

SOLID WASTE MANAGEMENT 2017-2018

Academic Research

Implementation of any waste management study necessitates adequate information on various aspects of the issue. Hence students are encouraged to analyse different aspects of solid waste generation and management in Kerala.

In Department of Economics- Three doctoral students are engaged in analyzing various dimensions of solid waste.

Jyotsna Nair is currently analyzing the economics of dry waste recycling industry in Ernakulum district

Ashwathy is analyzing generation and management of waste by Houseboats in Alleppey district

Amala Johnson is analyzing decentralized solid waste management under Haritha Keralam Mission of Govt of Kerala.

Teanan Manuel II MA March 2018 examined Adoption of Green Protocol as a Waste Production Strategy Among Latin Churches in Cochin Corporation. A brief on her study is given below.

Adoption of Green Protocol as a Waste Production Strategy Among Latin Churches in Cochin Corporation

Implementing a sound management strategy is a challenge that every local body in Kerala is facing Recognizing the need of the hour, Suchithwa mission, recently launched the green protocol with the aim of promoting the first principle of scientific waste management namely minimization of waste streams though reduction in use of disposal products and promotion of eco friendly alternatives. The success of these initiatives depends on its adoption by segments of population in all activities. A segment which has considerable influence and can make an impact are the churches in the state which are the venues for many public functions such as marriages, baptism, annual festival etc. The present study is undertaken to identify the adoption of green

protocol as a waste production strategy among Latin churches in Cochin Corporation. The study goes further to also examine the type of waste generated and disposal methods employed in these institutions.

OBJECTIVES OF THE STUDY

1. To identify the main public functions organized in Latin churches in Cochin Corporation.
2. To assess awareness of green protocol and its varied strategies that can be used in such public functions.
3. To identify the implementation and practice of green protocol strategies by churches in such functions.
4. To identify new opportunities for waste reduction that could be implemented by churches

METHODOLOGY OF THE STUDY

Present status of the adoption and practice of green protocol as a waste management strategy among Latin Churches in Cochin Corporation was studied by collecting data from the church authorities. To study the present status of the waste disposal system, data were collected by dividing the Latin Churches in Cochin Corporation as big, medium and small. Questionnaire method was used for collecting data by visiting church authorities. Attempts were made to make the questionnaire brief and to the point to enable the respondent to answer the questions with lively interest.

FINDINGS

- According to the study, among three main public functions such as wedding, baptism and funeral, weddings and funerals are the most happening ceremonies in churches during a month.
- 30% of churches opinioned that, plastic wastes generation in their church is high while 43% of them says that, plastic wastes generation is low when compared to other waste materials .
- 53% of churches opinioned that, paper wastes generation in their church are high while 40% of them says that it is low when compared to other waste materials.

- Only 6% of churches opinioned that, food wastes generation is moderate while 94% of them says that it is low when compared to other waste materials.
- 40% of churches opinioned that, grass/flower clippings generation in their church is high while 13% of them says that it is low when compared to other waste materials.
- 10% of churches opinioned that, wreath generation in their church is high while 57% of them says that, wreath generation is low when compared to other waste materials.
- 60% of churches opinioned that, generation of candle waste in their church is high while 23% of them says that it is low when compared to other waste materials.
- It is found that, in case of plastic wastes, 94% of churches, plastic wastes generated in are being collected by the corporation. In case of paper wastes, 77% of churches opinioned that, paper wastes generated in their churches are being collected by the corporation, 10% of them are adopting burning method, 7% of them prefer composting method, and 6% of them are dumping their wastes in their own compound. In case of grass/flower clippings 63% of churches says that, wastes from grass/flower clippings generated in their churches are being collected by the corporation, 24% of them are adopting burning method, 10% of them prefers composting method, and 3% of them are dumping the wastes in their own compound. In case of wreath, 90% of churches says that, wastes from wreath generated in their churches are being collected by the corporation while 10% of them are adopting composting method. In case of candle waste, 100% of churches were handing it over to the corporation.
- It is found that, the awareness level of the churches regarding the green protocol policy is reasonably good. Around 53% of churches are strongly aware about the green protocol policy while 47% of them are not at all aware about the policy. But the awareness level of the churches regarding the strategies and principles of green protocol policy is comparatively low. Only 30% of churches are aware about the different strategies/principles of green protocol policy while 70% of them are not at all aware about it.
- The main strategy for implementing green protocol at present seem to be prohibiting use of single use plastic/ paper disposable plates and cups during functions. Thus 66% of churches have currently banned plastic cups and plates and 83% have banned paper plates /cups during functions.53% of churches have banned use of plastic covering on

flowers in wreath, and 60% of churches banned the use of sponge/plastic holders in wreaths

- Only 13% of churches have currently banned the use of non-biodegradable decorations during festivals and 30% of churches have banned the use of plastic carry bags.
- 26% of churches have banned use of non-cotton socks/gloves during funerals, Only 20% banned the use of rexene/plastic shoes and only 7% of churches have banned use of non-biodegradable clothes during funerals.
- ‘Analysis of the usefulness of green protocol revealed that only 23% of churches believe that the practice of green protocol would make public functions eco-friendly while 77% of them do not think so.
- Regarding attitude of churches, most of the churches believe that banning of paper/plastic glass, plates during functions, plastic carry bags during festivals, plastic covering and plastic/ sponge holders in wreath is needed in order to attain environmental sustainability. However majority do not perceive the need for banning non-biodegradable decorations during festivals, non-cotton socks/gloves, Rexene/plastic shoes and non-biodegradable clothes during funerals.

SUGGESTIONS

- From the study, it is clear that, there are a plenty of waste management strategies and principles proposed by the government for promoting green protocol policy, but some of these practices particularly in the case of banning plastic carry bags and non biodegradable items of decorations are yet to be applied in many churches. Hence proper awareness programmes should be conducted in churches under the guidance of the Cochin Corporation in order to make both the authorities and the general public aware about the strategies and principles of the Green Protocol Policy implemented by the government.
- Current green protocol as a reduction strategy by the Government focuses mainly on plastic carry bags, single use cups/ plates and eco friendly decorations. They have not touched upon non biodegradable items that are generated in churches special those that are a part of funeral processes. In fact with increase in population and corresponding number of funerals, a few groups in the world are even considering bio- pods as funeral

caskets. In Kochi also, few churches are grappling with the issue and are slowly suggesting eco friendly burial materials. There is a need to expand Govts green protocol strategies to cover such practices also so as to reduce non biodegradable waste in the long run.

- A carrot and stick approach may be adopted for promoting implementation of green protocol. Churches who implement should be highlighted in social and print media. Such acknowledgement will draw public attention and help mould acceptable norms. Along with this, inspections should be held at marriage halls and other venues of the church in this regard and action should be taken if the protocol is violated. Environment audit groups may be formed in each ward who are entrusted with a basic checklist for potential green protocol strategies to be adopted for different functions and who can enforce the same.

Consultancy and technical support to local bodies

a) Kudumbasree Training - Trivandrum

July 8 2017- A training class was conducted at Trivandrum by Saraswathi, Shivaprabha and Ms. Thasneem (Kudumbashree) for Kudumbasree women. They gave training for making ball bags, strawberry bags, sanchis, purse bags and paper bags.



Kudumbasree Training- Trivandrum

b) Chavara Cultural Centre Training

September 28 2017 -A presentation on alternatives to plastic was organized in Chavara Cultural Centre Ernakulam by Shakti Kerala. The technical section was handled by Bhoomitra Sena Club. The interactive session was about various threats to the environment and the possible ways to tackle the issue of environmental pollution. The programme had displays of various eco-friendly products such as bags, clothes, cups, bottles etc. The main intention of the display was a shift from plastic products to eco-friendly products, especially clothes (jute). There were also talks on productive waste management and how non-biodegradable waste could be trashed without harming the environment. Training session was conducted by the technical team of St.Teresa's college for alternative to plastic carry bags. Beneficiaries included training personal of Trichurprison, juvenile justice dept Ernakulam and various self-help groups associated with Chavara Cultural Centre.

c) Clean Paravoor Green Paravoor

October 13 2017-As part of the Clean Paravoor Green Paravoor programme, awareness session on issue of plastic waste was conducted Dr Nirmala Padmanabhan FIC. BMC as a part of the programme organised by ParurMuncipality and Ernakulum Suchitwa mission. The students team First year Home Science, Angel and Anuvindha. They also conducted training for school paravoor in stitching various bhoomitra sanchis.



Clean Paravoor Green Paravoor session in progress

d) IEC workshop

December 22 2017 -Dr Nirmala attended the IEC workshop conducted Shuchitwa mission and Haritha Kerala Mission at TVM ThykkadGovt guest house to draft IEC campaign for Haritha Kerala Mission, Govt of Kerala.

e) NSS Guruvayur

December 23 2017- Dr Nirmala Padmanabhan FIC, BMC led awareness session on issue of plastic waste and demonstrated eco friendly alternatives to plastic carry bags to members of National Service scheme Unit no 483 of Sreekrishna high school Guruvayur at the 7 day camp at VRMMHSS Thykkad. All student members present made zero cost T shirt bag as an alternative to plastic carry bags.



NSS Guruvayoor

f) Kadamakudy Training

DEC 28 2017- Punarjani 2017, an effort by the NSS unit of GVHSS Kadamakkudy was a seven day camp organised jointly by the Government Vocational Higher Secondary School Kadamakkudy, KadamakkudyGramapanchayath, VarappuzhaGramapanchayath, the health department, police department and the excise department from 23 December 2017-30 December 2017 at the chirakkumGovt.UP school The Bhoomitra Sena club of St Teresa's college

Ernakulam trained the students in making zero cost T shirt bags which enabled them to reuse old t shirts and stitch them into bags which can be further used for daily use.



Kadamakudy Training

Awareness

Within the campus

a) Awareness on Green Protocol

November 23 2017-The St. Teresa's College undertook an awareness programme on Green Protocol to create awareness among the students regarding the concept of Green Protocol and scientific waste management. The awareness programme was held in the Arts block of ST. Teresa's College on November 23, 2017 by BMC volunteers-Sreelakshmi, Suha, Ayesha, Sheetal, Aleena, Teresa, Ardra, Elizabeth, Athira, Arya, and Patricia. It was conducted in the science block of ST. Teresa's College as well.

Ente Haritha Bhavanam volunteers were also part of the Green Protocol programme put forward by St.Teresa's College, Ernakulam. The main aim was to create awareness among the students about the concept of Green Protocol and to teach them the Ten Commandments undertaken by the BMC. This was conducted during the Value Education hour.

Outside the campus

a) Our Lady's Convent

July 7 2017: The Bhoomithra Sena Club of St.Teresa's College, Ernakulam conducted a presentation programme at Our Lady's Convent, Thopumpady. An awareness session on hazards of plastic waste was conducted for PTA and the Bhoomithra Bags were introduced to promote alternatives to plastic carry bags and a more environmental friendly life style.



b) St Xavier's College, Aluva

July 14 2017- St Xavier's Aluva- Scope of green bags and alternatives to plastic were introduced to students of the Dept. of Economics, St. Xavier's College, Aluva during the Economics Association activities.



c) Perumbavoor Municipality

July 21 2017- An awareness session on hazards of plastic waste was organized by the Perumbavoor municipality for the Kudumbasree members and the elected representatives in

association with Suchitwa Mission, Kochi. The Bhoomithra Bags were introduced to promote alternatives to plastic carry bags and for a more environment-friendly lifestyle.



Perumbavoor Municipality

d) IMG Presentation

Oct 5 2017- Dr NirmalaPadmanabhan presented the Bhoomitrasanchi at the Solid Waste management workshop conducted at IMG Kakkanad. Methods of making stylish t-shirt bags were introduced at the event. Attractive college bags and methods to make them were also demonstrated. Bhoomithra sanchisof various shapes and sizes were shown as well to attract the present to eco-friendly accessories.



IMG Presentation

e) EK Nayanar College Awareness Session

OCT 12 2017-The Bhoomithra Sena Club of St .Teresa's College Ernakulam gave an awareness session for NSS club members at EKMNSS. The session was on alternatives to plastic carry bags .it was conducted at EK Nayanar Memorial Govt college ElayarithattuKasargod.



EK Nayanan College Awareness Session

f) Demo at Government Victoria College, Palakkad

November 14 2017-A demo was conducted by the members of Bhoomitra Sena club at Govt Victoria College for a programme arranged by the Bhoomitra Sena club of Govt Victoria College. This was a mission to mentor that club to take up the green protocol mission.

g) Lions Club Awareness Session

November 21 2017: An awareness session was conducted by Dr.NirmalaPadmanabhan, department of Economics accompanied by two students Shilpa II DC economics, Ammu 1 DC economics for the Lions Club Girinagar north, Ernakulam. A presentation was shown at the event by the students and a demo was conducted on how to make the cloth bags as well. A sale of the Bhoomithra bags was also conducted at the event.



Lions Club Awareness Session

h) SevakiranSwesti

December 3 2017-Under the guidance of the faculty in charge Dr Nirmala Padmanabhan FIC, a BMC awareness session on issue of plastic waste was conducted and also demonstrated eco-friendly alternatives to plastic carry bag to the members of SevakiranSwesti at Kothamagalam.

i) Bhaumika-2k18

FEB 23 2018- The Society of Teresians for Environment Protection (STEP) of St. Teresa's College Ernakulam participated in a paper presentation as part of a National Workshop on Science and Technology for sustainable development with the support of Kerala State Council For Science, Technology and Environment, Thiruvananthapuram at Sree Narayana Guru College of Arts and Science, Paingottoor on 23rd and 24th February 2018 as part of the National Science Day celebrations-BHAUMIKA 2K18. The workshop aims to examine the benefits of Science and Technology for Sustainable development. Paper presentations, competitions, Exhibition and Night Sky Watching were organised as a part of the programme. Dr. Nirmala Padmanabhan, Associate Professor, Dept. of Economics, St. Teresa's College, Ernakulam was one among the Keynote speakers of the event.

j) Elamkulam Church

March 4 2018: Dr Nirmala Padmanabhan took a session on hazards of plastic waste and alternatives available for parishioners of Elamkulam Fathima church. An exhibition cum sale if eco-friendly alternatives was also organised on that day by STEP.

Action

Within the campus

a) Freshers' day Sale

12-14 June 2017- As part of the Suchitwa Mission, the BMC and STEP society annually make an excellent contribution towards environmental protection by promoting the use of foldable cloth bags made from upcycled textile wastes and steel cups in and around campuses in Ernakulam. A fresh start every year is made by the sale of Bhoomitra sanchis, steel cups and Prakriti college bags to the freshers of each year thereby implementing Green Protocol throughout the campus. A sale was conducted from 12-14 June 2017 by the student volunteers of the clubs at the Arts Block. Prakriti bags are attractive eco-friendly college bags designed by the students and stitched by Kudumbasree workers. These bags have Bhoomithra sanchis - trendy

and compact carry bags, attached to them and its available in various designs – ball bag, strawberry bag, zip bag etc. It can be used as an alternative to plastic carry bags. By using such bags, students serve as brand ambassadors of an anti-plastic carry bag campaign which will help to curb the use of plastic and rexine thereby mitigating the issue of solid waste in our country.

b) Schedule in Action Plan

- To conduct a meeting for all the second-year students to follow up the activities and to promote Ente Haritha Bhavanam Project into a greater level.
- Monthly tabulation of activities to determine the “Green class room” of each month to further activities.
- Mid-term award for the best performing coordinator and class.
- Arranging a campaign to ban plastic waste in college premise. To put up photos collected from the WhatsApp group on the college LED screen to give special recognition to students who cooperated for this project.

c) Distribution of Schedules

BMC with eco-friendly practices and joined hands with the Collectorate of Ernakulam on ‘Ente Haritha Bhavanam’ project schedules were distributed among students to check the green habits observed and practiced by students at home. The core team’s focus was to distribute the questionnaires among the second year students of every department and the collected the schedules. The main motive behind the schedule was to observe environmental awareness and green habits being followed by students at their home.

d) Greening the Annual Christmas Sale 2017

December 13 2017-ASTA, Association of St Teresa’s Alumni, conducted a Christmas sale on 13th December 2017. This gave an opportunity for women entrepreneurs to exhibit products such as saris, salwars, jewellery, home décor items, cakes, jams, pickles, snacks and ready-to –eat items.

The cosy warmth of the campus beckoned all things Christmassy and homely. A few to name were-indoor plants, peter pan ready- to-wear collars, embellished wine bottles, cushion covers, dresses for tiny- tots etc.

The Bhoomithra Club joined hands with ASTA to implement green protocol in the sale. Plastic carry bags were prohibited, and students provided paper bags made out of chart papers and newspapers respectively. A total of 445 bags were sold and they raised an amount of Rs. 1165, this encouraged the entrepreneurs to eschew the use of plastic bags. A team of 11 students led by Astle George of III DC economics handled the making of such alternatives. Sharon Christine Vaz, Andriya Nunez, Malavika Das, Sanjana Sony, Rita Tharakan, Sherin PN, Akhila Stephen, Nazra Siraj, Caroline, Athira E A and Lakshmi A adorned with Swach Sena badges volunteered to encourage stall members to follow the protocol which served to promote better compliance. Indeed, there was no better way to embrace yuletide.

e) STEP Work Centre

Feb 19, Kochi: St Teresa's College crosses yet another Milestone by expanding their work space for love for nature. The inaugural ceremony of the work centre for Society of Teresians for Environment Protection (STEP) of St. Teresa's College (Autonomous) was held at 11:30 am in the Arts block auditorium. Dr TN Seema, Executive Vice Chairperson, Haritha Kerala Mission, Government of Kerala was the chief guest of the programme. Dr. Sajimol Augustine M., Principal of the College welcomed the gathering which was followed by the presidential address delivered by Adv. Minimol V.K, Health Standing Committee Chairperson, Cochin Corporation. She spoke on the importance of an attitude for change especially among the youth towards an eco-friendlier lifestyle. The distinguished guests marked the beginning of the event by lighting the lamp.

STEP is a charitable and literary organization formed by students and faculty of St. Teresa's College in April 2016. Dr T.N Seema flagged off the endeavour and delivered the inaugural address. She did the honour of handing over the key to student representatives and spoke high of the Teresian spirit in environment protection and congratulated the faculty and students behind all the activities as part of STEP. She also wished that all these efforts bring about a lifestyle change in the daily lives of people.

The word of blessing was given by Rev.Sr.Dr.Vinitha (CSST), Director of St. Teresa's College. Smt. Gracy Babu Jacob (Councillor, Cochin Corporation), Shri. K. Chandrasekhar (Executive Director, TiE Kerala), Shri. Manjesh (District Co-ordinator, Kudumbashree), Smt. Seema (Cochin Shipyard) delivered the felicitation. Rev. Sr.Dhanya (CSST), Local Manager, St.

Teresa's College honoured the guests with bhoomithra bags as a token of gratitude. The programme concluded with Dr. Nirmala Padmanabhan, Associate Professor, St. Teresa's College, proposing the vote of thanks. An exhibition was also conducted as part of the inaugural ceremony at the newly inaugurated work centre displaying eco-friendly products.



STEP Work Centre Inauguration

f) New Projects of 2018

- Eco-Friendly Sanitary Napkins

A pre requisite for sustainable menstrual hygiene is safe and environmental friendly disposal of menstrual waste in general and sanitary napkins in particular. A survey of four villages in Kerala- Ezhikkara, Kanjiramkulam, Nenmeni and Marutharode in 2014-2016 done by a team headed by Dr Nirmala Padmanabhan as a part of Kerala Local Government Service Delivery Project funded by The World Bank and implemented by The Local Self Govt, Department Govt of Kerala reveal an increasing generation of such sanitary waste even in rural areas which is disposed off in an unscientific manner posing a major environmental threat to rural Kerala. Use of chemical gels in sanitary napkins is also reported to be harmful and potential source of cervix cancer. Realising such harmful effects, women in many developed countries are switching back to eco-friendly cloth napkins.

A pilot study conducted - under guidance of Shakthi - the women's wing of Swadeshi Science Movement- in three wards in Kothadu village (one of the coastal villages in

Ernakulam district) in 2017 revealed that nearly half the women / girls surveyed used sanitary napkins while the remaining 53 percent used old clothes. It is now being globally recognised that one strategy of sustainable menstruation is popularisation of eco-friendly cloth napkins even among younger generation. While such napkins are being manufactured and marketed by some, these are very expensive which is beyond the reach of the common man. STEP- Society of Teresians for Environment Protection – a social entrepreneurship unit consisting of around 100 students and faculty in St. Teresa's College - have designed eco-friendly cloth sanitary napkins which can be made from people's own old textiles. Such napkins will be of the type which can be opened out and dried in the sunlight. These can certainly be a potential solution particularly in rural areas.

- Other New Projects

Pencil pouches from textile waste from tailoring, upholstery shops.



g) Paper Recycling Project (OSSM Project)

As part of BMC activities of the academic year 2017-18 the Bhoomitra Sena Club of St. Teresa's College took a major step to recycle the paper waste produced in all over the college.

According to this project The BMC of St. Teresa's decided to distribute one cardboard box to each department of the college to collect the recyclable paper waste. Then the non-teaching staff of each department were instructed to collect the paper waste and sell it at the end of each month for recycling and they were also allowed to take the project they earned by selling these papers. So through the project, the BMC of ST. Teresa's college not only decided to work for the betterment of the environment, but also decided to give an opportunity to earn some project for the non-teaching staffs of the college. At the end of each month a squad of student members of BMC is decided to send to each department for an inspection. The BMC of the college also decided to title that Non-teaching staff who sell the more paper at the end of the academic year as the 'Recycling Champion of St. Teresa's college'.

Initially, for the paper recycling project, which is being called the ‘one step to save more (OSSM)’ project, a group of teachers consisting of Pro. Meera Jan, Bindhuja Menon and Anju.N.B were selected as the faculty incharge of the same.

A meeting of BMC student members of the college was organised and several small groups of students were selected for different duties regarding the OSSM Project.

A group of 20 students under the leadership of Anjitha .D. Kammath and Tanya Joe were selected for the collection and distribution of cardboard boxes.

A group of 5 students under the leadership of Parvathy M joined their hands and creativity to beautify the boxes. Then the following students were selected for the inspection of different departments.

Central block : Jeny, Aruna, Judith, Liya and joshmy

Department of Bharathanatyam and office: Anju Denny, mary, Liya Susan(Literature)

B.Com (Self),French, BCA, BVoc: Shihana V.M, Alisha Pradeep,Bhavya, Anjana,Sona, Preethy

Dept. Physics and Maths : Cerine,Festeena,Ashitha,,Linu,Heenna(physics department)

Dept. Home Science , Fasion Designing and Women studies: Rose, Jeswin, Ann Mariya.

Dept. Communicative English and sociology: Swathy, Mariya, Sara(communicative English)

Dept. Botany and Zoology: Jeenath, Neha, Anagha, Parvin,Shilpa,Devika,Varsha,Diya.

Dept. History and Literature : Anantha,Sreelakshmi V.S

Dept. Chemistry : Mary Treesa, Rukkaya, Shafahath.

Dept. BCom and Economics: Anslite, Minnu,Neha.

A small awareness class was given for those students on 9th January 2018 who were incharge of distribution of boxes about the Aim and procedure regarding the this project by Bindhuja Menon of Mathematics department. Then these students were divided into three groups for the Arts, Science and the Central blocks. Anjitha D Kammath of second mathematics took the leadership of Arts block, Tanya joe and Akshaya Shaju for the science block and Megha M for Central block. The students visited each department on 10th January 2018 and gave an awareness class for the non-teaching staffs of each department about the OSSM project and they wholeheartedly announced their willingness for the success of this project . The non-teaching staffs who gave their valuable time and service for the project are as follows ,

Chemistry Department : Ligi and Smitha

Maths Department : Jaya

Zoology department: Tincy

Home science : Mely

Fasion Designing: Reena and Akhila

Central block : Dhanya, Aasha

Arts Block: Shiny, Reetha, Leelamma and Sandhya

After the distribution of boxes, announcement was given to each block regarding this project to make all the students and teachers aware about the project.

Now every student as well as teachers started supporting the OSSM project by depositing the paper waste to the boxes provided and thus the project also helped immensely for the proper waste management of the college.

As part of the Ossm project, the BMC of St Teresa's College kept 21 boxes all over the college; 9 in arts block, 3 in central block, and 9 in science block.

Outside the campus

a) *Cleaning of Boat Jetty and Children's Park*

September 27 2017- Student volunteers of Ente Haritha Bhavanam project of the Bhoomitra Sena Club and NSS volunteers of St. Teresa's College Ernakulam along with representatives of Cochin Shipyard Limited conducted a cleaning programme at Children's Park, Ernakulam as part of the 'Swachhta hi Seva' campaign signalled by the Central Ministry of Drinking Water and Sanitation. After an introductory address the students were provided with gloves, caps and t-shirts along with some tools sponsored by Cochin Shipyard Limited. Students started cleaning the premises of Children's Park by 2:45 pm and it continued till 4:15 pm, students were congratulated for their commitment and later they were given refreshments. The program was one of the activities of the Swachhta Pakhwada (Cleanliness Fortnight) which began on the 15th of September and leads up to Gandhi Jayanti (2nd October). The following volunteers of Ente Haritha Bhavanam project participated in the cleaning programme:

1. Parvathy Venu
2. Riya P.J.
3. Akhila N.S.
4. Aswathy Asokan
5. Anju Raju
6. Athira Pourlin
7. Aleena Francis
8. Annie Jerlin
9. Lipna Mary George
10. Bijila Benny
11. Maria S. Antony
12. Renji George
13. Kareena Sirosh
14. Ashitha Mary K.L.
15. Anam Eyanth Paul
16. Anjitha M.S.
17. Jibitha V.J.
18. Midhu Sasankan
19. Mridhula Suresh
20. Dhanya Sasi
21. Maria Bijoy
22. Aparna Raju

b) Tutorial Videos for IGNOU

The club supported the production of eco-friendly bag making tutorials for IGNOU's Massive Open Online Course (MOOC) on Environment Sustainability in collaboration with the NGO Shakthi Kerala.