





SSR 5th CYCLE 2023

7.1.2 Waste Management



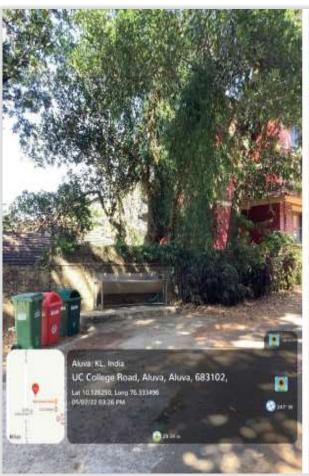
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Management of Degradable and Non-Degradable Wastes

College takes great pride in its commitment to environmental consciousness and sustainability. As part of its green campus initiatives, the institution has implemented a comprehensive waste management system that focuses on the responsible handling of degradable and non-degradable waste materials. This report details the various waste management practices and initiatives that have been adopted at our college.

1. Waste Segregation and Trash Bins:

Throughout the campus, various colored trash bins have been strategically placed to encourage students, faculty, and staff to segregate waste effectively. The bins are clearly labeled for different types of waste, such as biodegradable, non-biodegradable, recyclable, and hazardous waste. Student volunteers from the National Service Scheme (NSS) and National Cadet Corps (NCC) play an active role in overseeing the proper use of these bins, ensuring that waste separation occurs at the collection stage.







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2. Collaboration with Plan@Earth:

In a concerted effort to promote environmental preservation and sustainable waste management practices, the College has established a Memorandum of Understanding (MoU) with Plan@Earth, a voluntary organization dedicated to advocating for the environment. This collaboration enhances the college's capacity to implement effective waste management strategies and facilitates knowledge sharing on best practices in waste reduction and recycling.

PLANatEARTH

Phone: 0484 2604181 Mobile:9746474185/81/88 Info@planatearth.org fb.com/planatearth.kochi planatearth.org

This Memorandum of Understanding is made between Union Christian College (The first party) and the NGO PlanatEarth (The second party) dated 26.03.2021 for the purpose of collaborating in implementing education based outreach activities of the college among the economically and socially backward rural communities in the proximity of the college.

The First Party has State of the Art facilities for conducting technology epabled training and education programs as well as Human Resources in terms of experts Teachers in various Disciplines and student community. The second party is a Charitable organisation registered under Travancore Cochin Charitable Societies Act 1955 and has a good presence and rapport with the local community through execution of various projects ranging from dry waste management to awareness classes to rescue, relief, rehabilitation and rebuild programs following the floods of 2018, the NGO is able to implement various capacity building and learning programs for the local community. This Association between the First Party and the Second Party is for a period of 1 year from 1-4-2021 to 31-3-2022. The Association is for the purposes listed below.

- To conduct baseline studies and need analysis among the local community on behalf and in association with the college
- To recommend and design training and learning programs in association with the college and using the facilities and resources of the college
- To design and implement various skilling programs as part of Income Generation Programs for deserving members of the community thus identified
- To source and engage external resource persons to carry out various skill development projects
- 5. To assist the college in monitoring the project and documentation and reports
- 6. To organise meetings with the local community
- To ensure participation of identified beneficiaries from the local community in training, learning and education programs carried out as part of this project
- To carry out training programs on themes in which the NGO has proven expertise.

On Behalf of U.C. College

Principal, U.C. College hills Union Christian College, Allows

Mujeeb Mohammed

On Behalf of PLANatEARTH

President, PlanatEarth

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Plan@Earth, Xt/457 A, PO No 623, UE College PO Near Kolbe Ashram, Aluva, Kochi - 683 102. Registration Number:ER-313/09

Registered as a charitualis society under the Travancore Cochin Charitable Societies Acc - 1955

Kerela State Pollution Control Board approved Establishment.



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3. Biodegradable Waste Management:

To minimize the impact of biodegradable waste on the environment, the college has set up a biogas plant attached to the college canteen. Biodegradable waste generated from the canteen is processed in the biogas plant, converting it into valuable biogas that serves as a sustainable cooking fuel. This initiative not only reduces the college's reliance on traditional cooking fuels but also contributes to the reduction of greenhouse gas emissions.





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4. Tea Waste Management:

The Department of Botany takes the initiative to manage tea waste for campus beautification. Tea waste generated across the campus is collected and utilized as organic fertilizer for the college gardens and green spaces. This practice not only aids in waste reduction but also supports the overall aesthetic enhancement of the campus environment.



5. Chemical Waste Management:

Department of Chemistry has implemented waste management practices to handle chemical waste responsibly. Students undergo orientation sessions to safely handle chemicals, to minimize chemical wastage, and incorporate proper chemical waste disposal in routine lab work right from their inception. They are always instructed to follow mandatory safety practices like wearing labcoats, goggles, nitrile gloves to reduce the exposure to chemicals. Chemical waste is segregated from regular materials in appropriate containers before detoxification and disposal, while experiments are modified to minimize waste generation by adopting greener chemical practices. The department maintains a record of chemical stocks, prioritizing the use of older chemicals to minimize wastage. Environmentally benign cleaning methods are adopted, and green chemical protocols are incorporated to adequately enrich the curriculum. Micro-scale analysis is encouraged to reduce harmful chemical usage and waste wherever possible. Additionally, the department maintains Material Safety Data Sheets (MSDS) for all chemicals utilized in the laboratory and the solvent recovery equipment is employed to practice the global concept of reduce, reuse and recycle as and when required. Detergents and hot water are promoted for cleaning instead of solvents, and detoxification steps are considered to further promote sustainable practices and environmental stewardship.



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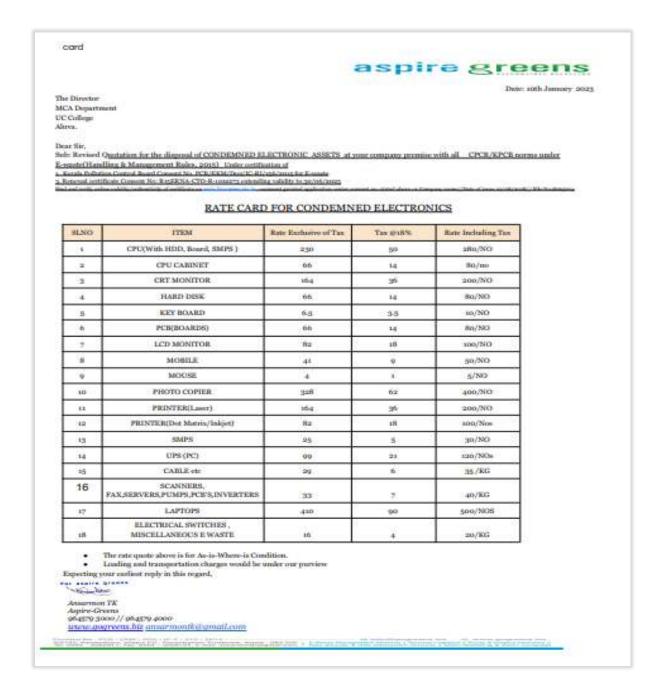
6. E-Waste Management:

Our college recognizes the importance of promoting sustainable practices and minimizing the negative impact of e-waste on the environment and human health. To achieve this, several initiatives have been implemented:

➤ Partnerships with Recycling Centers: Our college has established partnerships with authorized e-waste recycling centers. The collected e-waste is safely transported to these centers, where it undergoes proper recycling processes. This ensures that valuable materials are recovered, and hazardous substances are disposed of in an environmentally friendly manner.



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The college has implemented an incinerator as part of its waste management strategy. This system aids in the efficient disposal of waste materials through controlled combustion, contributing to the overall waste reduction and management efforts within the college environment.



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Deciduous trees and Dry leaf compost

Deciduous trees such as mahogany (*Swietenia mahagoni*), etc. in our college campus shed their leaves during hot summer. Abscission is the term used to describe this leaf-shedding process. These dried leaves are traditionally gathered and burned to ashes. Instead, a collection of these dried leaves can be transformed into organic fertilizer. Moreover, these dried leaves are high in carbon and have a small amount of the nutrients that plants require to thrive. Dry leaf compost is created from plant materials such as grass, dry leaves, or vegetable leftovers that can be decomposed. Thereby, these dry leaf compost can help in enriching the soil, holding moisture, suppressing plant diseases, and filtering harmful pests. Composting reduces the need for chemical fertilizers.



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Awareness class about Dry leaf compost and organic farming on 03/04/2023

Dry leaf compost bin





Recycling Programmes (Eco shop, Thrift Shop, EICCHO, startup project Dec 2022 to Aug 2023 by state government)

Awareness Campaigns: The college has conducted awareness campaigns to educate students, faculty, and staff about the significance of proper e-waste disposal. Workshops, seminars, and interactive sessions are organized to inform participants about the hazards of e-waste, the importance of recycling, and the methods for responsible disposal.



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Waste Recycling and Promotion Activities

Raanthal – Light a Smile, is a Department of English initiative to promote entrepreneurial solutions for eco-friendly products in order to fund student emergencies. Since its inception in 2017, the student initiatives have included anti-plastic campaigns, generating art out of waste competitions and an annual exhibition cum sale during Christmas time. After the COVID-19 outbreak, the 2022 exhibition included green gifts, tote bags, embroidered artefacts, paintings, terracotta jewellery, masks. On the occasion of the centenary celebration of the college, Raanthal volunteers joined 'Centennial Vista' and showcased centenary special products like cloth bags, canvas paintings along with other upgraded products. The extensive support of the UCian alumni and well-wishers helped the students raise close to Rs. 30,000, which will form a student emergency fund.





UNION CHRISTIAN COLLEGE, ALUVA
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7.1.2 **Criterion 7**