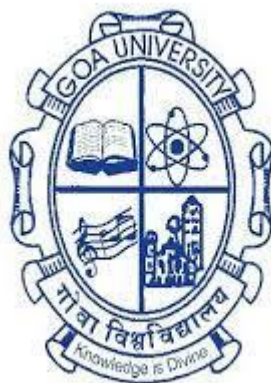


SWACHH BHARAT SUMMER INTERNSHIP 2022
FINAL PROJECT REPORT
SCHOOL OF EARTH, OCEAN AND ATMOSPHERIC SCIENCE, GOA
UNIVERSITY



Submitted by

Aniket Singh (Group Leader)

Shreya Bagkar

Anshavi Deshpabhu

Saniya Gosavi

Sumeedha Harmalkar

Nidhi Kambli

Anushka Kaskar

Afsha Memon

Samixa Sawant

Sonali Phadte

Under the Guidance of

Dr. Sangeeta Naik

Assistant Professor

Marine Microbiology

School of Earth, Ocean and Atmospheric Sciences, Goa University

2021-2022

Acknowledgement

We would like to begin by thanking the **Ministry of Human Resource Development** for providing this internship as part of the **Swachh Bharat Abhiyan Campaign** and also **Goa University** for providing us with a platform to undertake this internship under the guidance of **Dr. Sangeeta Naik** (Assistant Professor, Marine Microbiology, School of Earth, Ocean and Atmospheric Sciences, Goa University). We would also like to express our gratitude towards our mentor, Dr. Sangeeta Naik for providing us with constant support, for clearing our queries, guiding us throughout our project, for graciously helping us come up with various activities for the project, for participating in some of them and for putting in her best effort so we may be able to make a meaningful contribution to this campaign. We would also like to thank our SBSI 2021-22 University Nodal Officer, **Dr. Pranav Naik** for his constant support.

We would also like to take this opportunity to express our sincere gratitude towards the faculties, staff and citizens for contributing in creating a deep and meaningful impact of the events, drives, programs and initiatives that were undertaken under the various activities of this project.

With all the valuable support and suggestions, we've received; we hope that our endeavors focused on the attainment of the objectives of SBSI would help in providing momentum to the vision of a clean and green India. It was an inspiring journey, a privilege and a great experience to have been a part of this program and we intend to continue our efforts in contributing to this vision and hope to motivate others in doing the same through our work. We would also like to extend our gratitude towards our family and friends for their constant support and also for keeping a check on our wellbeing. Above all, we thank the Almighty for blessing us with the strength and knowledge to complete this project in due time.

“Ek Kadam Swachhata Ki Ore”

Declaration

We have carried out the **SBSI 2022 Internship** under the guidance of:

Dr. Sangeeta Naik,

Assistant Professor,

Marine Microbiology

School of Earth, Ocean and Atmospheric 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
21P039002	Aniket Singh
21P039003	Shreya Bagkar
21P039004	Anshavi Deshpabhu
21P039007	Saniya Gosavi
21P039008	Sumeedha Harmalkar
21P039010	Nidhi Kambli
21P039011	Anushka Kaskar
21P039013	Afsha Memon
21P039017	Samixa Sawant
21P039020	Sonali Phadte

Certificate

This is to certify that these following **SBSI 2022** Interns:

21P039002- Aniket Singh	Aniket Singh	21P039010- Nidhi Kambli	Nidhi Kambli
21P039003- Shreya Bagkar	Shreya Bagkar	21P039011- Anushka Kaskar	Anushka Kaskar
21P039004- Anshavi Deshpurabhu	Anshavi Deshpurabhu	21P039013- Afsha Memon	Afsha Memon
21P039007- Saniya Gosavi	Saniya Gosavi	21P039017- Samixa Sawant	Samixa Sawant
21P039008- Sumedha Harmalkar	Sumedha Harmalkar	21P039020- Sonali Phadte	Sonali Phadte

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. Communication skills
2. Public speaking
3. Management skills

This report is being submitted to SBSI 2022 University Nodal Officer, impartial fulfillment the completion of the **SBSI** Course during the academic year 2021-2022.



Dr. Sangeeta Naik

Name and Signature of SBSI Mentor

Content

Year: 2022

Duration: March- July

Total Hours: 100

Mentor: Dr. Sangeeta Naik

Team Members: Aniket Singh (team leader), Shreya Bagkar, Anshavi Deshpurabhu, Saniya Gosavi, Sumeedha Harmalkar, Nidhi Kambli, Anushka Kaskar, Afsha Memon, Samixa Sawant and Sonali Phadte.

THEME	NO.	PLACE	ACTIVITY	TOTAL HOURS
SANITATION AND HYGIENE	1.	Campus, Goa University & some villages	Cleanliness drive	15 hours
EDUCATIONAL OUTREACH AWARENESS TALK	2.	St. Cruz (Panjim) & Govt. primary school (Shiroda, Ponda)	Awareness talk	10 hours
WASTE MANAGEMENT IN VILLAGE	3.	Khorlim Mapusa & Revora	Poster making and explaining do's & don't on waste management	10 hours
WASTE MANAGEMENT SURVEY IN VILLAGES	4.	St. Cruz & Mala (Panjim)	Questionnaires were prepared to ask during the survey & explained composting & disposal of waste	10 hours

WASTE MANAGEMENT SURVEY IN HOSPITALS	5.	GMC (Bambolim) & North Goa District Hospital (Mapusa)	Review on biomedical waste management	10 hours
GREENERY IN CAMPUS	6.	SEOAS building in Goa university	Plantation of waste bottles for wall art	10 hours
PAPER BAG MAKING & DISTRIBUTION	7.	St. Cruz & Goa university campus	Paper bags preparation & distribution	8 hours
COMPOSTING OF BIODEGRADABLE WASTE	8.	Shady spot near a water source	Biodegradable waste compost	20 hours
PLANTATIONS	9.	Goa university & some villages	Tree plantation activity	8 hours

Introduction

Swachh Bharat Student Internship launched in October, 2018 is a part of the **Swachh Bharat Abhiyan Campaign** launched on October 2, 2014 by the central government. This internship was launched by the **Ministry of Human Resources Department (MHRD)** in association with the Ministry of Drinking Water and Sanitation and is titled '**Swachh Bharat Student Internship - 100 hours of Swachhata**'.

The objective of this internship is to encourage the youth across the country to contribute to the Swachh Bharat Mission through awareness programs, sanitation drives, surveys, workshops etc. and to develop their skills. The interns are expected to devote 100 hours to perform different activities under the theme's sanitation and hygiene, waste management, greenery and energy management. The interns are also required to adopt one

Village and conduct the activities of their choice in that village. We adopted different villages such as St. Cruz, Khorlim Mapusa, and Mala Panaji etc. Our team opted for this internship so they can contribute to the green and clean India campaign.

Our objective was to:

- Convey the message of the Swachh Bharat Mission and to encourage others to work towards attaining a greener India through our activities.
- To educate our society on various aspects such as the importance of waste management, sanitation, plantation etc.
- To encourage our community to use recyclable materials, afforestation and reduce the use of substances that are harmful to our environment.

SBSI REPORT – 2022

1. SANITATION AND HYGIENE CAMPUS AND VILLAGE – 10 + 5 = 15HOURS

Methodology/ Task Performed:

All the SBSI interns along with the help of some teachers carried out campus cleaning activities in order to make the campus clean and tidy. We collected all the different types of plastic polythene bags and then it was sent for separation. Cleaning the campus once will not reduce the waste so we did the campus cleaning activity 5-6 times on different dates. We also carried out village cleaning activities at St. Cruz Panjim and other villages. All the SBSI interns were present during the cleanliness drive and contributed equally to completing the activity.

AT CAMPUS



AT ADOPTED VILLAGE





Summary:

In accordance with the sanitation and hygiene theme, cleanliness drives were held on campus and off-campus i.e., at the villages on 8 June 2022. The aim of the cleanliness drive was to promote awareness of sanitation and to make a significant contribution to the Swachh Bharat Abhiyan. This activity was a successful one and the interns were able to collect a large amount of waste which was then sent for segregation and further processing. This activity contributed to a cleaner environment and also developed a habit of maintaining cleanliness in our surroundings with each individual that participated in this cleanliness drive.

2. EDUCATIONAL OUTREACH AWARENESS TALK – 10 HOURS

Methodology/Task Performed

On 8th April 2022, we met the principal of Government Primary School-Shiroda, Ponda-Goa and asked him to grant us a lecture in their timetable so that we can explain to the school students about waste management. He agreed and asked us to come on the next day by 11:00AM12:30 PMM.

On the next day i.e., on 9 April 2022, we reached the primary school exactly at 10:30 AM and took half an hour to prepare ourselves properly for the talk. The students and the teachers too sat and listened to the talk. We asked them a few questions to know if they already know about the waste management protocol to be carried out. We told them about different types of waste, how they need to be segregated. We also showed them a few videos to help them understand properly the procedure carried out to dispose of the waste or reuse it for some other purposes. The students were happy to learn about the same and promised us that they will dispose of waste in a proper way and avoid using non-recyclable substances as much as possible.

Then on 10 April 2022 at around 9:30 AM we met at St. Cruz Panjim and visited several houses from there and asked the children to meet us at the temple for a talk at around 10:30 AM. We were able to gather a satisfactory number of children and carried out the same procedure as we did at the Government Primary School Ponda-Goa. We asked them about different types of plastics and if they segregate waste separately at home. Next, we explained to them how to segregate and dispose waste and also showed them the videos on how the disposal is done on a large scale. We explained to them the 7R's (they knew only about the 3R's) and why we need to stop using plastic and why there is a necessity to recycle materials. All together we got a great response and they promised us that they will also tell these things to their family members and improve their knowledge on waste disposal and waste management and also start using recyclable and renewable substances instead of non-recyclable ones.

EDUCATIONAL OUTREACH AT ST. CRUZ AND GPS SCHOOL



Summary

“**Awareness Talk**” under Swachh Bharat Summer Internship 2022 was conducted by SBSI Interns on 9 April 2022 and 10 April 2022 at two different places i.e., St. Cruz and at Government school – Shiroda, Ponda. It was conducted to spread the motive of the Swachh Bharat Summer Internship which is to keep India Clean and Green. Our main focus was to put the awareness in the minds of our next generations and support this SBSI. At St. Cruz, we gave a speech about the ways of “**Recycle, Reuse Waste**” to people in a ‘door to door’ campaign. We conducted an “Awareness Talk” under the activity of Education Outreach of SBSI. We had 4 talk events. In these talks events, children got to learn about how to classify, segregate, recycle, reuse and manage the waste product from their households. Overall, it was a successful activity.

2. WASTE MANAGERMENTS IN VILLAGES – 10HOURS

Methodology/Task Performed:

POSTER MAKING AND EXPLAINING THE DO’S AND DON’T IN WASTE MANAGEMENT.

Places: - KHORLIM MAPUSA-GOA & REVORA- GOA

Date: - 30-April-2022 and 1- May-2022

On 30 April 2022 all of us met at Ponda and for the first one hour, we decided on how we will go through with the poster making and explanation and what type of poster should be made. Then from 4 pm to 6 pm all of us worked on making the posters. All together we made 4 posters, one showed a signal to stop using plastic, the other showed the 3R’s i.e., RECYCLE -REUSE-REDUCE, one depicted all the activities that should be done and should not be done in order to comprehend waste management and the other poster showed which all items can be recycled and which all cannot.

On the next day i.e., 1 May 2022, we visited different houses at Khorlim Mapusa from 10 am to 1 pm and explained all the posters and what each of the posters depicts. We told them why we need to stop using plastics and told them the do’s and don’ts in waste management. We also

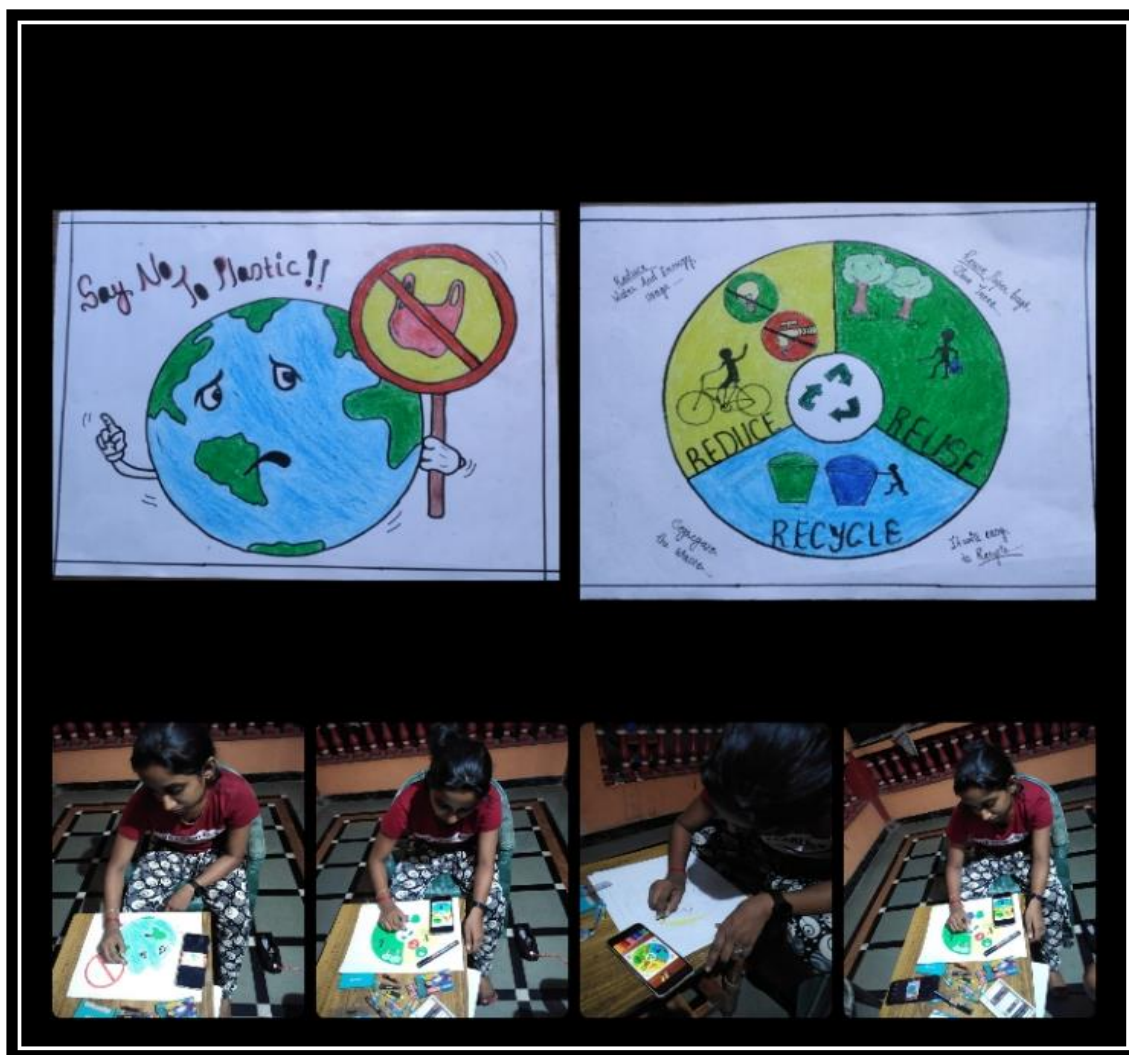
improved their knowledge of the types of waste that need to be segregated and reused with the help of the posters that were made by us earlier.

Then on the same day, we went to another place i.e., at Revora Goa and explained to them the same thing from the posters mentioned above we visited many houses and it was really a great experience to help people know about different types of waste that can be reused or recycled so that it does not cause any harm to the environment and is also being used at its best.

We also requested them to avoid using plastics in whatever way possible and use paper bags instead that are decomposable and do not cause harm to the environment even if it is thrown out. As evidence, some pictures of the posters and the houses that we visited are attached at the end.

POSTER MAKING AND EXPLAINING THE DO'S AND DON'T IN WASTE MANAGEMENT.





Summary

Poster making and explaining the DO'S and DON'T in waste management under Swachh Bharat Summer Internship 2022 was conducted by SBSI interns on 30 April 2022 and 1 May 2022 at two different places i.e., at Khorlim Mapusa Goa and Revora-Goa. It was conducted to spread the motive of the Swachh Bharat Summer Internship which is to keep India Clean and Green. Our main focus was to put the awareness in the mind of the villagers so that they become responsible citizens of our countries and do not contribute to any negative impact on the country. The knowledge of the villagers about the types of recyclable waste was improved and everyone was also requested to stop the usage of plastics in order to contribute to a better and pollution-free environment overall and it was a successful event.

3. WASTE MANAGEMENT SURVEY AT THE VILLAGES – 10 HOURS.

Methodology/ Task Performed

DATE: -20 May 2022 and 21 May 2022

PLACE: - ST. CRUZ PANJIM- GOA AND MALA PANJIM-GOA

The discussion about the questions that can be asked or that need to be asked to the villagers in order to know about how they carry out waste management in their village was discussed on 19 May 2022. We prepared a questionnaire containing about 12 questions. It took us almost 2 hours to sit and prepare the questionnaire and then we discussed to how to go through the questionnaire.

On the next day i.e., on 20 May 2022 from 10 am to 12 p.m. We took the survey of the houses in the St. Cruz village and asked them the questions that were prepared by us. We also gave them instructions on how to make compost from the wet waste generated in the household so that they can make better use of it. After gathering the information about the waste disposal at St. Cruz, we collected all the data and left for our next location that was Mala Panjim. We took the waste disposal survey there from 3 pm to 6 pm and asked them the same questions prepared by us. It was overall a successful day and we gathered all the information that was necessary in carrying out the survey. We told them about composting of wet waste as well

On 21st May 2022 all of us set and combined all the answers given by the villages of St. Cruz Mala Panjim, examined, drew a chart, and drew a conclusion out of it.

As evidence, the list of questions asked and some photographs of the survey at both places are attached to the report below.



QUESTIONS: -

1. Where do you usually put away collected household waste?
2. Are there any public bins near your house?
3. Do you dispose of the wet waste and dry waste separately?
4. Did the Panchayat or the Municipality give you instructions to dispose of wet waste and dry waste separately?
5. Has the Panchayat/Municipality given you a separate bin for the same?
6. How often does the garbage collector come to take away the garbage?
7. Has the Panchayat/ the municipality taken up any initiative of cleaning the entire village and roads of the village anytime?
8. If wet garbage is not collected, do you use it as compost for plants?
9. Did Panchayat give you the training to make compost from the wet waste generated?

10. Have you ever heard about the importance of recycling waste?

11. Do you reuse any plastic products?

12. Has the Panchayat or the Municipality taken any initiative to avoid using plastic or anything like that?

I. Survey at St. Cruz.

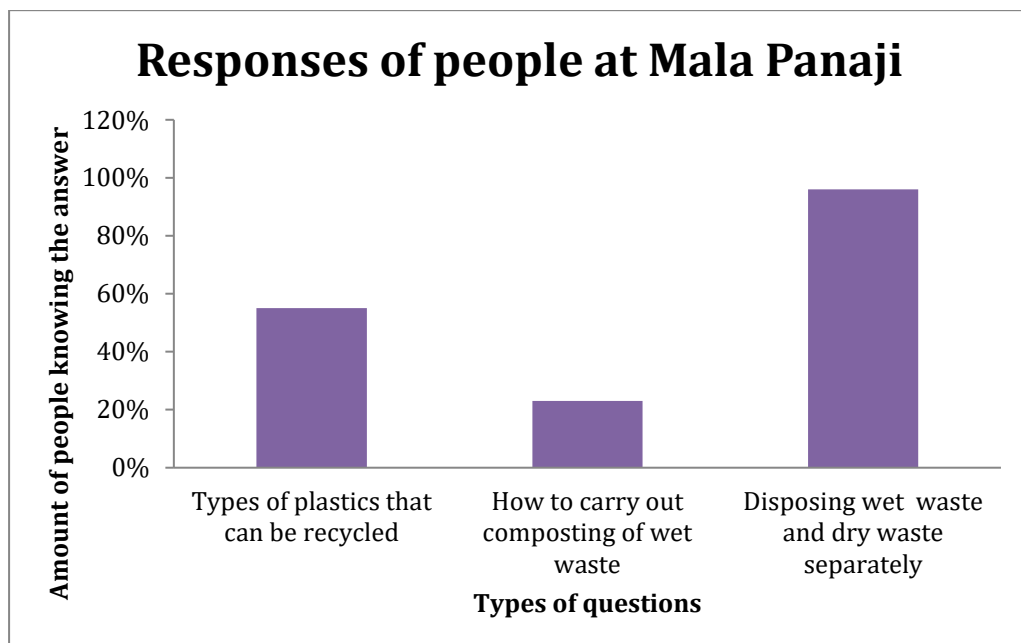
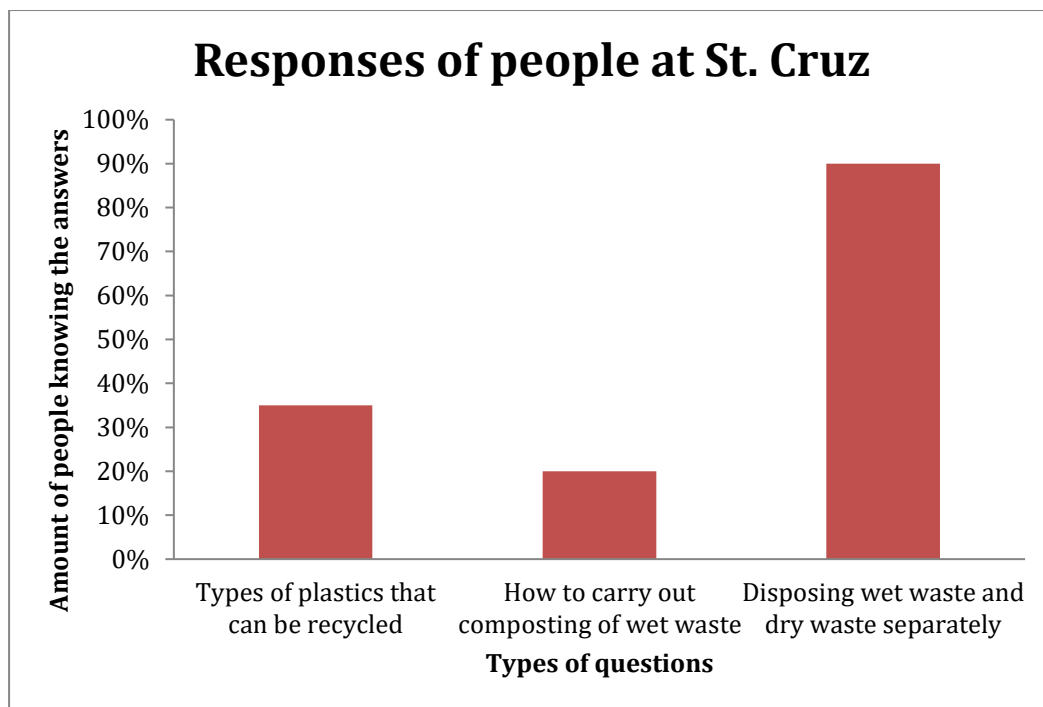
- A. People knowing the types of plastics that can be recycled-35%
- B. People knowing how to carry out composting of wet waste-20%
- C. People disposing of wet waste and dry waste separately-90%

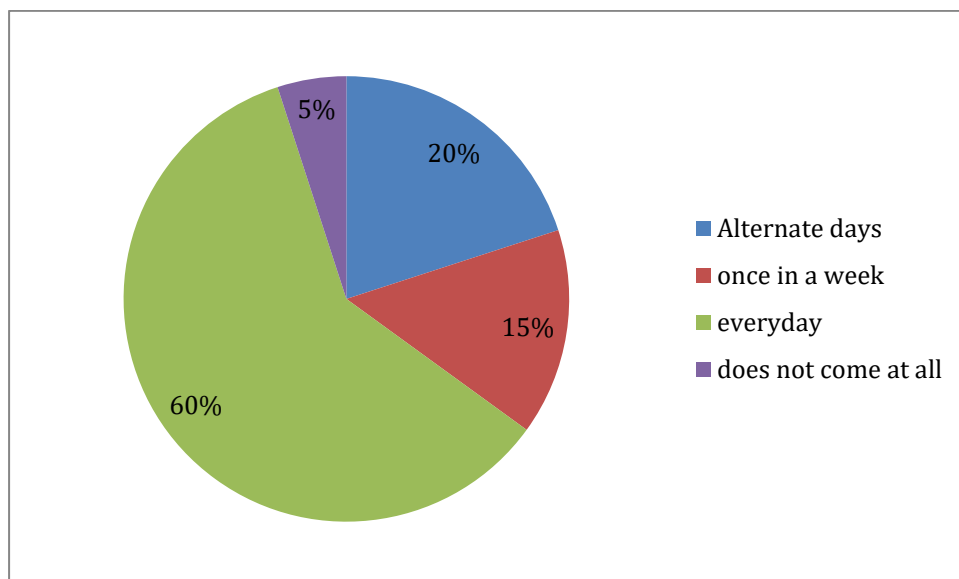
II. Survey at Mala Panaji

- A. People knowing the types of plastics that can be recycled-55%
- B. People knowing how to carry out composting of wet waste-23%
- C. People disposing wet waste and dry waste separately-96%

III. How often does the garbage collector come to collect the garbage?

- A. Alternate Days –20%
- B. Once in a week –15%
- C. Everyday-60%
- D. Does not come at all-5%





Summary

A waste management survey at the villages under Swachh Bharat Summer Internship 2022 was conducted by SBSI interns on 20 May 2022 at two different places i.e., at St. Cruz Panjim & Mala Panjim. It was conducted to spread the motive of Swachh Bharat Summer Internship which is to keep India clean and green. This activity increased our knowledge of the waste management activities carried out in the village and we were able to get a rough idea about it. Making compost out of the wet kitchen waste not only reduces the pollution but also contributes to getting a greener environment by adding the compost to the plants which as a result, helps the plants to grow stronger and faster. This activity was overall a successful one.

5. WASTE MANAGEMENT SURVEY AT GOA MEDICAL COLLEGE BAMBOLIM (5 HOURS) AND NORTH DISTRICT HOSPITAL MAPUSA. (5 HOURS)

Methodology/ Task Performed:

WASTE MANAGEMENT SURVEY AT HOSPITALS 5+5=10

Date: 19 May 2022 & 27 May 2022

Places: Goa Medical College Bambolim

North Goa District Hospital Mapusa

The discussion and preparation of the questionnaire was done on 18 May 2022. On 19 May 2022 at 10 am we started our survey at the Goa Medical College Bambolim and asked various questions to the doctors, the interns and the workers of the GMC hospital. All of them gave different answers regarding the waste disposal technique that is being carried out at the hospital. They also improved our knowledge about the biomedical waste.

On 27 May 2022 the interns visited North District Hospital Mapusa and asked the same questions that were asked at the GMC hospital. They asked several questions to the doctors, interns and the staff of the hospital to know about the waste disposal procedure that is carried out there. After the survey was complete, the interns compared the waste disposal system at both the hospital and discussed about it thereby improving their knowledge at a little higher level.

TYPES OF WASTE SEPERATED:

Yellow: in biomedical waste separation is pathological waste, cotton waste, dressing materials, beddings, body fluid contamination paper and cloth, face mask, cap, cytotoxic, expired and discarded medicines, microbiology, biotechnology lab waste.

Red: syringe without needles, 4 set catheters, gloves, urine bag, dialysis kit, 4 bottles, plastic wastes, goggles.

White translucent: needles, syringes with fixed needles, blades, scalpels.

Blue: glass (broken glass), ampoules, lab slides and metals, nails, metallic body implants scissors.

SURVEY AT GMC



SURVEY AT ASILO





Summary

A waste management survey was conducted by SBSI interns on 19 May 2022 at Goa Medical College, Bambolim and on 27 May 2022 at North District Hospital – Mapusa.

Biomedical waste collection and proper disposal has become a significant concern for both medical and general community. Effective management of biomedical waste is crucial and is also a social responsibility. A review of medical waste in the hospital was done so as to understand i) various handling & disposal procedure, ii) create awareness, iii) impacts of waste released on human health & environment.

If there is a inadequate management of waste, it will cause a direct health hazards on the general public, the health care workers and on the environment. We also learnt about the different types of biomedical waste that are discarded in different colored bins and why there is a need to discard different wastes separately.

Following were the questions asked to the hospital staff:

1. For how long can the untreated biomedical waste can be stored?

2. Can inappropriate biomedical waste disposal cause health hazard?
3. Do you follow the colour coding for biomedical waste?
4. Does the hospital have its own treatment & disposal of medical waste generated?
5. Is the staff trained to handle the hazardous waste generated?
6. Do you'll have any way or mechanism to decrease the toxicity of hazardous waste?
7. During pandemic, what were challenges faced to dispose various problematic waste?
8. How should biomedical waste be stored?
9. What are the precautions before letting down waste water into drain?
10. What are the different types of biomedical waste?

6. GREENARY ON CAMPUS – 10 HOURS

Methodology/ Task Performed:

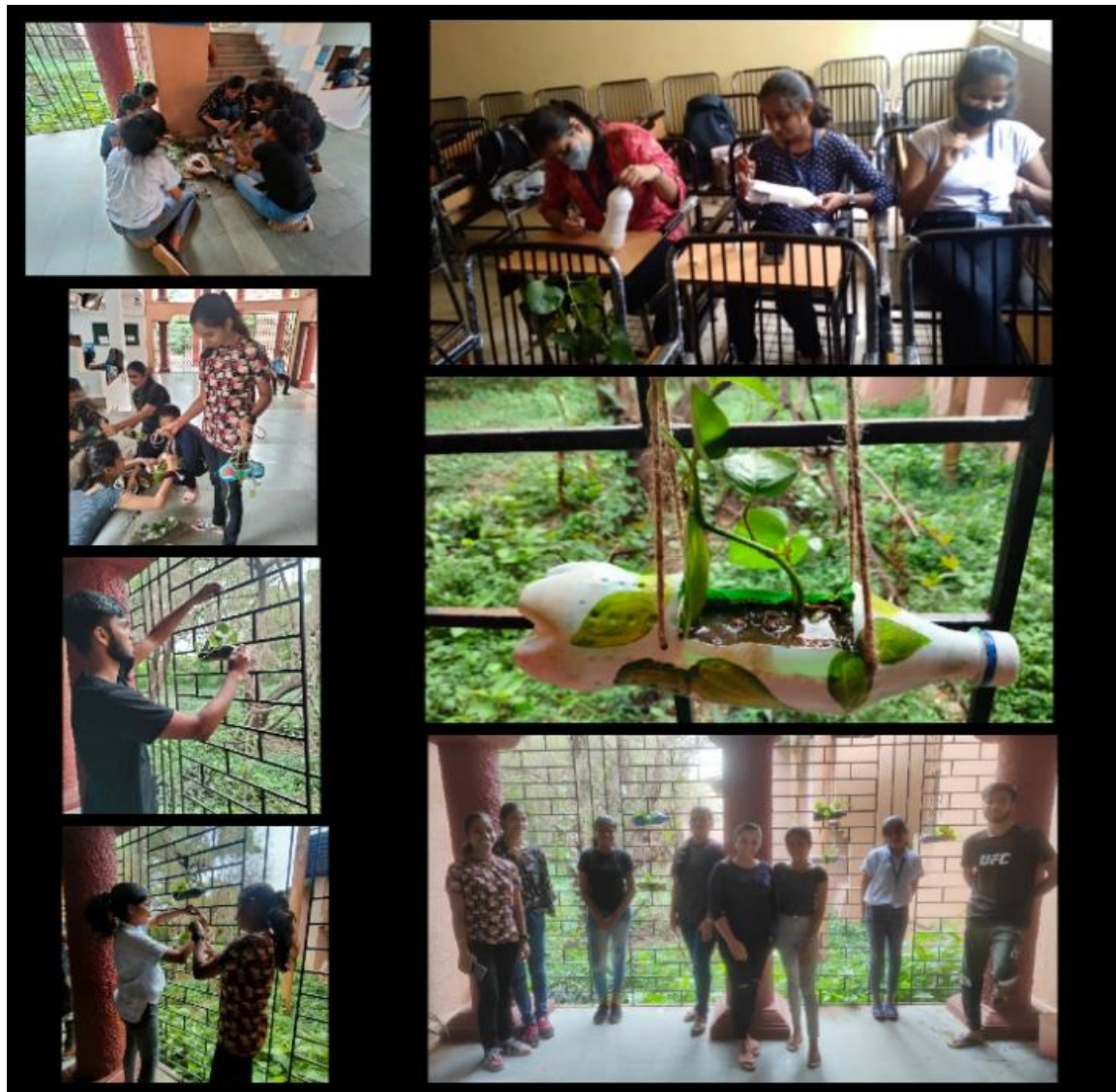
Greenery on campus – 10 hours

Place: SEOAS block of Goa University

We collected waste cold drink bottles. We cut it in such a way that we can plant some plants in it. We painted them in beautiful pattern to make them look attractive and left them to get dried.

The other day we bought small plants like money plant, periwinkle. We filled the bottles with soil and planted these plants with the permission of Dean we hanged them on the grills of the block. We have made holes in bottles, so that extra water drips off. We have requested the care takers to water the plants regularly and to take care of them.

GREENERY AT CAMPUS



Summary

Greenery on campus by creating 'DIY' from waste plastic bottles was held by SBSI 2022 interns on 6th June 2022 at SEOAS block of Goa University. The main purpose of the activity was that to use waste materials (e.g.: - plastic bottles) to make something creative and useful things out of it. The Dean, staff and college students appreciated us and even they decided to make best out of the waste and lead to Swachh Bharat. Clean India.

7.PAPER BAGS MAKING AND DISTRIBUTION- 8 HOURS

Methodology/ Task Performed:

On 2nd June 2022 we interns collected old newspapers from the houses we made 50 newspapers

by watching a tutorial on YouTube. We made bags such that it can hold more grocery items. We distributed the paper bags to the shop near Goa University campus and S.T Cruz. We convinced the shop owners to use paper bags instead of using plastic bags as it will in long run damage the environment.

We gathered some children in S.T Cruz village in a hall. We created a workshop for them to teach them to make paper bags. We also tried to motivate them, to use paper bags at home. We gave a brief talk about using paper bags in our daily routine lives.

PAPER BAGS MAKING AND DISTRIBUTION



Summary

Paper bags making and distribution activity was held by SBSI interns on 2nd June, at shops nearby Goa University and at S.T Cruz shops. The main purpose of the activity was that, to create awareness of using paper bags instead of using plastic bags, which is harmful to the environment for long run.

Children learned to make paper bags and which they will use in their household too in order to convince their parents to use paper bags. Shopkeepers appreciated the idea of using paper bags for their products instead of plastic bags, and assured us they will follow the same.

8. COMPOSTING OF BIODEGRADABLE WASTE -20 HOURS

Methodology / Task Performed:

Composting of Biodegradable waste

Date: 4th April 2022

Composting of biodegradable waste was started by us on 4th April 2022.

Composting is the natural process of decomposing and recycling of organic materials into a humus rich soil.

BOKASHI COMPOSTING: -

A suitable place was chosen with a dry, shady spot near a water source. Composting was carried out in a closed containers and added brown and green materials in alternate layers and kept ratio roughly 3 parts brown and 1 part green. The greens were chopped in small pieces. The Bokashi decomposed in anaerobic process to give humus. After 15 days the compost was mixed with soil and made holes in containers. After a week, the compost was used for plants.

VERMI COMPOSTING: -

Earthworms were used in process.

Leaves, veggies (raw), fruit peels were used while dairy, cooked food were avoided in process.

COMPOSTING OF KITCHEN WASTE



Summary

Composting of biodegradable waste activity was started by SBSI 2022 interns on 4th April 2022. The main purpose of activity was that to use biodegradable and environmentally friendly materials which will not create toxicity if they flow in waters. We also created awareness among people to make and compost at homes from wet waste generated. Humus will improve quality of soil and make soil fertile. This activity was completed successfully.

9. PLANTATIONS - 8 HOURS

Methodology/ Task Performed:

On 22nd May 2022, we all interns purchased plant sampling from Bambolim. The samplings consist of mango, jackfruit, guava, chickoo etc.

In evening we went to our Goa university campus asked permission SEOAS Dean. We along with some of teacher's consultation planted sampling around Goa university campus. We also watered the plants and ensured that no dogs or people unintentionally destroy them. In and all we planted samplings we requested the watchman and care takers of the SEOAS block to water the plants and to tell us, if there is any uncertain issue with plants.

On 31st May 2022, we interns purchased 5 plants samplings from Bambolim. In the evening we went to the S.T Cruz village we explained our initiative of SBSI internship to the village Panch and the inhabitants living there we identified 5 areas where, it will be safe to plant the samplings. We along with the villagers help planted the samplings and also made a warning sign for the locals, so that the plants are not destroyed. We gathered the villagers and explained them importance of the trees in today's world. We requested the villagers to water the plants and to take care of them. We told the Panch to inform us the progress of the plants in coming days.

PLANTATION AT VILLAGE



Summary

Tree plantation activity was conducted by SBSI 2022 interns on 22nd & 31st May 2022 at Goa university campus and S.T Cruz Panjim it was conducted to spread the message to plant and to save more trees as much as possible. We also tried to spread the message to plant and to save more trees as much as possible. We also tried to spread awareness of the depleting trees. We told them importance of the tree plantation in daily life.

In this activity people also learned about importance of trees and overall, it was successful activity.

Outcome and Conclusion

This internship has been an inspiring journey and a great experience. We Performed various activities from cleanliness, going for surveys to conducting workshops for students of the schools and villages.

- We've learned that we can contribute and create a meaningful impact on activities when we work as a team.
- We've also improved our communications skills and gained high level of self confidence
- We've gained a lot of knowledge about:
 - ❖ Our country's waste management system and what changes it needs so it is more efficient.
 - ❖ Our country's forest and tree cover, its biodiversity and its ecosystem service.

