

What are Eco-Bricks?

An eco-brick is a PET bottle packed solid with clean and dry used plastic. Eco-bricks are made manually to a set density to sequester plastic and create reusable building blocks. Eco-bricks are a simple, low-tech, non-capital, plastic transition technology that follows the earth's example of carbon care.



TAKING RESPONSIBILITY

Eco-bricking is a simple way to take personal responsibility for our plastic by keeping it out of industry and out of the biosphere. In this way eco-bricks keep plastic from degrading into toxins and microplastics and out of high-energy, high-emission industrial processes

But, Mostly

the hands-on process of eco-bricking deepens our awareness of these issues and their regenerative alternatives – what we call plastic transition.

Origins

The Asian eco-brick movement emerged from the land of the **Igorot people** in the **Northern Philippines** and is deeply inspired by their ancient ancestral wisdom.

<https://www.ecobricks.org/ayyew/>

*The **Igorots**, one of the few unconquered indigenous people of the South East Asia, have thrived in **ecological harmony** for centuries in the remote mountains of the Northern Philippines. Like many other indigenous peoples around the world, the concept of waste does not exist in their language— and consequently in the world around them. Instead their culture was guided by a virtue and concept known as ‘**Ayyew**’, which guides the Igorot way of life. In the Igorot culture, **ayyew** ranked just as high as other virtues such as **Courage, Honor** or **Loyalty**. When someone is **ayyew**, it means that they are striving towards ever increasing harmony with the cycles of life.*

*Essentially it is the virtue of striving to be in ever more harmony with the surrounding ecological cycles. **Ayyew** is not a state of being, but a process of being, hence it's it is **non-judgemental of one's present ecological state**. However, it is a **directional process**, one that leads to ever more abundance from ever more sync with the surrounding cycles of life. From an **Ayyew perspective plastic is not bad in and of itself**. It is a material with certain properties and characteristics that can be put to use in different ways.*

Our idea & Initiatives in India & Bangladesh

- Eco-bricking is a modern manifestation with regard to our personal plastic.
- In ***PRISM*** we have already took a challenge 8 yrs ago.
- Knowing it well that those bottles are non-degradable and harmful for the environment.
- We remembered the days when we used to read and listen to Fairy Tales, the **Aladin's Monster**.
- We started thinking about the hardly recyclable post-consumed plastics such as ***food packaging, multi-layer chips and toffee wrappings, aluminum foils of tablets, discarded part of the capsules, band aids, cells***, etc. causing pollution and considered them as **monsters**.
- Started thinking off inserting them inside the empty bottles and then through compaction the present day **Aladin's Monsters** were ready, which we started calling as **Eco-Bricks**.

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- Our initial effort was to make the **Eco-Bricks** and to stop plastic pollution.
- However, later on decided to make an exemplary use of the **Eco-Bricks** to encourage/ motivate people and constructed the first **water tank**.
- The tank was initially with the capacity of storing **1640 litres of water** and after observing its use we wanted to increase the capacity to **2800 litres of water**.



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- This helped in confidence building and we started promoting **Eco-Bricks** with the same concept among the children, we call as change agents.
- The children, the real **Green Ambassadors** after applying their intelligence made lots of useful items in India using empty bottles.



Eco-Bricks in Bangladesh

- In Bangladesh we just wanted to replicate, change the behavior, first among the future citizens of Bangladesh to understand the importance of segregation at source, dignity of work, environmental degradation, health hazards and public health issues.
- **PRISM** started working with **CIRCULAR**, a local Start Up agency in Dhaka and first meeting held on 2nd October, 2022. .
- In the end of November, 2022 we faced another challenge. There was **Asia Shelter Forum's** 2-day event at Sonar Gaon Hotel, Dhaka and despite all efforts to reduce some amount of plastic generation could not be avoided. In fact, from **CIRCULAR**, it's **CEO, SANKALITA** had demonstrated from the presentation gallery on the use of making **Eco-Bricks**.



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- We involved students from Jago Bangla Foundation School at Banani and Rayer Bazar of Dhaka.
- Children first understood the benefits of making **Eco-bricks**, how to make **Eco Bricks**, environmental (larger) and other social and health impacts etc.
- After that they made **Eco Bricks** taking it seriously, which they have made an ongoing process and finally assembled 128 **Eco Bricks** in making 2 dustbins as live examples (utility items) for other residents to believe how things and behaviors can be changed.



23°47'11", 90°24'45", -1.9m, 1

Installation of Dustbins

- On 11th Feb 2023 those two dustbins were commissioned at Road 55 (blind road) by the children and volunteers (youth) of Jago Foundation, where a few residents have been fighting against some social evils since long.
- <https://youtu.be/T1ChM3bJaE0>
- Over a period of three months, 100 students of the Jagoo Foundation school in Rayer Bazaar and Banani worked on an ecobricking project. Using 200 empty PET bottles, they filled it with hard to recycle post consumed plastics such as food packaging, multi-layer chips and toffee wrappings to create 'bricks', keeping almost 4000 pieces of plastics waste from ending up in landfills. These were then assembled into dustbins by the children.
- We extend our thanks to Jaago Foundation, Gulshan Society, Mahmud Rahman and Snigdha Chakraborty for walking with us this far.



CIRCULAR



PRISM

JOIN US!
installation of ecobrick waste baskets



Saturday, February 11, 2023
11 am to 1 pm
Lakeside, Road 55, Gulshan 2
RSVP: +8801713243859



Women Business Centre (WBC), Gopalganj

- First meeting held on 13th December at **Chhoto Dumuria** with the **United Purpose Team, Dhaka**
- During the introduction they referred themselves as members of **Sabji Group** (as a part of **NARI JHURI** in Bangladesh).
- They explained how and why they were selling their vegetables to the middlemen once a week.
- The perishable nature and the consequences if the produces are not sold on the same day was considered a big risk.
- To address the issue the concept of **Vegetables Cellar** was shared with them. Although the district administration already informed them about the entitlement of one freezer kind of a device, run with electricity. They have expressed their concerns of what would happen during power cuts.
- They liked the idea and logic of commissioning **Vegetable Cellars** as a necessity.
- It was also discussed about the expenses and to adopt the approach of constructing **Vegetable Cellars with available, affordable and easily accessible local resources**.
- The concept of **Eco Bricks** was introduced and the positive impacts of using **Eco Bricks** for construction of walls was discussed. The participants expressed their interest to go for **Vegetable Cellar** using **Eco Bricks**.
- Then we compared the cost of conventional bricks with **Eco Bricks** and disseminated the benefits of using **Eco Bricks**.



Vegetable Cellar With Eco Bricks

Agricultural Producers of any scale can install low cost, energy efficient **Vegetable Cellars** for increasing shelf life of perishable items. To change the above behaviour(s) amongst individuals & communities it's important to share details of:

- a) how to make **Vegetable Cellars** using their **local resources**;
- b) how it works without **electricity or fossil fuels**; why no electricity or fossil fuel means **less carbon footprint, leads to no pollution, impact on the natural environment**;
- c) why and how the farmers/producers can make **as many and as big Vegetable Cellars** they want, **based on their requirements**;
- d) why **no recurring cost**, and **no dependency**, hence **no need for any back-up support meaning further investment**;
- f) how **shelf life of perishable items will increase**, the logic behind and the traditional practices;
- g) how it helps the producers to **avoid middle men for marketing** and **improve their bargain power**;
- h) how to **reduce their dependency on pesticides and preservatives**;
- i) how it helps farmers to be able to compare the benefits of **growing organically** because of the **tangible impacts on the family economy**;
- j) how the **demonstration effects** on the neighbouring non-growers to get motivated to grow vegetables organically for their own consumption adopting nutrition garden concept.



Type A: 1. Make small holes at the bottom of the bottles for circulation of normal air and also tie up the mouth (inside) with mosquito nets to avoid earth worm, snakes, insects to go inside; 2. Place bamboo scaffolding/ platform (layers will be developed); 3. Openings should be like this; 4. Cover the top fixed with a 10ft PVC pipe as a chimney for ventilation of hot air from inside; 5. Cover with sack sprinkled with water for maintaining the mud wall



Type B: 1. Cutt the bottom of the bottles for circulation of normal air and also tie up the mouth (inside) with mosquito nets to avoid earth worm, snakes, insects to go inside; 2. Place bamboo scaffolding/ platform (layers will be developed); 3. Openings should be like this and there has to be covers; 4, 5 & 6. Keep vegetables; 7. Locals could understand COLD STORAGE and some data on Temperature.



		Village Cold Storage		
Date	Time	outside	Inside	
2/10/18 -	9 am	28°	19°	
	10 am	30°	20	
	11 am	30°	20	
	12 Non	33	20	
	1:00 PM	34	24	
	2:00 PM	34	24	



Type C: 1. Cutt the bottom of the bottles for circulation of normal air and also tie up the mouth (inside) with mosquito nets to avoid earth worm, snakes, insects to go inside, this is a large VC in two parts (both 4ft x 4ft size); 2. Side view; 3. Openings should be like this, cover the top fixed with a 10ft PVC pipe as a chimney for ventilation of hot air from inside (based on the position one can decide); 4. There are four such racks with a gap of 1 ft each in 3 racks and 1.5 ft gap for one rack for items like pumpkins, bottle gourds, ash gourds, etc. the rack shown in the picture is carrying a load of 30.5 kgs and never bent even without any support from the middle, this means in one side of the existing VC we can store **132 kgs vegetables** or more; 5. Another view of the VC, made by the PRISM's women volunteeers using plywood.



Type D: This one is made with bamboo scaffolding and from inside we have put sun board for **insulation**. Here also we can store 40 kgs in each layer and 160 kgs in 4 layers. However, layers can be increased to 6 (considering the space requirement of the vegetables), means in one VC a farmer can store **240 kgs vegetables**. For a VC wall is needed but it's to support from outer shocks and not for retaining load of the structure. Load of the entire structure wil be distributed on 4 poles and the the roof of four parts on four sides is needed with which the 10 ft ling PVC pipe will pass for ventilating hot air. This wall can easily be constructed with Eco Bricks and since there will be gaps, from inside a polythene sheet will be used on 4 sides for insulation.

13 th February 2023 at Chhoto Dumuria

- It was a nice experience first to interact with the UP Professionals and then also with the village women at Chhoto Dumuria.
- Interacted with the members of the WBC on a Video Call on 4th February and experienced the development based on our interactions on day one.
- After seeing their enthusiasm I thought I should visit soon to keep this spirit and also to boost up.
- Today we went and realised how seriously they have taken the approach.
- They have identified the place for installing the Vegetable Cellar on the road side.
- They have raised the plinth (but it needs to be raised further to avoid flood water to enter inside).
- They have made ecobricks.



Place identified for the Vegetable Cellar

14 th February 2023 at Chhoto Dumuria



Thank You

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