

Madras Christian College

SOLID WASTE MANAGEMENT PRACTICES AT MCC

The Government of Tamil Nadu, in exercise of the powers conferred under Section 5 of the Environment (Protection) Act, 1986 notified ban on manufacture, store, supply, transport, sale or distribute of use and throwaway plastics, plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups & plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness vide G.O. (Ms). No.84 dated 25.06.2018. The said ban came into effect from 01.01.2019.

Plastic, since its invention has changed our lives immensely owing to its versatility, imperviousness to water, low cost, ease of manufacture, long shelf life and so on. For the said reasons, we gradually started abusing plastic, by depending on it wholly, for every single use, replacing the natural alternatives.

According to the Central Pollution Control Board, India generates about 15,000 tonnes of plastic waste every day, of which about 40% remains uncollected. About 70% of the plastic packaging products become "waste" in a short span of time. While plastics have a wide variety of applications, the global rally is against the so-called "single use" or disposable plastic - used in bottles, cups, wrapping paper and bags. Together, they account for over half the plastic produced. Though Plastic Waste Management Rules are in place since 2011, several States and city corporations have been unable to effectively enforce the rules.

Before inventing plastics, the materials used were all made up of biodegradable or environmentally safe materials that come from natural sources, whereas plastic is actually a synthetic material derived from petroleum crude and moreover not easily biodegradable. So every single plastic thus manufactured stays on the planet as solid for longer period with no real use. Further it leaves huge carbon footprint, leaches into food, causes hormone disruption, pollutes ocean, kills marine animals and plants, and occupies most of the land preventing percolation of rainwater into underground wells and so on. Adding to this horror, the thrown away plastics that have ended up on the water bodies have become the new food material for aquatic animals thus altering the ecology. (Source: Tamil Nadu Pollution Control Board- <https://tnpcb.gov.in/>)

According to Dr Kumar, Senior Scientist at CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), India., the major problems affecting solid waste management are unscientific treatment, improper collection of waste, and ethical problems. This in turn leads to hazards like environmental degradation, water pollution, soil pollution, and air pollution.

Schools and Colleges are the best place to start waste management awareness, as they nurture the upcoming generation in their premises for the longest time and any subconscious messages passed on here would be deeply ingrained. They are also the best places to initiate a meaningful conversation on sustainable living, thereby understanding how the barrage of disposable and non-recyclable items have in the last fifteen to twenty years created a serious imbalance in our ecosystem and precipitated the current crisis.

Background of the Proposal:

The said proposal is the outcome of a webinar on ‘Creative Thinking Skills’ that was organised on July 5th 2021, wherein the students were oriented about the need to be creative. They were oriented about the Innovation and Ideation Club of the College and asked to come out with ideas for some of the existing problems they face. At that juncture, a group of students said they want to make MCC into a Zero waste institution. A webinar on ‘Solid Waste Management’ was organised on July 19th, 2021 so that the students get better clarity in the topic. As a result, a small team started working along with the faculty advisor and seven teams presented their innovative ideas to the other students and the outcome is the project.

Need and Importance of the Project:

Madras Christian College, with the three main guiding principles of Academic excellence, Social relevance and Spiritual vitality, having sent forth streams of individuals to serve the society at large, also has the prime responsibility to educate the students in Waste Management by setting up and following best practices within the campus which is the need of the hour. The students are always greatly influenced by the activities of the college and therefore this project will inspire and motivate the students to adopt best waste management practices at their homes too.

Solid waste management can be one type of waste management that could be started with, especially focussing on the usage, segregation and effective disposal of one time use plastics and fallen trees in the campus. Further on, other waste management strategies could be adopted.

The proposed Project would elevate the institution in the overall ranking among the institutions as we would be the pioneer institution in following the TN Govts order which would again gain favour from the Government. Thus, MCC would become a Role model for all other institutions.

The project on Solid waste management was initiated in Madras Christian College from January 2022 onwards by the Department of Social Work (SFS) in collaboration with the CSR project of Bisleri International- 'Bottles for Change'.

The main objective of the project is to make Madras Christian College a Zero Waste Institution by taking steps in effective segregation and proper disposal of the segregated wastes to the recyclers. This will reduce the landfills, promote cleanliness and protect the greenery of MCC and reduce environmental hazards.

To start with the project was divided into three phases:

A. Phase I- Initiation Phase

1. Studying the existing WMS in the Institution	A group of students were tasked with researching the Institution's Current Waste Management System (WMS) practices with the support of the estate office. This was accomplished cooperatively with the aid of support personnel. Dustbins on the campus were mapped and located. Students of the college were interviewed about their perception & attitude regarding waste disposal and segregation and their responsibility in it. Based on the study it was found that the students need awareness on SWM.
2. Presenting the Proposal and getting approval from the College Authorities	The proposal, module, and design plan for raising awareness on SWM were submitted for approval to the college administration. The three tiers of the presentation were successfully completed.
3. Identifying possible Collaborators	After receiving approval, the team started looking for other organizations, recyclers, and individuals to collaborate with for this project. Two CSR programmes were discovered by the team in this area, including ITC and Bisleri International's Bottles for Change.

B. Phase II-Implementation Phase

TOT for Student Volunteers	Three days of Training of Trainers for student volunteers were dedicated to the activity, which included an interactive module. The students who have received training will act as instructors for initiatives raising awareness among students, housekeeping staff, and other stakeholders. Thirty students of the Social Work stream participated in this TOT training.
Systematic Training Programmes for selected students in all the 33 Departments	The College features 33 departments, including those for the social sciences, the humanities, and the sciences. With chosen students and staff from each department, the student volunteers organised and carried out an awareness session in their respective classes. The awareness campaign was extremely effective, reaching students.
Training for the House Keeping Staff	The housekeeping employees, who were actually responsible for the collection, disposal, and segregation of waste, received training on the concept in three sessions. The seminar gave participants the chance to discuss their struggles with waste management among the housekeeping staff. These problems were thoroughly identified, and steps were taken to fix them.
Placing of bins with stickers about SWM at various places on campus.	The dustbins in the campus were cleaned and painted in two colours—Green and Blue. To distinguish between the different waste bins, stickers were used. Additionally, awareness posters were posted all throughout the campus.
LoA with Bisleri International-Bottles for Change	A letter of Association (LoA) with Bisleri International-Bottles for Change, was signed, through that, Bisleri collected the used plastics and bottles, which were recycled and the institution received payment for the waste. In the past year, there have been Seven collection drives. This paved way for the circular economy in the institution, through waste management.
Provision of Non-Electric Incinerators	Three women's halls were provided non-electric incinerators for the purpose of disposing of sanitary products in an environment friendly manner.

6. C. Phase III-Extension Phase

Phase III commenced from June 2022 onwards. In this extension phase, the project was extended to Residents of the college, Halls and MCC schools. New set of 74 student volunteers were inducted for the project UG program of the Department of Social Work (SFS). The volunteers were divided into different committees based on the nature of work assigned to them. A separate club called as WAMSA (Waste Management Students Association) was initiated in the department in order to carry out the SWM activities much more effectively. The following are the committees of the Club.

- College Committee- Taking care of activities in the college campus
- Hall Committee- Taking care of SWM activities in Halls by liaising with hall student representatives.
- Residents Committee- Taking care of SWM activities among the Residents in the campus
- School Committee- Taking care of SWM activities in MCC schools
- Department Monitoring Committee- Taking care of SWM activities during events organised by various departments in the college
- Community outreach committee- Taking care of SWM activities in the field work communities where students are placed.
- Research and Documentation committee- To conduct surveys and document weekly reports regularly.
- Media and Publicity Committee- To prepare videos and ppts about the SWM activities in the college.
- Collection drive Committee- To organise regular collection drives of used plastics strewn around in the campus.
- Finance Committee- To maintain bills for the expenses and raise sponsors for the SWM activities

1. Student volunteers monitoring in canteen and lounge

The Club's activity includes student volunteers monitoring in the canteen and lounge. A list of the dates and students' names who will do the monitoring has been prepared in advance. Every day, two students of the club are given the task to perform monitoring duties at canteen and lounge to ensure proper segregation by the students. These students are responsible for serving and guiding students of the college safe waste disposal. At the end of the day, the students will share their thoughts and observations to the directors.

2. SWM extension to 6 Halls

The project for solid waste management was extended to 6 halls. Disposable covers to collect only plastics were given to each resident in their rooms to ensure source segregation, which will then be disposed in the specified places in the halls. Under Bisleri Bottles for Change, all 6 halls were registered, and since then weekly collections are being done. The students have become more conscious to segregate and dispose plastics. Every week they are intimated on the amount of plastics they have contributed for recycling by Bisleri through the app. As part of motivation, it was planned to award the hall which has contributed the maximum amount of plastics for recycling, during the valedictory programme of the WAMSA club at the end of the year.

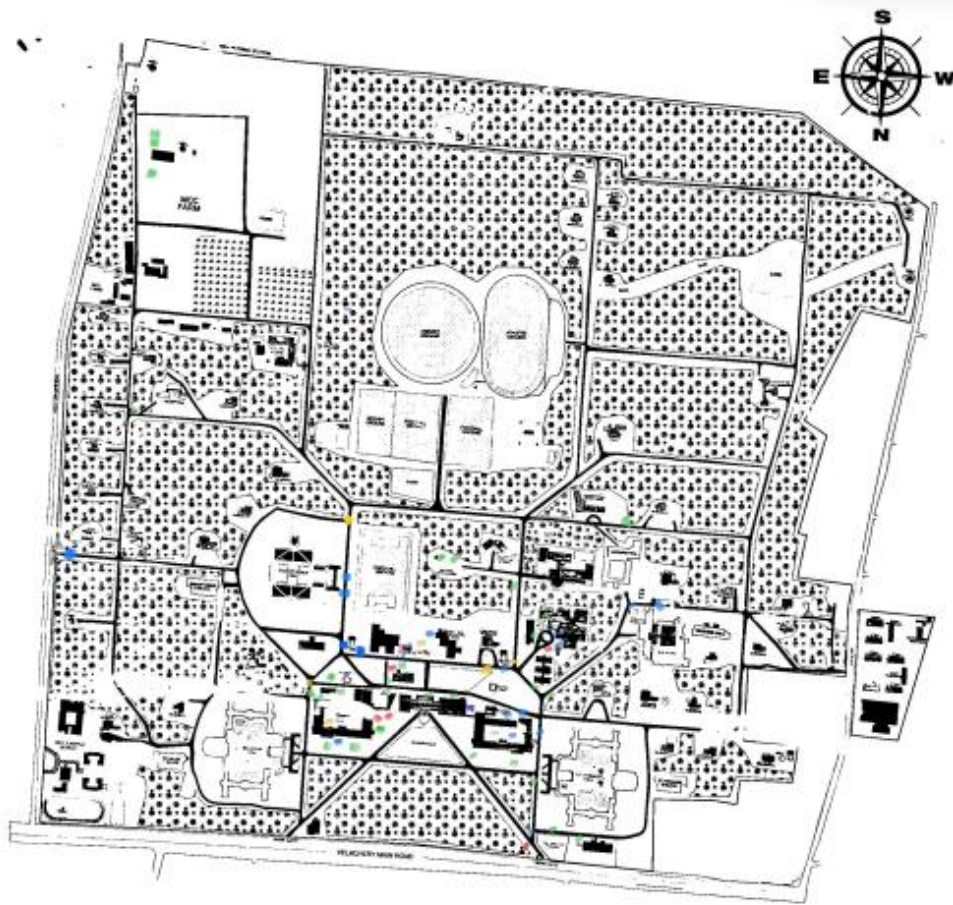
3. Resident Staff

The staff residents who are staying on the college campus play a significant part in making the campus fully waste-free. Therefore, the residents of the college were given awareness on SWM through the Resident staff Fellowship group. Each resident was given a cover to segregate only plastics from their homes. As each resident is also registered under bottles for change, the Bisleri team will collect the plastics and send them for recycling. The Residents Committee will oversee and carry out these initiatives. Also, awareness programmes will be conducted for the residents by the club members.

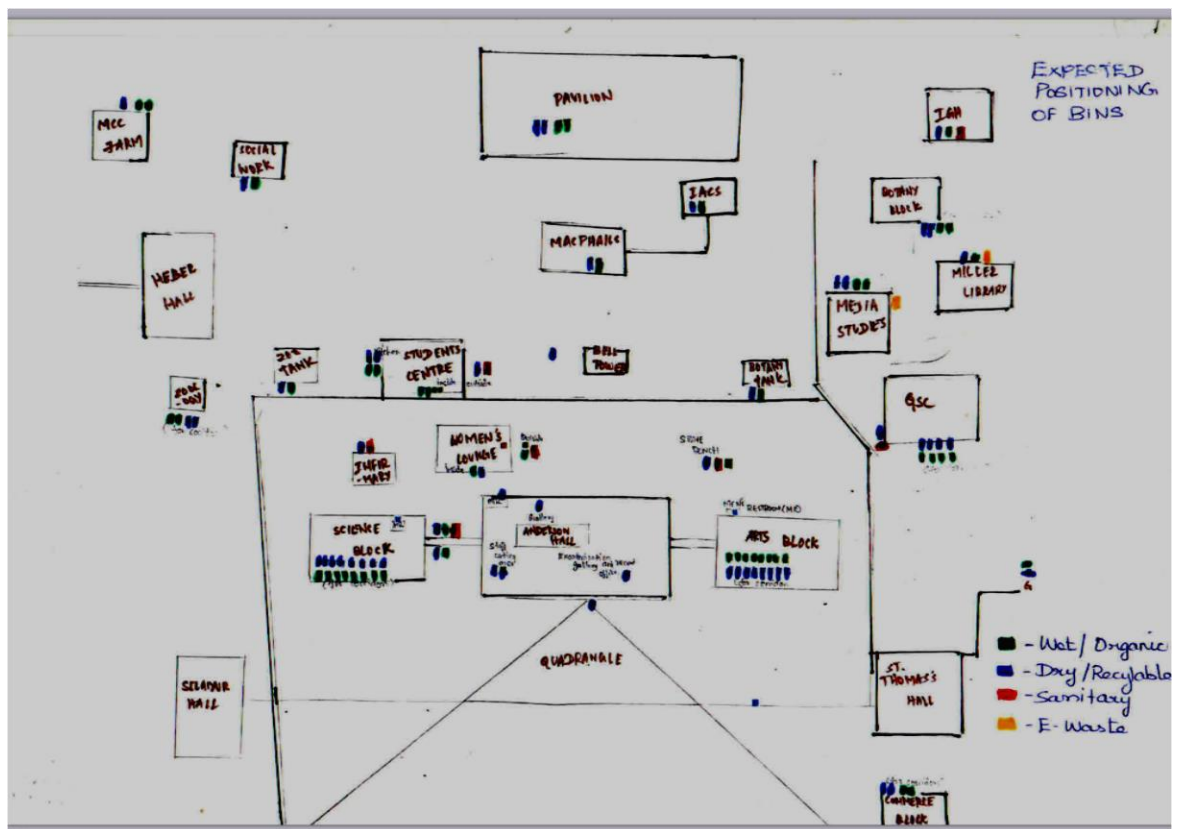
4. Schools and other units of the College

MCC has six schools under its management. The extension of this project is also proposed to be carried out in these schools. To begin with, the club has initiated the SWM programme at MCC Campus School on October 17th 2022. This comprises awareness programmes, awareness presentations, and appropriate monitoring in a manner similar to how it is being carried out in the college. The school students will be involved in the activities and it is planned to start WAMSA club in each school at the end of the academic year so that the school students take up leadership in sustaining the project at their premises

Mapping of Bins in the College Campus Map



Blue (Biodegradable)	: 22
Yellow (Non biodegradable)	: 7
Green (unnamed)	: 36
Red (plastic bottles only)	: 4
Purple (medical waste)	: 1



Ideal Positioning of Bins on Campus in and around the main block

Train the Trainer by CSR team of Bisleri- Our Knowledge Partner



First Level Training for Housekeeping & Security Staff of MCC in January 2022



Positioning of Bins in appropriate places with awareness material



The Bins had to be tied to a tree and covered to avoid the topping of the stray dogs, deers & monkeys which are on Campus. Lids had to be secured to avoid rain fall collecting in the bins. A hole was also made on the base of the bin to allow the flowing of any rain water which seeps inside

Plastic Bottle Drop boxes painted by the student volunteers positioned at strategic points



SWM awareness to all the students of MCC by student volunteers who have been trained





**SWM awareness by student volunteers through Street Theatre near the
Student's Centre**



Celebration of World Recycling Day on 18th March at the Campus



Students took a pledge to use recycled products and manage solid waste wisely.

Bottle Collection Drive for handing over to Bisleri



130 kgs of PET water bottles were collected in February 2022

Solid Waste Collection Drive by student volunteers



**Second Level Training for Housekeeping & Security Staff of MCC in March
2022**



Signing of Letter of Association between MCC & Bisleri



Ms. Anjana Ghosh, Director- Marketing, Bisleri & Dr. Paul Wilson, Principal, MCC
exchanging the signed Letter of Association



Ms. Anjana Ghosh, Director- Marketing, Bisleri with the Bursar, MCC with the Letter
of Association



Two benches made of Recycled plastic and two incinerators was donated to the College by Bisleri
