SBSI 2020 FINAL PROJECT REPORT
GU425

SWACHH BHARAT SUMMER INTERNSHIP
ECO FRIENDLY LIVING

Submitted by

Satyam Asolkar [L]

Nikhil Bholnekar

Prathamesh Joshi

Gayatri Naik

Shriraj Prabhudesai

Uddhav Vaze

Under guidance of

Dr. Marlon Sequeira

Assistant Professor of Electronics

School of Physical and Applied Sciences

Goa University

2020-21

DECLARATION

We have carried out the SBSI 2020 Internship under the guidance of –

Dr. Marlon Sequeira,

Assistant Professor of Electronics,

School of Physical and Applied Sciences

Goa University.

The contents of this report are original and are reporting the 100 hours of work carried out by us during this internship.

Roll No.	Name of the Interns	Signature
205310001	Satyam Asolkar	
205310003	Nikhil Bholnekar	
205310008	Prathamesh Joshi	
205310009	Gayatri Naik	
205310014	Shriraj Prabhudesai	
205310017	Uddhav Vaze	

CERTIFICATE

This is to certify that the following SBSI 2020 Interns –

1. *Satyam Asolkar*   *Roll No. 205310001*
2. *Nikhil Bholnekar*   *Roll No. 205310003*
3. *Prathamesh Joshi*   *Roll No. 205310008*
4. *Gayatri Naik*   *Roll No. 205310009*
5. *Shriraj Prabhudesai*   *Roll No. 205310014*
6. *Uddhav Vaze*   *Roll No. 205310017*

have satisfactorily completed 100 hours of activities related to Swachhata.

During this internship period, it was noticed that the interns acquired and enhanced the following skills –

1. *Waste Management*
2. *Energy Management*
3. *Time Management*
4. *Resource Management*
5. *Creativity*

This report is being submitted to SBSI 2020 University Nodal Officer, in partial fulfilment for the completion of the SBSI Course during the academic year 2020-2021.

Dr. Marlon Sequeira   **Dr. Priya D'Costa**
(SBSI Mentor)   **(SBSI Nodal Officer)**

Dr. Jivan Parab
(Programme Director)
(SBSI Co-Ordinator)

ACKNOWLEDGEMENT

Expressing acknowledgement is a difficult task and it is impossible to do justice with all those who were the part of the project. We would like to express our sincere gratitude towards all those who provided us guidance, support, inspiration throughout the course of this project and we are deeply indebted to all of them.

We wish to express our sincere gratitude to our project guide Dr. Marlon Sequeira for his valuable guidance.

We would like to thank our Programme Director Dr. Jivan Parab to allow us to make full use of the available facilities.

TABLE OF CONTENTS

INTRODUCTION

An initiative has been taken by the Government to maintain the cleanliness and hygiene of the country and this internship program aims at the same. This Internship programme is to engage the youth across the country and develop their skills and orientation for sanitation related work, amplify mass awareness on cleanliness and cement the people's movement aspect of Swachh Bharat Mission.

Mahatma Gandhi dreamt of an India which was not only free but also clean and developed. Mahatma Gandhi secured freedom for Mother India. Now it is our duty to serve Mother India by keeping the country neat and clean.

This is in line with the Prime Minister Narendra Modi's call on October 2, 2014 for each individual to devote 100 hours to Swachhata through the year.

The programme is expected to not only provide a great learning experience to students but hopes to also further the existing measures undertaken by the government in ensuring a clean and healthy India.

This Internship Program Aims to –

- ➢ Develop their skills and orientation for sanitation related work.
- ➢ Bring youth across the country an opportunity to make a significant contribution to the Swachhata revolution.
- ➢ Integrate youth in the community service in rural areas in the sun up to the 150th birth anniversary of Mahatma Gandhi.

"Devote the 100 hours every year towards the cause of cleanliness"

"Jan Jan Ka Nara Hai, Bharat Ko Swachh Banana Hai"

Being a youth and active citizen of this country, it is a good opportunity for us to lend a helping hand to our nation.

ACTIVITIES

1. **Did Paperless work:** Use of email, WhatsApp for communication. Going paperless by utilizing electronic document management systems, helps cut down on deforestation and pollution leaving more trees to do the work of absorbing carbon dioxide and slowing down global climate change.
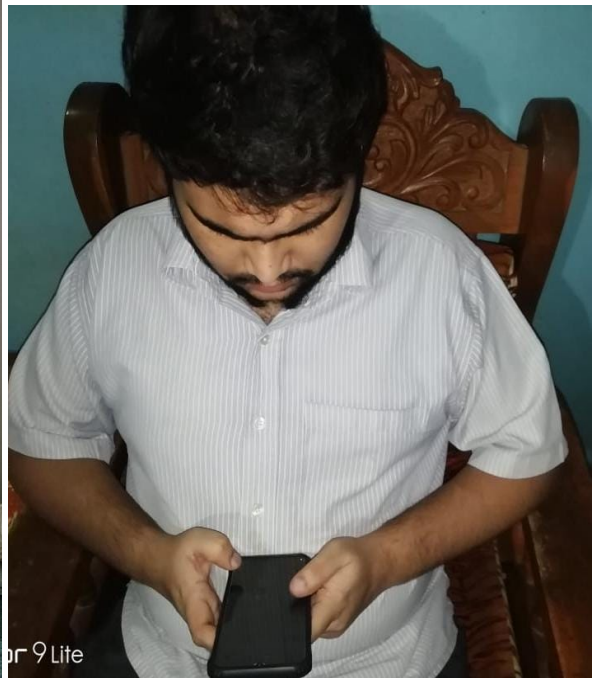
Outcome:

➢ There are many benefits to going paperless, from saving resources to boosting security.

➢ With global warming and excessive CO2 polluting the environment, the world has begun to see the value in going "green" and reducing our carbon footprint.

➢ Choosing a paperless office, schools, and colleges not only decreases the number of trees and reduces carbon footprint in terms of producing paper products, but it's significant for contributing to a sustainable society.
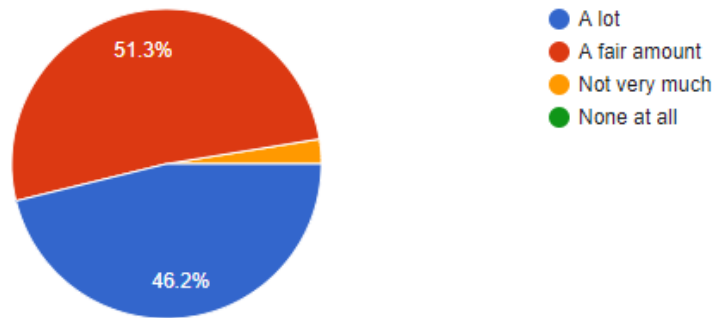
2. **Survey on Usage and Conservation of Electricity:**

    Survey Link: https://forms.gle/Lc4yCKuisoFEy36E7

    Survey Response:

How much thought do you give to saving energy in your home?

39 responses

- A lot
- A fair amount
- Not very much
- None at all

51.3%

46.2%
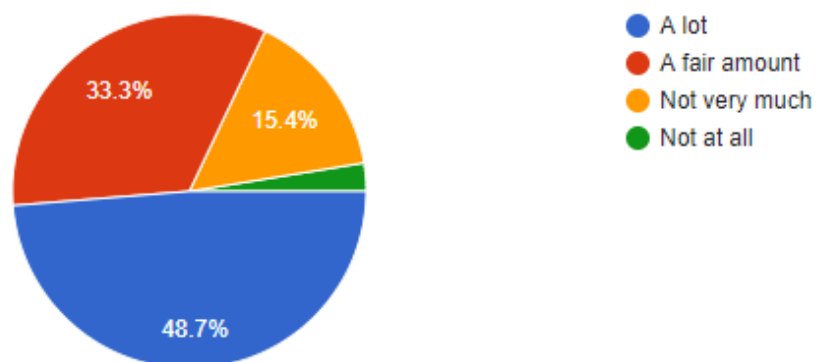
How often do you turn the fan off when you go out for a few hours or when you go to bed at night?

39 responses

- Almost always
- Very often
- Not very often
- Never

43.6%

51.3%
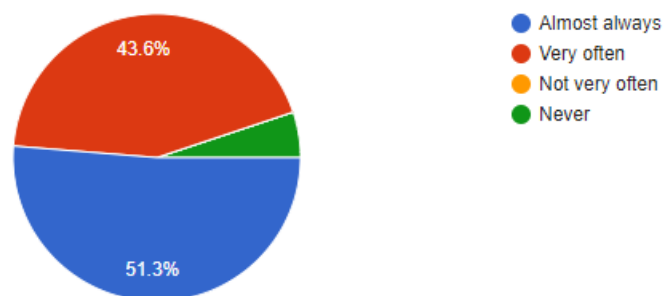
How concerned are you about the expected future price rises in energy?

39 responses

- A lot
- A fair amount
- Not very much
- Not at all

33.3%

15.4%

48.7%

In your opinion, what is the most effective thing that could reduce use of energy ?

39 responses

Turn off unnecessary lights and fans whenever possible

Maximum use of natural resources (Solar, natural light, cross ventilation) and practicing practices like composting, rain water harvesting which reduce the carbon footprint.

Switch of electricity when not in use. Use only when necessary. Sleep early at night and get up early in the morning. And if going to places nearby walking will be the best. Even walking kilometres if possible or use of bicycle.

Switch off fans,bulbs etc when you go out..

-

Using energy judiciously

Using natural light or maybe with the help of creative techniques.

Reduce the use if AC It consumes lot of energy.

In your opinion, what is the most effective thing that could reduce use of energy ?

39 responses

Unplug when not in use.

Use electricity only when there is need

Turn off appliances, gagets, lights, electric devices when not in use.

Making use of renewable energy.

Doing things manually

Switch off whn nt in use

Buying products that consume less Power

Saving of energy whenever not in use. This is the only option to save electricity

Use of Non - Renewable Energy

In your opinion, what is the most effective thing that could reduce use of energy ?

39 responses

Using energy, Only when it's necessary

Using natural light during day time, well ventilated houses , using LED bulbs , switching off lights whenever not needed , unplugging electronic devices when not in use , using solar heater .

Use of direct energy that is sunlight

Turn off lights and appliances when not in use

Solar panels in big apartments

Use of light sensors

Buy energy efficient equipment

Using low energy appliances.

By turning off lights and appliances when not in use

In your opinion, what is the most effective thing that could reduce use of energy ?

39 responses

Renewable energy

More and more use of Renewable energy like solar in goa ....

Most of electricity is use by hotel industry they consume lot them required so imposing some kid of rules and regulations to reduce unnecessary use of light

Put off when not in use.

Being responsible and not to waste energy unnecessarily and also by using more efficient technology.

Turnoff light once u used.

To use solar energy bulb

Turn off un necessary lights, instead use natural light(sun light), use of solar, use energy efficient light bulbs etc.

In your opinion, what is the most effective thing that could reduce use of energy ?

39 responses

Being responsible and not to waste energy unnecessarily and also by using more efficient technology.

Turnoff light once u used.

To use solar energy bulb

Turn off un necessary lights, instead use natural light(sun light), use of solar, use energy efficient light bulbs etc.

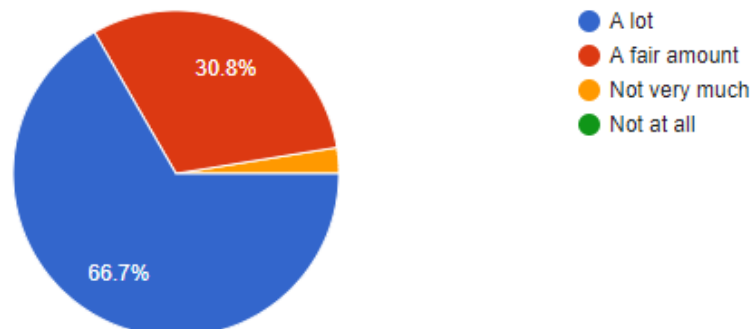Use energy only when required

Use of sunlight

Government should give free solar panels to all the poor people

We should remove plugs after switching off because there also energy is consumed.

By using low energy bulb

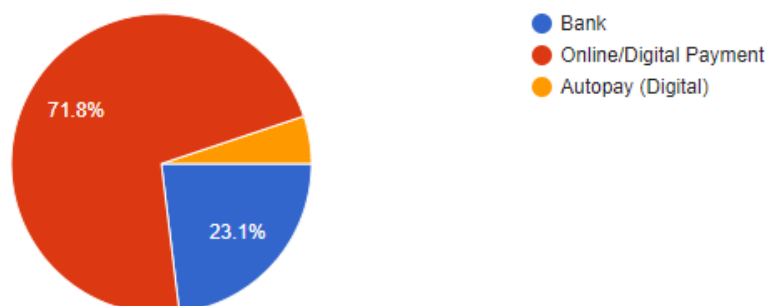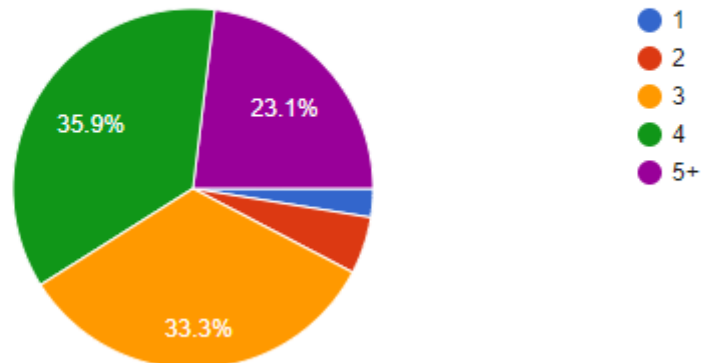## How concerned are you about climate change?

39 responses

- ● A lot
- ● A fair amount
- ● Not very much
- ● Not at all

30.8%

66.7%

How do you pay your electricity bills?

39 responses

- ● Bank
- ● Online/Digital Payment
- ● Autopay (Digital)

71.8%

23.1%

How many people live in your home?

39 responses

- 1
- 2
- 3
- 4
- 5+

35.9% — 23.1% — 33.3%

How many low energy light bulbs do you have in your home?

39 responses

- More than 5
- Less than 5
- None

53.8% — 7.7% — 38.5%
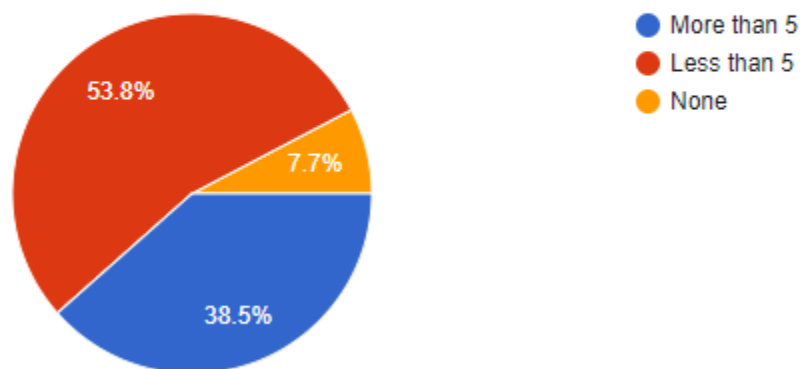
Which of following behaviors would you prefer to use less energy in your life?

39 responses

- Turn off lights and appliences when not in use.
- Use Public whenever possible
- Use energy efficient bulbs
- All of the above

51.3% — 46.2%
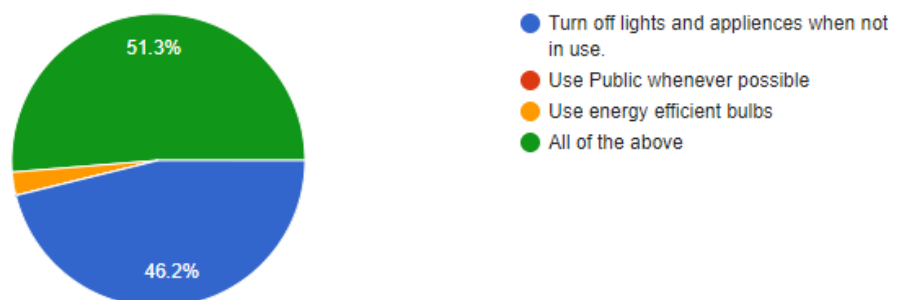
Do you think you could use less Electricity in your home have you tried doing it?

39 responses

- Yes
- No
- Maybe

10.3%
20.5%
69.2%
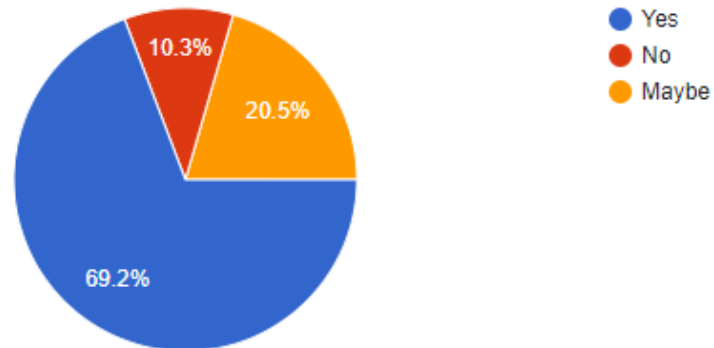
For how many days can you live without electricity?

39 responses

- 1
- 2
- 3+

28.2%
66.7%
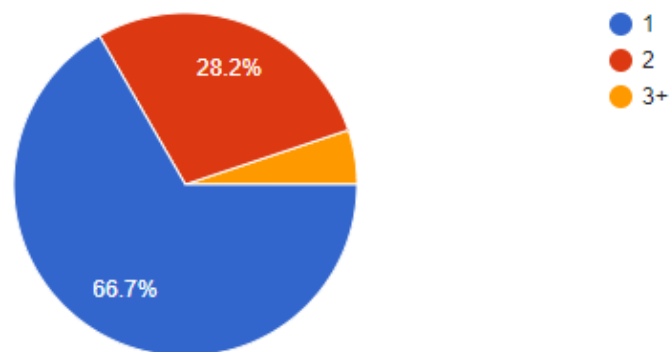
Do you have a Inverter at home?

39 responses

- Yes
- No
- Willing to Buy

76.9%
10.3%
12.8%
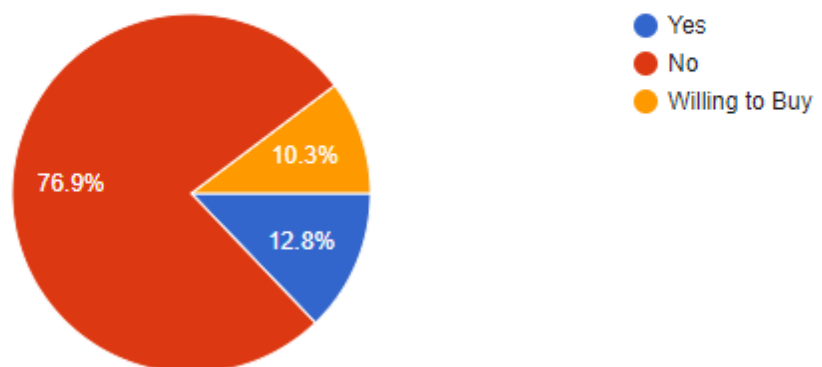
Do you use Electronic Ballast for tube light to conserve electricity?

39 responses

- Yes
- No

59%

41%
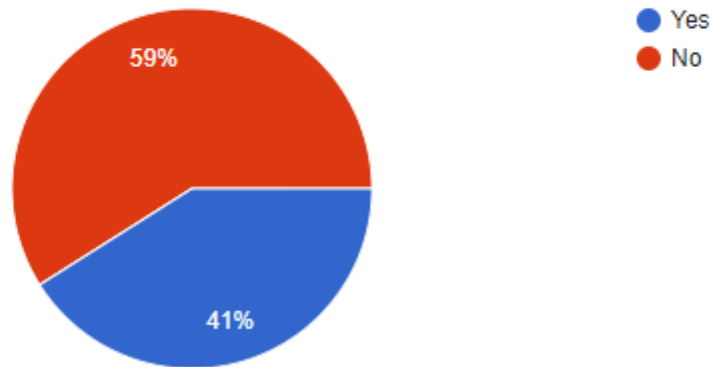
Can you stay without electricity? If YES How? If NO Why?

39 responses

No

No because now a days every main things works with electricity only

"Without electricity" seems difficult. In current times, all of us have to stay connected to the world outside. And specially due to the pandemic, most of us have shifted to use of mobile, laptop and electric gadgets more then ever. So what i feel is, you need electricity basically to keep these gadgets running.. apart from that, it's the matter of pleasure- satisfaction. One can always make decent arrangements in own house to facilitate the movement of air and light inside house, thus reducing the use of electricity.

No. Because of heat and feel warm. Phone cannot be charged. Cannot go for bathing since geyser won't work. Mixure grinder won't work and many more.

Yes by going out of the house playing with my friends outdoor

-

No, can't bear the heat, need fans to work.

Can you stay without electricity? If YES How? If NO Why?

39 responses

Definitely no! Bcoz nowadays everything is working on electricity. From making food to charge a mobile .

NO, also for basic needs we require electricity for example pumping water, for kitchen works like grinding, mixing etc, and in such a pendamic situation everything is online mode and the use of electronic devices has increased. So it will be difficult to live without electricity.

Yes. Because i have inverter

No electricity is necessary for some stuff

Accustoned and habitual...,

No. Everything is digitalized and hence electricity is required

No, digital life , college , etc

Yes

Electricity has become a very important part of my life.

No, if we don't get electricity all work is pending and even water supply is not there.

No, Because our home does'nt have Inverter.

If we had enough natural cold climate as that as north india states, we could have stayed without fan and AC. We could have even used natural source (diya) for lighting our houses.

No. Staying without electricity after sunset seems quite difficult when you don't have any back-up light sources.

Need electricity

No, I just don't get sleep in the night

Not more than 2 days. as it will affect the whole system

Can you stay without electricity? If YES How? If NO Why?

39 responses

No...

No, almost everything runs on electricity.

Yes, read a lot of books, go for a quick walk, some meditation, spend time with your family, this is possible only over weekend consider our work profile where I need my laptops for a living.

Noo can't

No. All my work is dependent on electricity

No. Because we have developed our daily life around electricity.

No, to work i require electricity o
Most of the time

No

Can you stay without electricity? If YES How? If NO Why?

39 responses

No, to work i require electricity o
Most of the time

No

No, not more thn 2 days because I can live but my pets couldn't (Aquarium having aquatic life, dogs and cats) n in new houses there are no old kitchen appliances which could not do anything when there is no ELECRICITY.. (Mixer, induction, etc)

No as it has become the most necessary thing after water , oxygen and food

No, bz now a days most of the things uses electricity

We have nothing to do staying at home during this pendemic and if current goes off we will be more devasted and plus for exams we need to charge our mobile too.

No. Because electricity had become a part of our life.

Outcome:

When you consume less power, you reduce the amount of toxic fumes released by power plants, conserve the earth's natural resources and protect ecosystems from destruction. By taking steps to reduce your energy intake, you'll contribute to a healthier and happier world.

3. **Cycles on the campus (reducing carbon footprints):**

There are different ways to reduce carbon footprint, but one of the easiest ways is cycling. If you are looking to reduce your carbon footprint, reducing or eliminating your automobile travel is a great way to do it and research shows that it does have an effect.

Outcome:

➢ Lowering the amount of usage of bikes/cars will lower the usage of petrol/diesel and in reverse, it can help to reduce carbon footprint.

➢ The Bicycle is a good alternative to driving cars or bikes. It will not only help us reduce pollution but also will help to improve health.

➢ When possible start using cycling in order to avoid carbon emission completely. It can be drastically reduced if we start group cycling. Cycle safely and reduce your carbon footprint.

4. Use of organic manure for the plants:

In this project, we have used vermicompost as an organic manure for plants. Basically vermicompost is the product of the decomposition process using various species worms, usually red wigglers, white worms and other earthworms, to create a mixture of decomposing vegetable or food wastes, bedding materials, and vermicast. The rearing of worms of this purpose is called vermiculture.

Outcome:

➢ Organic manures increase the organic matter in the soil. Organic matter in turn releases the plant food in available form for the use of crops.

➢ These manures also enable a soil to hold more water and also help to improve the drainage soils. They provide organic acids that help to dissolve soil nutrients and make them available for the plants.

➢ Manure supply plant nutrients including micronutrients. They increase the availability of nutrients.

5. **<u>Setting up a nursery/kitchen garden</u>:** Kitchen gardening is something all of us can do to make our environment greener. Fruits and vegetables grown in your own garden will promote health, because they will be rich in nutrients, especially phytochemicals, antioxidants, vitamin C, vitamin A and folate, without the risk of adulteration and pesticides.

6. **Use of STOP COVID-19 App:**

If you have spotted anybody violating Covid-19 SOP, then click on the corresponding icon, click image and compose a mail, which will be sent to the concerned authority, which will help authorities to find the hotspots where SOP's are violated the most and take appropriate actions to curb the spread of the virus. The location will be emailed to sop-violation-notifier@unigoa.ac.in by the app. Your few clicks can help the authorities to stop the spread of virus to a larger extent.
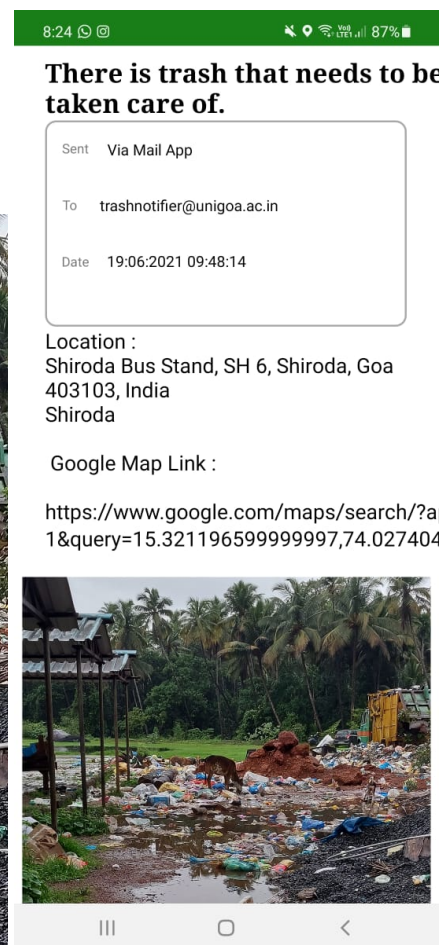
7. Use of Water Notifier App:

If a person finds a leaking water pipe by the roadside or there is water shortage or any other water related issue, then people can use water notifier app to register their complaints. User can click an image of the pipe leakage and send a mail using the app, also the authorities get the exact location which the app will automatically add in the mail. The location will be emailed to waternotifier@unigoa.ac.in by the app. This is a simpler and more convenient way for the user. User can also view the status of the complaint at any time.

8. Use of Trash Notifier App:

The Trash Notifier app can used by all interns to capture the location of places where trash is accumulated. User can click an image of the trash and send a mail using the app, also the authorities get the exact location which the app will automatically add in the mail. The location will be emailed to trashnotifier@unigoa.ac.in by the app. The interns can use this information to plan for the cleanliness drives or make alternate arrangements to clean up these locations captured by the app.

There is trash that needs to be taken care of.

Sent	Via Mail App
To	trashnotifier@unigoa.ac.in
Date	30:06:2021 18:39:36

Location :
Main Road, Marcel, near Indian Oil Petrol Pu
Orgao, Goa 403107, India
Orgao

Google Map Link :

https://www.google.com/maps/search/?api
&query=15.508183599999999,73.9612709

There is trash that needs to be taken care of.

Sent	Via Mail App
To	trashnotifier@unigoa.ac.in
Date	29:06:2021 12:26:36

Location :
Marcel, Orgao, Goa 403107, India
Orgao

Google Map Link :

https://www.google.com/maps/search/?api
&query=15.515464399999999,73.962869

BREAK-UP OF 100 HOURS

Sr. No.	Theme	Activity	Estimated Time (Hours)
1.	Waste Management	Paperless work – use of Email, WhatsApp for communication	10
2.	Energy Management	Survey on Usage and Conservation of Electricity	25
3.	Energy Management	Cycles on the Campus	25
4.	Greenery	Use of Organic Manure for the Plants	20
5.	Greenery	Setting up a Nursery/Kitchen Garden	20
6.	Sanitation & Hygiene	Use of STOP COVID-19 App	1
7.	Water Management	Use of Water Notifier App	
8.	Waste Management	Use of Trash Notifier App	

TAKEAWAYS OF THE INTERNS FROM SBSI

Satyam Asolkar: It was a joyful experience leading and working with my team. I have got a wonderful experience and has changed my perspective of cleanliness. It feels great that we are a part of this SBSI program and contributing few hours to make our country clean. This participation will surely help me in future.

Nikhil Bholnekar: It was a fabulous experience while working with my SBSI team and we got a good opportunity to serve for our environment. I am thankful for the guidance and help provided by our mentor and team members.

Prathamesh Joshi: I feel proud to be a "Swachh Bharat Student Intern". It was a great experience. This internship taught me a lot about time management and engaging with public. This will definitely help me in my future.

Gayatri Naik: It was a great experience to work with my team. We learned to manage our time doing studies as well as extra activities outside, and do our bit towards the environment.

Shriraj Prabhudesai: SBSI course taught me how to do team work and manage time. Activities performed under this course encouraged me and my teammates to take certain steps to keep our environment clean and green.

Uddhav Vaze: It was a great experience working with my SBSI team and I am satisfied with work we did these days. I am thankful for guidance and help provided by supervisor and team members.