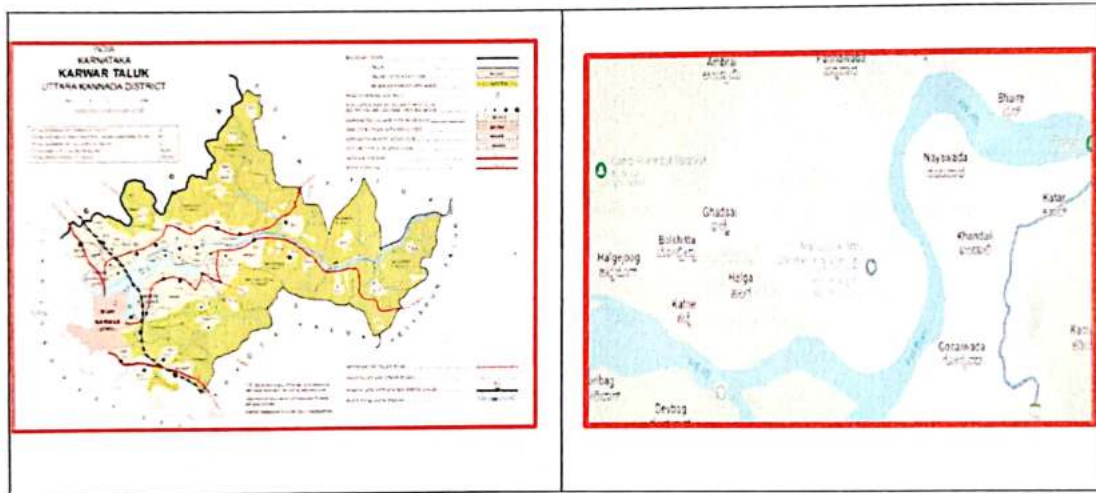
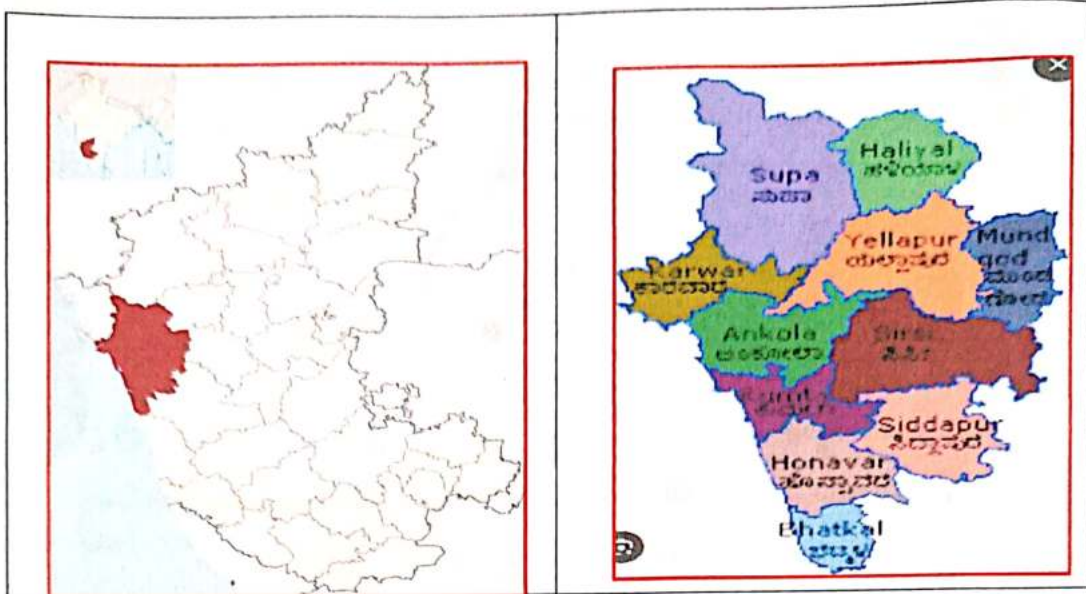


MAIN BUILDING



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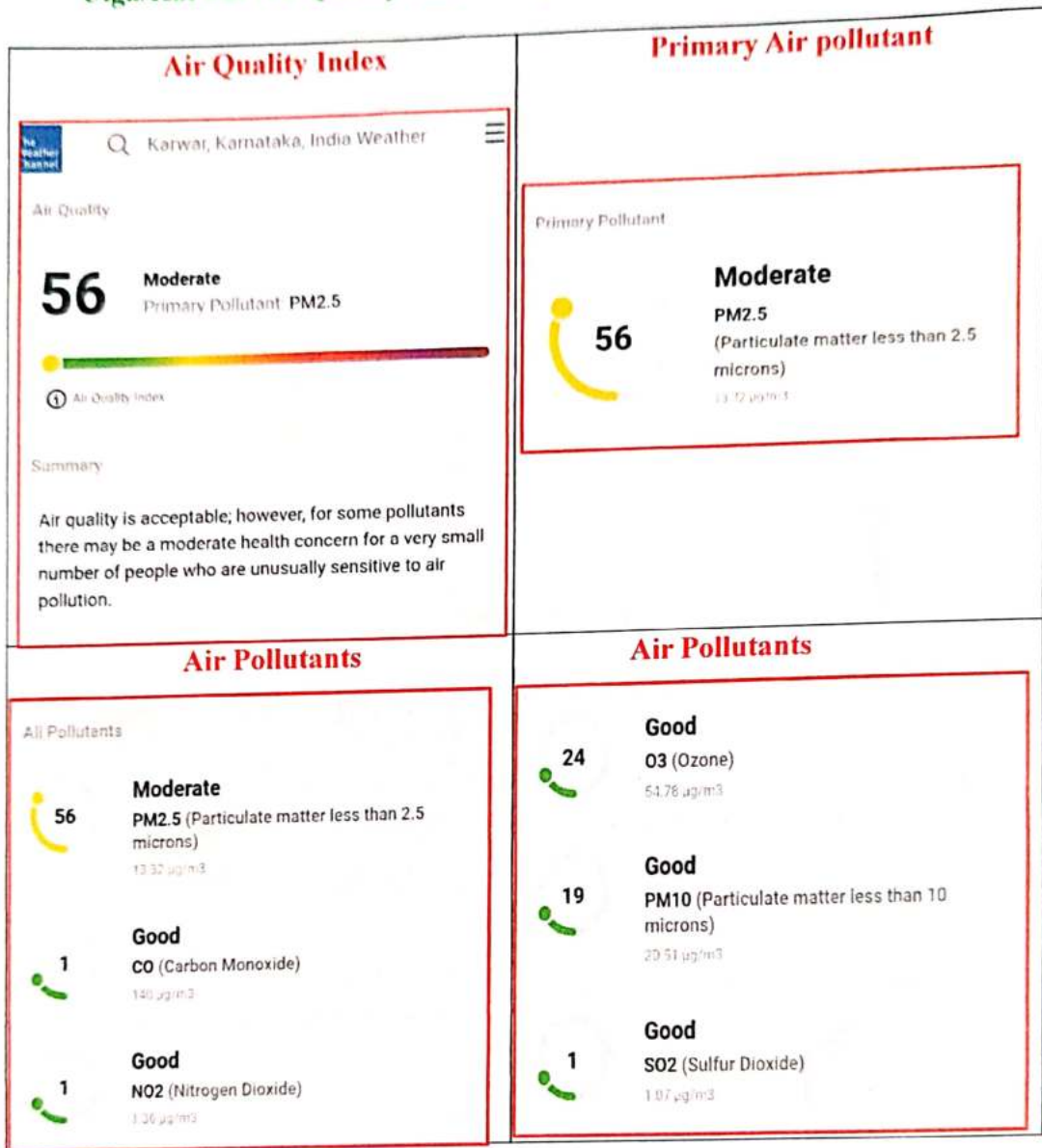
LOCATION DETAILS



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AIR QUALITY INDEX

PRIMARY POLLUTANT AND OTHER POLLUTANT LEVELS Ulga/Karwar Air Quality index and pollutants levels are almost same



Chit.





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2311, I - Cross MahanteshNagar, BELGAUM - 16
e-mail : beecube01@gmail.com
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GEOGRAPHICAL PARAMETERS

1. Altitude from sea level :62 feet
2. Latitude : 14.8881708 N.
3. Longitude: 74.240064E.
4. Geographical location: Kali river Basin
5. Weather zone : *Koppen Gieger* – Am
6. Topo sheet : enclosed
7. Perennial water flow direction :N to S
8. Ridge point near the Campus :Northern side
9. Low Contour pole level : No
10. Slope of the land :1:25
11. Ulga : Semi Agriculture (Areca nut Coconut, Cashew , Fishery,Paddy).

PHYSICAL PARAMETERS

12. Average Temperature :24 to 38 Celsius.
13. Average rainfall: 800 to 1800 mm.
14. Peak rainy month : July-August
15. Snow fall : Nil
16. Gust / Wind speed: 10 to 40 km/h
17. Average pressure : 1006 to 1013 mb
18. Least pressure : June
19. Max pressure: December- January
20. UV Index : 6 to 7 normal
21. Average Humidity : 25 % to 80 %
22. Least humid period : Jan to May
23. Avg Sun days :80 to 340 hours
24. Clear Visibility : up to 8.5-10 km



SUSTANABLE POLLUTION LEVELS

25. AQI :56 Moderate : acceptable
26. RPM 56 13.32 μgm^{-3} Moderate (605 μgm^{-3} as per MoEF)
27. CO level: 1 140.00 μgm^{-3} Good (250 μgm^{-3} as per MoEF)
28. NO_x level : 1 1.36 μgm^{-3} Good (80 μgm^{-3} as per MoEF)
29. O₃ level :24 54.78 μgm^{-3} Good (100 μgm^{-3} as per MoEF)
30. SPM: 1920.51 μgm^{-3} Good (100 μgm^{-3} as per MoEF)
31. SO₂ level : 1 1.07 μgm^{-3} Good (50 μgm^{-3} as per MoEF.)
32. The pollution levels : safer range within limits (as per MoEF standard)
33. dB level: 45 to 50 Very Good . (as per the BIS standards).
34. The illumination level : Appreciable (as per BIS mark 3646 part I.)

TYPE OF SOIL,PH, QUALITY OF WATER AND GREENARY

35. Type of soil : Yellowish Red loamy mix
36. PH of soil : 6.5 to 7.5
37. Water quality: Tested. (Test report is enclosed)
38. Greenery in the campus : Appreciable

MISCELLANEOUS

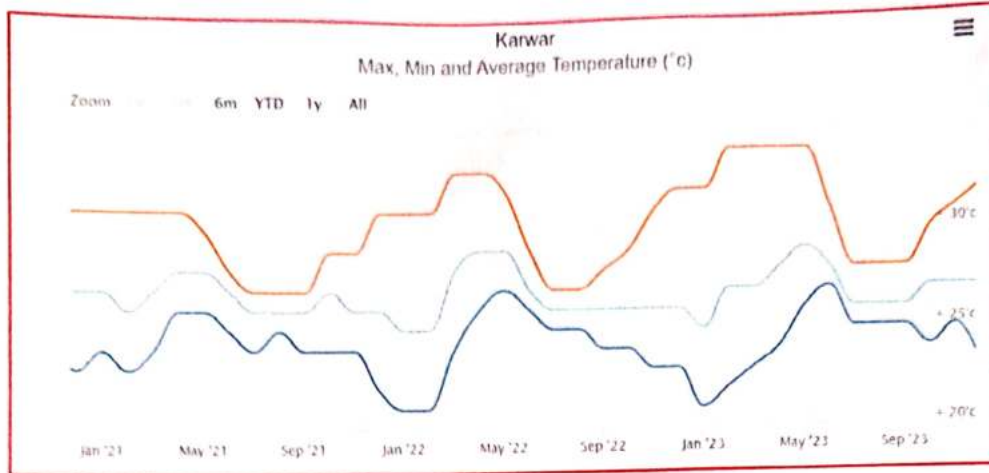
39. Max Hottest day 30th April 12.30 PM +5.30 GMT
40. Max Humid day 06th Aug 12.38 PM + 5.30 GMT
41. Distance from Equator 1651.99 km
42. Distance from Tropic Cancer 7949.42 km
43. Electromagnetic Radiation <40 μT (safe as per the BIS standards).



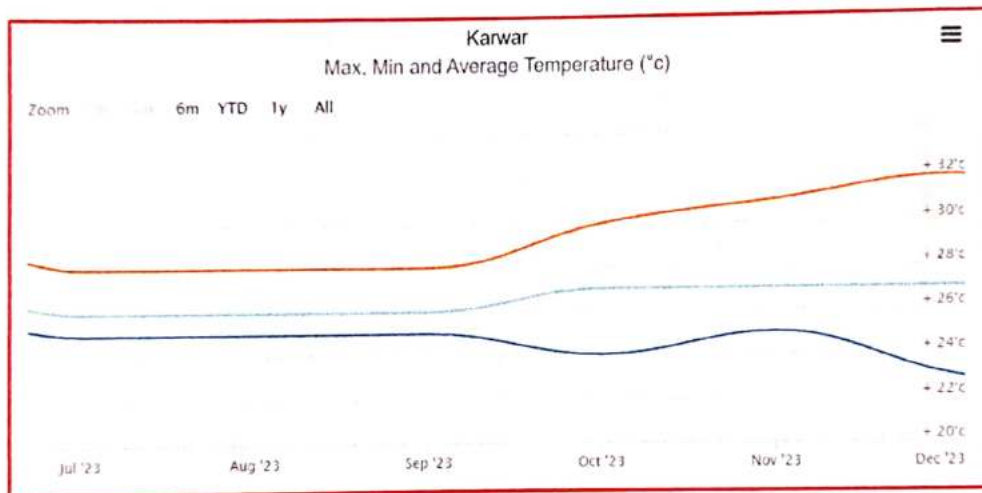
GRAPHICAL REPRESENTATION OF ENVIRONMENTAL PARAMETERS

Ulga /Karwar Environmentally parameter are same

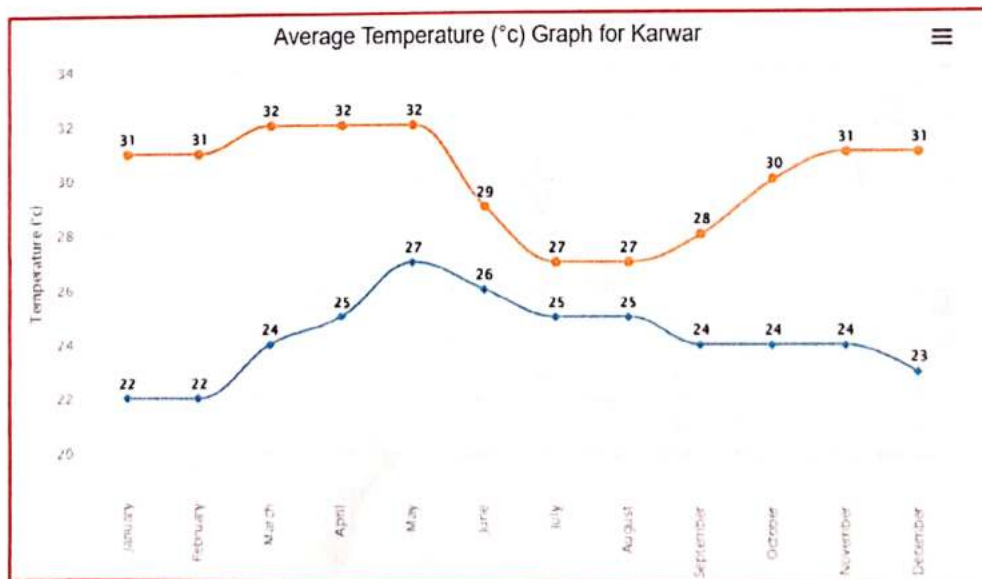
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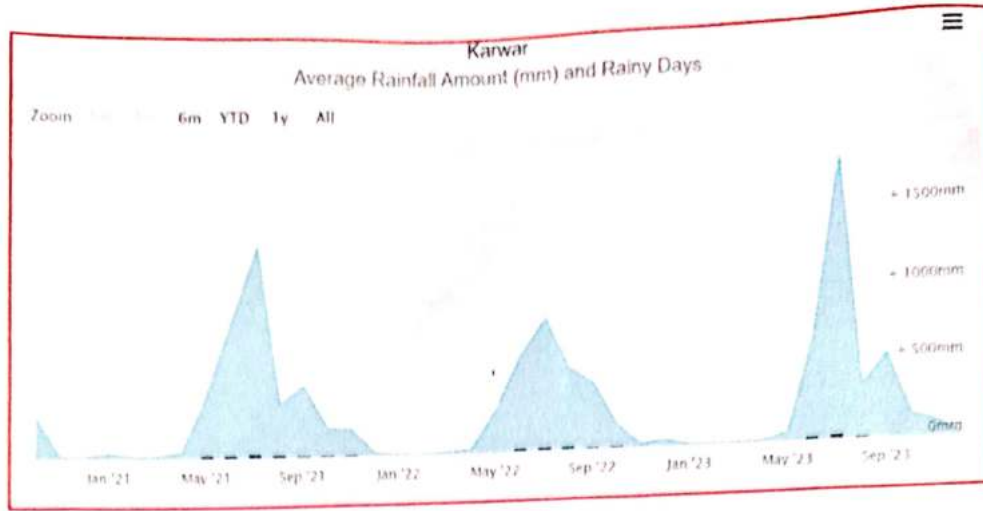
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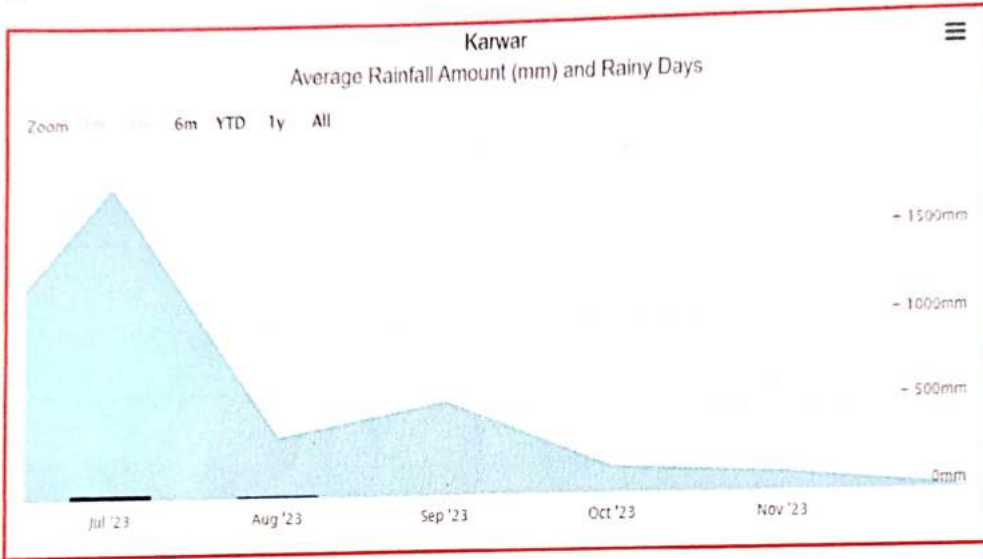
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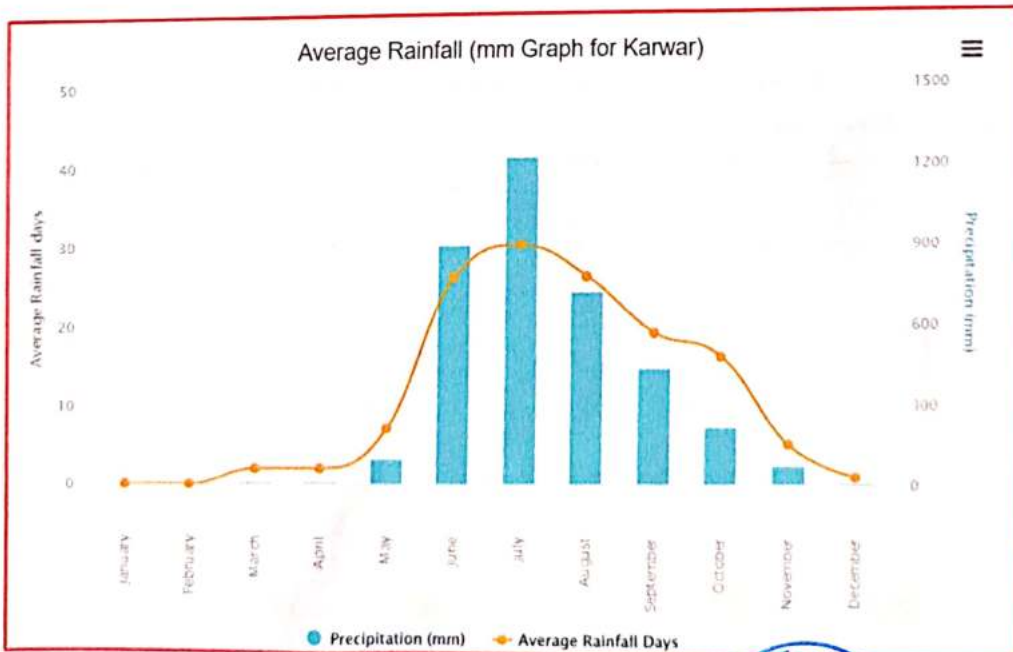
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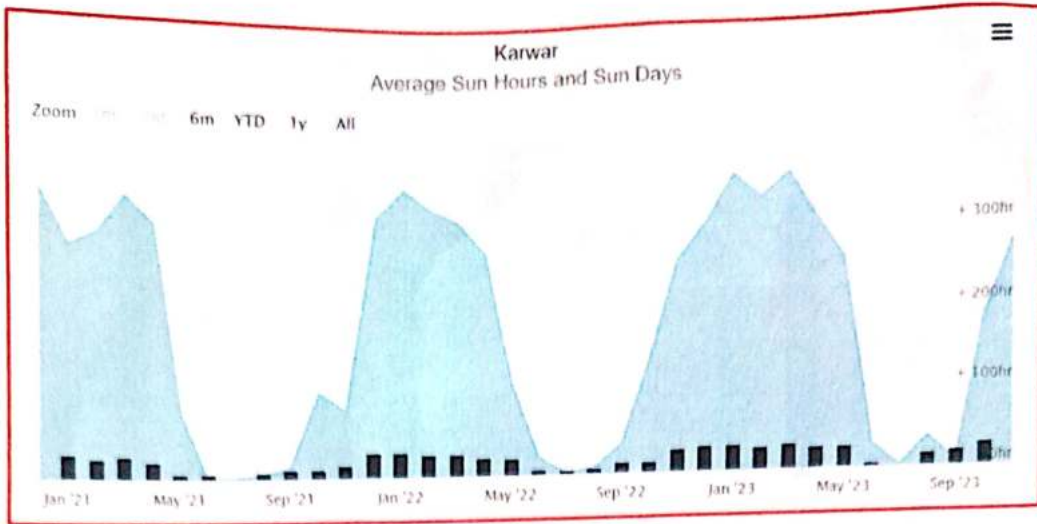
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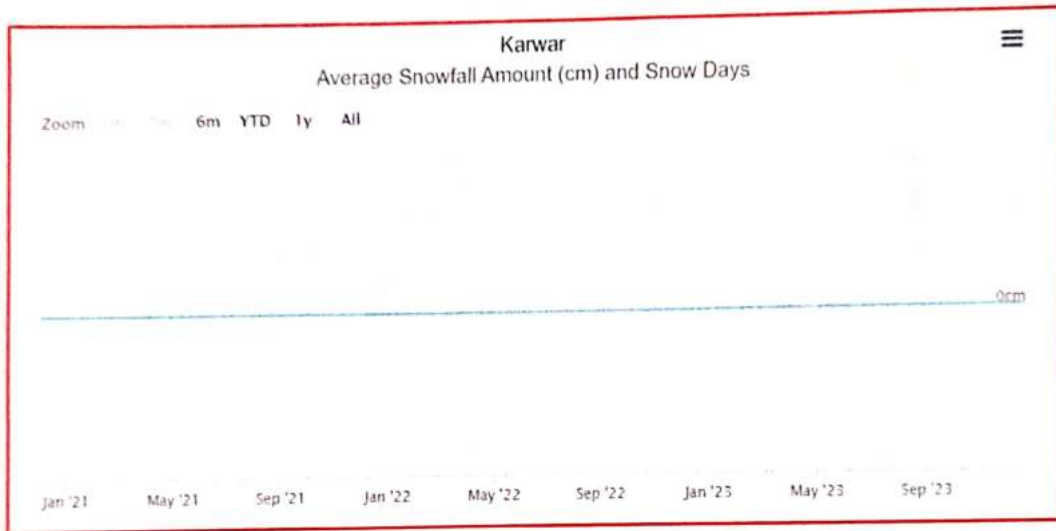
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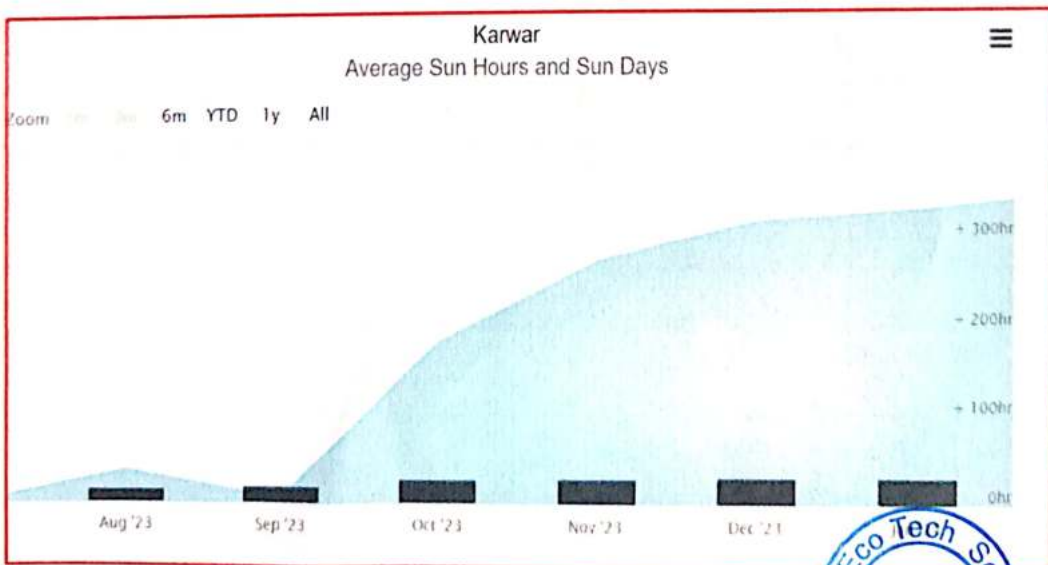
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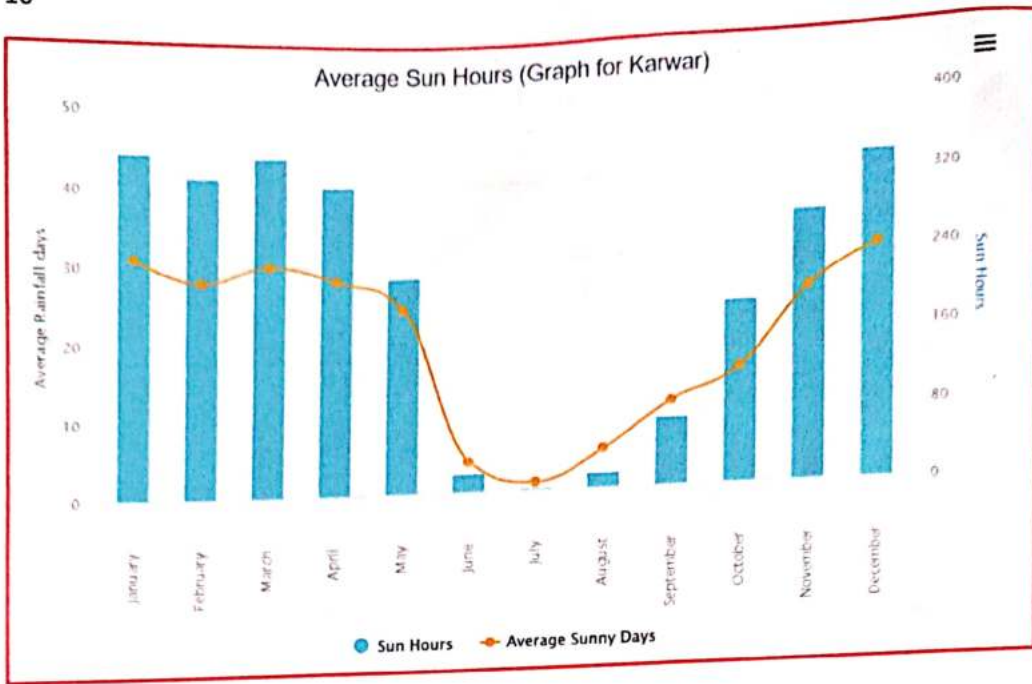
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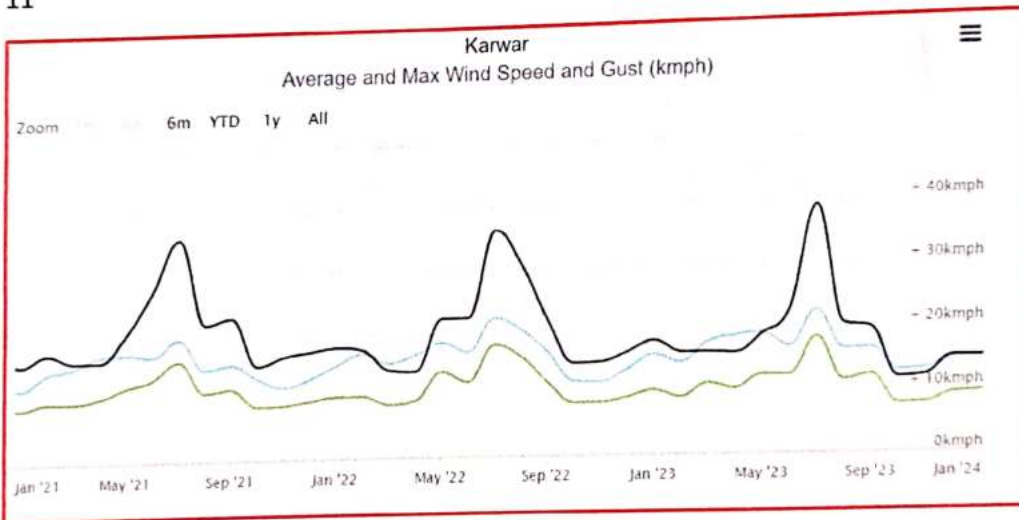
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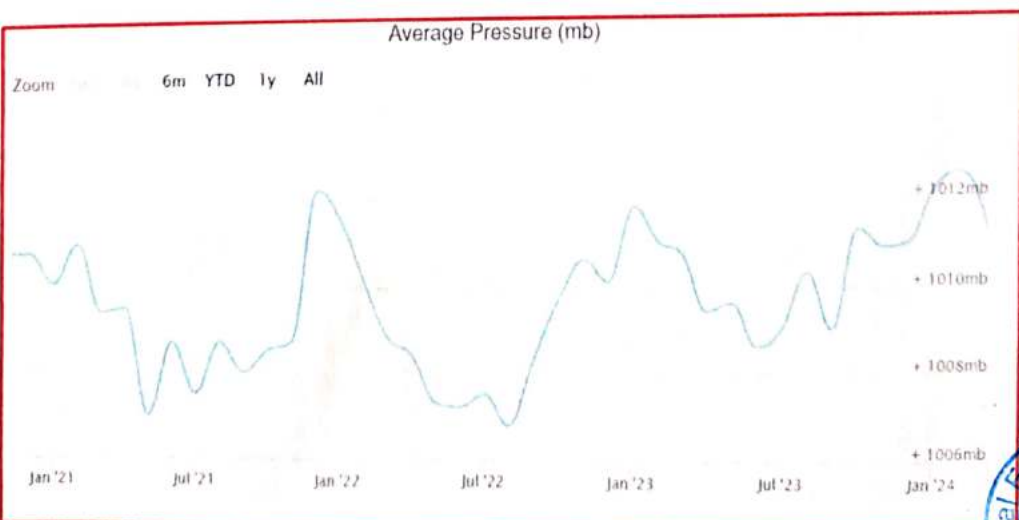
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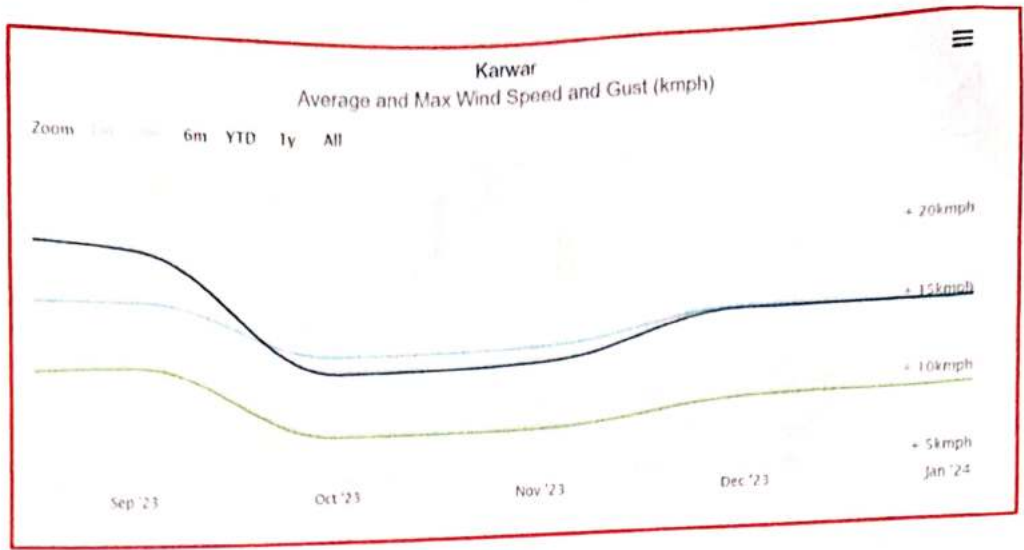
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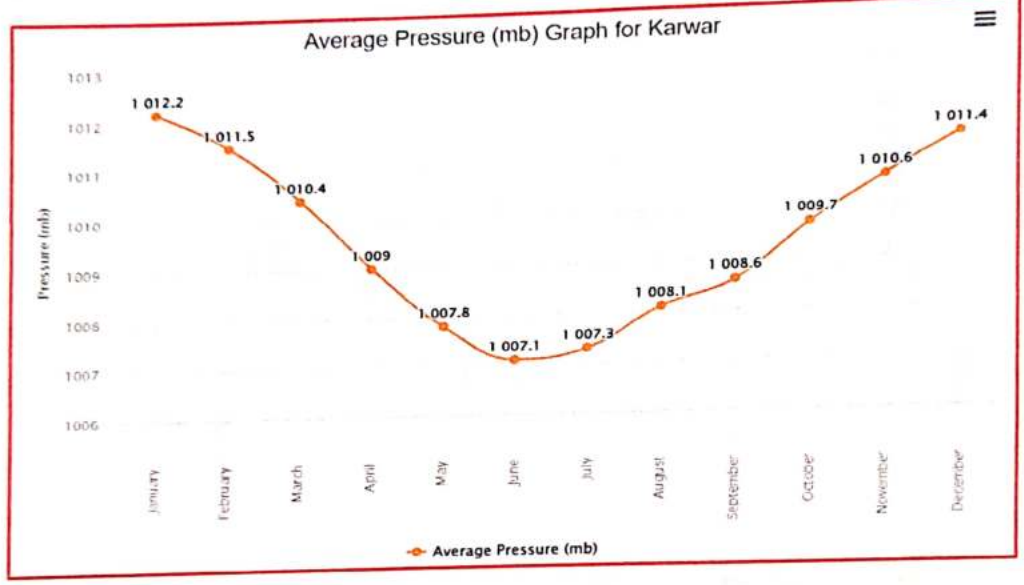
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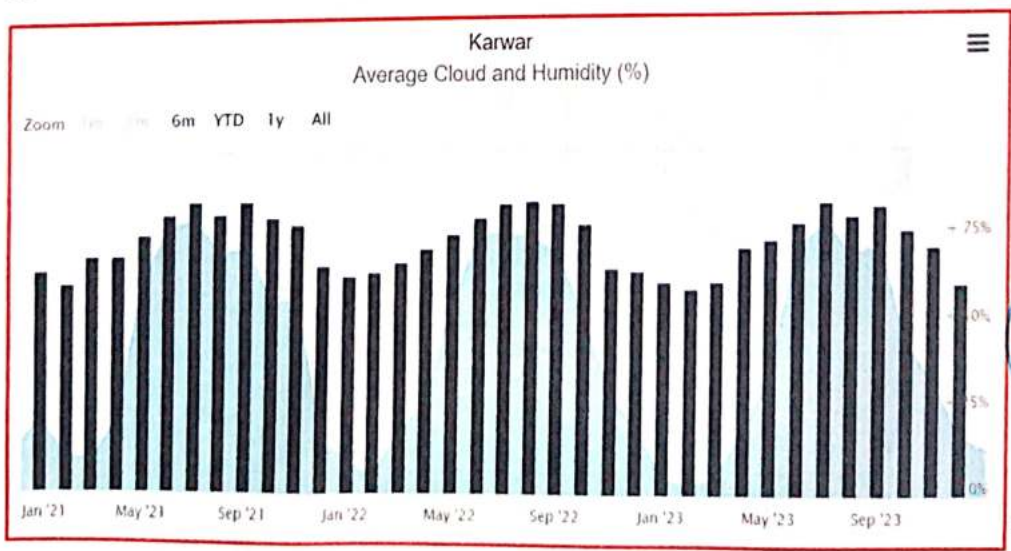
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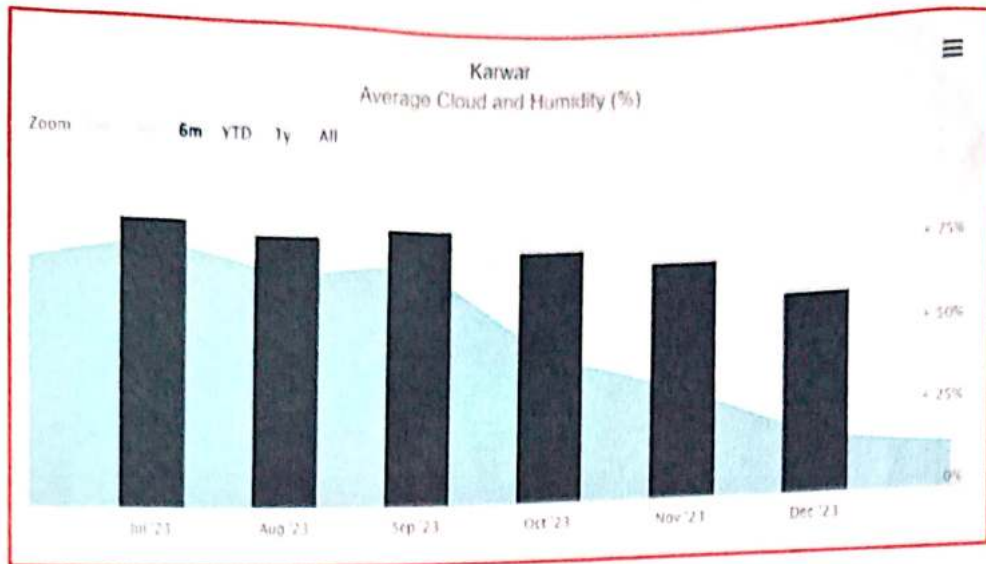


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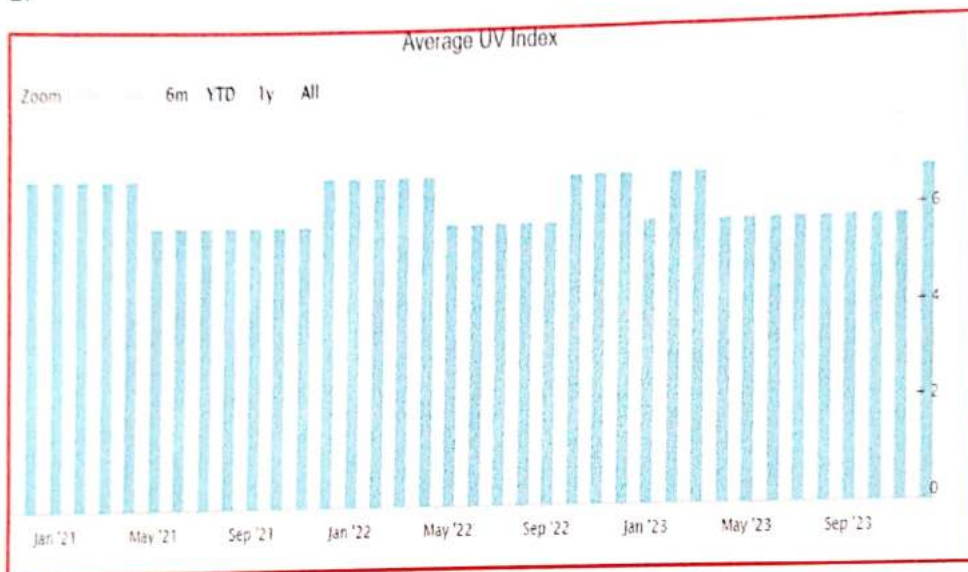


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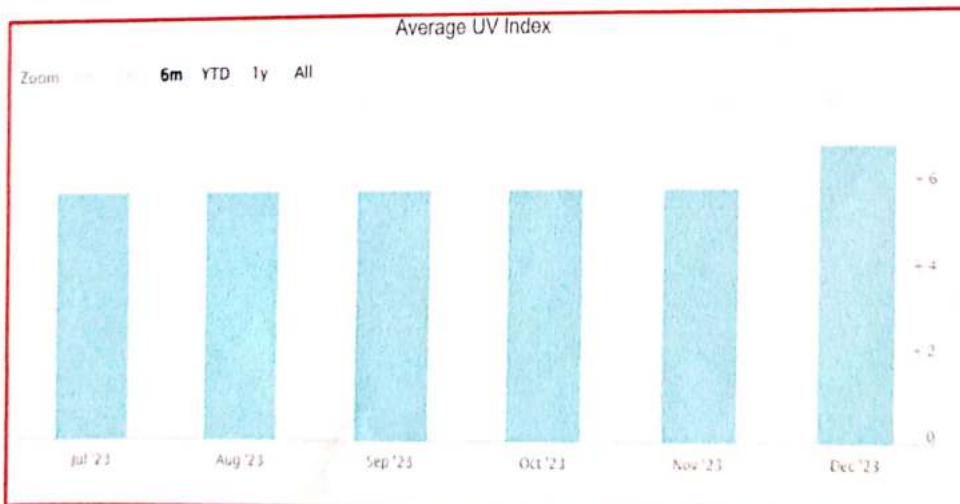
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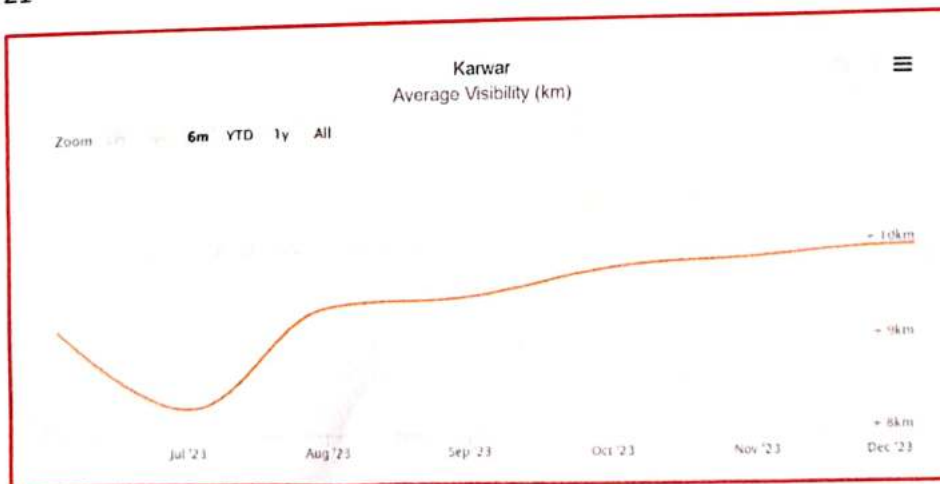
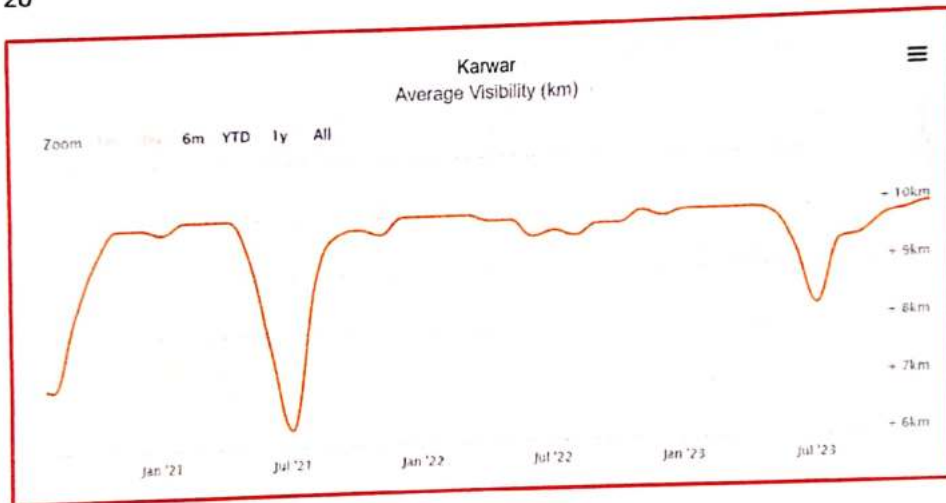
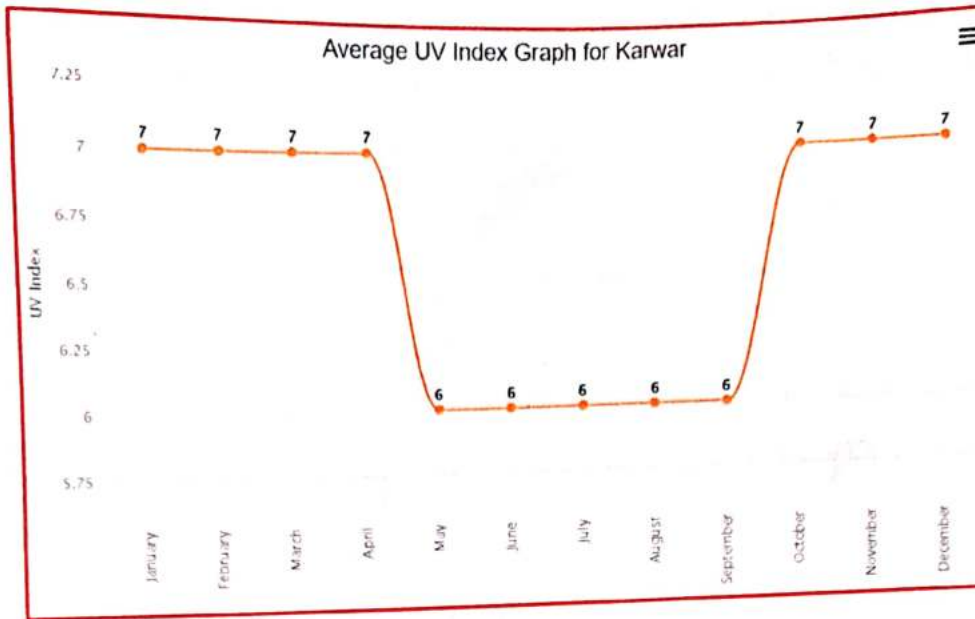
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18



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Cell No.: 9902428248. Reg No : UD-KR-04-058972

ENERGY AUDIT

This is to certify that, *Our Audit Team* has visited Mahasati Arts, Science and Commerce College, Ulga Ta:Karwar and Dist: Uttar Kannada PIN 581 328 and undertook the "*Energy Audi*" of college campus.

Following observation and analysis based on the data is provided here

1. Energy sensitization is observed among the staff and students in the campus
2. Roof top solar energy panel is provided in the campus
3. The energy utility curve has a initial exponential decrease trend, later exponential increase trend has appeared.
4. The average monthly utilization of electric energy is 1634Units (KWH)
5. A polynomial equation fits the energy utilization curve .
6. The polynomial equation is $y = 6.6429x^2 - 41.357x + 85.4$
7. Order of the polynomial =2
8. R squared value $=R^2 = R^2 = 0.7685$ in acceptable value
9. Since R^2 value is more than 0.5 the polynomial fits the data
10. Slope $m = -0.1672$ negative slope
11. Electric bills are slight increase by -37.03 year 2023. No spike readings are observed
12. It is due to infra structure developments

The details of Electric energy related charts and their importance are submitted to the college.

The energy usage profile of the college is very good


Technical staff


Convener
Energy Audit Team

Date :
Place :Ulga





UKAI GLHV 23 169178



2311, I - Cross Mahantesh Nagar, BELGAUM - 16
 e-mail: beecube81@gmail.com
 Cell No : 99024 28248, Reg No : UD KR-04-059972

GREEN AUDIT REPORT

This is to certify that, *Our Audit Team* has visited Mahasati Arts, Science and Commerce College, Ulga Ta:Karwar and Dist: Uttar Kannada PIN 581 328 and undertook the “*Green Audi*” of college campus.

- The campus is maintained very clean.
- Stand alone Solar energy is harnessed
- Fire extinguisher are provided at prime locations.
- Bore well water is tested and used for garden
- Municipal water/RO water is used for the drinking purpose
- Signs are provided in prime locations

Most of the significant plants in the campus are identified and nomenclatured.
 and Fauna is identified

S.No	Item	Number	Nomenclature
1	Number of trees	289	nomenclatured
2	Number of species	30	”
3	Medicinal plants	4	”
4	Rare plants	1	”
5	Endangered plants	-	”
6	Oxygen oozing plants	08	”
7	Sacred plants	4	”
8	Climbers	5	”
9	Aquatic	4	”
10	Ornamental	Many	”
11	Herbs and shrubs	Many	”
12	Fauna (Animals)	Identified	”
13	Rare bird	Horn bill	Pride Uttar Kannada


 Technical staff

Place :Ulga


 Convener

Green Audit team Date :





UKAI-GLHV 23 169178



2309, I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail: beecube81@gmail.com
Cell No.: 99024 28248, Reg No: UD-KR-04-058972

Date :

BILL

RECEIVED Fifteen thousand only from **Principal Mahasati Arts Science and Commerce College UGLA, Ta Karwar Dist Uttar Kannada** towards data Collection consultancy and documentation charges incurred during

1. *Environment Audit.*
2. *Energy Audit.*
3. *Green Audit .*

The afore said audit works have been carried out on campus during the visit for collecting related data .

Rs 15,000/-

Convener


Green Audit team

Date :

Place : Belgaum





UKAI-GLHV-23-169178



2309.I - Cross MahanteshNagar, BELGAUM - 16
e-mail: [beeecube\\$1@gmail.com](mailto:beeecube$1@gmail.com)
Cell No., 99024 28248, Reg.No. UD-KR-04-059972

Date :

Travelling Allowance


RECEIVED Advance of Rupees Three thousand only from **Principal Mahasati Arts Scieince and Commerce College UGLA, Ta Karwar Dist Uttar Kannada** to words, traveling allowance incurred during

1. *Environment Audit.*
2. *Energy Audit.*
3. *Green Audit .*

The afore said travel allowance charges are incurred during the visit of the campus for collecting all the campus related data for **GREEN AUDIT**.

Rs 3000/-

Rupees : Three thousand only


Convener
Green Audit team

Date : 20th Dec 2002

Place : Belgaum





UKAI-GIHV 21-169178



2311.1 - Cross Mahantesh Nagar, BELGAUM - 16
e-mail: beecube31@gmail.com
Cell No.: 99024 28248, Reg No: UD-KR-04-058972

ENVIRONMENT AUDIT REPORT

This is to certify that, *Our Audit Team* has visited Mahasati Arts, Science and Commerce College, Ulga Ta:Karwar and Dist: Uttar Kannada PIN 581 328 and undertook the "*Environment Audit*" of the college campus.

AIRVEDA Camera Techniques Beta Attenuation Method (BAM) has been employed to check the air quality parameters in terms of Air Quality Index (AQI) and audible intensity measured by standard sensors of sound, in decibel Bell (dB).

- 1) Ulga is located in Western Sahyadri hills near Karwar.
- 2) The average rain fall 301 mm
- 3) The average temperature range is 19 to 38°C
- 4) The mean pressure range is 1003 to 1016 m bar
- 5) It is located in "Aw" class as per (Koppen Gieger) weather classification.
- 6) Air Quality Index with level is 68 (Moderate)
- 7) Primary pollutant is RSP: AQI 68 level, ($16.17 \mu\text{gm}^{-3}$ within safer range as per MoEF)
- 8) All other related pollution levels are within safer ranges
- 9) It seems that, the city is free from industrial harmful- gas effluents.

The details of Geographical, Environmental, Weather parameters with related charts and their importance are submitted to the college.

The college fits in all respects for academic developments


Technical staff


Convener
Environment Audit Team

Date :
Place : Ulga

