



REVIEW OF RESEARCH

ISSN: 2249-894X

IMPACT FACTOR : 5.7631 (UIF)

VOLUME - 13 | ISSUE - 1 | OCTOBER - 2023



ECO-BRICKS: NEED OF AN HOUR?

Dr. Sunita P. Gaikwad

Dept. of Commerce,

Siddharth College of Arts, Science & Commerce, Buddha Bhavan, Fort, Mumbai.

ABSTRACT :

World is with full of pollution like land, ocean, air, noise and what not to mention. Now-a-days environment is facing new and innovative problem with some new research and innovation. Plastic is amongst one of them which harms ecosystem and environment. Plastic pollution is the today's biggest and not solved problem which is increasing day by day. In order to control the plastic pollution, government and local authorities took many steps but still not able to control pollution. The present paper focused on the importance of eco-bricks and methods to adopt for eco-bricks along with usage of it. In order to achieve the objectives researcher took help of secondary data. Secondary data will be collected from banks, newspapers, research agencies, Government Authorities, Government publications, periodicals, magazines and websites. It will be concluded with benefits, advantages of eco-bricks and precautions taken while adopting the same in the present scenario. At the end of the study suggestions has been given for improving, adopting secured and accurate method of eco-bricks. The present study will be helpful to the Government's policy, plastic industry, business units, researchers and educationalist for achieving their respective performance.



KEYWORDS : Eco-bricks, Environment, Ecosystem.

INTRODUCTION:

Today's world is with full of pollution like land, ocean, air, noise and what not to mention. Now-a-days environment is facing new and innovative problem with some new research and innovation. Plastic is amongst one of them. In order to control the plastic pollution, government and local authorities took many steps but still not able to control pollution, the problems are increasing day by day. In 2003, Susanna Heisse an environmental activist developed first construction system with Eco-bricks in Guatemala in order to solve the problem of plastic pollution. Very few people are aware about the eco-bricks which can be helpful to control plastic pollution. Schools, colleges and many NGOs have started creating awareness among the people in the society. The present study focused on the importance of the importance of the eco-bricks and method of making eco-bricks which will help to control non-recyclable plastic pollution and to reduce the cost of construction as well. Eco-bricks will prevent and stop the non-recyclable plastic waste which is degrading the ecosystem and environment. Eco-bricks are environmental-friendly, cost effective and a innovative method to use non-recyclable plastic.

MEANING:

An eco-brick is a plastic drinking bottles which is packed/ filled tightly with non-biodegradable waste or non-recyclable plastic which is clean and dry plastic. These eco-bricks can be used for building blocks. With the help of eco-bricks furniture, roads, safety walls, dustbins, tree pots/tree guard and many other things can be made. Eco-bricks are also known as ecological bricks.

REVIEW OF LITERATURE:

1. Edike U. E., Ameh O. J. et al (2020) found that eco-bricks should be made with systematic process, used plastic should be clean and dry otherwise it will negatively affect the performance of the eco-bricks.
2. Federico C. A., M Julia W, et al (2017) found that eco-bricks might be a sustainable alternative to non-structural construction material.
3. Nimesh Khakhariya (2021) covered the success story of Bhavnagar Municipal Corporation for creating awareness among the society on eco-bricks for making and for its uses.

The above studies focused on the success stories of eco-bricks, importance of eco-bricks and many more but the simple method of making eco-bricks with its importance not covered so the present paper will focus on the methods of making eco-bricks along with its importance of it.

OBJECTIVES OF STUDY:

1. To know about eco-bricks
2. To study the importance of eco-bricks.
3. To find a simplest method to make eco-bricks.
4. To suggest the ways for usage of eco-bricks.

RESEARCH DESIGN:

The present study is descriptive and explanatory research. In order to achieve objectives of the study, the researcher focused on Secondary data.

SECONDARY DATA: This was collected from research papers/articles research agencies, newspapers, periodicals, Government publications, magazines and websites.

SCOPE OF THE STUDY:

The present study covered importance of eco-bricks and methods of making eco-bricks along with the usage of eco-bricks.

SIGNIFICANCE OF THE STUDY:

The present study will help to know benefits of eco-bricks and methods of making eco-bricks which has influence on environment and ecosystem. An analysis of the present paper will help environmentalist to create awareness on the eco-bricks with tackling the problems of plastic pollution, The present study will help individuals, households, communities and corporations for controlling the plastic pollution. A clear understanding of trend towards controlling the plastic pollution will help to the govt. for framing new policies which will be helpful to the ecosystem and environment. The present study of will be helpful to companies for developing their business. This study will be also helpful to the future students, researchers, practitioners and educationalist for achieving their respective performance.

LIMITATIONS OF THE STUDY:

The present study is limited to the restricted objectives and methodology of the study.

ANALYSIS: As non-recyclable plastic is a harmful to the society, it is non-biodegradable, not recyclable, it stays for million years on the earth without any damages. So, if it will be used in the systematic and

with proper way then we will be able to control land, water and air pollution too which will be a sustainable also. Let's know the importance of eco-bricks.

Eco friendly: Plastic material is non-biodegradable so it is very difficult to disposed it off from the environment which is harming the environment. Always it floats around the oceans, rivers, lakes, on the road and everywhere which harms wildlife and ecosystem. Eco-bricks will help to reduce all the plastic pollution and will be used for the construction purpose. Eco-bricks help in safeguarding the natural environment.

Empower Households, communities and companies: Every individual, companies and communities are thinking that all plastic waste should be manageonly by the Government and local authorities. But because of awareness on eco-bricks everyone is inspired by recycling method of plastic waste and now most of them are taking initiative to develop new ways of construction with eco-bricks.

Low energy, simple method and local solution to plastic: Eco-bricks are very easy to make that any individual without the help of machine, additional finance and human resource can make eco-bricks. Because of its simplicity, eco-bricks will be adopted in the construction activity.

Eco-bricks can be used for long period or indefinite use: It is only because of plastic is non-biodegradable, it has longer life. So, we can use it for construction purpose i.e. for longer period which will be secure and will have longer life.

Saves plastic from incineration and sequester CO₂: Incineration and burning the plastic will be dangerous for the environment which will create more problems to ecosystem and environment. So, if the eco-bricks can be made then burning of plastic problem will get solved and we will able to stop pollution.

Versatility: Eco-bricks can be used for the purpose of construction of roads, walls, forest, tree guards, tree pots, safety guard walls and many more uses. We have more benefits of the eco-bricks. Eco-bricks are versatile.

As we came to know the benefits of the eco-bricks i.e. it can save our environment from the degradation and can save life and earth. Let's know simple steps to make eco-bricks one by one.

- 1) **Collection of Plastic:** This plastic contains plastic bags, wrappers, milk bags, namkeen bags and all other non-biodegradable plastic but ensure that all this plastic should be clean, dry and free from any organic matter, otherwise we will not be able to make qualitative eco-bricks.
- 2) **Collect Plastic Bottles:** Plastic bottles also should be again clean and dry. These plastic bottles. These plastic bottles neck should be narrow like Thumps Up bottle.
- 3) **Stuff the bottle with the Plastic waste:** All collected bottles should be packed/filled tightly as possible as with the collected plastic waste. It should be so tightly packed that it should not be compressed any further, for that long stick or any other tool can be used to fill the bottles with plastic tightly.
- 4) **Seal the bottle:** Once the bottles filled tightly with plastic then easily it should not be compressed. If the bottles are ready with filled plastic then replace the cap of bottles and seal it tightly with tape or a lid.
- 5) **Repeat:** Repeat the process until the required number of bottles are not collected which can be used for the planned project.

Now we know the steps to make eco-bricks, we are ready with eco-bricks but where and how it can be used for the benefit of the environment that let's know about in detail. Eco-bricks can be used for many purposes like:

- 1) **Furniture:** Eco-bricks can help to make chairs, stools and table and other decorative furniture.

- 2) **Insulation:** Eco-bricks can be used for the purpose of insulating material in walls, roofs or other structure.
- 3) **Landscaping:** Eco-bricks can be used for decorative purpose like creating borders or raised garden beds and many more.
- 4) **Building:** Eco-bricks are helpful for construction of walls, benches, roads, garden beds and many more.
- 5) **Art:** Eco-bricks can be used for the purpose of art materials to create sculptures, murals etc.

FINDINGS OF THE STUDY:

- 1) Eco-bricks are solution to the plastic pollution which can be easily made by individuals, communities or companies.
- 2) Creativity can be developed to make use of eco-bricks for construction of roads, walls, tree guards and many more.
- 3) Eco-bricks are environment friendly, cost effective and will stop the pollution which will safeguard the environment and ecosystem.
- 4) Easy method to make eco-bricks, no machine or any additional money is required.
- 5) Eco-bricks can be used for shorter or longer period as per the requirements and the project.
- 6) Schools, colleges and NGOs should take initiative to create awareness among the society regarding benefits and methods to make eco-bricks.

CONCLUSION:

Eco-bricks are environment friendly which helps in reducing the need for traditional building materials like bricks or concrete and eco-bricks will stop the landfills or the ocean as well. Eco-bricks can be used for many purposes. The main importance of eco-bricks is that it helps in reducing the plastic pollution which harms the environment and ecosystem. Further, more research should be undertaken so that new methods can be adopted to stop plastic pollution. The awareness that grows puts us on a road towards consuming and using plastic wisely.