

A

Field Work Report on Biodiversity in Amba-barwa Wildlife Sanctuary



ESID, 1 Sept 2020



Department of Environmental Science

**Shri. Dnyaneshwar Maskuji Burungale
Science and Art's College Shegaon,
Dist.-Buldana (M.S.)**

HoD

Dr. D. L. Bhade
Shri. D. M. Burungale Science
and Art's College shegaon

Co-Ordinator

Mr. R. B. Barabde
Shri. D. M. Burungale Science
and Art's College shegaon



Late Reverend Father Shri.MaskujiBirujiBurungaleShikshanSanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : + 91-07265-253959 Fax.No. : + 91- 07265-253959

(Affiliated to SantGadga Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdmbsc.org

Email : - sdmbshegaon@gmail.com



Shri.RamvijayDnyaneshwarBurungale
President

Dr.R.E.Khadsan

Dr. D. L. Bhade

Principal

HoD, EVS Deptt.

Email: - dkhadsan@gmail.com dlbhade@gmail.com

Mob. 09767317055

Mob. No. 9923317021

(NAAC Accredited with B⁺ Grade , C.G.P.A. – 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2021-22/

Date: - 01.10.2021

To,

The Principal

Shri. D.M. Burungale Science

and Arts College Shegaon

Subject:-To permit us for organizing Field visit at Amba-Barwa Wildlife Sanctuary (03/10/2021)

Respected sir,

With respect to above subject Department of Environmental Science of our college decided to organize
Field visit at Amba-Barwa Wildlife Sanctuary (03/10/2021) Time 9.00 AM.

So please give permission to organize this program.

Thanking you!

Date:- 01 /10 / 2021

Mr. R.B.Barande

(Coordinator)

Dr.D.L.Bhade

(HoD)
Dr.D.L.Bhade

Assistant Professor & HOD

Department of Environmental

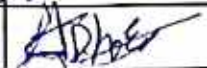
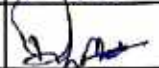
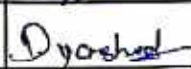
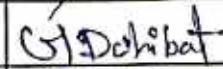
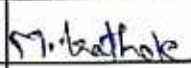
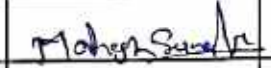
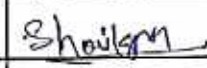
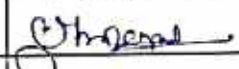
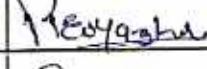
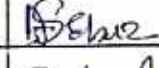
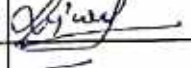
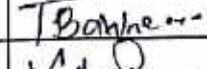
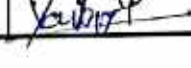
Sci & Arts College, Shegaon

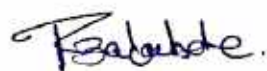
SHRI. D. M. BURUNGAL SCIENCE AND ART COLLEGE SHEGAON
DEPARTMENT OF ENVIRONMENTAL SCIENCE

Amba-barwa Wildlife Sanctuary Field Visit - 2021 - 22

Student List

DATE - 03 / 10 / 2021

Sr. No	Students Name	Signature	Remark	
1	Abhishek Dinesh Gupta			
2	Ankit Mahadeo Dhoran			
3	Dhiraj Santosh Maskar			
4	Dnyaneshwar Murlidhar Nile			
5	Ganesh Bhanudas Dahibhat			
6	Mahesh Gajanan Katole			
7	Mahesh Maroti Sangle			
8	Mudassir shaikh			
9	Om Ravindra Deshmukh			
10	Priyanshu Gupta			
11	Shaikh Arbaz			
12	Suhas Eknath Borokar			
13	Sujwal manoj bangar			
14	Tejas Bawane			
15	Vaibhav Baban Paturde			



R.B. Barabde.



Dr. D.L. Bhade

Dr.D.L.Bhade

Assistant Professor & HOD

Department of Environmental

Shri D M Burungale Sci & Arts College, Shegaon

A

Field Report On Biodiversity In Amba-barwa Wildlife Sanctuary



ESTD - 1 Sept. 2000



Department of Environmental Science
Shri. Dnyaneshwar Maskuji Burungale Science and
Art's College Shegaon, Dist.-Buldana (M.S.)

Submitted By
Mr. Sujwal Manoj Bangar
B.Sc – II

HoD
Dr. D. L. Bhade
Shri. D. M. Burungale Science
and Art's College shegaon

Co-Ordinator
Mr. R. B. Barabde
Shri. D. M. Burungale Science
and Art's College shegaon

Acknowledgement

Department of Environmental Science give me opportunity to performing such activity. This activity helps me to improve my subject views. I have deepest sense of gratitude towards my guide **Prof. R. B. Barabde** for his valuable guidance and keen interest constructive criticism and constant inspiration throughout the Field work.

I feel equally indebted towards respected Principal **Dr. R.E. Khadsan** Shri. Dnyaneshwar Maskuji Burungale Science and Art's College Shegaon for his significant support and co-operation to success of this Field work.

I deem it a great pleasure and privilege to offer my sincere and cordial thanks to respected Head of Department **Dr. D.L. Bhade** for his constructive help during Field work.

I also express my sincere thanks to **Prof. P. L. Gawande, Prof. Y. M. Kuchar**, for their supporting helps.

I also express my gratitude to all teaching and non-teaching staff and library staff for their cooperation.

I also thank to my colleagues and friends for their supportive help to completion of this Field work.

My words fail to express my feelings in respect of my below parent who are providing constant encouragement and blessings.

Place:- Shegaon

Date:- 09 / 10 / 2021



Signature of student

Shri Dnyaneshwar Maskuji Burungale Science and Art's
College Shegaon, Dist. Buldana-444203



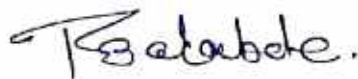
**DEPARTMENT OF
ENVIRONMENTAL SCIENCE**



CERTIFICATE

This is to certify that Ms/Mr. **Sujwal Manoj Bangar** of B.Sc.- Ist / IInd / IIIrd
Semester – I / II / III / IV / V / VI has satisfactory complete the fieldwork on
“**Biodiversity of Amba-Barwa Wildlife Sanctuary** ” in the subject
Environmental Science during session 2021 - 2022

Date of Submission :- 09 / 10 / 2021



Subject Teacher
Mr. R. B. Barabde



Head of Department
Dr. D. L. Bhade

Field Report

The Amba Barwa Wildlife Sanctuary is situated in Satpura hills of the Buldhana District of Maharashtra. It is a part of the Melghat Tiger Reserve. The sanctuary area includes a Reserved forest of 102.10 sqkm, Protected forest 22.62 Sq. km. and remaining land is private cultivation and *Abadi* lands from ex-forest villages of *Ambabarwa*, *Chunkhadi* and *Rohinkhed* of Sangrampur Taluka of Buldhana District.

The Sanctuary is under the Chief Conservator of forest and Field Director, Melghat Tiger Reserve with headquarters at Amravati.

The sanctuary is 65 km from the Shegaon. The tourist zone of the sanctuary is 21.26 Sq. km comprising eight forest compartments. The other tourist attraction are *Mangri Mahadev Mandir*, *Jalkakund*, *Pipladohkhora*, and *Chimankhora*.

Plants of Amba Barwa:-

1) Teak Plant :-

Scientific name: *Tectona grandis*

Higher classification: *Tectona*

Rank: Species

Family: Lamiaceae

Kingdom: Plantae

Order: Lamiales

Teak is a tropical hardwood tree species in the family Lamiaceae. It is a large, deciduous tree that occurs in mixed hardwood forests. *Tectona grandis* has small, fragrant white flowers arranged in dense clusters at the end of the branches. These flowers contain both types of reproductive organs.

2) Arjuna Plant :-

Scientific name: *Terminalia arjuna*

Family: Combretaceae

Higher classification: Tropical almond

Rank: Species

Kingdom: Plantae

Order: Myrtales

Terminalia arjuna is a tree of the genus *Terminalia*. It is commonly known as arjuna or arjun tree in English.

3) Dhawda Plant :-

Scientific name: *Anogeissus latifolia*

Higher classification: *Anogeissus*

Rank: Species

Family: Combretaceae

Order: Myrtales

Anogeissus latifolia is a species of small to medium-sized tree native to the India, Nepal, Myanmar, and Sri Lanka. Its common names are axlewood, bakli, baajhi, dhau, dhawa, dhawra, or dhaora, takhian-nu, and raam. It is one of the most useful trees in India.

4) Salai Plant :-

Scientific name: *Boswellia serrata*

Higher classification: *Boswellia*

Rank: Species

Family: Burseraceae

Kingdom: Plantae

Boswellia serrata is a plant that produces Indian frankincense. The plant is native to much of India and the Punjab region that extends into Pakistan.

5) Mango Plant :-

Scientific name: *Mangifera indica*

Family: Anacardiaceae

Higher classification: *Mangifera*

Rank: Species

Kingdom: Plantae

Order: Sapindales

Mangifera indica, commonly known as mango, is a species of flowering plant in the family Anacardiaceae. It is a large fruit tree, capable of growing to a height of 30

metres. There are two distinct genetic populations in modern mangoes – the "Indian type" and the "Southeast Asian type".

Animals In Amba – barwa:-

1) Deer :-

Scientific name: Cervidae

Speed: Reindeer: 60 – 80 km/h

Gestation period: Reindeer: 222 days

Height: Reindeer: 85 – 150 cm

Higher classification: Pecora

Family: Cervidae; Goldfuss, 1820

Deer or true deer are hoofed ruminant mammals forming the family Cervidae. The two main groups of deer are the Cervinae, including the muntjac, the elk, the red deer, and the fallow deer; and the Capreolinae, including the reindeer, white-tailed deer, the roe deer, and the moose.

2) Bear :-

Scientific name: Ursus

Speed: Brown bear: 56 km/h

Height: Brown bear: 70 – 150 cm

Gestation period: Brown bear: 180 – 270 days,

Higher classification: Bears

Family: Ursidae

Ursus is a genus in the family Ursidae that includes the widely distributed brown bear, the polar bear, the American black bear, and the Asian black bear. The name is derived from the Latin ursus, meaning bear.

3) Wolf :-

Eats: Deer, Hares, Moose, Arctic fox, Elk, Bison, Beaver, Rodents, Ungulate

Height: 80 – 85 cm (Adult, At Shoulder)

Scientific name: Canis lupus

Mass: 30 – 80 kg (Male, Adult), 23 – 55 kg (Female, Adult)

Length: 1 – 1.6 m (Adult)

Conservation status: Least Concern

The wolf, also known as the gray wolf or grey wolf, is a large canine native to Eurasia and North America. More than thirty subspecies of *Canis lupus* have been recognized, and gray wolves, as popularly understood, comprise wild subspecies. The wolf is the largest extant member of the family Canidae.

4) Leopard :-

Speed: 58 km/h (Maximum, Running)

Mass: 31 kg (Male, South Africa's coastal mountains population), 23 – 27 kg (Female, Somalia population)

Trophic level: Carnivorous

Scientific name: *Panthera pardus*

Length: 90 – 160 cm (Adult, Head and body)

Height: 60 – 70 cm (Male, Adult, At Shoulder), 57 – 64 cm (Female, Adult, At Shoulder)

Lifespan: 12 – 17 years

The leopard is one of the five extant species in the genus *Panthera*, a member of the cat family, Felidae. It occurs in a wide range in sub-Saharan Africa, in some parts of Western and Central Asia, Southern Russia, and on the Indian subcontinent to Southeast and East Asia

5) Tiger:-

Conservation status: Endangered (Population decreasing)

Length: 2.5 – 3.9 m (Male, Adult), 2 – 2.8 m (Female, Adult)

Scientific name: *Panthera tigris*

Height: 80 – 110 cm (At Shoulder)

Mass: 90 – 310 kg (Male, Adult), 65 – 170 kg (Female, Adult)

Speed: 49 – 65 km/h (In Short Bursts)

Size of territory: 60 – 100 km² (Male, Adult), 20 km² (Female, Adult)

The tiger is the largest living cat species and a member of the genus *Panthera*. It is most recognisable for its dark vertical stripes on orange fur with a white underside. An apex predator, it primarily preys on ungulates, such as deer and wild boar.

Photo Gallery





Late Reverend Father Shri. Maskuji Biraji Burungale Sukshan Sanstha, Shegaon. R. No. F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : - 91-07265-253959 Fax.No. : + 91- 07265-253959

(Affiliated to Sant Gadge Baba Amravati University, Amravati) [College Code No. 332]

Website : www.sdbmc.org

Email : - sdbmcshgaon@gmail.com

Shri. Rameshwar Dnyaneshwar Burungale
President

Dr. R.F. Khoslan
Principal

Dr. D. L. Bhade
HOD, EYS Deptt.

Dr. D. L. Bhade
HOD, EYS Deptt.

Dr. D. L. Bhade
HOD, EYS Deptt.

(NAAC Accredited with B+ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDBMSC/EYS/2021-22

Date: -13.09.2021

To,

The Principal

Shri. D.M. Burungale Science
and Arts College Shegaon

Subject:- To permit us for organizing online program of Ozone Day 16 September 2021

Respected sir,

With respect to above subject Department of Environmental Science of our college decided to
organize online program on the occasion of Ozone Day 16 September 2021 Time 11.30 AM. This

program is free and open for all stakeholders.

So please give permission to organize this program.

Thanking you!

Date:-13/09/2021

Mr. R.B. Harabde
(Coordinator)

Permitted
13.9.21

Dr. D.L. Bhade

(HOD)

Dr. D.L. Bhade
Associate Professor & HOD
Department of Environmental Science
Shri. D.M. Burungale Sci & Arts College, Shegaon



Late Reverend Father: Shri.Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

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SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

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Email : - sdmbcshegaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr.R.E.Khadsan
Principal

Email : drkhadsan@gmail.com
Mob: 99767317035

Dr. D. L. Bhade
HoD, EVS Deptt.
d.bhade12@gmail.com
Mob. No. 9923317021

(NAAC Accredited with B⁺ Grade , C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2021-22/15/2021

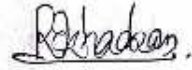
Date: -16.09.2021

CERTIFICATE

This is to certify that Dr.S.R.Warhekar Deptt.of Environmental Science
Narsamma Arts, Science and Commerce College, Kiran Nagar, Amravati, has delivered online
speech on " Ozone Day " on dated 16 September 2021, at Shri. Dnyaneshwar Maskuji Burungale
Science and Arts College, Shegaon.

I am very much thankful to him for giving valuable time and hoping same cooperation in future.

Sent by mail
16/09/2021
Rg.


Principal



Scanned with OKEN Scanner



Late Reverend Father Shri. Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422

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SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

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Website : www.sdbmsc.org

Email : - sdbmsc@rediffmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R.E. Khadse
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.

Email : - drkhadse@gmail.com
Mob. 9976721722

drbhade@gmail.com
Mob. No. 9923317221

(NAAC Accredited with B+ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDBMSC/EVS/2021-22/10/2021

Date: -13.09.2021

To,

Dr. S.R. Warhekar

Deptt. of Environmental Science

Narsamma Arts, Science and Commerce College, Kiran Nagar, Amravati

Subject: - Invitation Letter for Online Program on Ozone Day 16 September 2021

Respected sir,

With respect to above subject, Environmental Science Department of our college decided to organize

online program on the occasion of Ozone Day 16 September 2021 Time 11.30 AM. This program is free and open for all stakeholders.

So you are kindly invited as main speaker for Day of this program and deliver your speech regarding same.

Thanking you!

Date:- 13/09/2021

Sent by mail
13/09/2021
-RB-

HoD

Principal

Copy for information to -

- 1) For file President, LRF Shri M. B. Burungale Education Society, Shegaon.
- 2) Principal, Narsamma Arts, Science and Commerce College, Kiran Nagar, Amravati
- 3) Official copy

16 September 2021 World Ozone Day

Department of Environmental science ,

Shri D.M.Burungale Science and Arts college,Shegaon going to organise online program to celebrate world ozone day with title " Save Ozone Layer Save Earth"

so you everyone should register your name for this program.

Program timing 2.00 PM tomorrow on 16 September 2021.... Program link will be provide you tomorrow morning... Registration compulsory to all students...

• Registration Link :-

https://docs.google.com/forms/d/e/1FAIpQLSchHfgCfJC5WAI84LLrYTnVWdfoj-KPsJ0_oRe5CGf4ILLEFA/viewform?usp=sf_link

• Program Link :-

Dr.R.E.Khadsan is inviting you to a scheduled Zoom meeting.

Topic: Ozone Day Celebration-2021

Time: Sep 16, 2021 01:30 PM Mumbai, Kolkata, New Delhi

Join Zoom Meeting

<https://us02web.zoom.us/j/7344469525?pwd=TGZtTjh5NUFTUVkxM0t0Qk9Scm1qUT09>

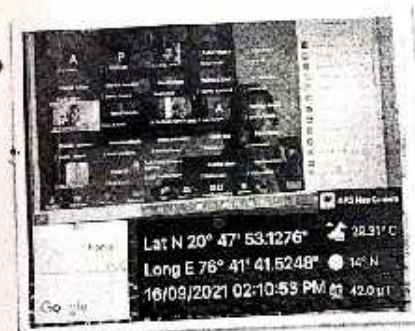
Meeting ID: 734 446 9525

Passcode: 12345



Photo Gallery

16 September 2021 World Ozone Day





Late Reverend Father Shri. Maskuji Burungale Shikshan Sanstha, Shegaon (C.No. 422)

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

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Email : sdmbshgaon@gmail.com

Shri. Rameshwar Dnyaneshwar Burungale
President

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Dr. D. L. Bhade
HOD, EYS Deptt.

Email - drkhadse@gmail.com
Mob. 9762110055

Email - dlbhade@gmail.com
Mob. No. 9733110031

(NAAC Accredited with B⁺ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSCTVS/2019-20/15/2020

Date: 27.02.2020

To,

The Principal

Shri. D.M. Burungale Science
and Art's College Shegaon

Subject:- To permit us for organizing World Wildlife Day Programme Dated 03/03/2020

Respected sir,

With respect to above subject Department of Environmental Science is going to organize
World Wildlife Day Programme Dated 03/03/2020 at 12.30 PM To aware the students about
Wildlife, their habitat their importance in environmental balance.

So please give permission to organize this program.

Thanking you!

Date:- 27/02/2020

Mr. R. B. Barabde

(Coordinator)

Dr. D. L. Bhade

(HOD)

C. L. Khadse

Asst. Professor & Head
Deptt. of Environmental Science
Shri. D.M. Burungale Science & Arts
College, Shegaon 444203 Dist. Buldana

Permitted
R. Khadse
25.2.2020



Late Reverend Father Shri. Maskuji Dnyaneshwar Maskuji Burungale Shikshan Sanstha, Shegaon R. No. F-422.

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Website : www.sdmbsc.org

Shri. Ramvijay Dnyaneshwar Burungale
President

Email : sdmbsc@gmail.com

Dr. R.E. Khadsar
Principal

Email : sdmbsc@gmail.com
Mob. 9976311055

Dr. D. L. Bhade
HoD, EVS Deptt.
d.bhade@sdmbsc.org
Mob. No. 9923211721

(NAAC Accredited with B⁺ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Date: -01.03.2020

Out. No. SDBMSC/EVS/2019-20

Notice

All the Students here to inform you that, Department of Environmental Science is going to organize "World Wild-life Day Programme" Dated 03/03/2020 at 12.30 PM To aware the students about Wildlife, their habitat their importance in environmental balance.
Thanking you!

Venue :- Department Of Environmental Science Lab

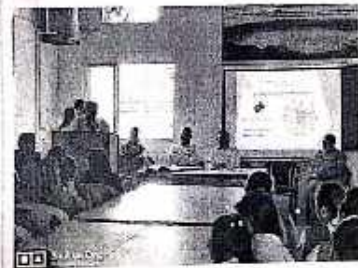
* Date:- 01 / 03 / 2020

Dr. D. L. Bhade

(HOD)
D.L.Bhade

Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M.Burungale Science & Arts,
College, Shegaon 444203 Dist.Buldana

World Wild-life Day Programme On Dated 03/03/2020





Late Reverend Father Shri. Maskuji Biruji Burungale Shikshan Sansha, Shegaon R.No.F-422.

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Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R.E. Khadsan
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.
dlbshade@gmail.com
Mob. No. 9923321021

Email - drkhadsan@gmail.com
Mob. 9976731755

(NAAC Accredited with B+ Grade , C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSCEVS/2019-20/04/2019 .

Date: -20.09.2019

To,

The Principal

Shri. D.M. Burungale Science
and Art's College Shegaon

Subject:- To permit us for organizing Cloth Bag Exhibition on 24 / 09 / 2019

Respected sir,

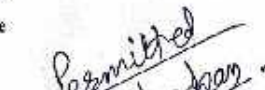
With respect to above subject Department of Environmental Science is going to organize "Cloth Bag Exhibition on 24/09/2019" at 01.00 PM" To aware the students about Plastic pollution and its effects on natural environment.

So please give permission to organize this program.

Thanking you!

Date:- 20 / 09 / 2019


Dr. R. B. Barabde
(Coordinator)


Permitted
20.09.2019
PRINCIPAL

Shri. Dnyaneshwar Maskuji Burungale
Science and Arts College, SHEGAON
Dist - Buldana - 444203 (M.S.)


Dr. D. L. Bhade

(HoD)
D.L. Bhade
Asst Professor & Head
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts
College, Shegaon 444203 Dist Buldana



Late Reverend Father Shri. Maskuji Buruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : +91-07265-253959 Fax.No. : +91-07265-253959

(Affiliated to Sant Gadge Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdmbsc.org

Email : - sdmbshegaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R.E. Khadson
Principal

Dr. D. L. Bhade
HOD, EVS Deptt.
dlbhade@gmail.com
Mob. No. 9923117021

Email : - drs@sdmbssc.org
Mob. 99767317055

(NAAC Accredited with B+ Grade , C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2019-20/05/2019

Date: -22.09.2019

* To,

Honble.

Shri. Ramvijayji Dnyaneshwar Burungale

President

Late Reverend Father Shri. Maskuji Buruji Burungale

Shikshan Sanstha, Shegaon R.No.F-422.

Subject :- Invitation as a Inaugurator and chief guest of the "Cloth Bag Exhibition on 24 / 09 / 2019"

Respected Sir ,

With respect to above subject Department of Environmental Science is going to organize "Cloth Bag Exhibition on 24 / 09 / 2019 at 01.00 PM" To aware the students about Plastic pollution and its effects on natural environment.

So kindly accept our invitation.

* Thanking you!

Date :- 22/09/2019

Place :- Shegaon

HOD

Dr. D.L. Bhade

(Department of Environmental Science)

D.L. Bhade

Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts
College, Shegaon 444203 Dist. Buldana

Late Reverend Father Shri. Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.



Late Reverend Father Shri. Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.
SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: HULANA.
Ph.No. : + 91-07265-253959 Fax.No. : + 91- 07265-253959
(Affiliated to Sant Gadge Baba Amravati University, Amravati) [College Code No. 113]
Website : www.sdbmsc.org Email : sdbmsc@gmail.com



Shri. Ramvilas Dnyaneshwar Burungale
President

Dr. R. E. Khadsar
Principal

Dr. D. L. Bhade
HoD, EYS Deptt.
d.bhade@gmail.com
Mob. No. 952317021

Email : d.bhade@gmail.com
Mob. 952317021

(NAAC Accredited with B Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDBMSC/EYS/2019-20/

Date: -23.09.2019

Notice

All the Students here to inform you that, Department of Environmental Science is going to organize "Cloth Bag Exhibition on 24 / 09 / 2019 at 01.00 PM" To aware the students about Plastic pollution and its effects on natural environment.

Venue :- Department Of Environmental Science Lab

Date:- 23 / 09 / 2019

Dr. D. L. Bhade

(HoD)

D.L.Bhade

Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts,
College, Shegaon 444203 Dist. Buldana

Reverend Father Shri Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No J-422,
SHRI DNYANESHWAR MASKUJI BURUNGALE SCIENCE & ART'S COLLEGE
SHEGAON -444203 Dist: - BULDANA.



DEPARTMENT OF ENVIRONMENTAL SCIENCE

Dr.R.E.Khadsan
Principal

Prof.D.L.Bhade
Head of Department

DATE :- 24 / 09 / 2019

EXHIBITION OF CLOTH BAGS

Following students are selected as per rank

Sr no	Name Of Student	Year	Rank
1	Ku. Sakshi Surendra Kherde	B.Sc - I	I
2	Ku. Dipa Digamber Bawaskar	B.Sc - I	II
3	Muzammil Mahemood Shah	B.Sc - II	III

Following Judges For Competition

1) Dr. R. E. Khadsan

2) Dr. G. D. Tambatkar

3) Mr. D. L. Bhade

4) Mr. R. B. Barabde

5) Mr. S. B. Sonone

[Signature]

[Signature]

[Signature]

[Signature]

"Cloth Bag Exhibition On 24 / 09 / 2019"





Late Reverend Father Shri. Maskuji Dinuji Durungale Shikshan Sansha, Shegaon R No.F-422.

SHRI DNYANESHWAR MASKITI



ANA.

333]

A. Dhade
S. Deptt.
mail.com
23317621

Cotton bags List

1. Sanjay A. Khan	5
2. Zeenat parveen	5
3. Nuehat parveen	5
4. Munaza Bano	5
5. Pankhja Bhute	3
6. Anuja khiradkar	3
7. Sakshi S. Khande	5
8. Chaitali M. Plasmale	5
9. Kamal D. Markhade	5
10. Neha A. Khan	5
11. Gayatri D. Badlihe	5
12. Dipa D. Bhandarkar	5
13. Vaishnavi H. Wankhade	5
14. Vaishnavi R. Wankhade	5
15. Shreya V. Rajankar	4
16. Sakshi S. Shinde	5
17. Saba Firdaus	3
18. Chaitali M. Sultane	2
19. Anjali D. Mehenge	5
20. Mayuri V. Tekale	5
21. Shubhangi S. Khandare	4
22. Vrushali Devchand Wale	5
23. Pranjali Vasudeo Rahate	4
24. Minat Santay Bhangal	3
25. Sneha Wankhade	2
26. Sameeruddhi D. Parkar	2

NCE

08.2019

19

to organize

27] Vaishnavi K. Manumare :- 5.

28] Tejaswini M. Patil :- 5

29] Anjali . R. Gawande :- 5

30] Akshiti P. Chaturkar :- 5

31] Rutuja . S. Bhumgale :- 3

32] Kirti Rajesh Rathod :- 5

33] Donhavi . D. Tozade :- 4

34] Jayashri A. Tozade :- 4

35] Vaishnavi B. Indore :- 5

36] Pooja . S. Tozade :- 5

37] Soham . J. Kale :- 5

38] Uddha V. V. Vikram :- 5

39] Saadnya Maniyam :- 5

40] Karanji Subhash Rahate :- 5



Late Reverend Father Shri.Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

**SIIRL DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : + 91-07265 253959 Fax.No. : + 91- 07265-253959

(Affiliated to SantGadga Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdmboc.org

Email : sdmbshagaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr.R.E.Khadse
Principal

Email : dkkshar@gmail.com
Mob. 99757317035

Dr. D. L. Bhade
HoD, EVS Deptt.
d.bhade@gmail.com
Mob. No. 9923317021

(NAAC Accredited with B⁺ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2019-20/03/2019

Date: -30.08.2019

To,

The Principal

Shri. D.M. Burungale Science
and Art's College Shegaon

Subject:- To permit us for organizing Ecofriendly Ganesha Festival 02 September 2019

Respected sir,

With respect to above subject Department of Environmental Science is going to organize

"Ecofriendly Ganesha Festival on dated 02 September 2019"

So please give permission to organize this program.

Thanking you!

Date:- 30/ 08 / 2019

R. B. Barabde

Mr. R. B. Barabde

(Coordinator)

D. L. Bhade

Dr. D. L. Bhade

(HoD)

D. L. Bhade

Asstt. Professor & Head
Dept. of Environmental Science
Shri. D.M.Burungale Science & Arts
College, Shegaon 444203 Dist Buldana

Permitted
R. B. Barabde
30.8.2019



late 19th century

2000年，中国加入世界贸易组织，标志着中国对外开放进入了一个新的阶段。这一事件不仅对中国，也对世界产生了深远的影响。

即 钟 明 寺 殿 前 山 石 上 刻 有 佛 号 曰 南 无 阿 弥 陀 佛 南 无 阿 弥 陀 佛

[illegible]

1. *Alfred is not only a very young man, but also a very young man.*

Volvox carolinianus 1000: 1000-1000-1000

(Rev.) <u>Samuel J. Thompson</u> <u>Franklin</u>	(Rev.) <u>Samuel J. Thompson</u> <u>Franklin</u>	(Rev.) <u>Samuel J. Thompson</u> <u>Franklin</u>
---	---	---

10/10/1944
 10/10/1944
 10/10/1944

1. *Chlorophyll a* (Chl a) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue-violet and red-orange regions of the visible spectrum. Chl a is essential for the light-dependent reactions of photosynthesis, where it converts light energy into chemical energy.

Ed - H. M. ...

[illegible]

DEPARTMENT OF ENVIRONMENTAL SCIENCE

11. The first of these is the *Journal of the Proceedings of the General Assembly of the Church of Scotland*, 1844, p. 10.

1900-1901

Notice

For the findings have to inform your Hon. Government of Parliament and to inform the public. - Particularly Committee National on dated 1st September 1988. In which the members of the Committee of Parliament and particularly the members of the Committee of Parliament.

• Chlorine is hydroxylated to hydrochloric acid in the liver.

Sept 27 / 1886 / 1894

1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 26

1999

12. *Agave americana*

[Handwritten notes:]

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Ecofriendly Ganesha Festival 02 September 2019



B.S.C. - IInd

Sr. No	Name of student	Sign
①	Saurav G. Shegokar	G. Shegokar
②	Hareem V. Dhumale	Hareem
③	Kastik G. Satote	G. Satote
④	Datta D. Lokhande	D. Lokhande
⑤	Pratik K. Borde	K. Borde
⑥	Yashwant V. Dhanekar	V. Dhanekar
⑦	Pankaj N. Shejale	N. Shejale
⑧	Pavon G. Waghmare	G. Waghmare
⑨	Rushikesh V. Shesole	V. Shesole
⑩	Sneha D. Jadhav	D. Jadhav
⑪	Pooja V. Mhasal	V. Mhasal
⑫	Rashmi R. Dixit	R. Dixit
⑬	Vaishali G. Indure	G. Indure
⑭	Manali R. Puyad	R. Puyad
⑮	Vaishali B. Rautale	B. Rautale
⑯	Radhika P. Shegokar	P. Shegokar
⑰	Harsha S. Gwalani	S. Gwalani
⑱	Ashwini S. Kathole	S. Kathole
⑲	Sneha S. Nawkar	S. Nawkar
⑳	Avanti K. Deshmukh	K. Deshmukh
㉑	Pragati S. Atrale	S. Atrale
㉒	Durga S. Bawaskar	S. Bawaskar
㉓	Pradnya B. Ganes	B. Ganes
㉔	Vaishnavi D. Jamdar	D. Jamdar
㉕	Vaishnavi G. Tayde	G. Tayde
㉖	Roshani R. Wagh	R. Wagh



Late Reverend Father Shri. Maskuji Biruji Burungale Shiksha Sanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : + 91-07265-253959 Fax.No. : + 91-07265-253959

(Affiliated to SantGadge Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdbsc.org

Email : - sdbscshegaon@gmail.com

Shri. Ramvijay Dayaneshwar Burungale
President

Dr.R.E.Khadse
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.
dlbhade@gmail.com
Mob No. 9823117021

Email : - dlbhade@gmail.com
Mob 09757317053

(NAAC Accredited with B+ Grade, C.G.P.A. - 2.65)



DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDBSC/EVS/2018-19/01/2018

Date: -10.08.2018

To,

The Principal

Shri. D.M. Burungale Science

and Art's College Shegaon

Subject:- Permission for organizing Guest Lecture on Dated 16 August 2018

Respected sir,

With respect to above subject Department of Environmental Science is going to organize **Guest Lecture on "Sustainable Development" Dr. Jaykiran A. Tidke** (HOD Department of Botany SGBAU Amravati)

So please give permission to organize Guest lecture.

Thanking you!

Date:- 10 / 08 / 2018



Mr. R. B. Barabde

(Coordinator)

Permitted
R. Bhade
10.8.2018


Dr. D. L. Bhade

(HoD)
D.L.Bhade
Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts
College, Shegaon 444203 Dist Bhandra



Late Reverend Father Shri.Maskuji Binuji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : + 91-07265-253959 Fax.No. : + 91- 07265-253959

(Affiliated to SantGadga Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdmbse.org

Email : sdmbsegaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr.R.E.Khadsan
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.

Email : dkhadsan@gmail.com
Mob. 09265317025

dlbhade@gmail.com
Mob. No.9923217021

(NAAC Accredited with B' Grade , C.G.P.A. – 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2018-19/ ~~666666~~

Date: -11.08.2018

Notice

All the Students here to inform you that, Department of Environmental Science is going to
organize Guest Lecture on "Sustainable Development" Dr. Jaykiran A. Tidke (HOD Department
of Botany SGBAU Amravati) on Dated 16 August 2018

Venue :- Department of Environmental Science

Date:- 11 / 08 / 2018


Dr. D. L. Bhade

(HoD)

D.L.Bhade

Asstt. Professor & Head
Dept. of Environmental Science
Shri. D.M.Burungale Science & Arts
College, Shegaon 444203 Dist. Buldana



Late Reverend Father Shri Maskuji Biruji Burungale Shikshan Saretha, Shegaon R. No.F-422.

**SHRI DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

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Website : www.sdmbsc.org

Email : sdmbscgaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R.E. Khadsan
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.
dlbhade@gmail.com
Mob. No. 9923117021

Email : drkhadsan@gmail.com
Mob. 09767317093

(NAAC Accredited with B⁺ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2018-19/02/2018

Date: -16.08.2018

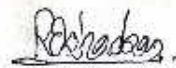
CERTIFICATE

This is to certify that **Dr. Jaykiran A. Tidke** (HOD Department of Botany SCiBAU Amravati) has delivered online speech on "Sustainable Development" on Dated 16 August 2018 at Shri. Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon.

I am very much thankful to him for giving valuable time and hoping same cooperation in future.

Received on
Date - 16/08/2018

KS.


Principal

Guest Lecture on "Sustainable Development" on Dated 16 August 2018





Late Reverend Father Shri. Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

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Website : www.sdmbsc.org

Email : - sdmbsc@rediffmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R.E. Khadsan
Principal

Email : - drkhadsan@gmail.com
Mob. 09167317055

Dr. D. L. Bhade
HOD, EVS Deptt.
dlbhade@gmail.com
Mob. No. 9923317021

(NAAC Accredited with B+ Grade, C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSCEVS/2017-18/ 02-2017

Date: -15.07.2017

To,

The Principal

Shri. D.M. Burungale Science

and Art's College Shegaon

Subject:- Permission for organizing Distribution of Plant Sapling to Students.

Respected sir,

With respect to above subject Department of Environmental Science is going to organize
"Distribution of Plant Sapling to Students Dated 25 July 2017" So please give permission to
organize this program.

Thanking you!

Date:- 15 / 07 / 2017

R. B. Barabde
Mr. R. B. Barabde

(Coordinator)

Dr. D. L. Bhade
Dr. D. L. Bhade

(HOD) EVS
Asst. Professor in EVS
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts
College, Shegaon-444203 Dist. Buldana

PRINCIPAL

Shri. Dnyaneshwar Maskuji Burungale
Science and Arts College, SHEGAON
Dist - Buldana 444203 (M.S.)

Distribution of Plant Sapling to Students on Dated 25 July 2017



Science and Arts College, SHEGAON
Dist - Buldana 440303 (M.S.)



Late Reverend Father Shri.Maskuji Biruji Burungale Shikshan Sanstha, Shegaon R.No.F-422.

**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE SHEGAON - 444203 Dist: BULDANA.**

Ph.No. : + 91-07265-253959 Fax.No. : + 91- 07265-253959

(Affiliated to SantGadga Baba Amravati University, Amravati) [College Code No. 333]

Website : www.sdmbsc.org

Email : - sdmbshegaon@gmail.com

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr.R.E.Khadsan
Principal

Dr. D. L. Bhade
HoD, EVS Deptt.

Email - drkhadsan@gmail.com
Mob. 05767317055

dlbhade@gmail.com
Mob. No. 9923317021

(NAAC Accredited with B⁺ Grade , C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2017-18/ 01 | 2017

Date: -04.07.2017

To,

The Principal

Shri. D.M. Burungale Science
and Art's College Shegaon

Subject:- ~~To~~ Permission for organizing Plantation Program on Dated 07 July 2017

Respected sir,

With respect to above subject Department of Environmental Science is going to organize "Plantation
Program on Dated 07 July 2017"

So please give permission to organize this program.

Thanking you!

Date:- 04/07/2017

R. Barabde
Mr. R. B. Barabde

(Coordinator)

D.L. Bhade
Dr. D. L. Bhade

(HoD)
D.L. Bhade

Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M. Burungale Science & Arts
College Shegaon - 444203 Dist. Buldana

Permitted
R. Barabde
4.7.2017
Shri. Dnyaneshwar Maskuji Burungale
Science and Arts College, SHEGAON
Dist - Buldana 444203 (M.S.)



Late Reverend Father Shri. Maskuji Biruji Burungale Shiksha Sanstha, Shegaon R.No.F-422

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Dr. D. L. Bhade
HOD, EVS Deptt.
dldhade@gmail.com
Mob. No. 9923317021

Email : - drkhadsan@gmail.com
Mob. 09767317055

(NAAC Accredited with B⁺ Grade , C.G.P.A. - 2.65)

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Out. No. SDMBSC/EVS/2017-18/

Date: -05.07.2017

Notice

All the Students here to inform you that, Department of Environmental Science is going to organize "Plantation Program on Dated 07 July 2017" To aware the students about Tree Plantation and Conservation of Environment.

Venue :- New College Campus Area

Date:- 05 / 07 / 2017

Dr. D. L. Bhade

(HOD)

D.L.Bhade

Asst. Professor & Head
Dept. of Environmental Science
Shri. D.M.Burungale Science & Arts
College, Shegaon 444203 Dist BULDANA

Plantation Program on Dated 07 July 2017



World Water Day Celebration



Department of Environmental Science celebrated World water Day on 22 March 2022. Dr.R.E.Khadsan was chairperson of this celebration function and Mr. Amol Sawant, founder of Nisargakatta Akola and Dr. Milind Shirbhate, Associate Professor in zoology Shankarlal Khandelwal College Akola was Chief guests for on this occasion. Dr. Shirbhate delivered guest lecture on Conservation of Water. Total 90 students attended same.



Late Reverend Father Shri. Maskuji Buruji Burungale Education Society, Shegaon (R.No. F-422)
**SHRI. DNYANESHWAR MASKUJI BURUNGALE
SCIENCE & ARTS COLLEGE**

AKOT ROAD, SHEGAON - 444 203 DIST - BULDANA (M.S.)

Ph. No. 07265 - 253959, Fax - 07265 - 254939

(Affiliated to Sant Gadge Baba Amravati University, College Code No.: 333)

Website - www.sdmbcs.org

E-mail: sdmbshEGAON@gmail.com, sdmbcs333@sgbau.ac.in

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Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R. E. Khadsan
Principal

Cell - 9767317055, E-mail - dr.khadsan@gmail.com

No. : SDMBCS/NAAC/Criteria-VI/2191-A/2019.

Date : 21.11.2019

Policy Document On Environment and Energy Usage

The Environment and Energy usage Policy of Shri D. M. Burungale Science and Arts College,
Shegaon

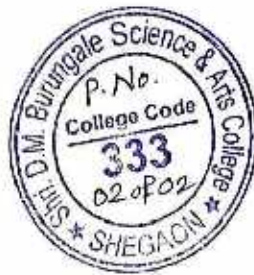
To save energy and to protect the environment.

Policies :

- To assess our energy usage and measure its impact on the environment.
- To count CO₂ emissions generated by our means of transportations- vehicles.
- To reduce local air pollution emissions using environment-friendly vehicles, including bicycles, public transportation and use of pedestrian-friendly roads.
- To install LED bulbs in the complete campus to save energy.
- To develop systematic waste management mechanism.
- To develop rain water harvesting unit.
- To undertake tree plantation drive.
- To take additional measures to continuously improve our energy consumption.
- To encourage use of advanced technology to minimize energy consumption, atmospheric emissions and noise, particularly from our vehicle fleets



- Affiliating university and actively work with the local organizations in the areas of environment, energy efficiency and sustainable development to monitor and respond to emerging environmental and energy issues.
- To strengthen our employees' and students' environmental knowledge and skills in order to improve our own environmental performance which provide information and training opportunities on energy saving measures through Environmental Science departmental activities.



R. Chaudhary

PRINCIPAL

Shri. Dnyaneshwar Maskuji Burungale
Science and Arts College, SHEGAON
Dist - Buldana 444203 (M.S.)

Nutan Urja Solutions

A 703, Balaji Witefield, Near Sunni's World,

Sus Road, Sus, Pune 411 021

Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

Date: 08/10/2019

CERTIFICATE

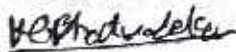
This is to certify that we have conducted Environmental Audit at Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon in the year 2018-19.

The College has already adopted following projects for making the campus **Energy Efficient**.

- Installation of Bio Composting Pit
- Installation of Rain Water Harvesting System

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

Nutan Urja Solutions,



K G Bhatwadekar,
Certified Energy Auditor,
EA - 22428



Nutan Urja Solutions

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Sus Road, Sus, Pune 411 021

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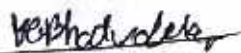
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- Usage of Energy Efficient BEE STAR Rated equipment

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Date: 10/08/2020

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Date: 10/08/2020

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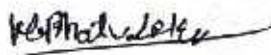
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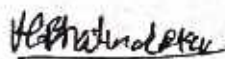
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Sus Road, Sus, Pune 411 021

Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

Date: 25/03/2022

CERTIFICATE

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Date: 25/03/2022

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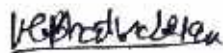
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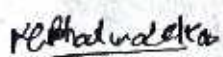
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**Report
On
Green Audit
At
Shri Dnyaneshwar Maskuji Burungale Science and Arts College,
Shegaon
(Year 2018-19)**

Prepared by

Nutan Urja Solutions

A 703, Balaji Witefield, Near Sunni's World,

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6. Study of Green Practices	14
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6.5 Paperless Office	15
6.6 Green Landscaping with Trees and Plants	15



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We are also thankful to various Head of Departments & other Staff members for helping us during the field measurements.

We hope that the recommendations stated in this report will be useful and worthy of discussions to take things forward to help implementation of energy conservation measures and green practices. While we have made every attempt to adhere to high quality standards, in both data collection and analysis through the report, we would welcome your suggestions so as to improve upon this report further.



Executive Summary

Green Audit of Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon is conducted by Nutan Urja Solutions, Pune. Based On the audit field study, following important points can be presented.

1. Present Energy Consumption

Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon uses Electrical Energy as the source of Energy for various equipment in the college campus. In the following Table, we present the details of Energy Consumption.

Table no 1: Details of energy consumption

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	229	0.18
2	Minimum	102	0.08
3	Average	161	0.13
4	Total	1,929	1.54

2. Various Measures Adopted for Energy Conservation

1. Usage of STAR Rated ACs at new installations
2. Usage of LED lights at some indoor locations
3. Usage of LED Lights for outdoor lighting.

3. Rain Water Harvesting

The College has installed the Rainwater harvesting project, to reduce dependency on municipal corporation water supply.

4. Waste Management

The College has already installed a Bio composting Plant, wherein, the bio-degradable waste is composted & is used as fertilizer for the garden.

The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



5. Notes and Assumptions

1. Daily working hours-10 Nos
2. Annual working Days-250 Nos
3. Average Rate of Electrical Energy : Rs 11/- per kWh



Abbreviations

CFL	: Compact Fluorescent Lamp
FTL	: Fluorescent Tube Light
LED	: Light Emitting Diode
V	: Voltage
I	: Current
kW	: Kilo- Watt
kWh	: kilo-Watt Hour
kVA	: Active Power



1. Introduction

Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon is run by Late Reverend Father Shri. Maskuji Biruji Burungale Education Society, Shegaon one of the leading and reputed educational society. The college was established in September 2000 for providing higher education to the students specially who were socially and economically deprived. The college is temporarily affiliated to Sant Gadge Baba Amravati University. The college holds the distinction of being the only institution providing higher education in science to the village and poor students in the surrounding region.

1.1 Objectives

1. To study present level of Energy Consumption
2. To Study the present CO₂ emissions
3. To assess the various equipment/facilities from Energy efficiency aspect
4. To measure various Electrical parameters
5. To study Scope for usage of Renewable Energy
6. To study various measures to reduce the Energy Consumption

1.2 Audit methodology

1. Study of connected load
2. Study of various Electrical parameters
3. To prepare the Report with various Encon measures with payback analysis



2. Study of Electrical Energy Consumption

In this chapter, electricity bills are studied for the analysis of electrical energy consumption.

Table no 2.1: Summary of electricity bills

No	Month	Energy (kWh)	Bill Amount (Rs)
1	Aug-19	204	2218
2	Jul-19	102	1112
3	Jun-19	132	1439
4	May-19	195	2126
5	Apr-19	129	1406
6	Mar-19	165	1799
7	Feb-19	122	1333
8	Jan-19	149	1624
9	Dec-18	141	1537
10	Nov-18	229	2496
11	Oct-18	203	2213
12	Sep-18	159	1728
	Total	1,929	21,029

Variation in energy consumption is as follows,

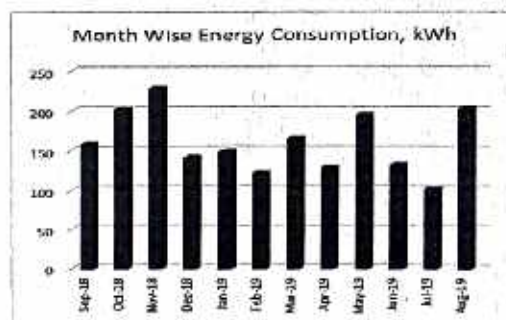


Figure 2.1: Month wise energy consumption

Monthly variation in electricity bill is as follows,

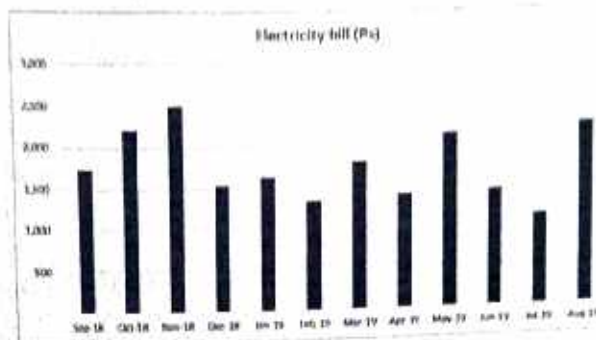


Figure 2.2: Month wise electricity bill

Key observations of electricity bill are as follows,

Table no 2.2: Key observations

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	229	0.18
2	Minimum	102	0.08
3	Average	161	0.13
4	Total	1,929	1.54



3. Carbon Foot printing

1. A Carbon Foot print is defined as the Total Greenhouse Gas emissions (CO₂ emissions), emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various form of Electrical Energy used by the College for performing its day to day activities

2. Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions due to Electrical Energy is as under

- 1 Unit (kWh) of Electrical Energy releases 0.8 Kg of CO₂ into atmosphere.

Based on the above Data we compute the CO₂ emissions which are being released in to the atmosphere by the College due to its Day to Day operations

We herewith furnish the details of various forms of Energy consumption as under

Table 3.1: Month wise Consumption of Electrical Energy & CO₂ Emissions

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Aug-19	204	0.16
2	Jul-19	102	0.08
3	Jun-19	132	0.11
4	May-19	195	0.16
5	Apr-19	129	0.10
6	Mar-19	165	0.13
7	Feb-19	122	0.10
8	Jan-19	149	0.12
9	Dec-18	141	0.11
10	Nov-18	229	0.18
11	Oct-18	203	0.16
12	Sep-18	159	0.13
	Total	1,929	1.54

In the following Chart we present the CO₂ emissions due to usage of Electrical Energy.



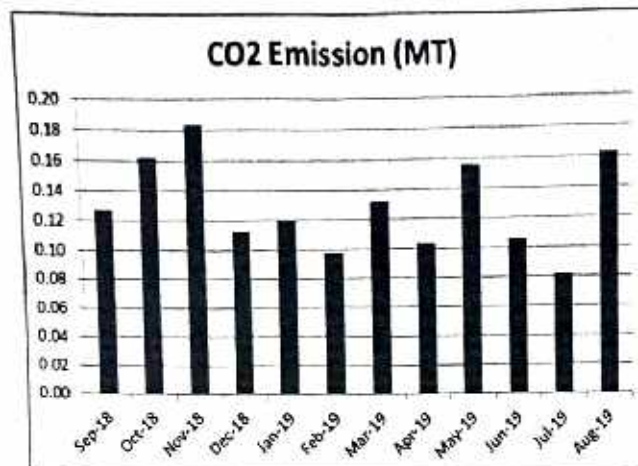


Figure 3.1: Month wise CO2 Emission

4. Study of Rain Water Harvesting

The College has already installed Rain Water Harvesting project, wherein the rain water falling on the terrace is collected and through pipes it is fed to underground Water Storage tank. This stored water is then reused for domestic purpose.

Photograph of Rain Water Harvesting pipe



5. Study of Waste Management

5.1 Solid Waste Management

The College has already installed a Bio composting Plant, wherein, the bio-degradable waste is composted & is used as fertilizer for the garden.

5.2 e-Waste Management

The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



6. Study of Green Practices

6.1 No of students who don't use own Vehicle for coming to Institute

Out of total students coming to Institute, about 40% students use own Automobile.

6.2 Usage of Public Transport

During the Students transport study, it was revealed that the local students who are residing near areas make use of Public Transport like Municipal Transport local buses, local sharing type auto rickshaws. Some students use bicycles. Institute encourages students to not to use automobiles.

6.3 Pedestrian Friendly Roads

The Institute has well defined pedestrian foot paths as to facilitate the easy movement of the students within the campus.

Photograph of Road within campus



6.4 Plastic Free Campus

The Institute is an active participant in the Government of India's most prestigious project of SWATCHH BHART ABHIYAN. The Institute has displayed boards in the Campus, to make the campus plastic free. Various measures adopted for this purpose are as follows

- Installation of Separate waste bins for Dry waste & wet waste
- Usage of paper tea cups in the Institute canteen
- Display of boards in the campus for Plastic Free campus



6.5 Paperless Office

The internal communication of the Institute is through the Internet. There are hardly any day to day operations, where printing is required.

6.6 Green Landscaping with Trees and Plants

The Institute has beautiful maintained Garden.

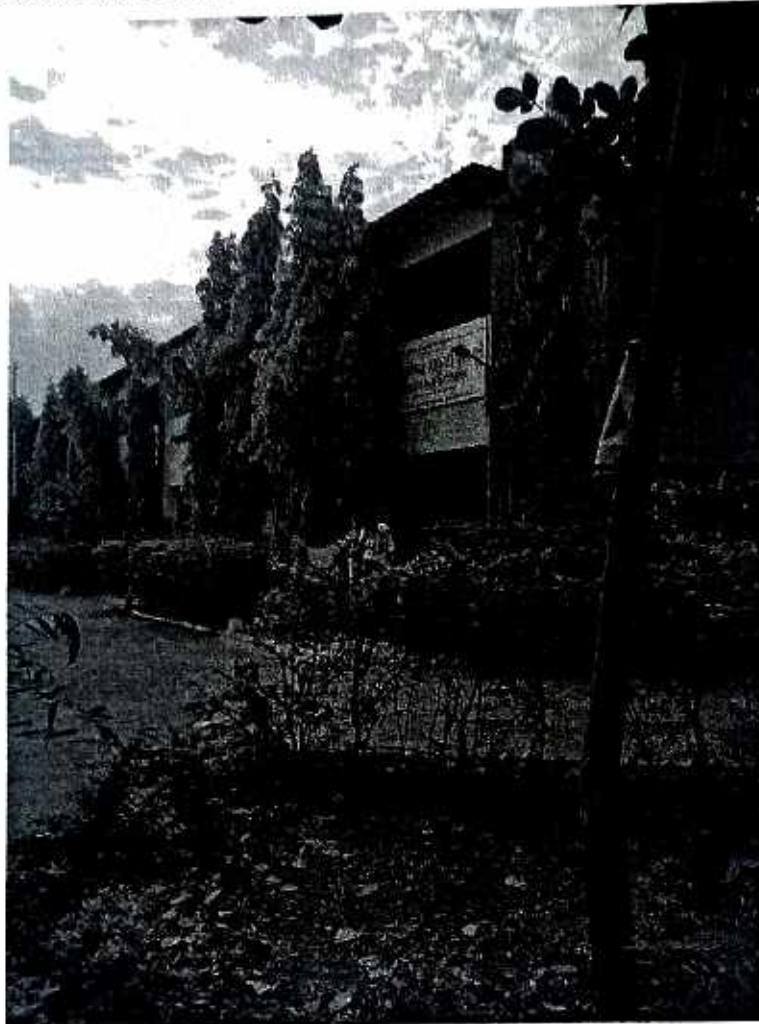


Figure 6.1: Beautiful maintained Garden of college

**Report
On
Green Audit
At
Shri Dnyaneshwar Maskuji Burungale Science and Arts College,
Shegaon
(Year 2019-20)**

Prepared by
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Table no 1: Details of energy consumption

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	319	0.26
2	Minimum	69	0.06
3	Average	190	0.15
4	Total	2,283	1.83

2. Various Measures Adopted for Energy Conservation

1. Usage of STAR Rated ACs at new installations
2. Usage of LED lights at some indoor locations
3. Usage of LED Lights for outdoor lighting.

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The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



5. Notes and Assumptions

1. Daily working hours-10 Nos
2. Annual working Days-250 Nos
3. Average Rate of Electrical Energy : Rs 11/- per kWh



Abbreviations

CFL	: Compact Fluorescent Lamp
FTL	: Fluorescent Tube Light
LED	: Light Emitting Diode
V	: Voltage
I	: Current
kW	: Kilo- Watt
kWh	: kilo-Watt Hour
kVA	: Active Power



1. Introduction

Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon is run by Late Reverend Father Shri. Maskuji Biruji Burungale Education Society, Shegaon one of the leading and reputed educational society. The college was established in September 2000 for providing higher education to the students specially who were socially and economically deprived. The college is temporarily affiliated to Sant Gadge Baba Amravati University. The college holds the distinction of being the only institution providing higher education in science to the village and poor students in the surrounding region.

1.1 Objectives

1. To study present level of Energy Consumption
2. To Study the present CO₂ emissions
3. To assess the various equipment/facilities from Energy efficiency aspect
4. To measure various Electrical parameters
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6. To study various measures to reduce the Energy Consumption

1.2 Audit methodology

1. Study of connected load
2. Study of various Electrical parameters
3. To prepare the Report with various Encon measures with payback analysis



2. Study of Electrical Energy Consumption

In this chapter, electricity bills are studied for the analysis of electrical energy consumption.

Table no 2.1: Summary of electricity bills

No	Month	Energy (kWh)	Bill Amount (Rs)
1	Jul-20	69	752
2	Jun-20	209	2278
3	May-20	319	3477
4	Apr-20	129	1406
5	Mar-20	205	2235
6	Feb-20	137	1488
7	Jan-20	185	2017
8	Dec-19	179	1951
9	Nov-19	229	2496
10	Oct-19	233	2540
11	Sep-19	186	2027
12	Aug-19	204	2218
	Total	2,283	24,885

Variation in energy consumption is as follows,

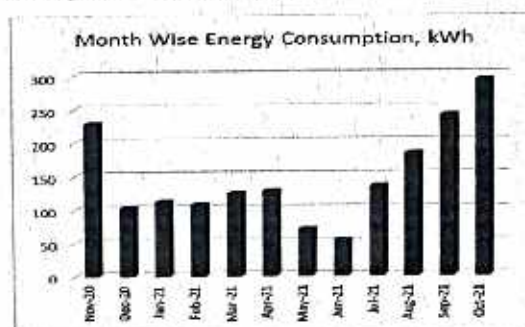


Figure 2.1: Month wise energy consumption

Monthly variation in electricity bill is as follows,

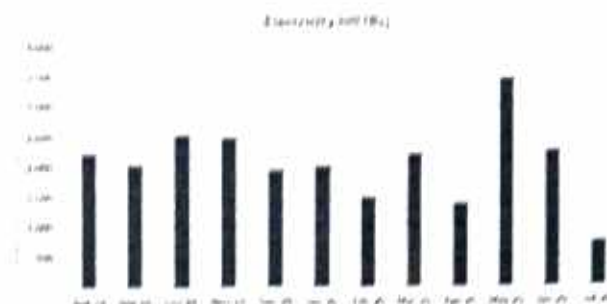


Figure 2.2: Month wise electricity bill

Key observations of electricity bill are as follows,

Table no 2.2: Key observations

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	319	0.26
2	Minimum	69	0.06
3	Average	190	0.15
4	Total	2,283	1.83

3. Carbon Foot printing

1. A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions (CO₂ emissions), emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various form of Electrical Energy used by the College for performing its day to day activities

2. Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions due to Electrical Energy is as under

- 1 Unit (kWh) of Electrical Energy releases **0.8 Kg of CO₂** into atmosphere.

Based on the above Data we compute the CO₂ emissions which are being released in to the atmosphere by the College due to its Day to Day operations

We herewith furnish the details of various forms of Energy consumption as under

Table 3.1: Month wise Consumption of Electrical Energy & CO₂ Emissions

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-20	69	0.06
2	Jun-20	209	0.17
3	May-20	319	0.26
4	Apr-20	129	0.10
5	Mar-20	205	0.16
6	Feb-20	137	0.11
7	Jan-20	185	0.15
8	Dec-19	179	0.14
9	Nov-19	229	0.18
10	Oct-19	233	0.19
11	Sep-19	186	0.15
12	Aug-19	204	0.16
	Total	2,283	1.83

In the following Chart we present the CO₂ emissions due to usage of Electrical Energy.



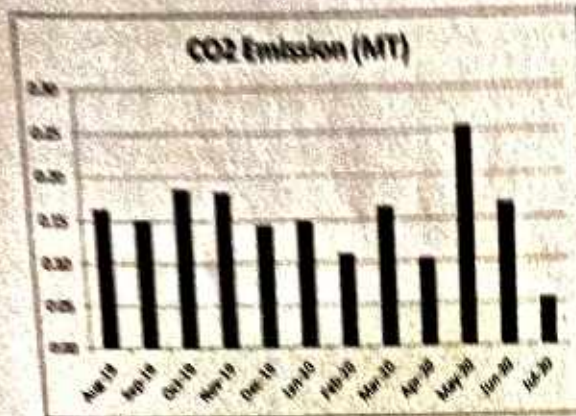


Figure 3.1: Month wise CO2 Emission

4. Study of Rain Water Harvesting

The College has already installed Rain Water Harvesting project, wherein the rain water falling on the terrace is collected and through pipes it is fed to underground Water Storage tank. This stored water is then reused for domestic purpose.

Photograph of Rain Water Harvesting pipe



5. Study of Waste Management

5.1 Solid Waste Management

The College has already installed a Bio composting Plant, wherein, the bio-degradable waste is composted & is used as fertilizer for the garden.

5.2 e-Waste Management

The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



6. Study of Green Practices

6.1 No of students who don't use own Vehicle for coming to Institute

Out of total students coming to Institute, about 40% students use own Automobile.

6.2 Usage of Public Transport

During the Students transport study, it was revealed that the local students who are residing near areas make use of Public Transport like Municipal Transport local buses, local sharing type auto rickshaws. Some students use bicycles. Institute encourages students to not to use automobiles.

6.3 Pedestrian Friendly Roads

The Institute has well defined pedestrian foot paths as to facilitate the easy movement of the students within the campus.

Photograph of Road within campus



6.4 Plastic Free Campus

The Institute is an active participant in the Government of India's most prestigious project of SWATCHH BHART ABHIYAN. The Institute has displayed boards in the Campus, to make the campus plastic free. Various measures adopted for this purpose are as follows

- Installation of Separate waste bins for Dry waste & wet waste
- Usage of paper tea cups in the Institute canteen
- Display of boards in the campus for Plastic Free campus



6.5 Paperless Office

The internal communication of the Institute is through the Internet. There are hardly any day to day operations, where printing is required.

6.6 Green Landscaping with Trees and Plants

The Institute has beautiful maintained Garden.



Figure 6.1: Beautiful maintained Garden of college

**Report
On
Green Audit
At
Shri Dnyaneshwar Maskuji Burungale Science and Arts College,
Shegaon
(Year 2020-21)**

Prepared by
Nutan Urja Solutions
A 703, Balaji Witefield, Near Sunni's World,
Sus Road, Sus, Pune 411 021
Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

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Acknowledgement

We at Nutan Urja Solutions, Pune, express our sincere gratitude to the management of Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon for awarding us the assignment of Green Audit of their college premises.

We are also thankful to various Head of Departments & other Staff members for helping us during the field measurements.

We hope that the recommendations stated in this report will be useful and worthy of discussions to take things forward to help implementation of energy conservation measures and green practices. While we have made every attempt to adhere to high quality standards, in both data collection and analysis through the report, we would welcome your suggestions so as to improve upon this report further.



Executive Summary

Green Audit of Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon is conducted by Nutan Urja Solutions, Pune. Based On the audit field study, following important points can be presented.

1. Present Energy Consumption

Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon uses Electrical Energy as the source of Energy for various equipment in the college campus. In the following Table, we present the details of Energy Consumption.

Table no 1: Details of energy consumption

Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	293	0.23
2	Minimum	55	0.04
3	Average	149	0.12
4	Total	1,786	1.43

2. Various Measures Adopted for Energy Conservation

1. Usage of STAR Rated ACs at new installations
2. Usage of LED lights at some indoor locations
3. Usage of LED Lights for outdoor lighting.

3. Rain Water Harvesting

The College has installed the Rainwater harvesting project, to reduce dependency on municipal corporation water supply.

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In this chapter, electricity bills are studied for the analysis of electrical energy consumption.

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No	Month	Energy (kWh)	Bill Amount (Rs)
1	Oct-21	293	2645
2	Sep-21	241	2250
3	Aug-21	184	2720
4	Jul-21	135	1450
5	Jun-21	55	865
6	May-21	71	985
7	Apr-21	129	1440
8	Mar-21	125	1363
9	Feb-21	108	1177
10	Jan-21	113	1232
11	Dec-20	103	1123
12	Nov-20	229	2496
	Total	1786	19745

Variation in energy consumption is as follows,



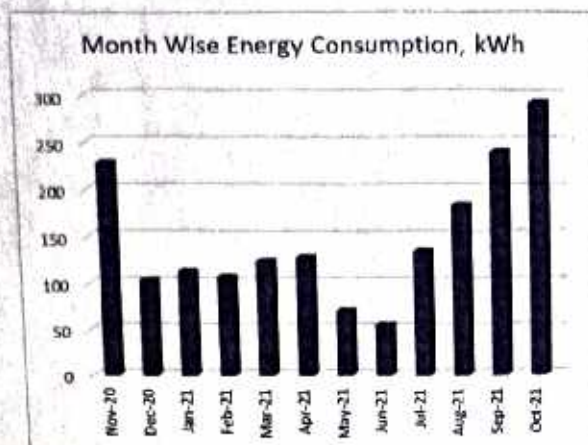


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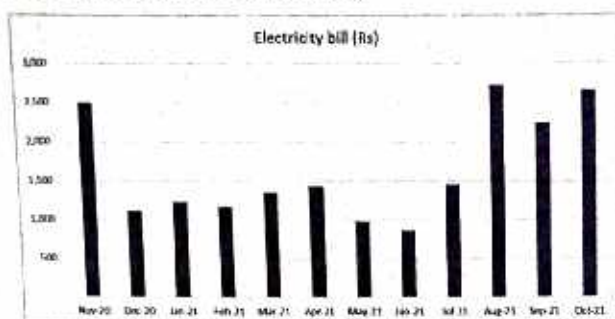


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Key observations of electricity bill are as follows,

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Sr no	Parameter	Energy consumed, (Units)	CO2 Emission (MT)
1	Maximum	293	0.23
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6	May-21	71	0.06
7	Apr-21	129	0.10
8	Mar-21	125	0.10
9	Feb-21	108	0.09
10	Jan-21	113	0.09
11	Dec-20	103	0.08
12	Nov-20	229	0.18
	Total	1,786	1.43

In the following Chart we present the CO₂ emissions due to usage of Electrical Energy.



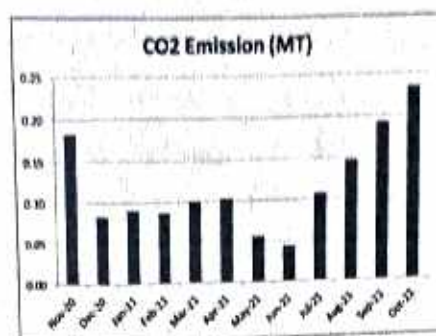


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At
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(Year 2018-19)

Prepared by
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Acknowledgement

We at Nutan Urja Solutions, Pune wish to express our sincere gratitude to the management of Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon for assigning the work of Environmental Audit of college campus.

We appreciate the co-operation and support extended to our team members during the entire tenure of field study.

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We are also thankful to all other staff members who helped us during the Measurements at the field and for giving us the necessary inputs to carry out this vital exercise.



Executive Summary

After the Field measurements & analysis, we present herewith important observations made and various measures to reduce the dependency on Natural resources & reduce the pollution.

Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon consumes various resources for day to day operations, namely: Air, Water, Electrical Energy & LPG.

1. Various Pollution due to College Activities:

- Air pollution: Mainly CO₂ on account of Electricity & LPG Consumption
- Solid Waste: Bio degradable Kitchen Waste, Garden Waste
- Liquid Waste: Human liquid waste

2. Present Level of CO₂ Emissions:

Sr no	Parameter	Energy consumed, (Units)	CO ₂ Emission (MT)
1	Maximum	229	0.18
2	Minimum	102	0.08
3	Average	161	0.13
4	Total	1,929	1.54

3. The various projects already implemented for Environmental Conservation:

- Usage of Energy Efficient BEE STAR Rated equipment
- Usage of Natural Day light in corridors
- Implementation of Bio Composting pit for disposal of Bio degradable waste
- Implementation of Rain Water Harvesting

4. Recommendations:

1. Installation of Bio Gas Generator Plant instead of Bio composting Plant.
2. Installation of Sewage treatment Plant to make campus a Zero Discharge campus

5. Notes & Assumptions:

1. 1 kWh of Electrical Energy releases 0.8 Kg of CO₂ into atmosphere
2. 1 kWp Solar PV plant generates 5 kWh/day Electrical Energy for 300 days in an year.



Abbreviations

AC	: Air conditioner
PES	: Progressive Education Society
CFL	: Compact Fluorescent Lamp
FTL	: Fluorescent Tube Light
LED	: Light Emitting Diode
kWh	: kilo-Watt Hour
Qty	: Quantity
W	: Watt
kW	: Kilo Watt
PF	: Power Factor
M D	: Maximum Demand
PC	: Personal Computer
MSEDCL	: Maharashtra State Electricity Distribution Company Ltd



1. Introduction

1.1 Important Definitions:

1.1.1 Environment: Definition as per environment Protection Act: 1986

Environment includes water, air and land and the inter-relationship which exists among and between Water, Air, Land and Human beings, other living creatures, plants microorganism and property

1.1.2. Environmental Audit: Definition:

An audit which aims at verification and validation to ensure that various environmental laws are complied with and adequate care has been taken towards environmental protection and preservation

According to UNEP, 1990, "Environmental audit can be defined as a management tool comprising systematic, documented and periodic evaluation of how well environmental organization management and equipment are performing with an aim of helping to regularize the environment"

1.1.3. Environmental Pollutant: means any solid, liquid and gaseous substance present in the concentration as may be, or tend to be, injurious to Environment.

1.1.4. Relevant Environmental Laws in India: Table No-1:

1927	The Indian Forest Act
1972	The Wildlife Protection Act
1974	The Water (Prevention and Control of Pollution) Act
1977	The Water (Prevention & Control of Pollution) Cess Act
1980	The Forest (Conservation) Act
1981	The Air (Prevention and Control of Pollution) Act
1986	The Environment Protection Act
1991	The Public Liability Insurance Act
2002	The Biological Diversity Act
2010	The National Green Tribunal Act

1.1.5. Some Important Environmental Rules in India: Table No-2:

1989	Hazardous Waste (Management and Handling) Rules
1989	Manufacture, Storage and Import of Hazardous Chemical Rules
2000	Municipal Solid Waste (Management and Handling) Rules
1998	The Biomedical Waste (Management and Handling) Rules
1999	The Environment (Siting for Industrial Projects) Rules
2000	Noise Pollution (Regulation and Control) Rules
2000	Ozone Depleting Substances (Regulation and Control) Rules



2011	E-waste (Management and Handling) Rules
2011	National Green Tribunal (Practices and Procedure) Rules
2011	Plastic Waste (Management and Handling) Rules

1.1.6 National Environmental Plans & Policy Documents: Table No-3:

1.	National Forest Policy, 1988
2.	National Water Policy, 2002
3.	National Environment Policy or NEP (2006)
4.	National Conservation Strategy and Policy Statement on Environment and Development, 1992
5.	Policy Statement for Abatement of Pollution (1992)
6.	National Action Plan on Climate Change
7.	Vision Statement on Environment and Human Health
8.	Technology Vision 2030 (The Energy Research Institute)
9.	Addressing Energy Security and Climate Change (MoEF and Bureau of Energy Efficiency)
10.	The Road to Copenhagen; India's Position on Climate Change Issues (MoEF)

1.2 Objectives

1. To study present usage of Natural resources the College is consuming
2. To Study the present pollution sources
3. To study various measures to make the campus Self sustainable in respect of Natural resources
4. To suggest the various measures to reduce the pollution: Air, Water, Noise

1.3 Audit Methodology:

1. Study of College as System
2. Study of Electrical Energy Consumption
3. Study of CO2 emissions
4. Suggestions on usage of Renewable Energy

1.4 General Details of College

No	Head	Particulars
1	Name of Institution	Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon.
2	Address	MH SH 173, Dhanokar Nagar, Shegaon, Maharashtra 444203.
3	Affiliation	Sant Gadge Baba Amravati University, Amravati.



2. Study of Consumption of Various Resources

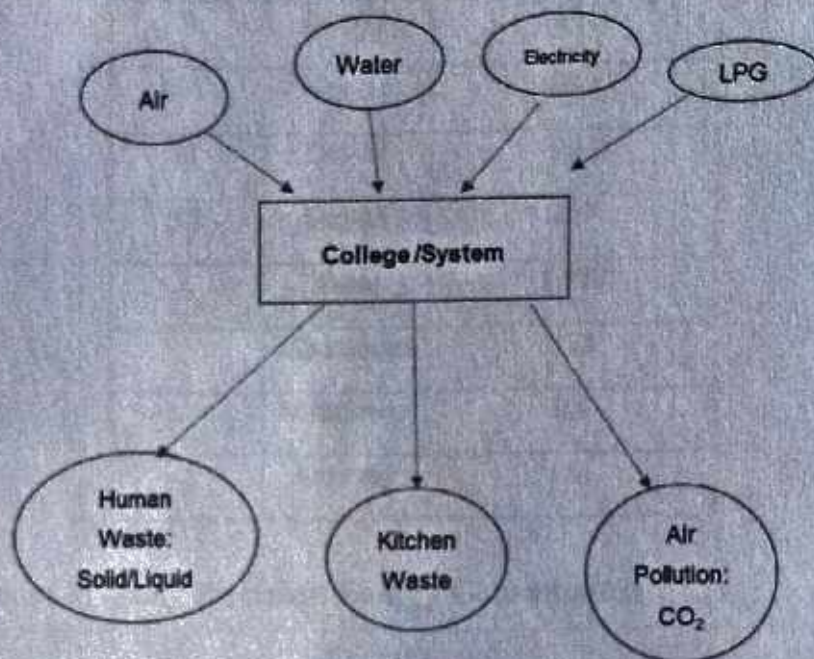
The Institute consumes following basic/derived Resources:

1. Air
2. Water
3. Electrical Energy
4. Liquefied Petroleum Gas

Also, college emits following pollutants to environment

1. Human Waste: Solid/ Liquid
2. Kitchen waste
3. Air pollution

We try to draw a schematic diagram for the College System & Environment as under.



Now we compute the Generation of CO₂ on account of consumption of Electrical Energy & LPG as under.

The calculation of electrical energy consumption by college can be given as,



Table 2.1: Electrical Energy Consumption

No	Month	Energy (kWh)
1	Aug-19	204
2	Jul-19	102
3	Jun-19	132
4	May-19	195
5	Apr-19	129
6	Mar-19	165
7	Feb-19	122
8	Jan-19	149
9	Dec-18	141
10	Nov-18	229
11	Oct-18	203
12	Sep-18	159
	Total	1,929
	Maximum	229
	Minimum	102
	Average	161

2.1 Variation of Monthly Electrical Energy Consumption

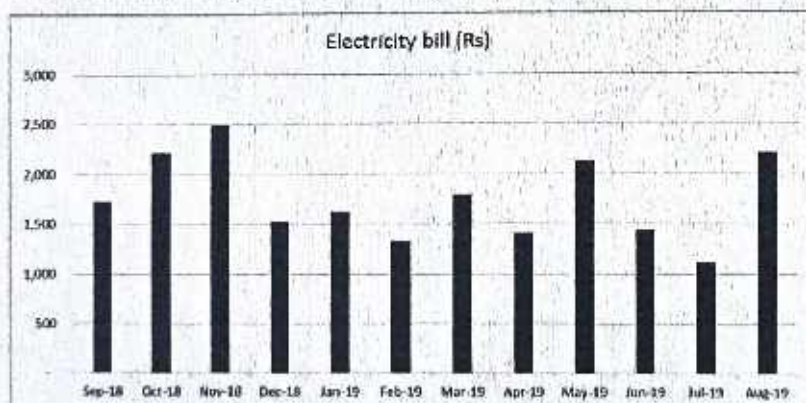


Figure 2.1 : Monthly Electrical Energy Consumption



2.2 Key Inference drawn

from the above analysis, we present following important parameters:

Table 2.2: Variation in Important Parameters

Sr no	Parameter	Energy consumed, (Units)
1	Maximum	229
2	Minimum	102
3	Average	161
4	Total	1,929



3. Study of Environmental Pollution

In this Chapter, we present the various types of Pollution as under:

3.1 Air Pollution

The College is using two forms of Energies, namely: Thermal in the form of LPG and Electrical Energy used for day to day operations of the College. The major pollutant on account of above Energy forms is the Carbon Di Oxide.

- 1 unit (kWh) of Electrical Energy emits 0.8 Kg of CO₂ in the atmosphere
- 1 Kg of LPG emits 3 Kg of CO₂ in the atmosphere

In the following Table, we present the CO₂ emissions.

Table 3.1: Month wise Consumption of Electrical Energy & CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Aug-19	204	0.16
2	Jul-19	102	0.08
3	Jun-19	132	0.11
4	May-19	195	0.16
5	Apr-19	129	0.10
6	Mar-19	165	0.13
7	Feb-19	122	0.10
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	Maximum	229	0.18
	Minimum	102	0.08
	Average	161	0.13



In the following Chart we present the CO2 emissions due to usage of Electrical Energy.

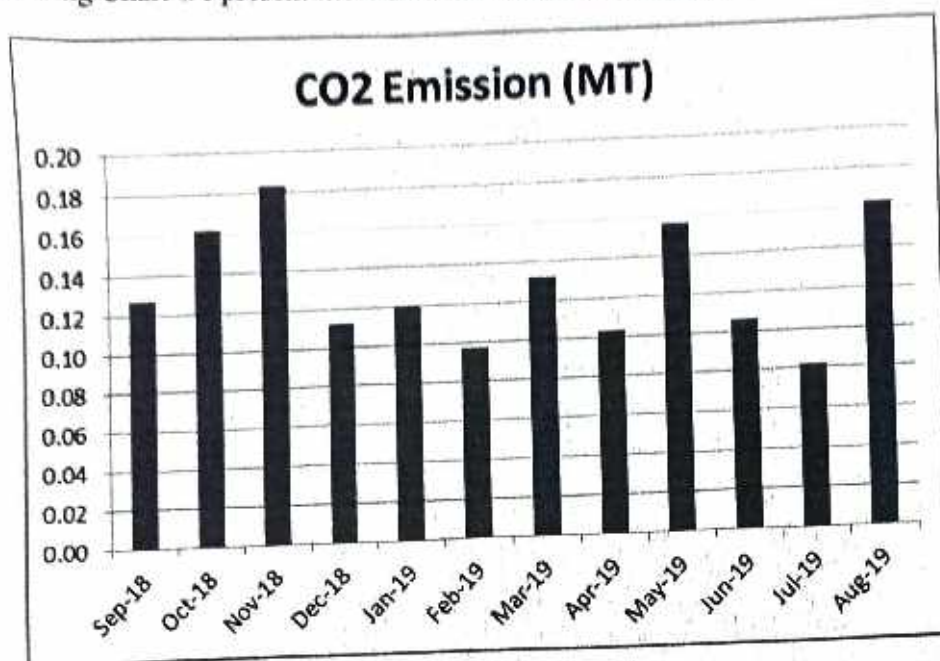


Figure 3.1: CO2 emission due to usage of electrical energy.

3.2 Study of Solid Waste Generation

The College has already installed a Bio composting Plant, wherein, the bio-degradable waste is composted & is used as fertilizer for the garden.

3.3 Study of Liquid Waste Generation

At present the Liquid Waste generated due to day to day operations is drained off to the municipal Corporation through a pipe.

3.4 Study of e-Waste Management:

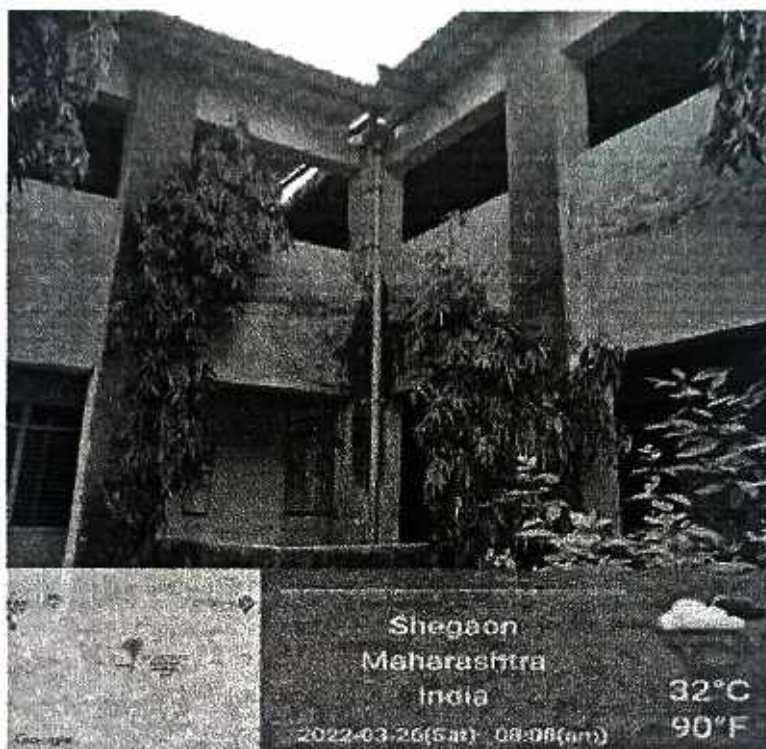
The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



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Photograph of Rain Water Harvesting Pipe:



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Prepared by

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A 703, Balaji Witefield, Near Sunni's World,

Sus Road, Sus, Pune 411 021

Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

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4. Study of Rain Water Harvesting	13
5. Recommendations	14



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- Solid Waste: Bio degradable Kitchen Waste, Garden Waste
- Liquid Waste: Human liquid waste

2. Present Level of CO₂ Emissions:

Sr no	Parameter	Energy consumed, (Units)	CO ₂ Emission (MT)
1	Maximum	319	0.26
2	Minimum	69	0.06
3	Average	190	0.15
4	Total	2,283	1.83

3. The various projects already implemented for Environmental Conservation:

- Usage of Energy Efficient BEE STAR Rated equipment
- Usage of Natural Day light in corridors
- Implementation of Bio Composting pit for disposal of Bio degradable waste
- Implementation of Rain Water Harvesting

4. Recommendations:

1. Installation of Bio Gas Generator Plant instead of Bio composting Plant.
2. Installation of Sewage treatment Plant to make campus a Zero Discharge campus

5. Notes & Assumptions:

1. 1 kWh of Electrical Energy releases 0.8 Kg of CO₂ into atmosphere
2. 1 kWp Solar PV plant generates 5 kWh/day Electrical Energy for 300 days in an year



Abbreviations

AC	: Air conditioner
PES	: Progressive Education Society
CFL	: Compact Fluorescent Lamp
FTL	: Fluorescent Tube Light
LED	: Light Emitting Diode
kWh	: kilo-Watt Hour
Qty	: Quantity
W	: Watt
kW	: Kilo Watt
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MD	: Maximum Demand
PC	: Personal Computer
MSEDCL	: Maharashtra State Electricity Distribution Company Ltd



1. Introduction

1.1 Important Definitions:

1.1.1 Environment: Definition as per environment Protection Act: 1986

Environment includes water, air and land and the inter-relationship which exists among and between Water, Air, Land and Human beings, other living creatures, plants microorganism and property

1.1.2. Environmental Audit: Definition:

An audit which aims at verification and validation to ensure that various environmental laws are complied with and adequate care has been taken towards environmental protection and preservation

According to UNEP, 1990, "Environmental audit can be defined as a management tool comprising systematic, documented and periodic evaluation of how well environmental organization management and equipment are performing with an aim of helping to regularize the environment"

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1927	The Indian Forest Act
1972	The Wildlife Protection Act
1974	The Water (Prevention and Control of Pollution) Act
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1981	The Air (Prevention and Control of Pollution) Act
1986	The Environment Protection Act
1991	The Public Liability Insurance Act
2002	The Biological Diversity Act
2010	The National Green Tribunal Act

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3.	National Environment Policy or NEP (2006)
4.	National Conservation Strategy and Policy Statement on Environment and Development, 1992
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6.	National Action Plan on Climate Change
7.	Vision Statement on Environment and Human Health
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9.	Addressing Energy Security and Climate Change (MoEF and Bureau of Energy Efficiency)
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1. To study present usage of Natural resources the College is consuming
2. To Study the present pollution sources
3. To study various measures to make the campus Self sustainable in respect of Natural resources
4. To suggest the various measures to reduce the pollution: Air, Water, Noise

1.3 Audit Methodology:

1. Study of College as System
2. Study of Electrical Energy Consumption
3. Study of CO₂ emissions
4. Suggestions on usage of Renewable Energy

1.4 General Details of College

No	Head	Particulars
1	Name of Institution	Shri Dnyaneshwar Maskuji Burungale Science and Arts College, Shegaon.
2	Address	MH SH 173, Dhanokar Nagar, Shegaon, Maharashtra 444203.
3	Affiliation	Sant Gadge Baba Amravati University, Amravati.



2. Study of Consumption of Various Resources

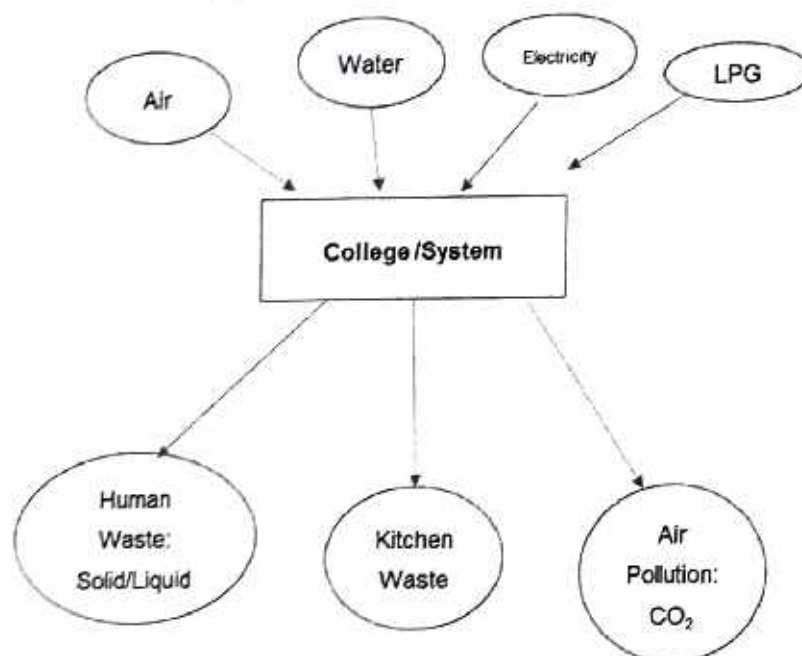
The Institute consumes following basic/derived Resources:

1. Air
2. Water
3. Electrical Energy
4. Liquefied Petroleum Gas

Also, college emits following pollutants to environment

1. Human Waste: Solid/ Liquid
2. Kitchen waste
3. Air pollution

We try to draw a schematic diagram for the College System & Environment as under.



Now we compute the Generation of CO₂ on account of consumption of Electrical Energy & LPG as under.

The calculation of electrical energy consumption by college can be given as,



Table 2.1: Electrical Energy Consumption

No	Month	Energy (kWh)
1	Jul-20	69
2	Jun-20	209
3	May-20	319
4	Apr-20	129
5	Mar-20	205
6	Feb-20	137
7	Jan-20	185
8	Dec-19	179
9	Nov-19	229
10	Oct-19	233
11	Sep-19	186
12	Aug-19	204
	Total	2,283
	Maximum	319
	Minimum	69
	Average	190

2.1 Variation of Monthly Electrical Energy Consumption

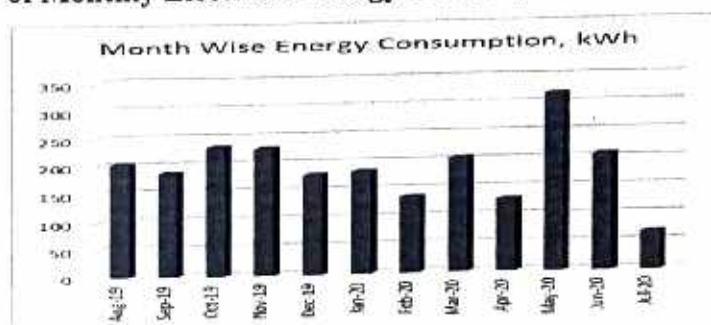


Figure 2.1 : Monthly Electrical Energy Consumption

2.2 Key Inference drawn

From the above analysis, we present following important parameters:



Table 2.2: Variation in Important Parameters

No	Parameter	Energy consumed, (Units)
1	Maximum	319
2	Minimum	69
3	Average	190
4	Total	2,283



3. Study of Environmental Pollution

In this Chapter, we present the various types of Pollution as under:

3.1 Air Pollution

The College is using two forms of Energies, namely: Thermal in the form of LPG and Electrical Energy used for day to day operations of the College. The major pollutant on account of above Energy forms is the Carbon Di Oxide.

- 1 unit (kWh) of Electrical Energy emits 0.8 Kg of CO₂ in the atmosphere
- 1 Kg of LPG emits 3 Kg of CO₂ in the atmosphere

In the following Table, we present the CO₂ emissions.

Table 3.1: Month wise Consumption of Electrical Energy & CO₂ Emissions:

No	Month	Energy Consumed, kWh	CO ₂ Emissions, MT
1	Jul-20	69	0.06
2	Jun-20	209	0.17
3	May-20	319	0.26
4	Apr-20	129	0.10
5	Mar-20	205	0.16
6	Feb-20	137	0.11
7	Jan-20	185	0.15
8	Dec-19	179	0.14
9	Nov-19	229	0.18
10	Oct-19	233	0.19
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	Total	2,283	1.83
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In the following Chart we present the CO₂ emissions due to usage of Electrical Energy.

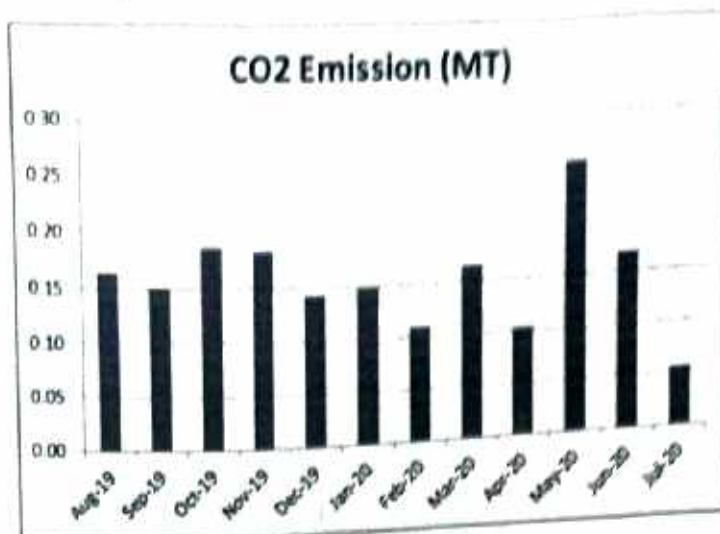


Figure 3.1: CO₂ emission due to usage of electrical energy.

3.2 Study of Solid Waste Generation

The College has already installed a Bio composting Plant, wherein, the bio-degradable waste is composted & is used as fertilizer for the garden.

3.3 Study of Liquid Waste Generation

At present the Liquid Waste generated due to day to day operations is drained off to the municipal Corporation through a pipe.

3.4 Study of e-Waste Management:

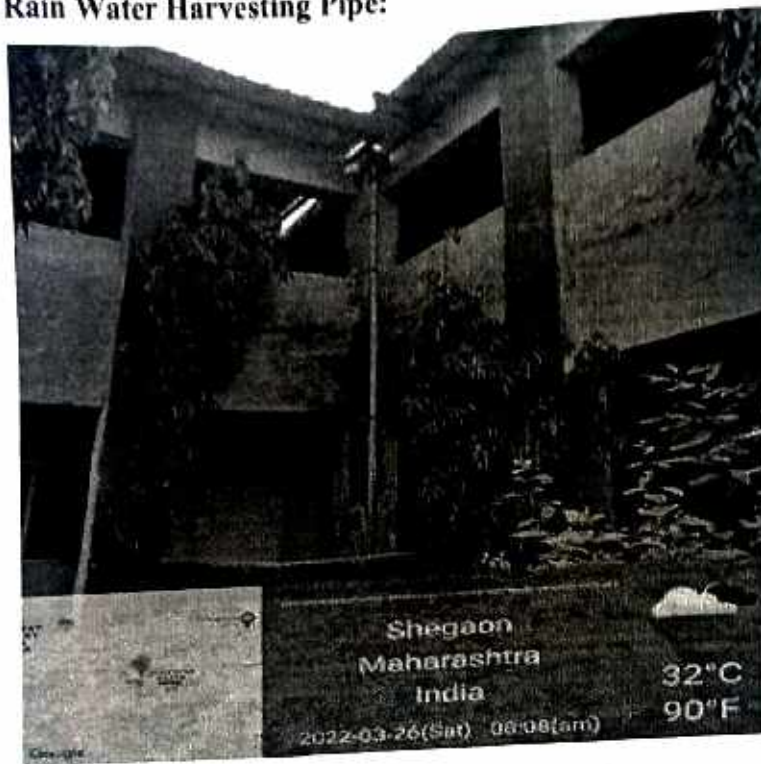
The internal communication is through emails and hence there is hardly any generation of e-Waste in the premises.



4. Study of Rain Water Harvesting

The College has already installed Rain Water Harvesting project, wherein the rain water falling on the terrace is collected and through pipes it is fed to underground Water Storage tank. This stored water is then reused for domestic purpose.

Photograph of Rain Water Harvesting Pipe:



Report
On
Environmental Audit
At
Shri Dnyaneshwar Maskuji Burungale Science and Arts College,
Shegaon
(Year 2020-21)

Prepared by
Nutan Urja Solutions
A 703, Balaji Witefield, Near Sunni's World,
Sus Road, Sus, Pune 411 021
Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

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Sr no	Parameter	Energy consumed, (Units)	CO ₂ Emission (MT)
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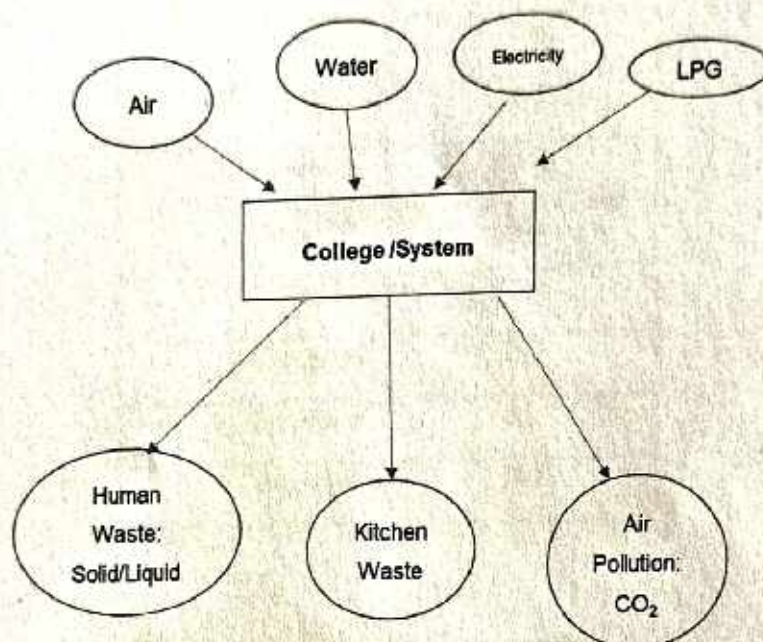
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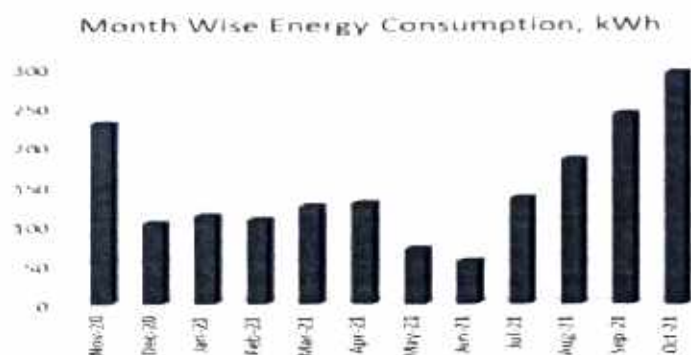


Figure 2.1 : Monthly Electrical Energy Consumption



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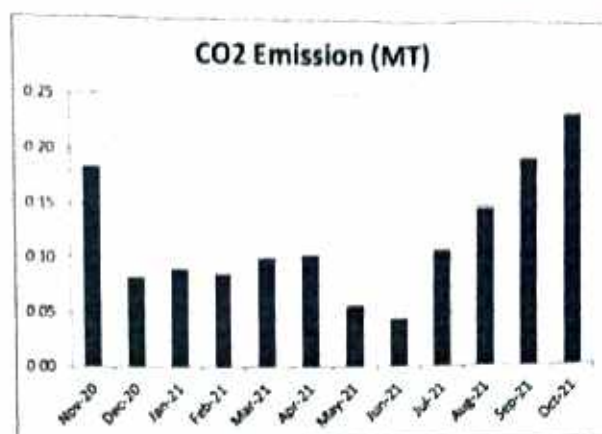


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Photograph of Rain Water Harvesting Pipe:



5. Recommendations

In order to reduce the dependency on Natural resources and also in order to reduce the various pollutions arising due to the day to day operations of the College we herewith recommend following recommendations.

- Installation of Bio Gas Generator Plant instead of Bio composting Plant.
- Installation of Sewage treatment Plant to make campus a Zero Discharge campus



Late Reverend Father Shri. Maskuji Biruji Burungale Education Society's



**SHRI DNYANESHWAR MASKUJI
BURUNGALE SCIENCE AND ART COLLEGE, SHEGAON**
AON-444203, Dist. Buldana

(Affiliated to Sant Gadge Baba Amravati University, Amravati)

(Accredited by NAAC with B⁺ Grade with CGPA 2.65)



Criterion- VII

Institutional Values and Best practices

7.1.3

Quality audit on environment and energy regularly undertaken by the institution.



Late Reverend Father Shri. Maskuji Biruji Burungale Education Society, Shegaon (R.No. F-422)

SHRI. DNYANESHWAR MASKUJI BURUNGALE SCIENCE & ARTS COLLEGE

AKOT ROAD, SHEGAON - 444 203 DIST - BULDANA (M.S.)

Ph. No. 07265 - 253959, Fax - 07265 - 254939

(Affiliated to Sant Gadge Baba Amravati University, College Code No.: 333)

Website - www.sdmbcsc.org

E-mail: sdmbshagaon@gmail.com, sdmbcsc333@sgbau.ac.in

(NAAC Accredited with B+ Grade , C.G.P.A. 2.65)

Shri. Ramvijay Dnyaneshwar Burungale
President

Dr. R. E. Khadsan
Principal

Cell - 9767317055, E-mail - dr.khadsan@gmail.com

No.: SDMBCS/NAAC/IQAC/AQAR/2021-22/3343

Date: 30/12/2022

Self Declaration

This is to declare that, the information, reports, true copies of the
Supporting documents, numerical data, and web links etc. furnished in this file are verified
by IQAC and the head of the institution and found correct.

Dr. A. B. Wadekar

NAAC/IQAC Co-ordinator

Shri. D.M. Burungale Science & Arts College,

SHEGAON 444203 Dist. Buldana

BACK ID: MHC06N276889

Dr. R. E. Khadsan

Principal

Shri Dnyaneshwar Maskuji Burungale

Science & Arts College, Shegaon

Dist. Buldana, Pin - 444203



Criteria3-Research,InnovationsandExtension (QIM3.1.1)

7.1.3

Quality audit on environment and energy regularly undertaken by the institution.

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Quality audit on environment and energy regularly undertaken by the institution,

Certificate of the awards received from recognised agency

Year	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Number	00	00	00	00	00



Dr.A.B.Wadekar

nAAC/QAC Co-ordinator

Dr.D.M.Burungale Science & Arts College,

SHEGAON 444203 Dist.Buldana

TRACK ID: MHCOG427465



Dr.R.E.Khadsan

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Shri Dnyaneshwar Maskul Burungale

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Dist. Buldana, Pin - 444203



3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)