



KOHIMA COLLEGE, KOHIMA

**PROJECT
ON
ENVIRONMENTAL SCIENCE**

Topic: History of Eco-bricks.

The extent and use and the Positive and Negative side of Eco-bricks.

Submitted to
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INTRODUCTION

An ecobrick is a plastic bottle packed with unrecyclable plastic such as food wrappers and plastic bag to create a building block. Ecobricks are made manually to set density to sequester plastics or to keep plastics from degrading into toxins and microplastics.

Suzanna Heisse, an environmental activist in Guatemala developed the first construction system with Eco-bricks in 2003 for solving plastic pollution challenges faced in Lake Atitlan communities. She built a wall out of them, which became an inspiration to other around the world.

Ecobricks are cheap alternatives and helps protect the environment. Ecobricks can be used to construct furniture like benches, nesting shades and buildings.

Ecobricks has its own pros and cons as well.

On one side, ecobricks prevent pollution and global warming in a way, as plastics are dumped in

Oceans are burnt which emits harmful gases, is prevented by ecobricks. Furthermore, plastics remain the same for 1000 years or more, hence eco-bricks will never break down. On the other hand, ecobricks also has disadvantages. Photo-degradation makes the plastic fragile and vulnerable to breakage, releasing micro-plastics into the area which is known to be harmful to animal and human health.

ECOBRICKS

4th March 2024

Kohima College, Kohima: The department of Environmental Science, Kohima College, Kohima organised a cleanliness drive around the college campus to educate and to promote civic sense among students community followed by flower plantation to enhance the beauty of the college campus. The activities were carried out on the 4th March 2024, at 3 0' clock in the afternoon by the students of BA 6th semester section A and B who were guided by two lecturers from the Environmental Science department — Ma'am Medoseno Geneviene Ithapo, Assistant Professor (HOD) and Ma'am Pete-vino Chase, Assistant Professor, throughout the activity.

The drive was organised to understand the importance of waste management and plantation. And also to help the students to become skilled in handling waste and in promoting waste management.

The students were specified into groups with ten (10) members ^{each} who were equipped with necessary tools like spade, hoe, empty mineral bottles, gloves, etc.

Every group was asked to bring 3 mineral water bottles (3 litres) and at least three (3) ornamental shrubs.

The first activity ^{dealt} with the process of making cobricks. We began by collecting wrappers. Our team in Group 18, were assigned to clean the back of the ground floor girls washroom and the road leading to the college playground. Our group members all worked together by collecting plastic waste and compressed the waste in the bottles with sticks. We stacked the waste tightly after every level to ensure that the waste is properly compacted. After that we squeezed the bottles with our hand to check if it was tight and full enough and finally we sealed it.

The whole idea of cobricks is to reuse single used plastics on non-recyclable plastic rather than

etting them end up in landfill.

Eco-brick is a building block made entirely from unrecyclable plastic. It is created by filling a plastic bottle with dry plastic until it is packed tightly and can be used for building block.

This wonderful ecobrick collection drive does not only helps in building block but also have a huge impact on environment and all living organism by reducing the single use plastic.

With this activity, scattering of plastic waste ^{in and} around the college campus were minimized to a great extent within an hour.

Process for the plantation

A hole was dug and each flower was planted into the individual hole prepared for them.

After planting the flower plant, several cups of water was added to the soil for healthy growth of the flowers.

Lastly, the portion of area where the flowers were planted was covered / surrounded with rocks to protect or maintain the flowers from damaging.

During the event, flowers like hibiscus, hydrangea, bougainvillea spectabilis were planted with each flower having its own benefits.

For eg:

Hibiscus is high in antioxidants and offers many potential benefits. In particular, it may help promote weight loss, reduce

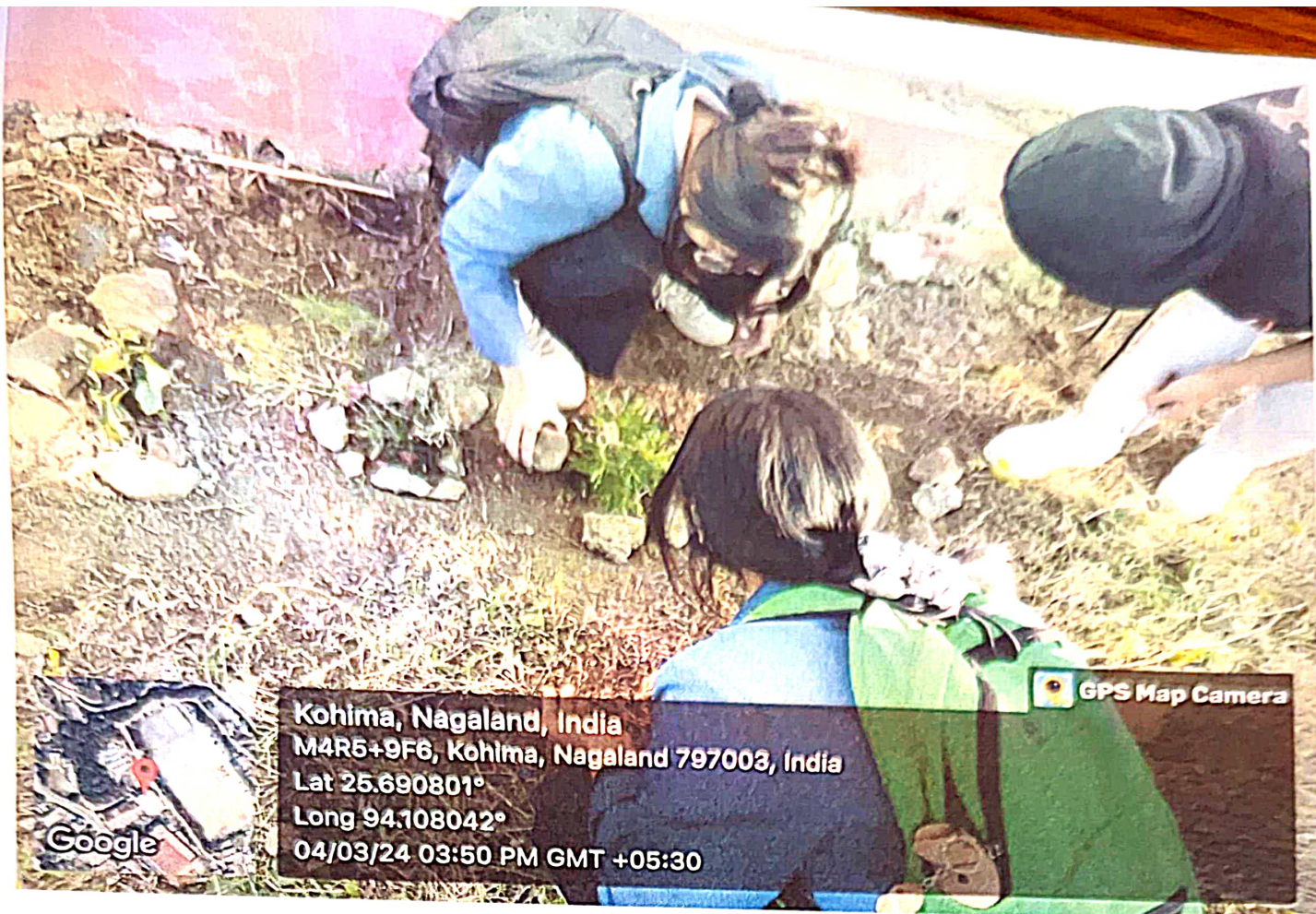
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the growth of bacteria and cancer cells, and support the health of the heart and liver.

Hydrangea is a popular decorative plant and has been used traditionally as herbal medicine to treat urinary conditions.

Bougainvillea spectabilis is one of the traditional medicinal plants with potential antifertility activity. It has shown to possess anti-cancer, antidiabetic, antihypertensive, anti-inflammatory, antihyperlipidemic, antimicrobial, antioxidant and anticancer properties.

The main reason behind the planting of these flowers is that it has the capability to improve air pollution, and provide medicinal assistance and makes the environment fresh and pollution free.



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- From this activity, we've learnt the importance of using biodegradable or compostable products instead of plastic as it is hazardous to our environment as well as our health. Through this drive, we also learnt that we can innovate plastic substance into something productive. The non-biodegradable waste in the form of plastic can be recycled into eco-bricks. Through the second activity i.e., plantation of ornamental plants, one shrub was Hibiscus, through this activity we learned about this particular shrub as medicinal benefits. Hibiscus is used for treating loss of appetite, ~~cold~~, stomach irritation, nerve diseases etc. The activities were extremely productive and we believe this have greatly enriched our knowledge.