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SNAMBOO: HANDMADE BAG FROM NATURAL FIBERS OF SNAKE PLANT *(DRACAENA TRIFASCIATA)* LEAVES AND BAMBOO *(BAMBUSA VULGARIS)* SHEATHS

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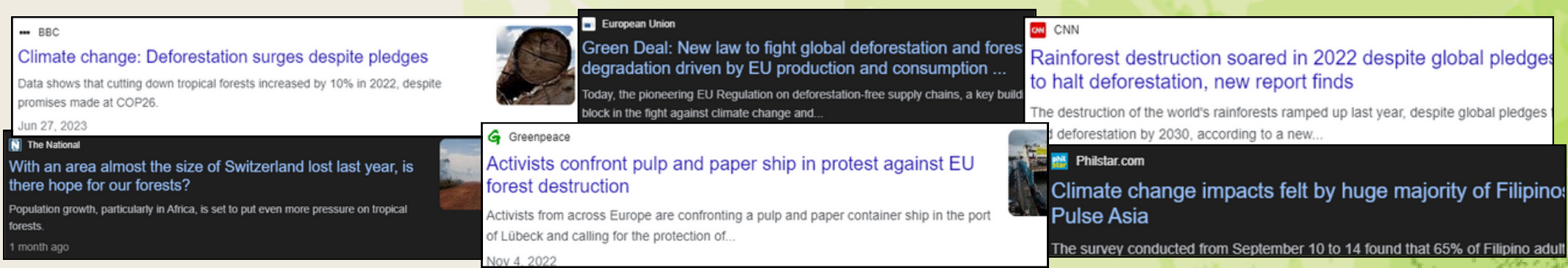
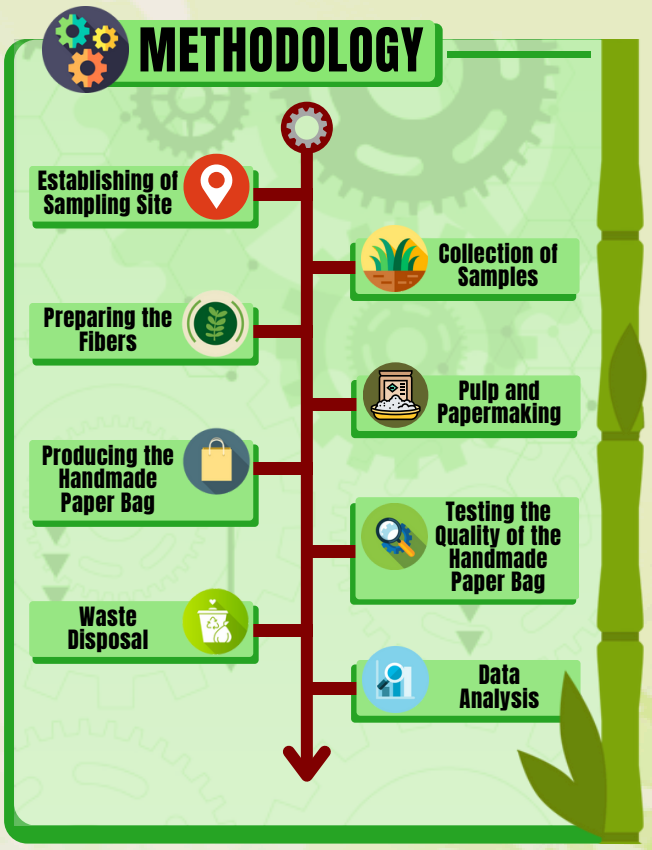


INTRODUCTION

Plastic bags are used to carry items such as food and clothes purchased from stores. In fact, according to OceanWatch Australia (2021), **5 trillion plastic bags** are consumed yearly in the whole world. That is a rate of 160,000 plastic bags per second and more than 700 every year for each individual on earth. Additionally, URBANLINKS (2020) also noted that the Philippines generates an alarming **2.7 million tons of plastic waste** each year, with 20% of it estimated to end up in the ocean. This results in many negative environmental consequences, including animal choking, pollution, and obstructions of channels and streams. Currently, the world is slowly recognizing the severity of this issue and is now accepting more initiatives to fight the harmful impacts of overreliance on plastic bags.

Snake plants, locally known as Espada, have natural fiber content, and Cebu researchers were able to extract it in their research. They discovered that it is quite durable due to its elongation limit and strength, which are almost equal to those of commercial fibers (BD, 2019). On the other hand, Wang (2017) also found that the anatomical structure of **bamboo sheaths** is composed of vascular bundles surrounded by fibers and large parenchyma cells in between. In connection with these circumstances, this research study is conducted to produce paper bags from snake plant *(Dracaena trifasciata)* leaves and bamboo *(Bambusa vulgaris)* sheaths.

METHODOLOGY



RESULTS AND DISCUSSIONS

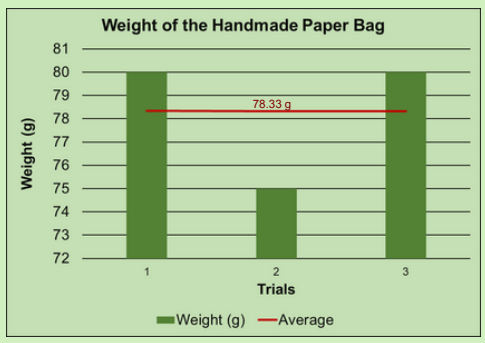


Figure 1. *Weight of the Handmade Paper Bag*

- *weighs 78.33 grams in average*
- *thicker paper results to more durable bag (Tracy, 2022)*

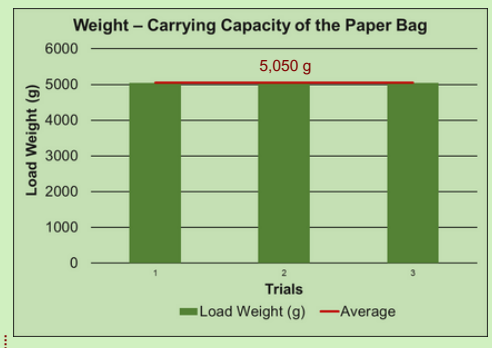


Figure 2. *Weight-Carrying Capacity of the Handmade Paper Bag*

- *5,050 grams/ 5kg capacity*
- *more durable than the 4kg capacity for commercial bags (Bille, 2021).*

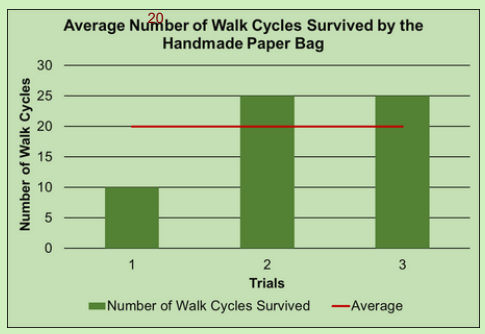


Figure 3. *Average Number of Times that the Paper Bag can be Reused*

- *bag can be reused 20 times*
- *higher than the required 3 times of reuse (Broadway Industries, 2020).*

SNAMBOO HANDMADE PAPER BAG

CONCLUSION

Based on the findings of the study, the snake plant and bamboo sheaths can be potential resources for paper bag production.

RECOMMENDATIONS

1. The most suitable concentration of snake plant and bamboo sheaths for paper production may be identified.
2. Scoring machines or creasers may be used.
3. Water resistance and other quality parameters may be tested.

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