



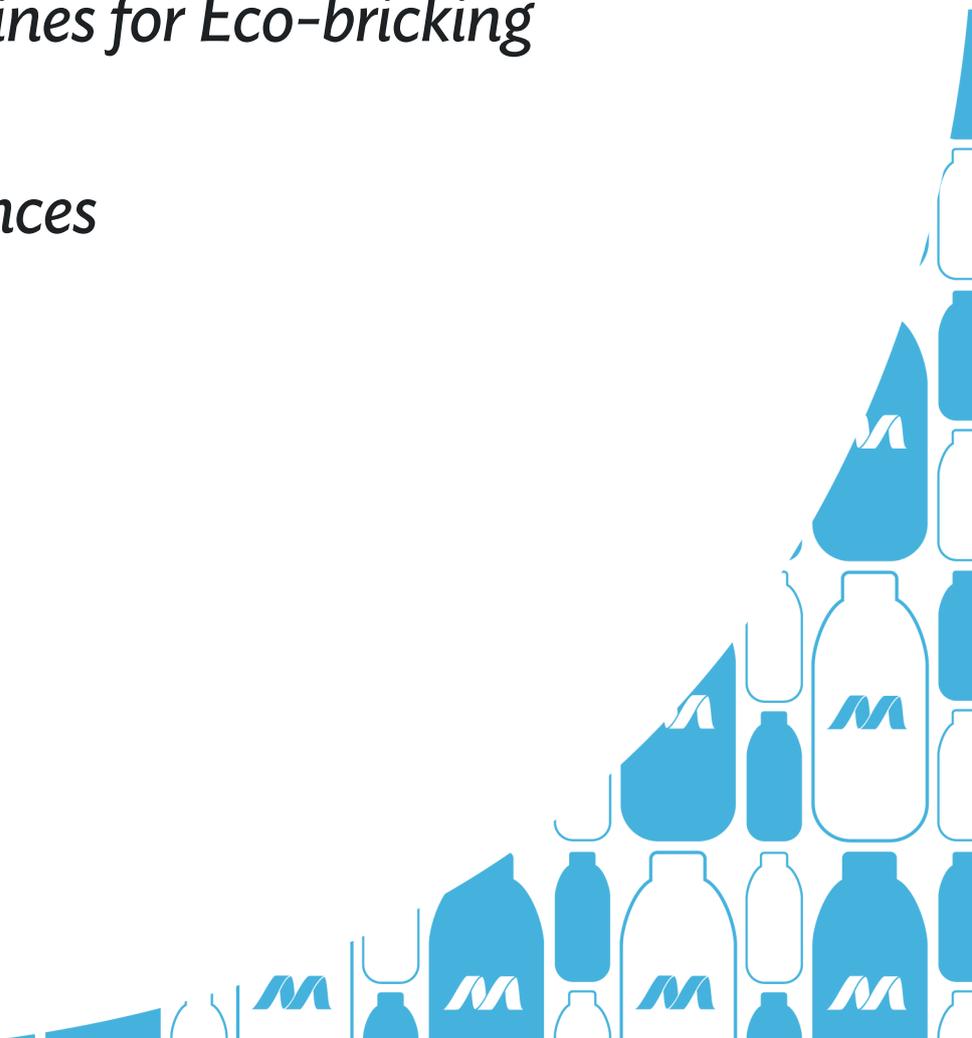
MISSION

PLASTIC SOLUTION



TABLE OF CONTENTS

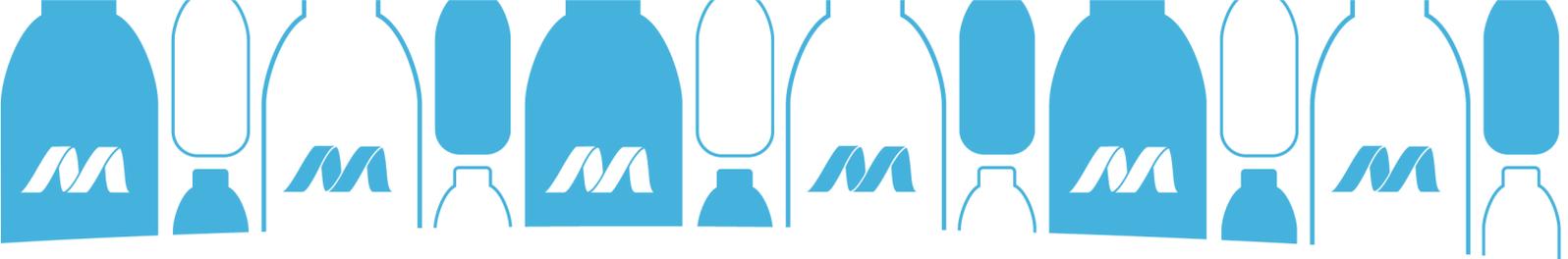
- 2** *What is the Problem?*
- 4** *How Can We Contribute to the Solution?*
- 5** *Mission: Plastic Solution*
- 7** *Guidelines for Eco-bricking*
- 10** *References*





WHAT IS THE
PROBLEM?





WHAT IS THE PROBLEM?

According to a report by the **United Nations Environment Programme (UNEP)**, **“our planet is drowning in plastic pollution.”**

- Because of the accessibility and value of use, the world has become addicted to single-use or disposable plastic which creates a lot of social and economic impact with severe environmental consequences.
- As of 2018, the world produces about 300 million tons of plastic waste every year. That’s nearly equivalent to the weight of the entire human population.
- These single-use plastic products are everywhere becoming integral to our daily lives.

Polyethylene terephthalate (PET)
water bottles, dispensing containers, biscuit trays

High-density polyethylene (HDPE)
shampoo bottles, milk bottles, freezer bags, ice cream containers

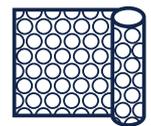
Low-density polyethylene (LDPE)
bags, trays, containers, food packaging film

Polypropylene (PP)
potato chip bags, microwave dishes, ice cream tubs, bottle caps

Polystyrene (PS)
cutlery, plates, cups

Expanded polystyrene (EPS)
protective packaging, hot drink cups

- The Philippines is the third largest plastic polluter in the world, right after China and Indonesia.
- The Philippines produces 6,875.84 tons of plastic per day, of which 81% is mismanaged.
- This could be attributed to a lively “sachet economy” wherein households with limited income are encouraged to buy single-use small quantity sachets of food and toiletries.
- Plastic waste – whether in a river, an ocean, or on land – can persist in the environment for centuries.
- Most plastic items never fully disappear, instead they break down into tiny particles that creep up into our food chains, onto our plates and water supply. This could cause serious health problems and persistent environmental issues.
- The global volume of plastic waste continues to grow and some of the biggest producers and consumers, including the Philippines, don’t manage their waste effectively.
- If current trends continue, our oceans could contain more plastic than fish by 2050.



HOW CAN WE CONTRIBUTE TO THE SOLUTION?

Some very simple and practical ways include the following:

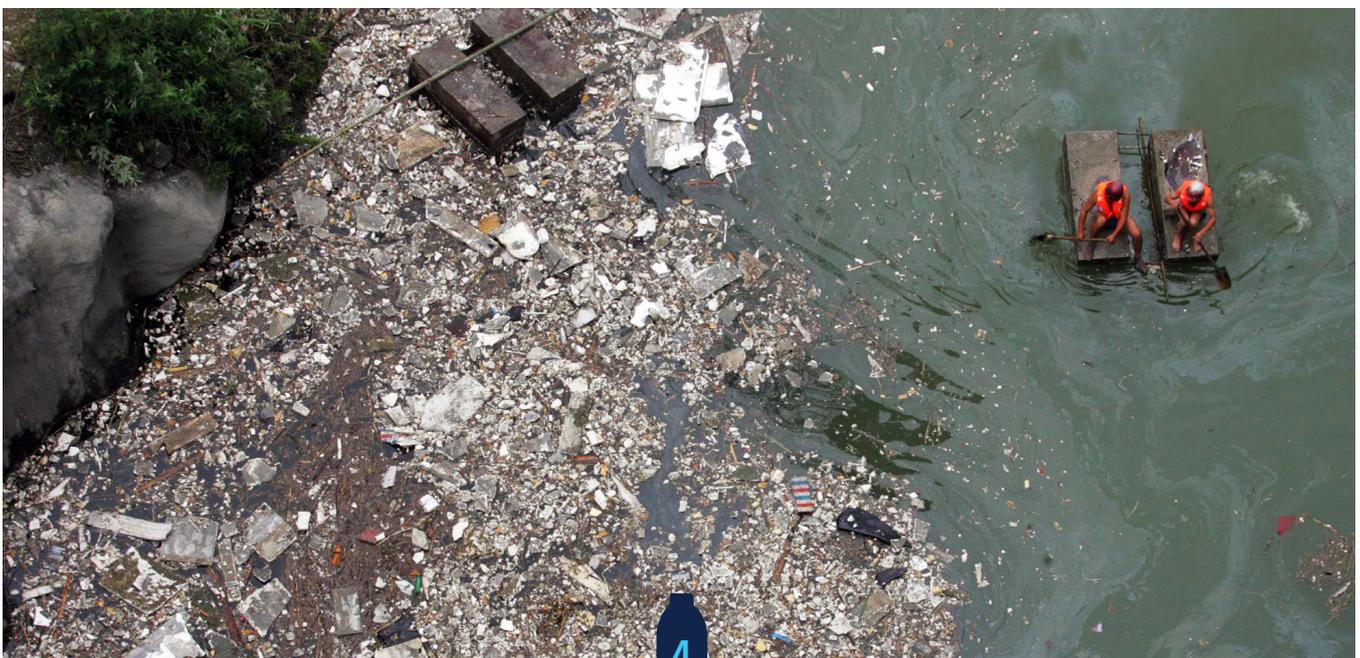
1. Ask restaurants you often visit to stop using plastic straws.
2. Refuse plastic cutlery and straws.
3. Bring your own coffee mug to work.
4. Carry a refillable water bottle.
5. If you have to buy meals for takeout, bring your own food containers.
6. Bring your own shopping bags to the markets.

On the policy and implementation level, we could:

1. Participate in campaigns that pressure food suppliers to use non-plastic packaging.
2. Participate in campaigns that pressure local officials to support a ban on single-use plastic bags.
3. Participate in campaigns that pressure local authorities to improve how they manage city or community waste.

REMEMBER!

It is always better to avoid using single-use plastics.
*But what if there are instances where it was deemed unavoidable?
What can be done?*



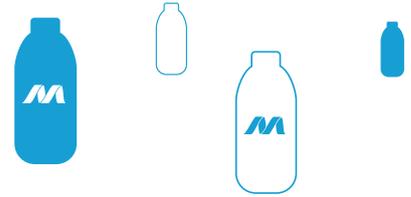


MISSION

PLASTIC SOLUTION



MISSION PLASTIC SOLUTION



An advocacy campaign that aims to influence what we do with single-use plastics within the campus and eventually in our households and communities. The goal is to create an environment where people are putting conscious efforts to avoid single-use plastics. Collectively, the entire MCL community should be able to contribute in addressing plastic waste problems by doing something useful and practical.

ECO-BRICKS A PRACTICAL SOLUTION



WHAT ARE ECO-BRICKS?

Eco-bricks are plastic/PET bottles stuffed solid with non-biological waste to create a reusable building block for various purposes such as modular furniture, garden spaces, and even full-scale buildings such as schools and houses. This simple local waste solution is becoming a growing movement of communities all over the world.



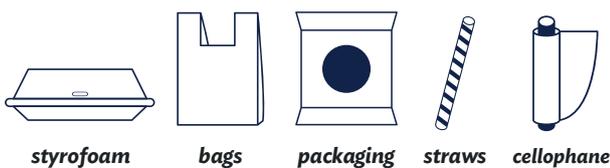
HOW TO MAKE ECO-BRICKS?

Eco-bricks are plastic/PET bottles stuffed solid with non-biological waste to create a reusable building block for various purposes such as modular furniture, garden spaces, and even full-scale buildings such as schools and houses. This simple local waste solution is becoming a growing movement of communities all over the world.

Here is an 8-step guide to help you in your eco-brick journey:

1. GET YOUR PLASTIC READY

Eco-bricks are made with clean and dry plastic. Start by segregating your eco-brick ready plastic from all other materials. If there is any food, oil or dirt on your plastic, be sure to wash then dry. Dirty plastic inside an eco-brick will lead to microbiological growth and methane forming inside your eco-brick.



**USE ONLY
CLEAN AND DRY
PLASTIC**



2. CHOOSE YOUR BOTTLE

For starters, the MCL community is encouraged to use the following bottles for eco-bricking:

COCA-COLA 1.5L, 1L, 500ml, 300ml

SPRITE 1.5L, 1L, 300ml

ROYAL 1.5L, 1L, 300ml

REAL LEAF 480ml

MINUTE MAID 330ml

POWERADE 500ml, 250ml

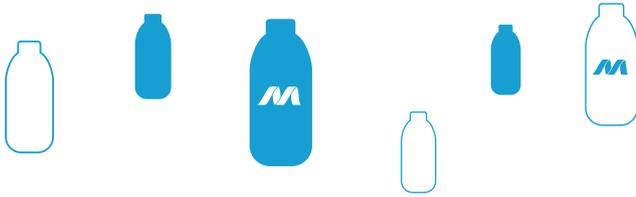
CRYSTAL CLEAR 500ml

KOPIKO 240ml

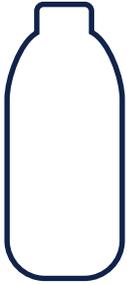
LIPTON 330ml

GATORADE 500ml

NOTE: If your preferred bottle is not in the list, kindly consult with CSCE before proceeding with the eco-bricking process.



3. GET YOUR STICKS READY



Eco-brickers like to call their packing stick, their magic wand. It makes the plastic disappear! Having the right stick will make a big difference to your eco-bricking. Bamboo and wood make the best sticks. The size of the stick depends on the type of bottle you go with. You want a stick with a diameter roughly one third the width of a standard bottle opening— so about 6mm. You want your stick to be

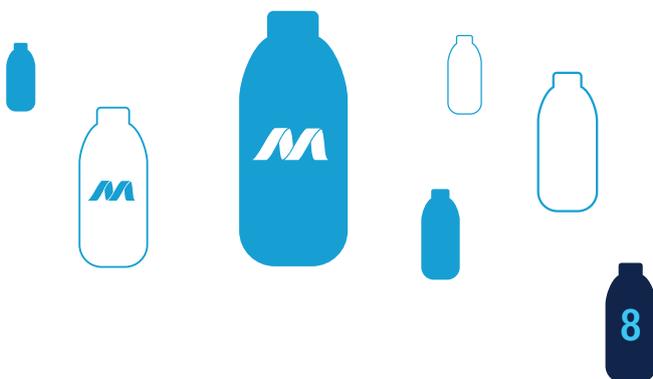
to be about twice the height of your bottle, with a slightly rounded tip. Avoid sharp cornered sticks as they can rupture the bottle and you can get splinters and blisters on your hand.

Once you've got a stick with a good size and shape, you're set! You can then give it to others to copy and replicate.

5. PACK THE BOTTLE TIGHT, MIX PLASTICS AS YOU GO

Now it's time to pack away! Use your stick to push down the plastic around the inside of the bottle— move in a circle pushing down along the sides. To maximize the density, it's good to mix soft, then hard plastic. Cut up big plastics into smaller pieces. The smaller the pieces, the denser you'll get! If it's your first eco-brick, weigh occasionally to make sure you are on track for your target weight.

Did you push too hard? In rare cases, when using a sharp stick, a thin bottle or too much lateral force, an eco-brick will rupture. Don't panic! But, it's best to start again. Ruptured bottles will not last and can leak plastics. Cut the bottle open, remove the plastic and start again. Cut bottles can be recycled.



4. NO GLASS, METAL OR BIODEGRADABLES



NO METAL



NO GLASS



NO PAPER



NO BIO

What you don't put in your eco-brick is just as important as what you do. Remember that we are putting plastic inside and eco-brick because it is toxic to the environment. Metal, paper, cardboard, glass and biodegradables will not poison the biosphere— so there is no need to put them into a bottle. Be especially careful not to pack sharp metal or glass into an eco-brick— they can rupture the sides and pose a danger for handling. There are other solutions for these materials:

- Paper and cardboard can be safely burnt.
- Biodegradables can be composted.
- Metal and glass can be recycled.

6. WEIGH YOUR ECO-BRICK TO ENSURE QUALITY

Density goals are essential to ensure quality eco-bricks to ensure good constructions, make the most of the volume, and energize the social spread of eco-bricks. a good solid eco-brick is something you can be proud! When others see and hold it, they understand immediately the transformation of loose plastic to building block that has occurred! Good quality eco-bricks and eco-brick constructions are fundamentally inspiring.

For the MCL community, the suggested weight is:

Maximum Eco-brick Weight

= Bottle Volume x 1

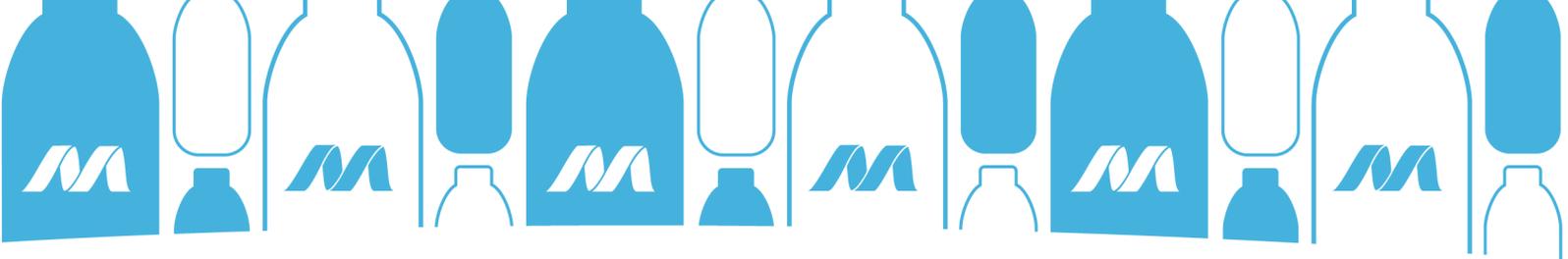
Suggested Maximum Eco-brick Weights:

1000ml = 1000g

250ml = 250g



(Eco-brick Weight Table on next page)



Weigh your eco-brick, and record the weight on a label.

COCA-COLA	1.5L	1.5kg
	1L	1kg
	500ml	500g
	300ml	300g
SPRITE	1.5L	1.5kg
	1L	1kg
	300ml	300g
ROYAL	1.5L	1.5kg
	1L	1kg
	300ml	300g
REAL LEAF	480ml	480g
MINUTE MAID	330ml	330g
POWERADE	500ml	500g
	250ml	250g
CRYSTAL CLEAR	500ml	500g
KOPIKO	240ml	240g
LIPTON	330ml	330g
GATORADE	500ml	500g



IMPORTANT REMINDERS

- Eco-bricks must be stuffed full of trash until they are hard like bricks.
- One must keep going until the bottle is completely full.
- As you complete your eco-brick, make sure it is not packed to overflowing.
- Plastic should not be pushing up against the lid, otherwise the lid may be damaged over time.
- Lastly, always remember that by doing this, you are contributing to the solution of an environmental, economic, and social problem that is bound to affect future generations. Your action today will make an important difference tomorrow! So enjoy the process and let's complete this mission!



7. LABEL YOUR ECO-BRICK

Once sealed, label your eco-brick with the following:

- Your name (optional)
- Date and year
- Final weight

Labels will be distributed throughout the MCL community and may also be obtained from the CSCE, Colleges, and other Department Offices.

8. TURN OVER YOUR ECO-BRICK

When completed, the eco-bricks may be turned over to the CSCE Office or in the designated areas around the campus. There will also be disposal bins around the campus where the eco-bricks may be deposited.





REFERENCES

Ocean Conservancy. (2015). Stemming the tide: land-based strategies for a plastic-free ocean

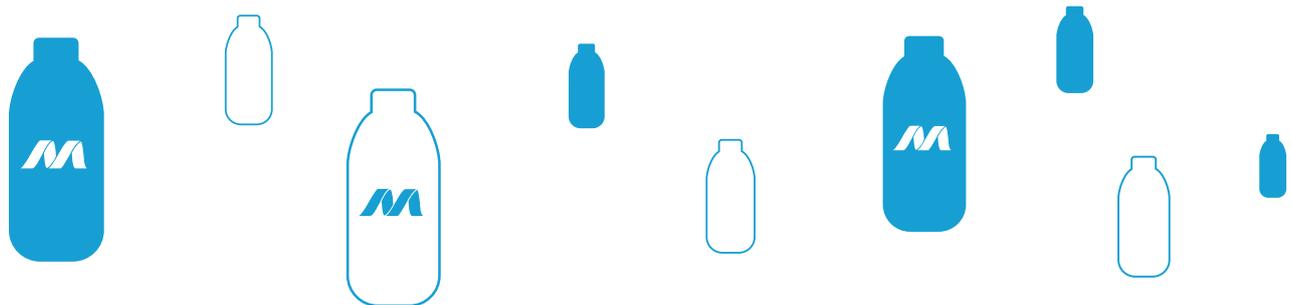
UN Environment. (2018). Banning single-use plastic: lessons and experiences from countries

Rob, Hopkins. EcoBricks and education: how plastic bottle rubbish is helping build schools. www.theguardian.com. The Guardian. Retrieved 2014-05-29.

UN Environment. (2018). Beat plastic pollution [Interactive data file]. Retrieved from <https://www.unenvironment.org/interactive/beat-plastic-pollution/>

Ecobricks.org. (2018). How to make ecobricks [Data file]. Retrieved from <https://www.ecobricks.org/how/>

Photos from iStock, Deutsche Welle, UN Environment, and The Plastic Solution



#SUSTAINABILITY Is In urDN



Center for Service-Learning
and Community Engagement
(CSCE)
Malayan Colleges Laguna



in partnership with

