



# Making the world green one BIOplastic at a time

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# Problem #1

Over  
**256M**

plastic items get thrown  
out on a **daily** basis.  
(Gaia, 2019)



**163 million**

packet sachets



**48 million**

packet sachets



**45 million**

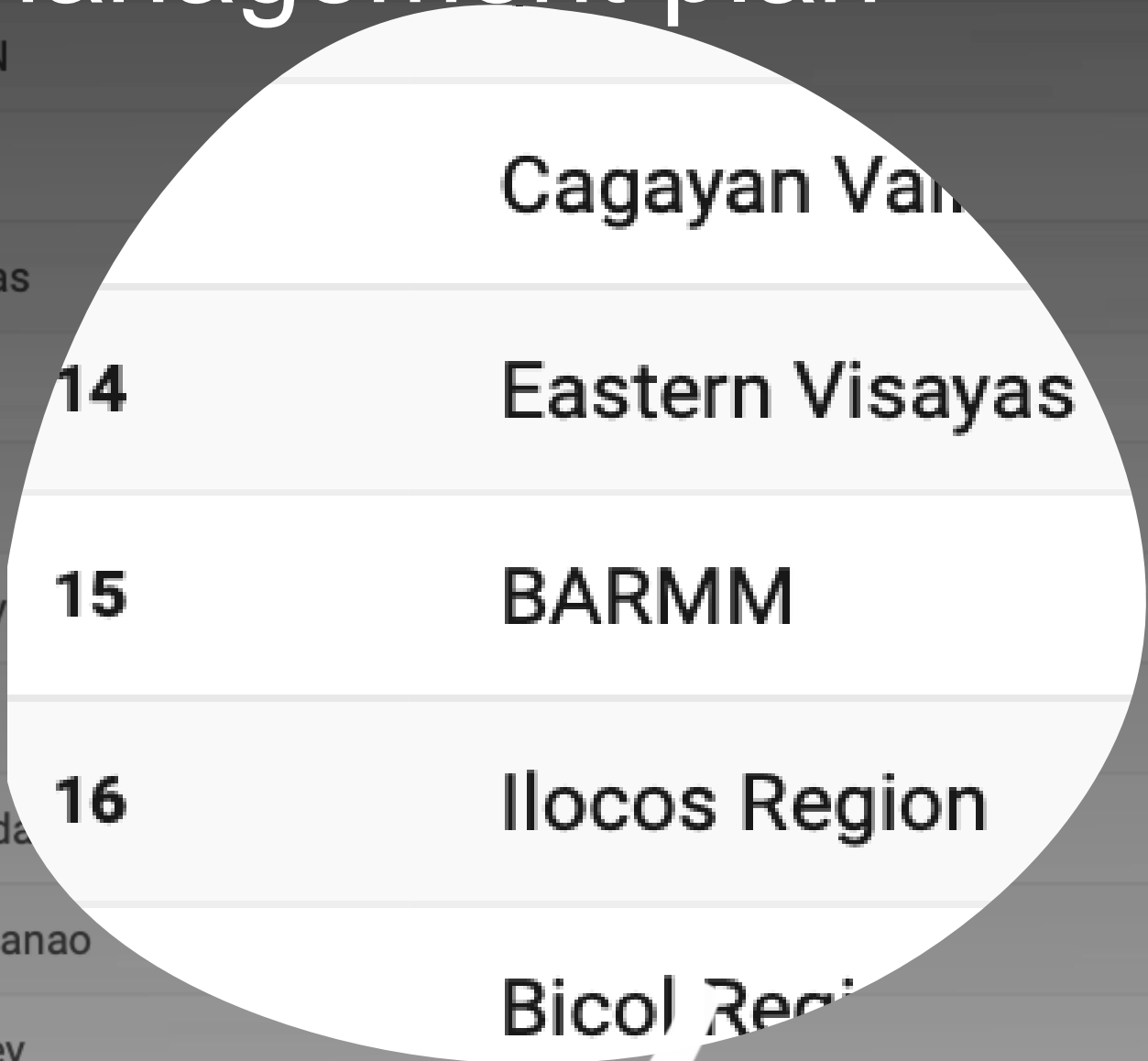
packet sachets





	Region	No. of LGUs with approved SWM plan	Total no. of LGUs*	% of LGUs with approved SWM plan
1	METRO MANILA	16	16	100%
2	Central Mindan	17	49	76%
3	Southern Mind	36	49	73%
4	CALABARZON	93	142	65%
5	CARAGA	47	73	64%
6	Central Visayas	63	107	59%
7	CAR	45	77	58%
8	Central Luzon	62	130	48%
9	Western Visay	63	133	47%
10	MIMAROPA	24	71	34%
11	Northern Mind	31	93	33%
12	Western Mindanao	24	71	34%
13	Cagayan Valley	31	93	33%
14	Eastern Visayas	38	143	27%
15	BARMM	25	119	21%
16	Ilocos Region	24	125	19%
17	Bicol Region	3	114	3%

# Approved 10-year solid waste management plan



119 LGU's  
25 LGU's with SWM plan

21% ratio  
(3rd to the last in the country)

\* Based on the Philippine Standard Geographic Code, as of March 2019  
Source: National Solid Waste Management Commission

# Problem #2

About  
**2M**  
people in BARMM are  
considered poor.

(Dy, 2019)







However,

BARMM captures  
**63.8%**  
of the total aquaculture  
production in the country.

(PSA, 2019)



BASILAN

SULU

TAWI-TAWI

49.5%  
share

Tawi-Tawi has the highest  
concentration of aquaculture  
production in the region.  
(PSA, 2019)



# Solution



Safe



Eco-  
friendly



Non-toxic



Low  
Maintenance



Affordable

# Seaweed Bioplastics



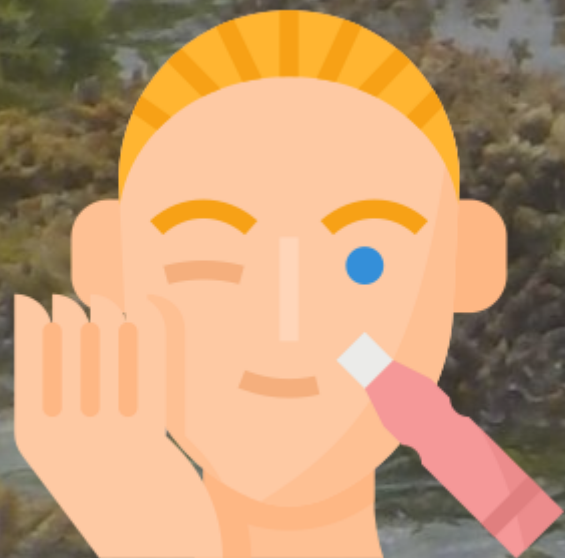
# Components:



Water



Corn starch



Collagen

## Tambalang / Guso



As provided by the Professionals group at Omar bin AbdulAziz Secondary Independent School



# Possibilities

Utensils



Wrapping



Plastic bottles





How is it different  
from the others?



The bioplastic dissolves in  
water and it can be a  
sustainable source of income  
for the people.

(RFI, 2019)





# Business Opportunity



Long background with Seaweed Farming

Create local job opportunities



Potential to expand economic growth



# Timing

## Market Size Potential Growth

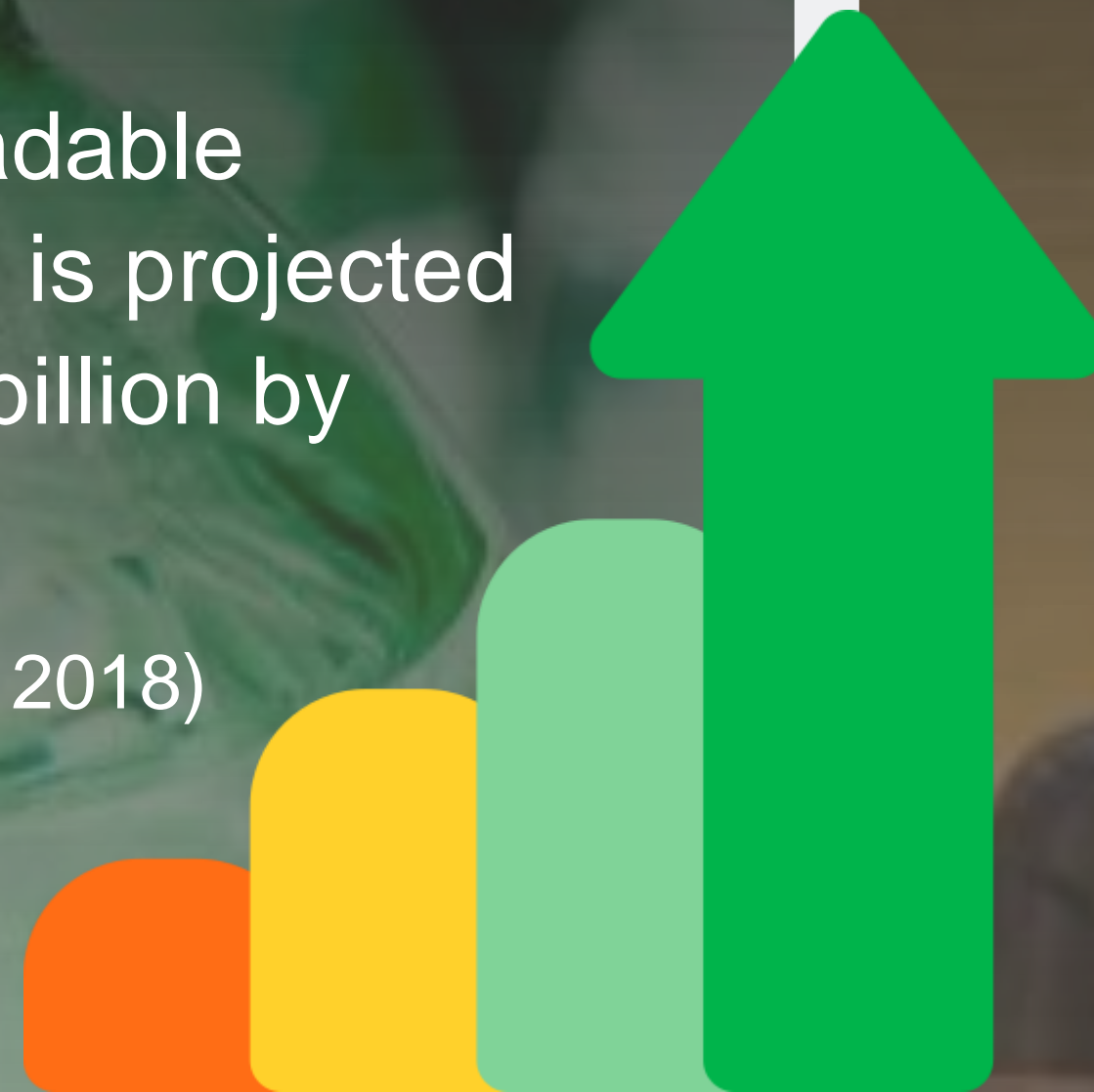
The global biodegradable plastics market size is projected to reach USD 6.73 billion by 2025

(Research and Markets, 2018)

## Plastic Bag Ban in BARMM offices

By the use of seaweed bioplastics, businesses will still be able to provide convenient and cheap packaging to customers that will not let businesses disobey the law.

(Policar, 2019)





# Conclusion

Seaweeds are a viable  
source for creating

bioplastics  
It will help reduce risk of  
plastic crisis globally

It will raise the economic  
activity of BARMM





# Get In Touch With Us

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## Website

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# References

BPI-ARMM (2017). Seaweed Farmers Struggle as the Seaweed Industry Grows. AGRICULTURE. Retrieved on February 5, 2020 from <http://www.ndbcnews.com.ph/news/seaweed-farmers-struggle-seaweed-industry-grows>

Dy, R. T. (2019, January 28). The poverty challenge of Bangsamoro. Retrieved from <https://business.inquirer.net/264224/the-poverty-challenge-of-bangsamoro>

Fernandez, I., Baunto, A., & Villasper, J. (2019). Open Data for the Bangsamoro Transition Practical Notes on Using Geospatial and Statistical Data for Decision-Making. The Asia Foundation, 1-23. DOI: 10.13140/RG.2.2.32445.41445

Fernandez, H (2015). Tawi-Tawi Seaweed Farms. Retrieved on February 5, 2020 from <https://indaydiaries.wordpress.com/2015/06/17/tawi-tawi-seaweed-farms/>

Gaia. (2019, March 8). Plastics Exposed: How Waste Assessments and Brand Audits are Helping Philippine Cities Fight Plastic Pollution. Retrieved from <https://www.no-burn.org/waba2019/>

Macaraeg, P. (2019). How Going Zero Waste is Addressing PH's Plastic Pollution. Rappler PH. Retrieved on February 5, 2020 from [rappler.com/science-nature/environment/239891-how-going-zero-waste-address-philippines-plastic-pollution](http://rappler.com/science-nature/environment/239891-how-going-zero-waste-address-philippines-plastic-pollution)

Policar, D. (2019, July 2). Single-use plastic banned in BARMM government offices. Retrieved from <https://www.pressreader.com/philippines/bandera-mindanao/20190702/281547997439631>

Research and Markets. (2018, November 5). Global Biodegradable Plastics Market Report 2018-2025 - Market Size is Projected to Reach USD 6.73 Billion. Retrieved from <https://www.globenewswire.com/news-release/2018/11/05/1645081/0/en/Global-Biodegradable-Plastics-Market-Report-2018-2025-Market-Size-is-Projected-to-Reach-USD-6-73-Billion.html>

RFI. (2019, August 8). Young scientist creates bio-plastic from mango peels and seaweed. Retrieved from <https://www.rfi.fr/en/asia-pacific/20190807-philippines-scientist-bio-plastic-mango-peels-and-seaweed-environment-science>

UNDP (2016). Coordinator for BARMM and Marine Plastic Litter. Retrieved on February 5, 2020 from [https://jobs.undp.org/cj\\_view\\_job.cfm?cur\\_job\\_id=86182](https://jobs.undp.org/cj_view_job.cfm?cur_job_id=86182)