

BEHOLD! THE CHAMPION OF THE COASTS HAS ARRIVED!

**THE RISE OF...
MAN-GROVE!**



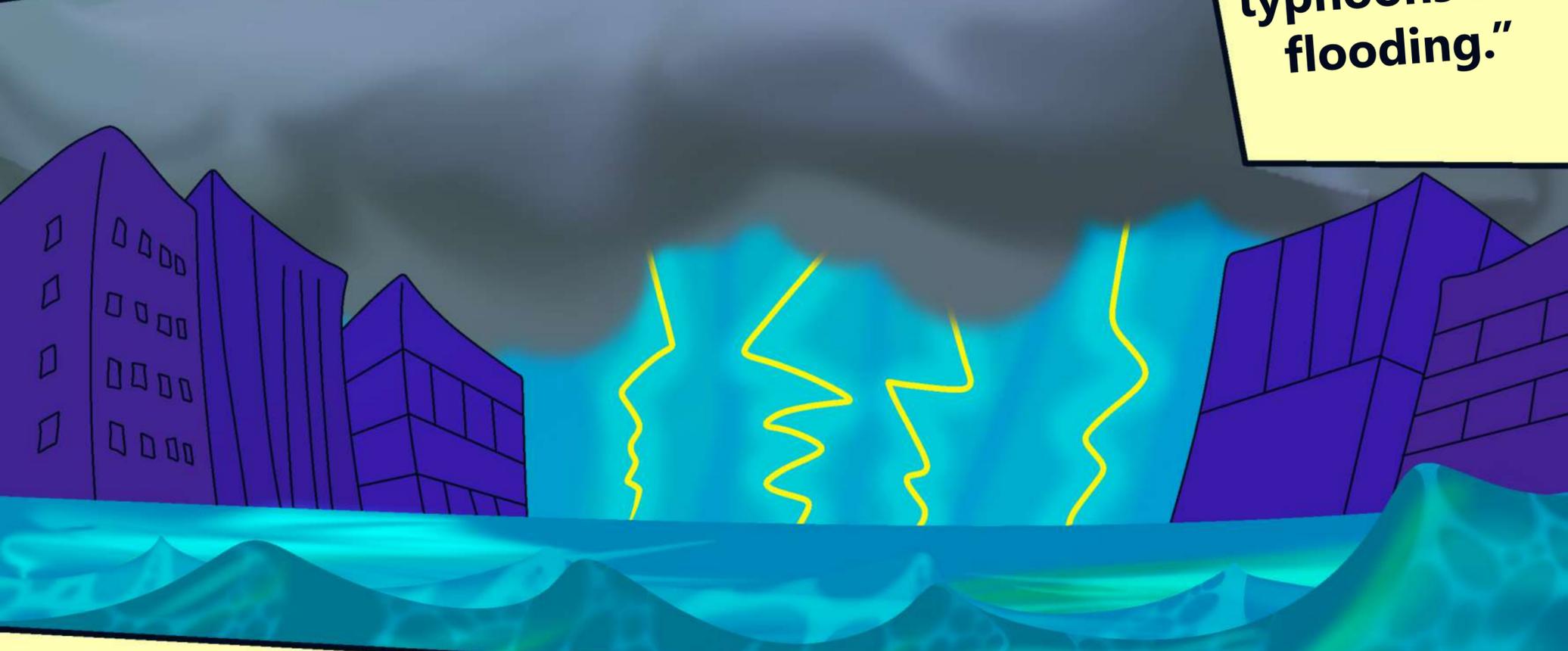
**You too can protect the
coastal environment!**

**WRITTEN AND ILLUSTRATED BY:
NICO C. LAMBERTE**

“The coast of Cebu is in ruins, mangroves have been cut, and plastics pollute the sea.”

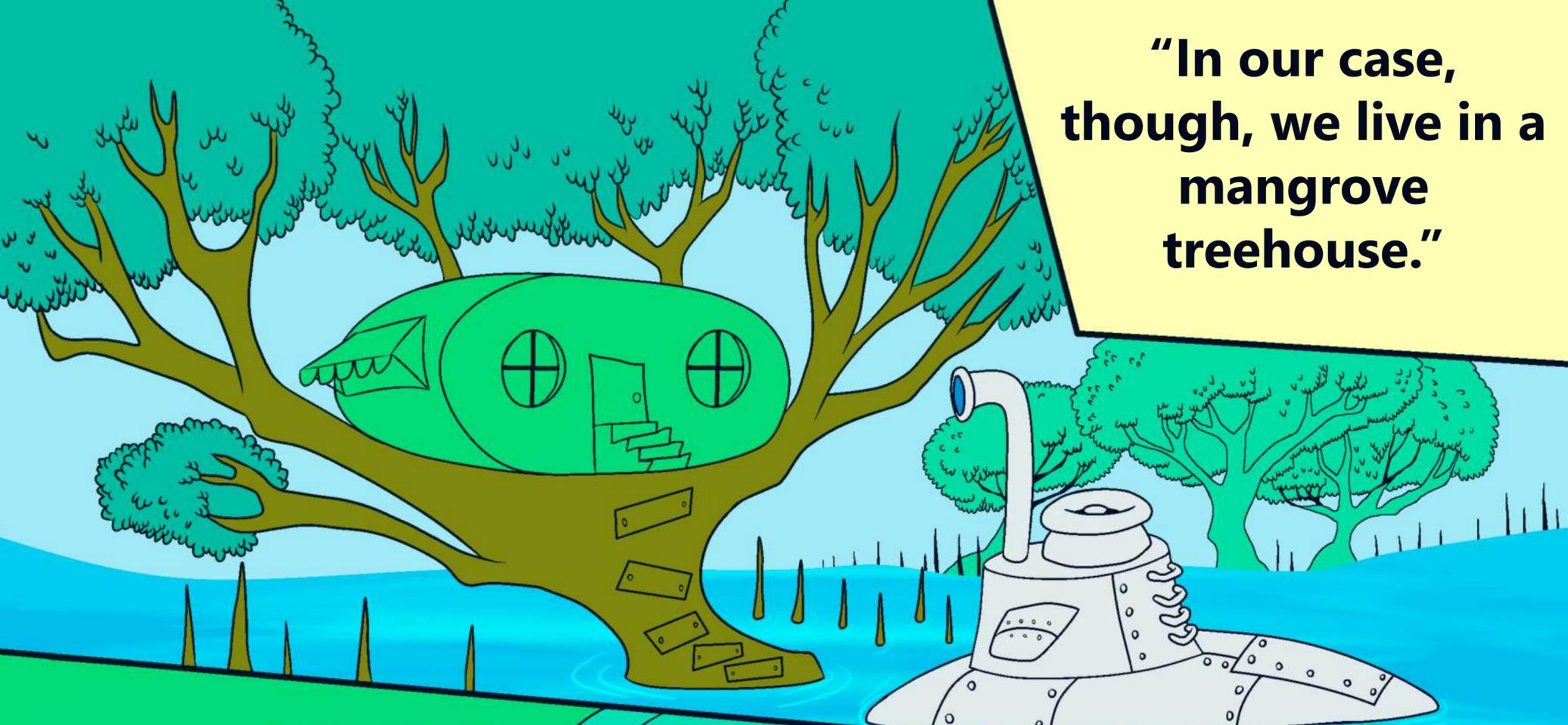


“The streets are prone to typhoons and flooding.”



“Those who live on the coasts have to seek refuge in the mountains or in makeshift boathouses.”





“In our case, though, we live in a mangrove treehouse.”



It seems that we as humans don't listen. no matter how hard we try to help. Too stubborn to care.



Can you blame them? I think they're too busy surviving. Besides, humans are also part of the environment.



Yes, I agree with you, but how will humanity survive if we keep wasting nature's resources?

We have the brains, we can do something about this. We can protect Cebu!



Hey, I have an idea! Let's use one of our rejected thesis ideas. A humanoid mangrove that can protect the coast, remember?



Of course! I always wanted to have a humanoid mangrove ever since I was young. People thought we were crazy, but we're geniuses! We'll show them.



KA-BREAK!



A few drops of power tonic will do the trick! Soon, different species of mangrove seeds of Avicennia, Ceriops, Rhizophora and Sonneratia will become one mighty protector!

"And just like that, Man-Grove is born! Yes. I'm not good at naming, but I like it, anyway."



Greetings, master. How may I be of service?

Man-Grove, my greatest creation. Follow my orders, and you will save the environment.



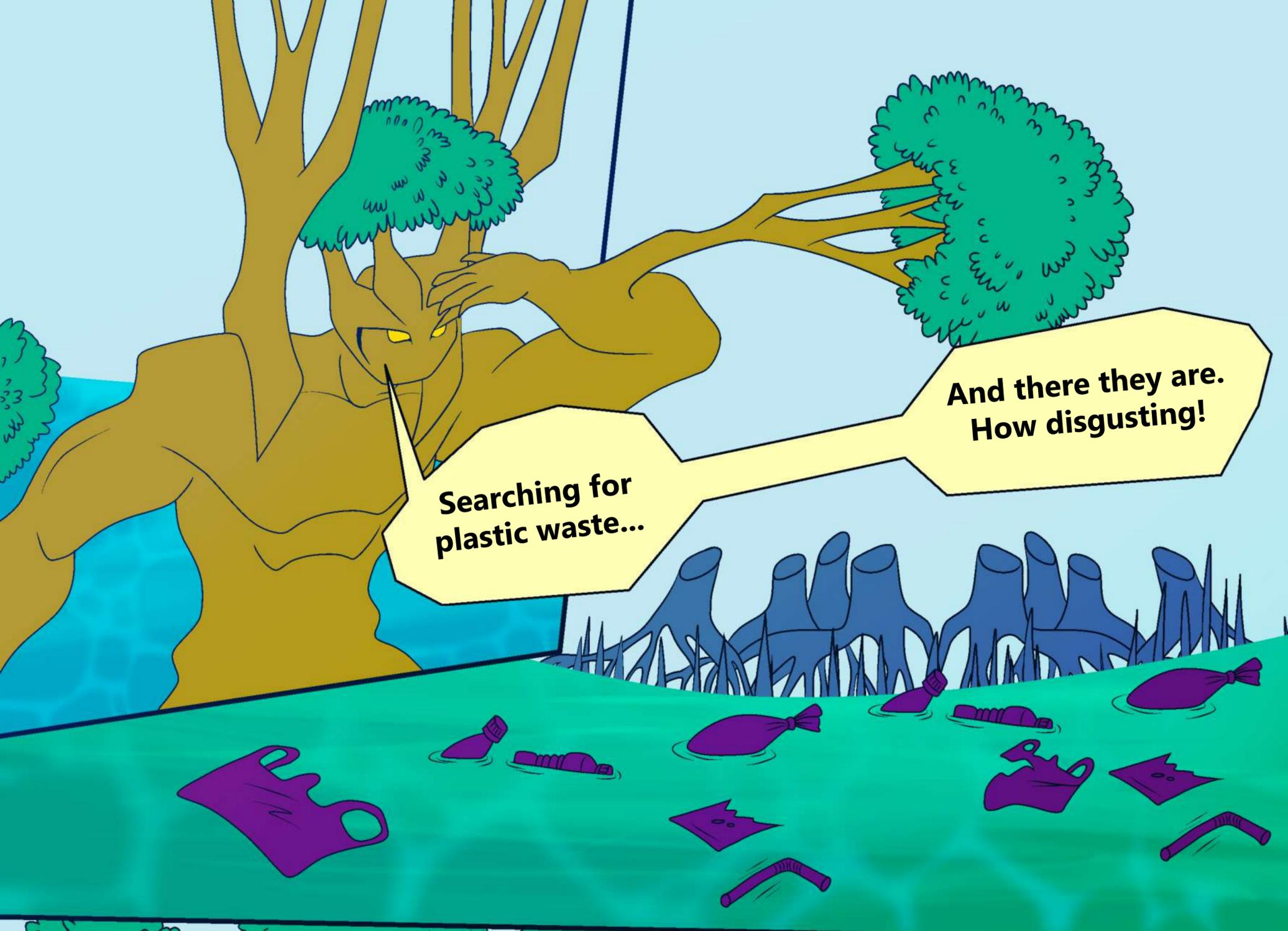
We'll assist you by communicating through this mobile trashbin we built. That's where you can throw garbage properly.



Your task is simple. Pick up any waste floating on the sea, and plant as many mangroves as you can to fortify the coast.



Good plan. I guess I'll better get going.



Searching for plastic waste...

And there they are. How disgusting!



Time to take out the trash. Literally! I guess.



That's all of them. What's next, master? Shall we recycle the trash?



No, we need to segregate the plastic waste first to see if there are actual recyclable materials like aluminum and glass.



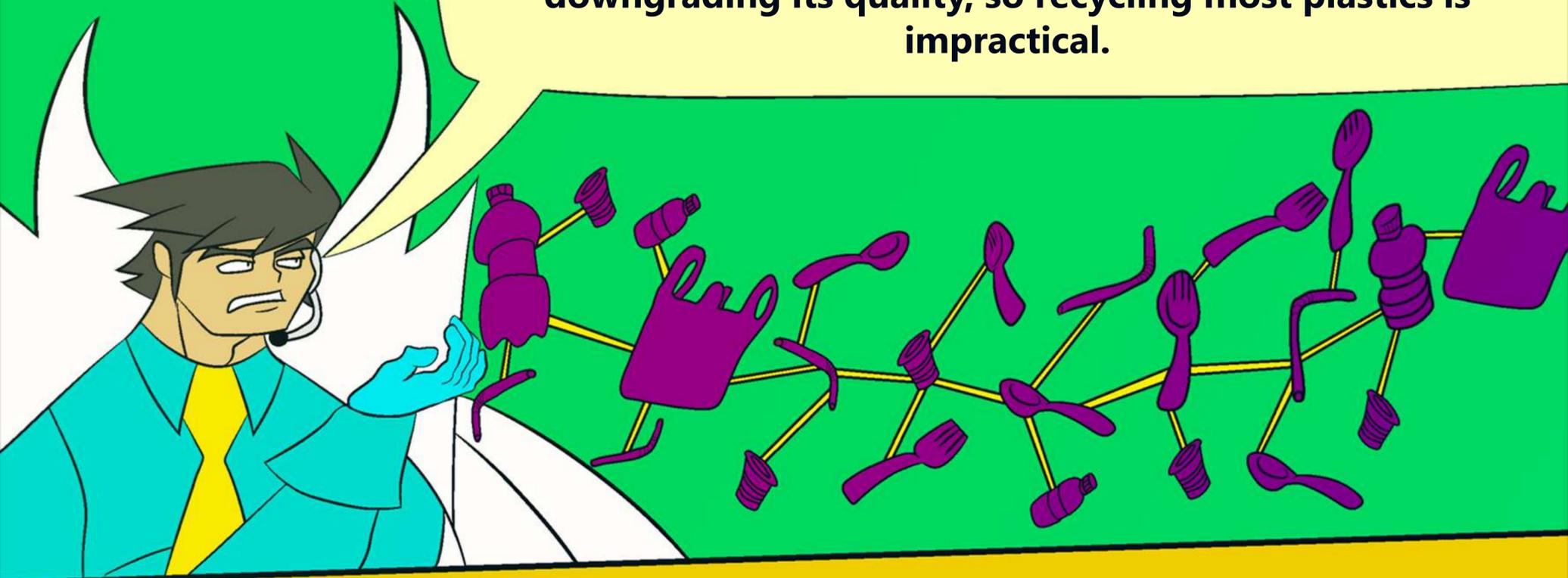
Should've thought of making separate trashbins for each type of waste in the first place.

Also, plastic is not recyclable? Why?

One: I've thought of making more trashbins, but we don't have enough money.

And two: Good question, I'll try my best to explain.

Plastics are polymers. They are large molecules that are made up of linked chains of smaller molecules called monomers. Recycling the plastics will shrink the polymer chain, downgrading its quality, so recycling most plastics is impractical.



I'd also like to point out that the single-use plastics keep food from spoiling and are used by the medical industry to prevent infections. I think it's ironic that those plastics are infecting the earth.

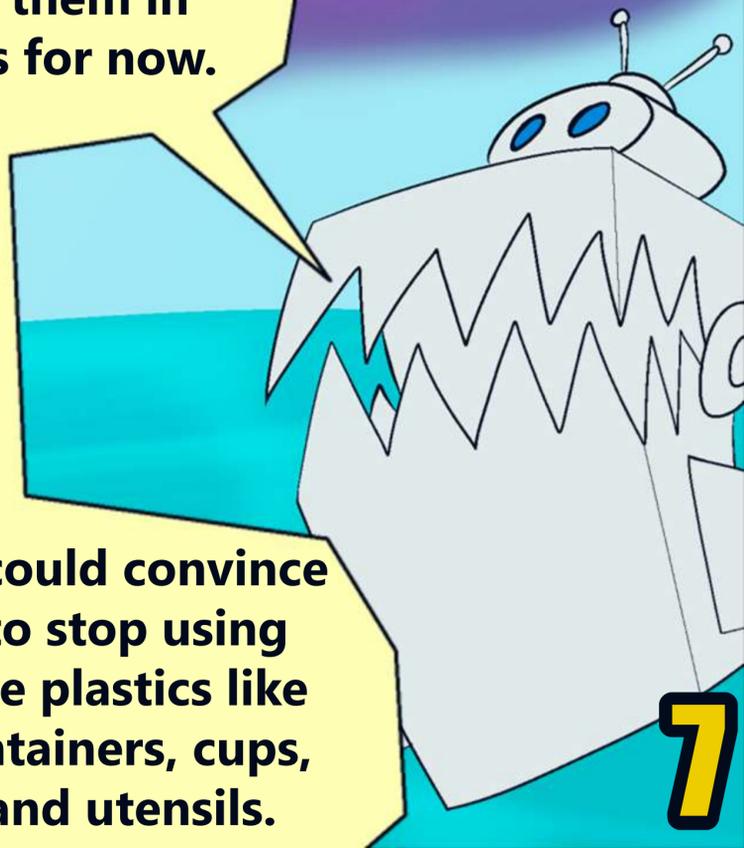


So, what are we gonna do with the plastics?

I'm afraid we'll have to put them in landfills for now.

But landfills just pollute the Earth, there has to be another way!

Well, we could convince people to stop using single-use plastics like bags, containers, cups, straws and utensils.





Hey look, a typhoon has created a huge wave, called a storm surge, and it's heading right for us!

Fight or flight, Man-Grove! You know what to do.

It'll be my pleasure.

Planting mangroves for coastal defense!

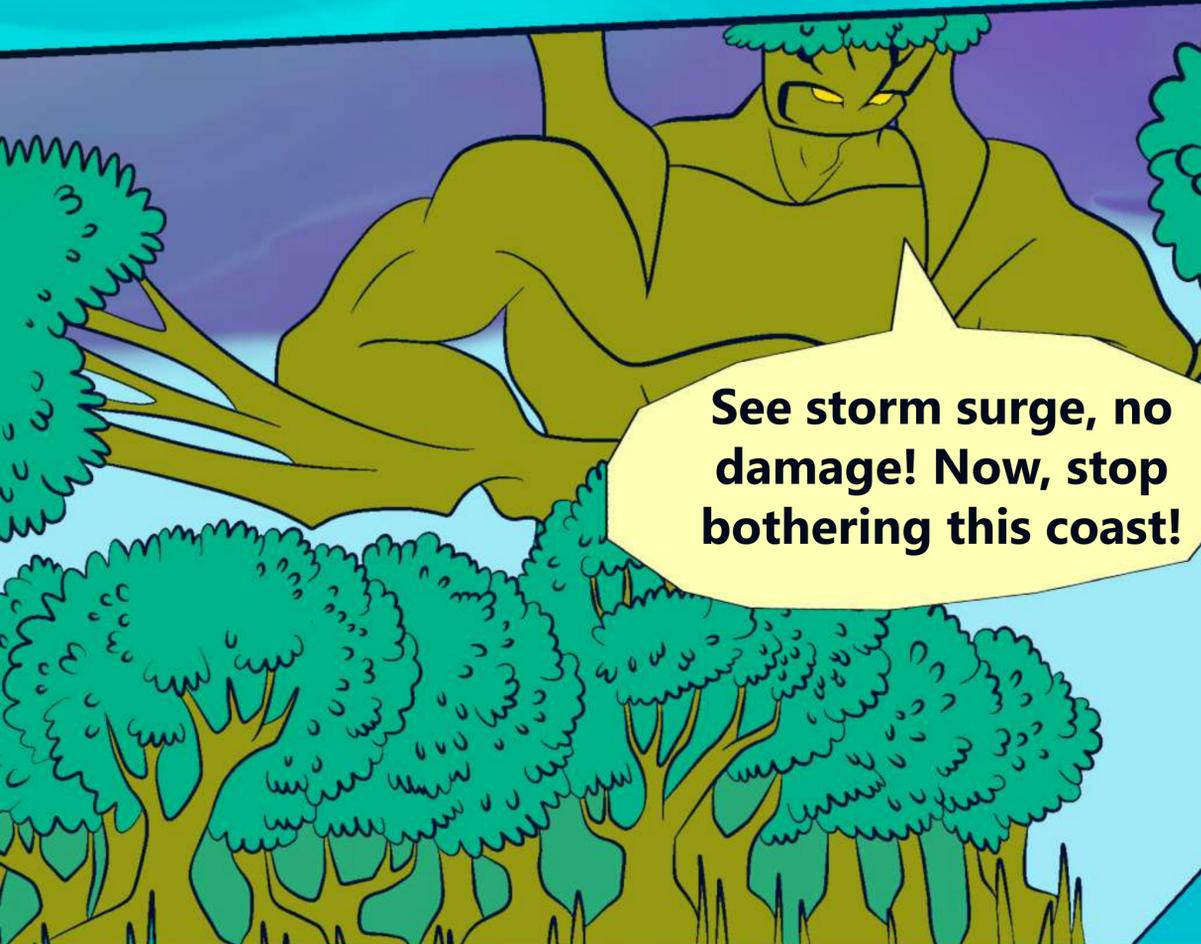
Impressive! He just planted hundreds of mangroves in mere seconds!



KA-SLAP!



See storm surge, no damage! Now, stop bothering this coast!

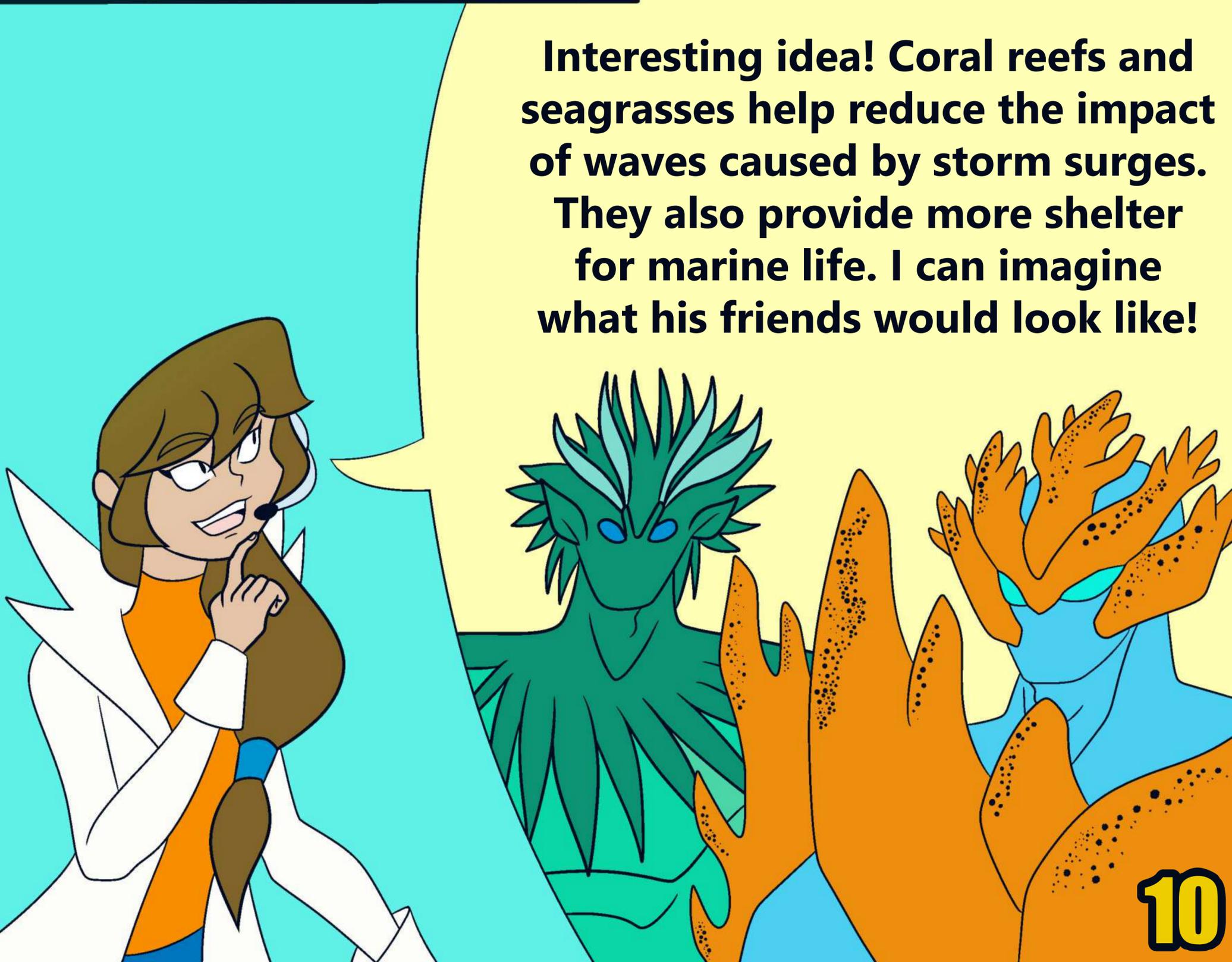




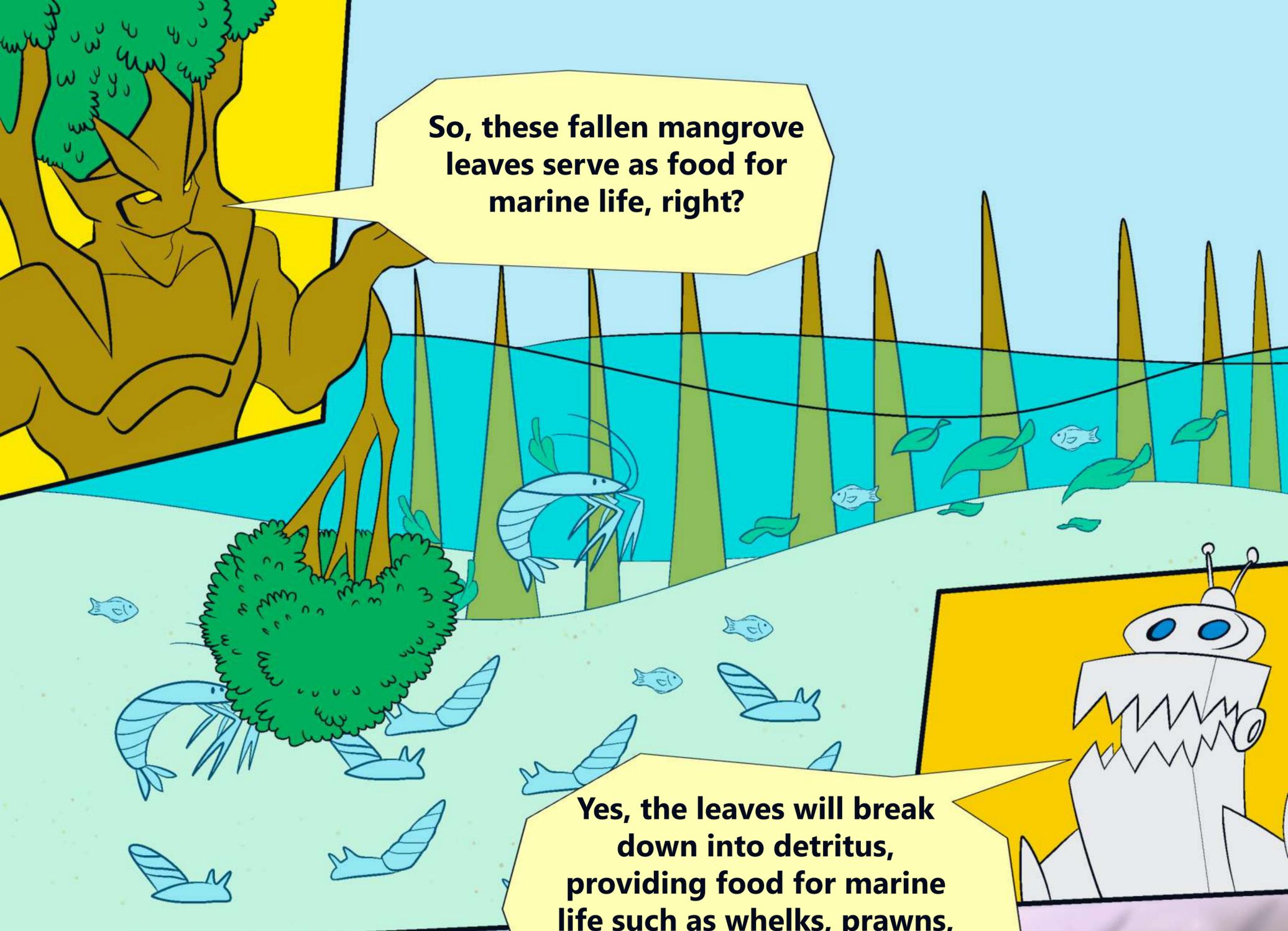
You have done well, Man-Grove! The coast is now fortified.



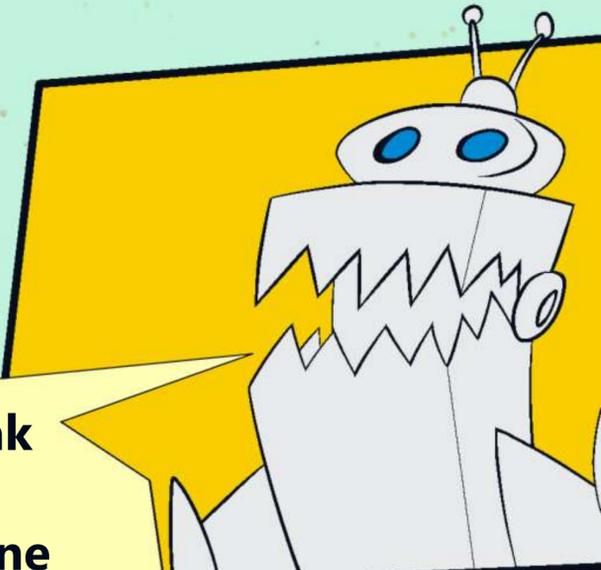
Soon, I shall make humanoid versions of seagrass and coral to help you protect the coast. Once you team up with them, you will become a force to be reckoned with!



Interesting idea! Coral reefs and seagrasses help reduce the impact of waves caused by storm surges. They also provide more shelter for marine life. I can imagine what his friends would look like!



So, these fallen mangrove leaves serve as food for marine life, right?



Yes, the leaves will break down into detritus, providing food for marine life such as whelks, prawns, juvenile fish, and many more.



Well, my work here is done. I shall return when the coast is in danger, but for now, I must go home.



Woah, that's a floating house! Interesting, I must analyze it further. I got a lot of free time, anyway, I have nothing better to do.



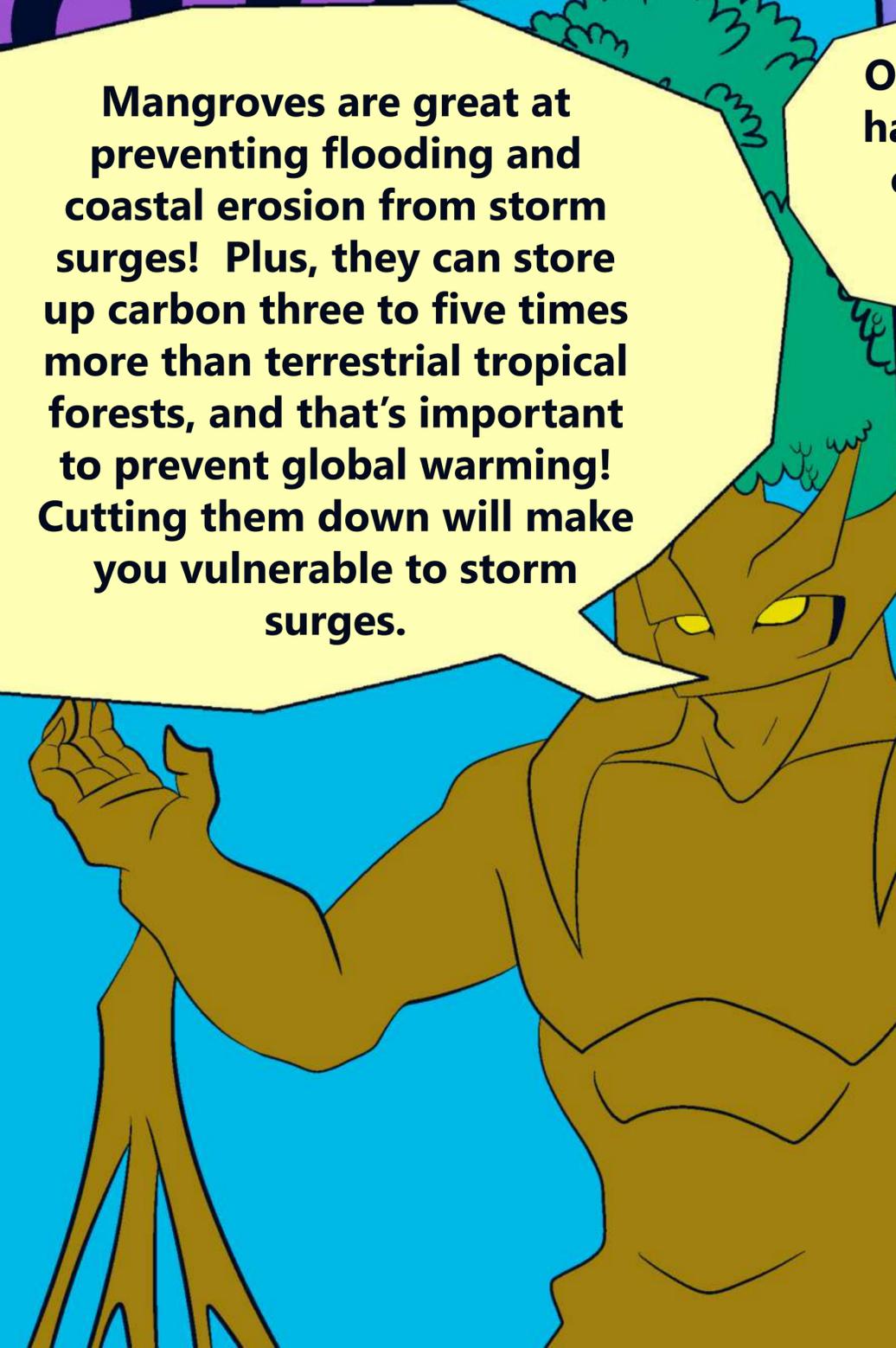
Great, another experiment of that pesky mad scientist. Look, buddy, I don't know who or what you are, but we don't need your help.



Is your house made of mangrove wood?



Yes it is. What about it?



Mangroves are great at preventing flooding and coastal erosion from storm surges! Plus, they can store up carbon three to five times more than terrestrial tropical forests, and that's important to prevent global warming! Cutting them down will make you vulnerable to storm surges.

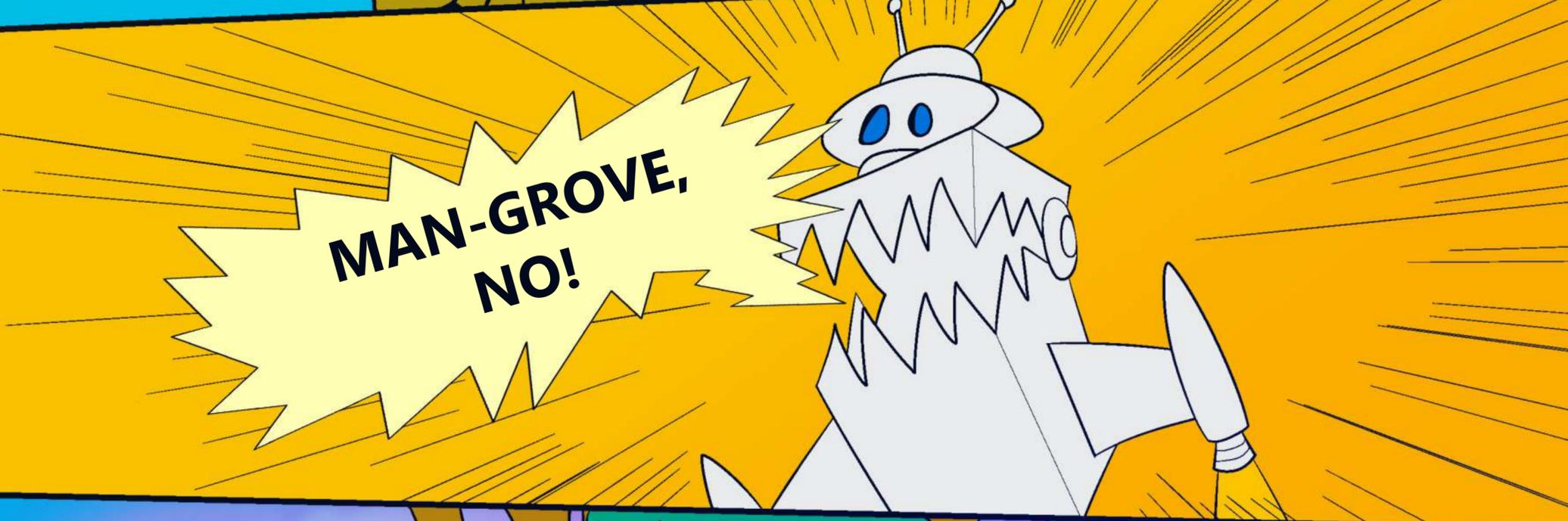


Our old homes were flooded, we had to make shelters. I mean, we only cut a few of them, what's wrong with that?



I'm starting to think that humans are nothing more than petty pollutants.

Hey now, let's not jump to conclusions.

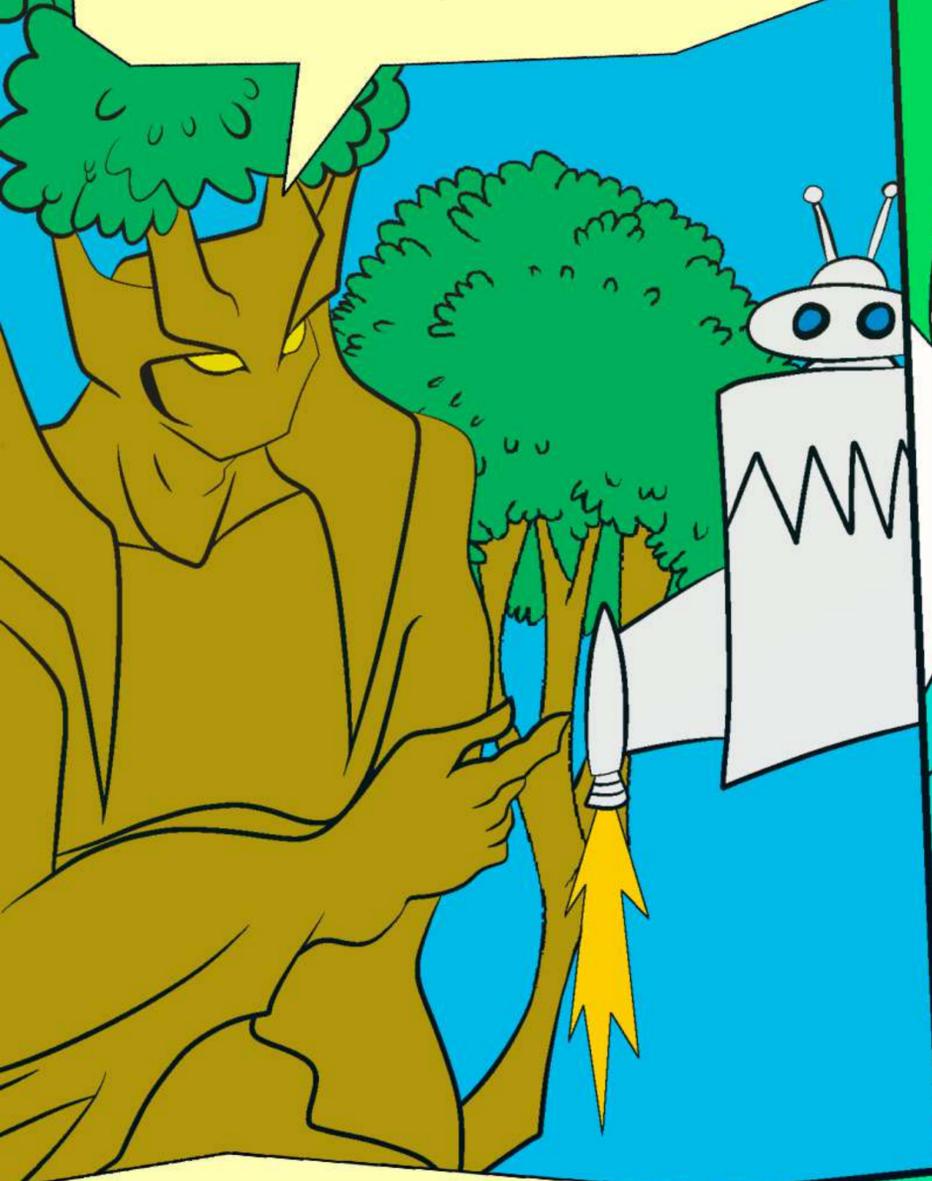


**MAN-GROVE,
NO!**



While I also do not like most humans, we should at least teach them how to plant mangroves. I think it is better that way.

Very well, I shall teach them how to plant, but only for your sake, master.



Step 1: So, you have a Rhizophora mangrove seedling good. Make sure the seedling is moist and wet (also keep your mind out of the gutter).



Step 2: Make sure the bulb part is at the top when planting the seedling. Fill up the bottom part of the seedling with soil so the moisture will be absorbed by the soil to acquire nutrients.

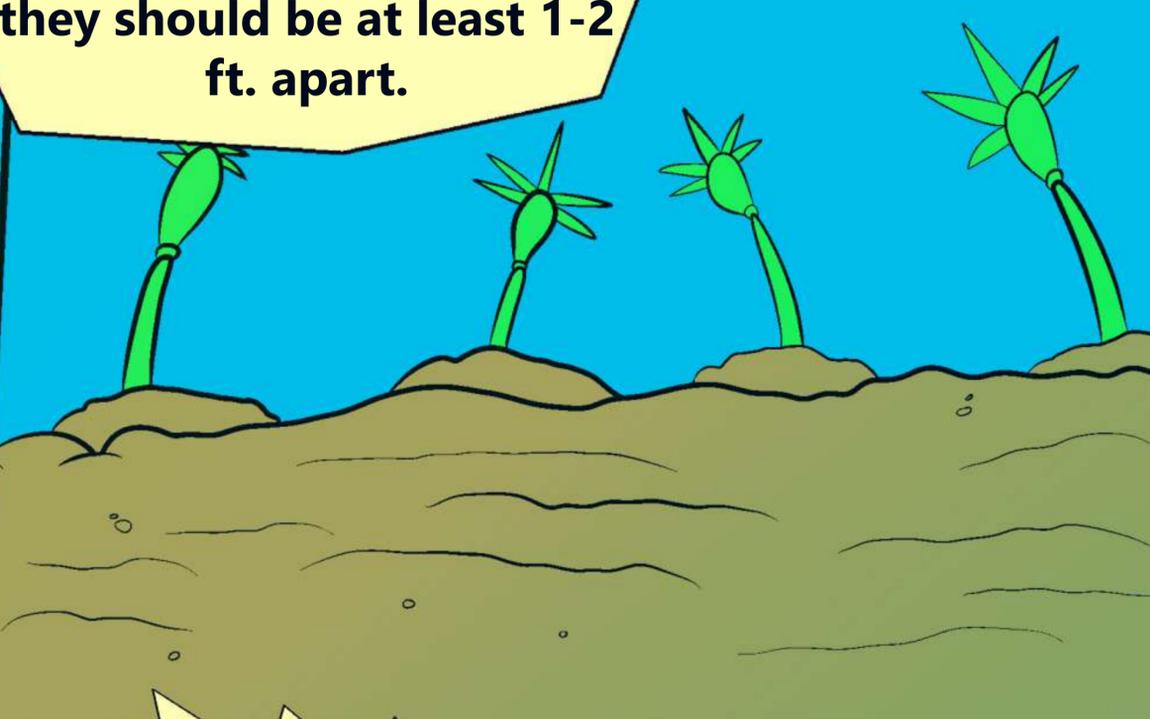


Step 3: Find a place where it's muddy, or has brackish water. Personally, I like to plant my mangroves in brackish waters, but muddy ones are fine too, as long as it has moisture.



Step 4: Dig a hole for the seedling. Make sure the hole is deep enough for the seedling to grow well, the hole must be at least half the length of the seedling.

Don't forget to cover it! The seedling should be standing upright, so compress and tighten up 30 to 80 cms apart! The seedling should be standing up, so tighten up the soil for support. When planting more seedlings, they should be at least 1-2 ft. apart.



So, how long do mangroves usually grow?

If you take care of mangroves well, they can grow pretty fast. Species like Bruguiera can grow up to two meters or more in two years.

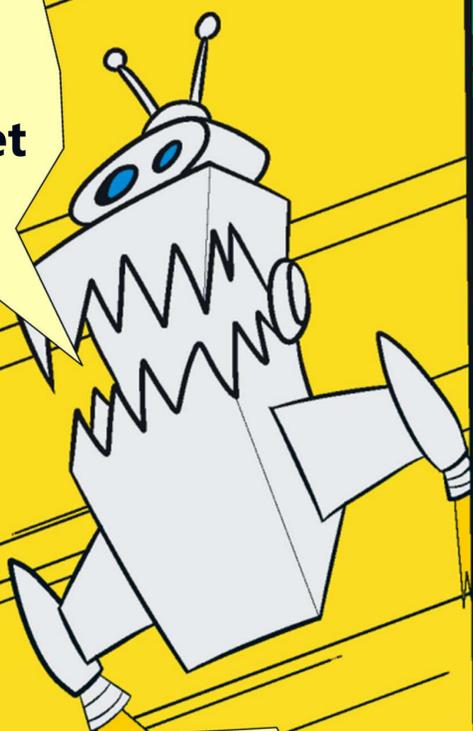
RAAAARGH! ME JUNK MONSTER. HUMAN IS GARBAGE.

???

Great, who's this garbage?



It's a junk monster.
Quick, Man-Grove, get
rid of it!



This day can't get any
weirder, can it? I feel
mad!

Human pollutes, must be
destroyed. Me junk
monster. Me work of art.

You're not a work of art,
shut up. Please,
shut up.

Take this heat
ray, I guess.

BUZZZZZ!!!!

You've
incinerated that
junk heap!
Why?

That heat ray just came out of
nowhere, Man-Grove's power is
amazing! But burning plastics
releases harmful chemicals like
dioxins and furans.

???



Now, that burned waste is gonna release those harmful chemicals up in the air. I thought we're trying to save the environment.

Will we ever learn to not take Mother Nature for granted?

We are. But, you made a fair point. I had to do something, though, fight or flight.

If we are willing to learn more about the environment, then yes, we will.

"Keep on fighting, Man-Grove, for the sake of the environment!"



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coastal environment!

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**CEBU IS IN PERIL!
THE CITY FLOODED, THE SEA POLLUTED, THE COAST DAMAGED.
IN THE YEAR OF 2047, TWO MARINE BIOLOGISTS CREATED
THE CHAMPION OF COASTS TO PROTECT THEIR BELOVED HOME.
THAT CHAMPION IS...**



MAN-GROVE!

- A BIOENGINEERED HUMANOID MANGROVE WITH ALL THE STRENGTH AND TOUGHNESS OF MANGROVES.**
- CREATED FROM VARIOUS SEEDS OF MANGROVES WITH POWER TONIC.**
- THE POWER TONIC CONTAINS NANOMACHINES FOR HIS ARTIFICIAL INTELLIGENCE.**
- VOWS TO PROTECT COASTS FROM STORM SURGES AND PLASTIC.**
- HAS MANY MORE POWERS, BUT HAS NOT UNLOCKED THE POTENTIAL YET.**

MEET THE SCIENTISTS!



**WALLACE
CATAGUE**

- 28 YEARS OLD.
- GRADUATED AT THE INSTITUTE OF SAN BORROMEIO AND RECEIVED A DEGREE IN MARINE BIOLOGY.
- PASSIONATE, ARROGANT, BUT HAS A HIDDEN KINDNESS.
- THE PEOPLE OF CEBU HAVE POLARIZING OPINIONS ABOUT HIM.
IS HE A MAD SCIENTIST OR A KIND HELPER?
- REALLY LOVES MANGROVES.

MEET THE SCIENTISTS!



**SKYLAR
GALINDO**

- 28 YEARS OLD.

- ALSO STUDIED MARINE BIOLOGY IN THE INSTITUTE OF SAN BORROMEO AND MINORED IN ROBOTICS.

- GENTLE, COMPASSIONATE, AND CONSIDERATE TO OTHER PEOPLE.

- PREFERS COMPELLING MEN WITH A PASSIONATE VISION AND A CLEAR GOAL.

- SHE IS THE ROOMMATE AND ONLY TRUE FRIEND OF WALLACE.

BEWARE THE JUNK MONSTERS!



- EVIL SIMPLETONS THAT ARE MADE OF VARIOUS KINDS OF WASTE.
- THEY BELIEVE THAT THEY THEMSELVES ARE WORKS OF ART AND THAT HUMANS ARE TRASH.
- COMES IN DIFFERENT SHAPES AND SIZES .
- CAN BE FOUND ANYWHERE IN CEBU, ESPECIALLY AT THE COASTS.