



GLOBAL CLIMATE *Pledge*



OCEAN PROTECTION

What's being done, what you can do, and the step by step breakdown

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- what/why ocean protection?

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3 5 Additional Projects You Can Do

- beach clean ups
- adopt a highway
- ecobricking
- water monitoring
- collaborate

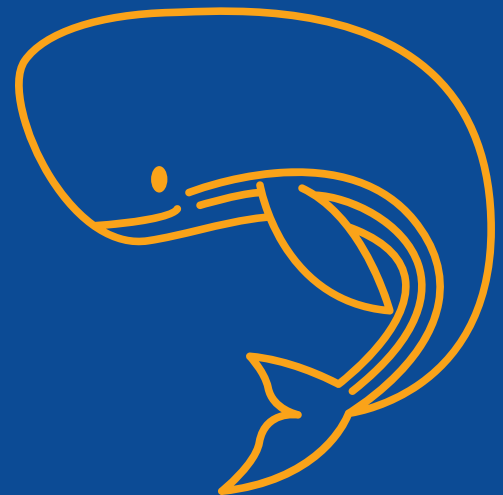
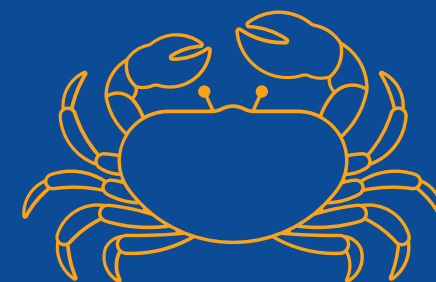
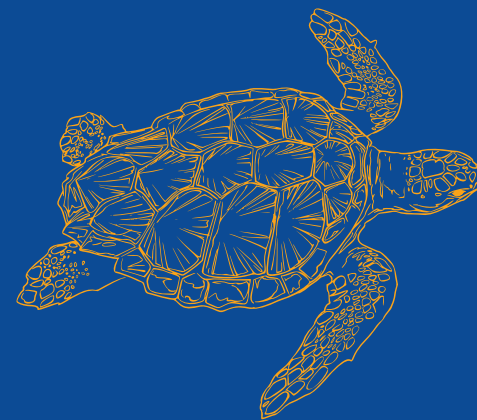
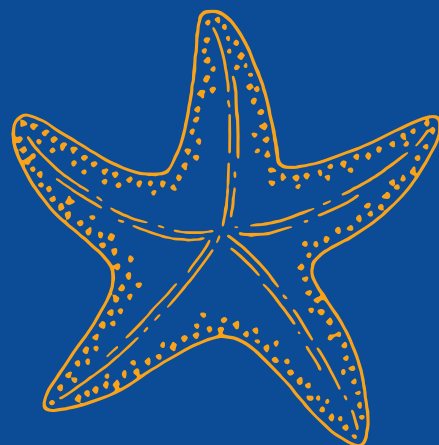
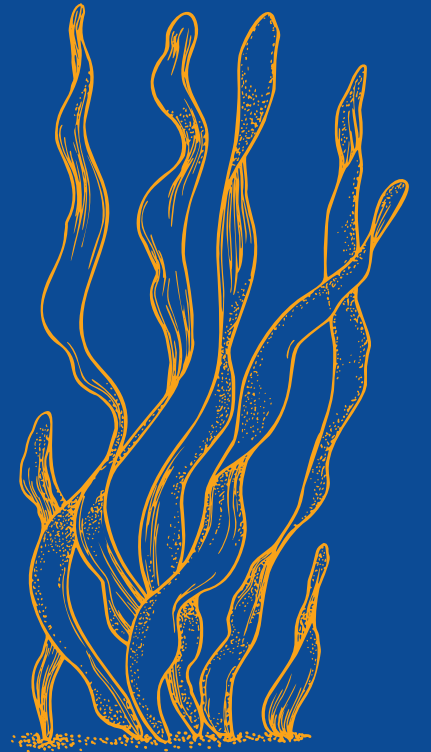
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4 Other Tidbits that Help

- eating sustainably
- shopping sustainably
- eliminating single use plastics

5

5 Take the Pledge



Why Protect Our Oceans?

Here's what we'll cover in this section:

- ocean stats
- ocean temp
- ocean acidification
- coral bleaching



Oceans are constantly being taken for granted.

20% of protein provided for the WORLD comes from the ocean.

90% of marine predators have been entirely eradicated

The Plastic Island is now the size of Texas

Source



Oceans: a Key Component in our Climate



- want surface to be warm
- want deeper waters cooler
- ocean stratification = homes for all species
 - this is not the case (anymore)
- also effects weather of the land it surrounds

Ocean acidification is another issue that we can connect to humanity.

- by definition, ocean acidification is where the water's pH no longer oscillates around 7; instead, it has become more acidic, varying from pH values 7 and lower.
- IPCC report determines "virtual certainty" humans are the cause
- new circumstances result in an adapt or die situation

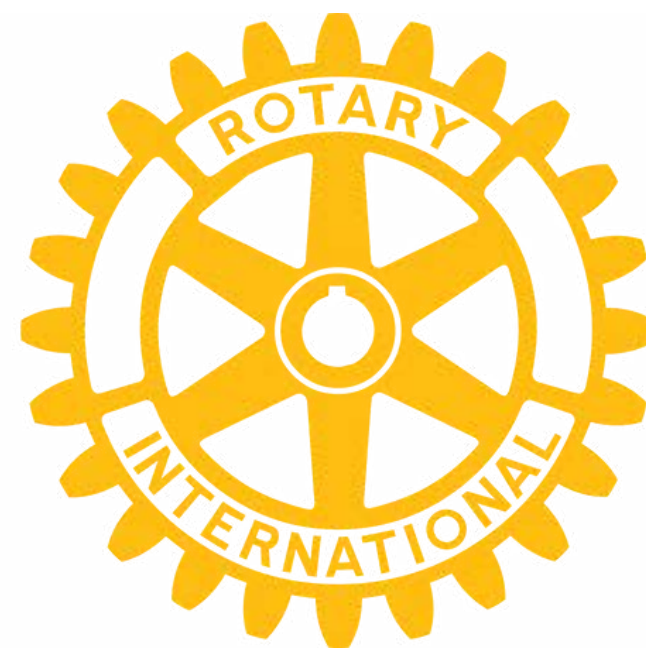




It is undeniable. Humans
have hurt the oceans.

- sea levels are rising
 - areas of extreme drought, and
 - areas of excess water
 - the way we treat the ocean MATTERS
-
- there are solutions to the problems
we've caused...

Rotary



ROTARY CLUBS IN ACTION

(and how they can inspire you)

1. ROTARY REEFS

The Rotary Club of Newport Beach is working in Bocas del Toros to save the corals from the damage of Stony Coral Tissue Loss Disease.

“Our mission requires that we address the concept of coral reef recovery through a holistic lens. Ocean ecosystems include the management and protection of resources, the quality of life for the plant, animal and human species that live within that ecosystem. This means that our organization is more than just “putting coral structures” in the water.”



[ROTARY REEFS](#)

WHAT THEY'RE TACKLING

Stony Coral Tissue Loss Disease

- what it does: kills the tissue in the corals, until the entire coral is dead.
- has proven to be a significant threat to marine life living in/around corals



HOW THEY DO IT

They started by inputting these 6ft reefs in Bocas Del Toros, Panama. The goal was to build a 100ft reef there, but this was the starting point.

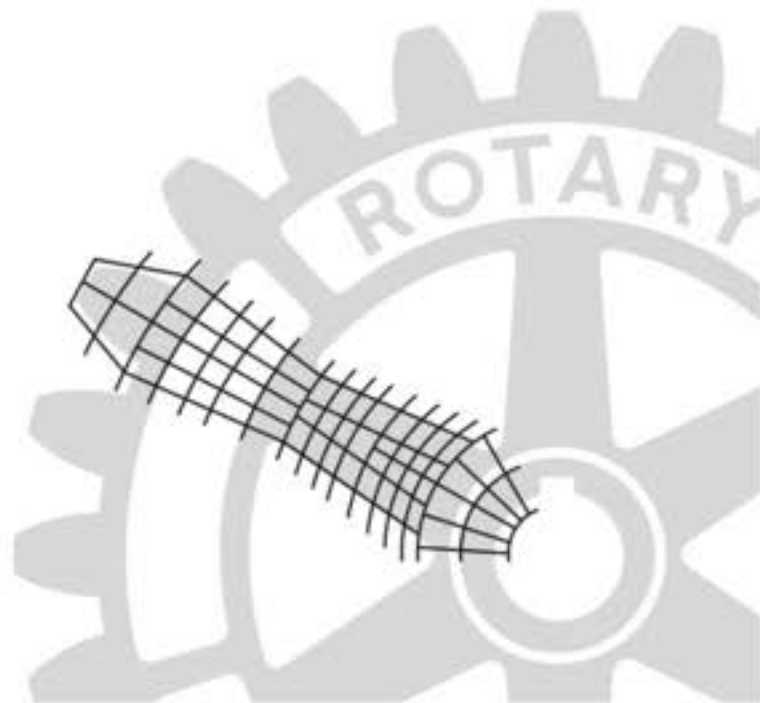
In the Philippines, they have already managed to build a 70ft long reef.



The Reef Breakdown

SECTIONING (PARTIAL)

4" slab weighs \pm 50 lbs per square foot
Average size of module: 8 ft² or 400 lbs
Max size: 10 ft² • Min size 4 ft²



BASE CONSTRUCTION

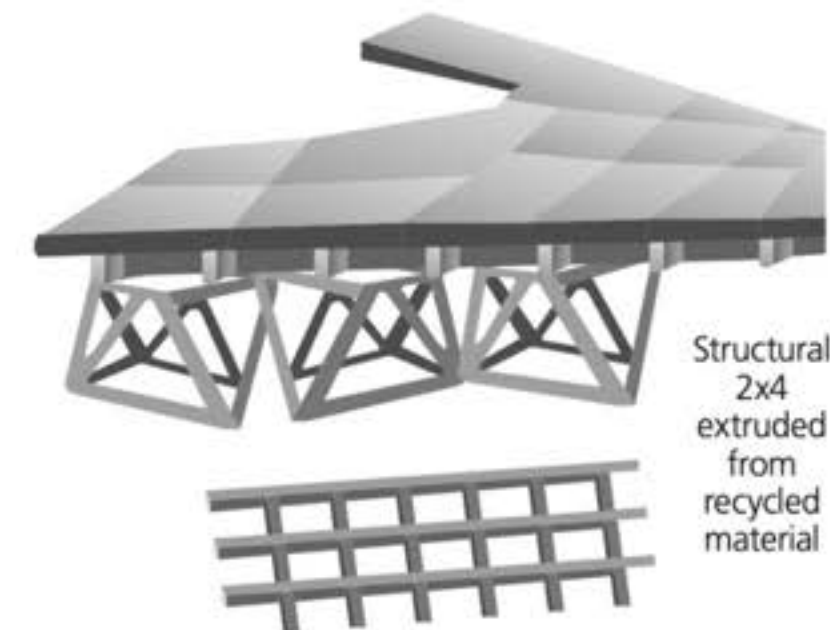
\pm 200 concrete and steel supports
Approx 5' x 5' x 2.66'
Weight \pm 330 lbs



Create strong base with random interior spaces that fish love. Relatively easy to handle and move individually under water. Allows for uneven terrain.

CONSTRUCTION OVERVIEW

Minimum surface depth at low tide = 5'
Total height above sea floor = \pm 4'
Minimum water depth 10'



Structural
2x4
extruded
from
recycled
material

Support strength is 60 lbs/ft² a 2.8' span.
Slab weight: 50 lbs/ ft² • Allows for leveling of base to accommodate placement of modular top plate.

HOW YOU CAN PARTICIPATE

Adopting a reef is a GREAT way to keep this project going.

Benefits of you/your group adopting a reef:

- more reefs are planted, allowing for more marine life success
- more trees are planted, allowing for the marine ecosystem to be sustained
- transit to and from these coral planting sites are covered, ensuring this project can actually continue!



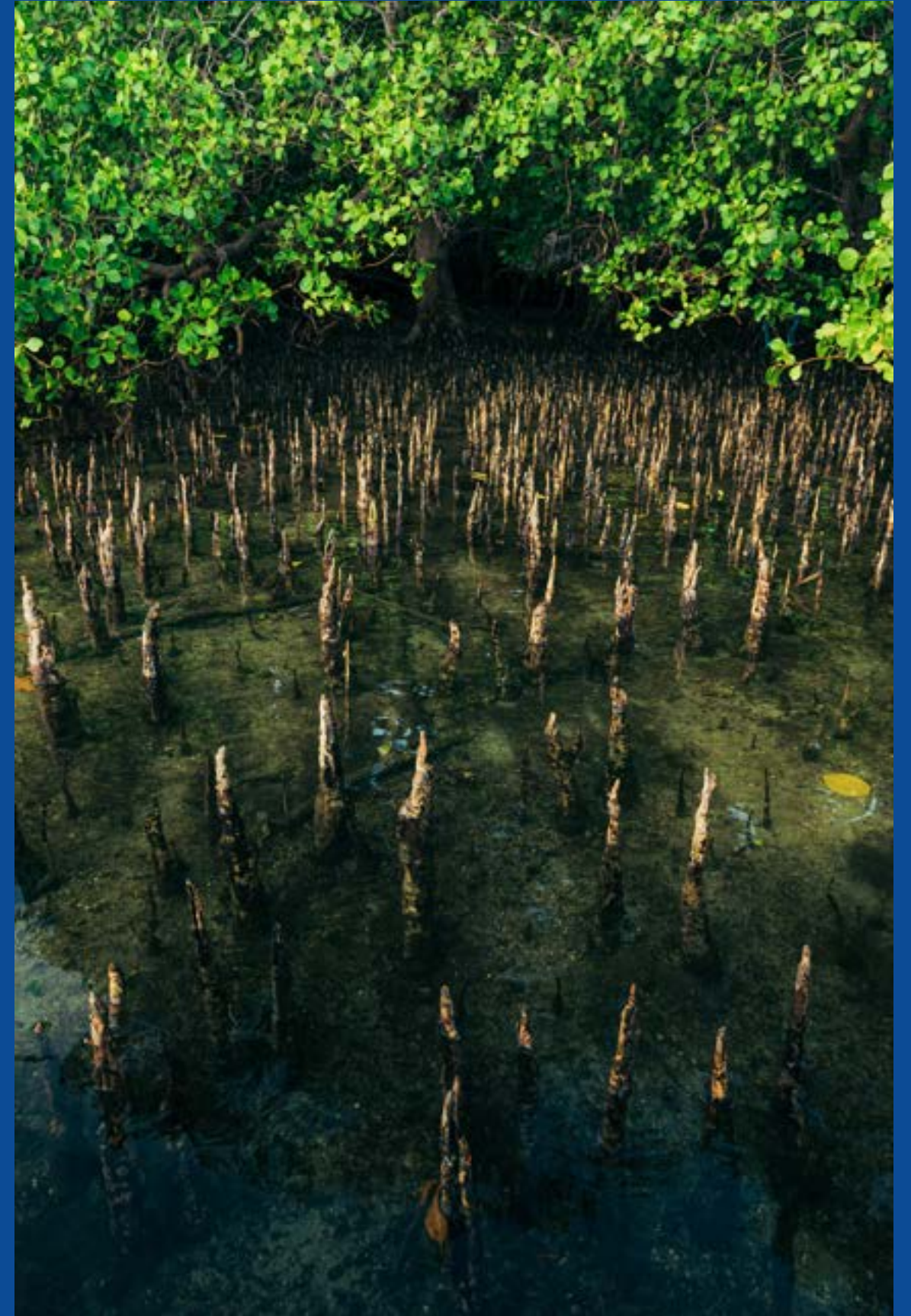


2. MALDIVES MANGROVE RESTORATION

The Rotary Club of Malé is working with the Rotary Club of Onigbongbo to sustain and manage protected mangrove areas.

WHY MANGROVES?

- very effective carbon sinks
- sustain marine ecosystems
- enhance marine wildlife life
- provide protection to marine wildlife





1

develop an awareness program for mangroves

2

establish a mangrove nursery

3

establish a tour guide program for mangrove wetlands



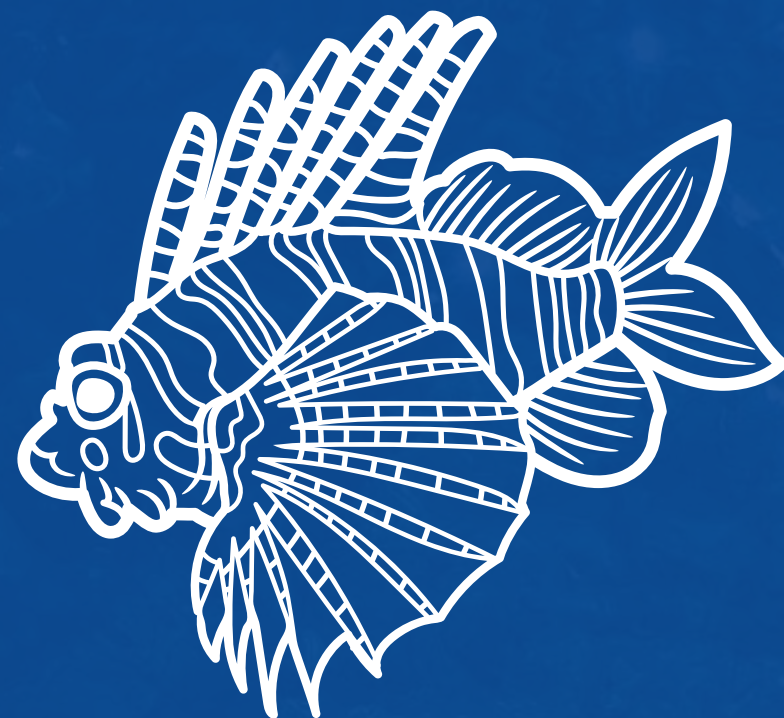
THE GAME PLAN

- 4 clean up mangrove areas in the island/community
- 5 remove excess sediments
- 6 provide a livelihood training program for informal female workers
- 7 Introduce eco-tourism

START A MANGROVE RESTORATION PROJECT WITH YOUR ROTARY GROUP!



3. The Lionfish Project



STARTED IN BOCAS DEL TORO

The goal:

- fish out the invasive species (lionfish) where they are invading
- remove the invasive species from the coral reefs
- make a market for lionfish
- minimize the negative effects of the lionfish

NEGATIVE EFFECTS OF LIONFISH

A lionfish with distinctive brown and white vertical stripes and long, venomous spines is swimming over a coral reef. The water is clear and blue, and the coral is brown and textured.

**-they outcompete/kill
native species**

**-this results in
unnecessary extinction**

**-as well as a greater
potential for overfishing**



THIS IS APPLICABLE IN
SURROUNDING
COMMUNITIES SUFFERING
FROM THE NEGATIVE
EFFECTS OF LIONFISH





4. OPERATION NORTHERN EXPOSURE

In the Faroe Islands, there is a controversial annual occurrence of massacring the whales passing through. Sea Shepherd is infamous among whale hunters for their active pursuits against the massacre.

ANTI- WHALE MASSACRE REASONING

- many consider the slaughter of whales animal cruelty
- the cultural significance of whale in the Faroese diet has been causing harm in children and adults due to high volumes of mercury
- suspicions of false claims of regulation

[Source](#)



WITH REGARDS TO MERCURY:

- pilot whales contain an average of 3.3 micrograms/gram of mercury
 - half of that being methyl mercury
- a proven association between meals eaten with whale, and:
 - birth defects due to mercury (mainly neurobehavioral dysfunction)
 - consumption of mercury exceeding the weekly recommended amount stated by WHO (0.3mg)



WRITE A LETTER CAMPAIGN

- rotary is doing a write a letter campaign to save these whales that are being massacred.
- get involved, and join the letter campaign (by starting your own)



Source



5. SEAS AND STRAWS

The goal: eradicate plastic

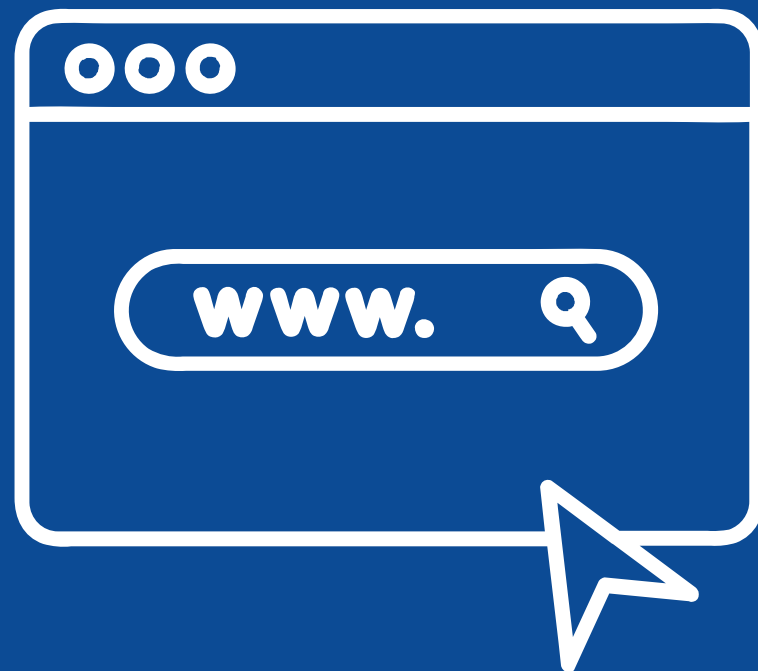
- goal is to raise awareness about damage of plastic in the environment (long term)
- educates people on the effects of plastic
- provides alternatives for single use plastics in day-to-day living
- promotes the riddance of plastic in a large degree



GET INVOLVED

1

READ UP ON THE
INFO PROVIDED



2

SEND IN YOUR
QUESTIONS



3

COLLABORATE



6. THE BIG FISH PROJECT



**Rotary Club
of Bocas del
Toro**

**Putting big
structures of
sea
creatures at
the beach**

**These sea
creatures
will hold
single use
plastics**

**When filled,
they are
taken to a
recycling
company**

GET INVOLVED



Image from The Big Fish Project Facebook

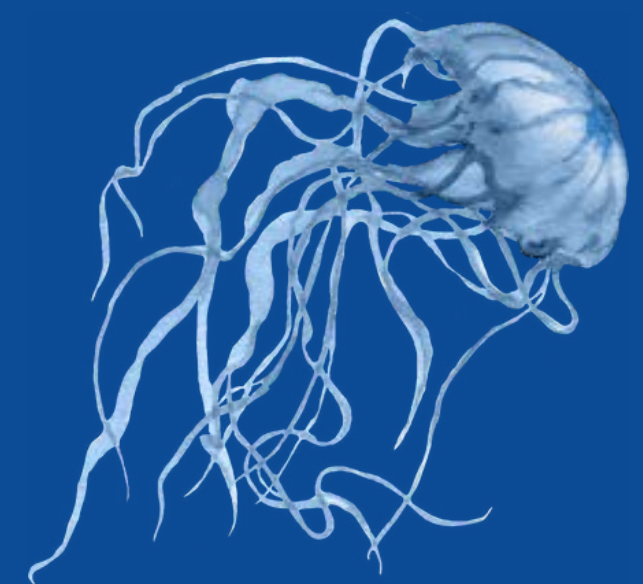
1

PUT ONE OF
THESE
STRUCTURES ON
YOUR BEACH

2

RECYCLE THE
PRODUCTS &
SAVE OUR
WATERS!

PROJECT OCEAN BLUE



The Rotaract Club of Kelana Jaya started this project in August 2018, and finished in June 2019

#LESSWHITEMOREBLUE AWARENESS CAMPAIGN

- educated the public on environmental issues
- target audience: youth

Project Ocean Blue — (cont.)

METAL UP!

- swapped plastic straws for metal
- also lead to the #30LessStraws campaign
- Money that was fundraised was donated to a turtle conservation organization

[Source](#)

WATERFALL CLEAN UP

- CLEANED UP OVER 600KG OF PLASTIC AND GARBAGE
- PAINTED THE HUT THAT WAS THERE AS WELL

IS YOUR CLUB NEXT?

■ CAMPAIGNS & EDUCATION

- get your club to spread the word about the environmental issues in your area
- start a campaign to create a positive effect!

■ VOLUNTEER WORK

- get your club to volunteer on projects which will benefit your area
- i.e. beach clean ups, plastic collections, water life restoration, etc.

An aerial photograph of ocean waves crashing onto a sandy beach. The water is a deep, vibrant blue, and the white foam of the waves is visible as they break. The sand is a light, warm tone, contrasting with the cool blues of the sea. The overall mood is serene and powerful.

5 PROJECTS TO HELP OUR OCEANS

1. BEACH CLEAN UPS

Why participate?



AESTHETIC BENEFITS

A clean beach is a pretty beach! Whether the beach is a tourist hub or a frequented place by locals, people are more inclined to go to a clean beach.



ECONOMIC BENEFITS

Beaches are a tourist attraction! Cleaner beaches bring in more tourists to come and do all sorts of fun beach activities- from shopping to parasailing.



SAFETY BENEFITS

The plastic and garbage picked up from the beach prevents it from doing harm to the marine life on the shore and in the ocean.

The How-To Guide



SELECT YOUR LOCATION

Prior to going out, determine the beach which you and your group will be tending to. Feel free to visit the beach beforehand, and learn what you're dealing with.

GET YOUR GROUP

Once you have your location, partnering with school clubs or local organizations can bring you the help you'll need.

INVOLVE THE COMMUNITY

Spreading the word to the area local to the beach is a great way to encourage those around us to protect our oceans! This can be done via social media, flyers, local newspaper ads, etc.

COLLECT DATA

At the time of the beach cleanup, record the types of trash collected. This is a useful way to know what you are looking for in future beach clean ups. This can be done via tallying/categorizing, or through data collecting apps like Clean Swell.



ROTARY IN ACTION

The Rotary Club of Del Mar Solana Beach is working in India for a beach clean up project to happen in the 2022-23 year.

THEIR PLAN



1

provide hand gloves & trash bags

2

set up bins for garbage disposal

3

plant trees

4

provide landscaping for beach

5

provide classes for beach
residents on waste disposal

2. Adopt a Highway

What is it?

Adopt a highway is a program where anyone can choose a portion of their local highway and “adopt” it. What this means is that the section of adopted highway is then kept clean from litter and other pollutants by the person/group who adopts that section of the road.

Why do it?

Adopting a highway is an easy way to prevent toxic runoff and plastics from entering the oceans. Essentially, we can protect both marine and terrestrial life by picking up the litter that is left on the road.



Breaking it Down



CONTACT ADOPT A HIGHWAY COORDINATOR

You can find this contact generally on the Department of Transportation site for your state.

REVIEW THE CONDITIONS AND COMMITMENTS

Adopting a highway comes with a monetary and time commitment. Be sure your group/organization is ready to make this decision!

REVIEW SAFETY REQUIREMENTS

Adopt a Highway has a safety protocol set so that cleaning the highway doesn't put anyone in danger. Make sure to review this and save our oceans safely.

APPLY

Complete the application under the instructions of your state's Department of Transportation.

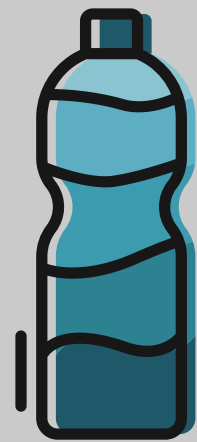
3. Ecobricking: what is it?

Ecobricking is where single use plastics are repurposed after use. This is done by taking something like a plastic water bottle and filling it up with clean plastic wrappers until it is so densely packed, you cannot bend the plastic bottle. Once this state has been reached, you have made an ecobrick! It can then be donated to an organization that will use it for structural purposes in furniture, housing, and anything that needs a building backbone.



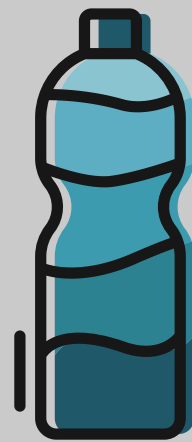
WHAT TO CONSIDER

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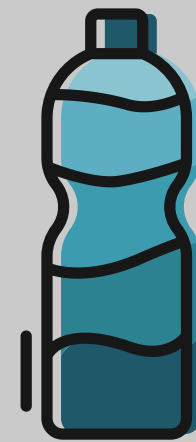
short term
or long term
use?

02



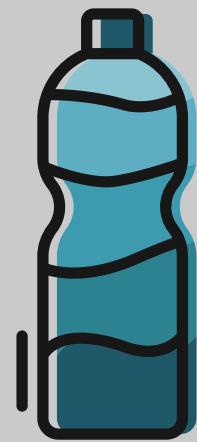
storage

03



maintenance

04



What
module?



3 Types Of Ecobricking:

Milstein, Dieleman, and Earth

NEED TO KNOWS ABOUT THE MILSTEIN MODULE



- 1 indoor use ONLY
- 2 short term use typically
- 3 horizontal stacking ONLY
- 4 builds seats, stages, beds, tables
- 5 should be cleaned once a year

NEED TO KNOWS ABOUT THE DIELEMAN MODULE



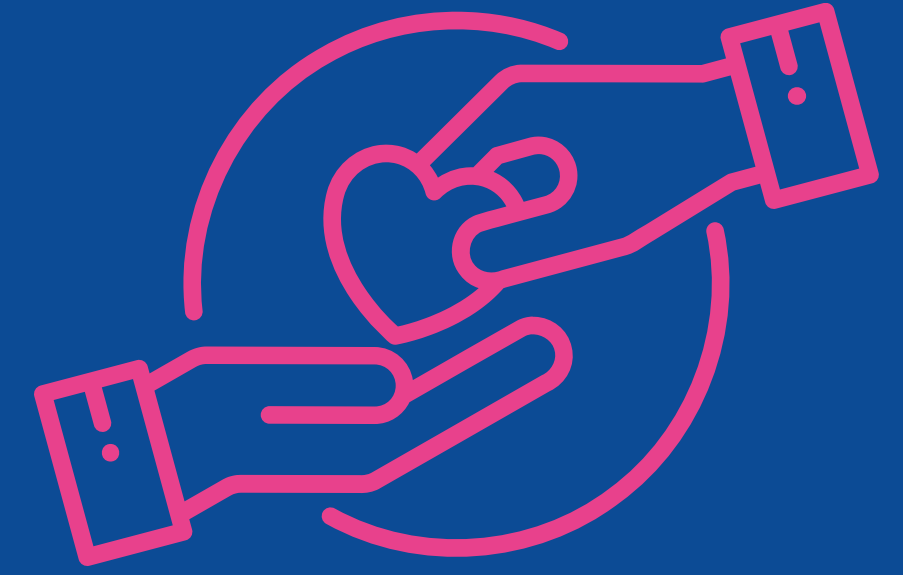
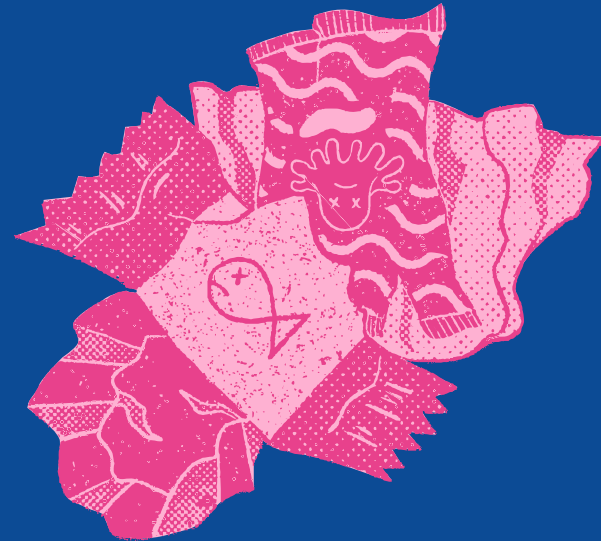
- 1 indoor & limited outdoor use
- 2 short term use typically
- 3 horizontal and vertical stacking
- 4 builds walls, stages, playgrounds
- 5 should be cleaned once a year

NEED TO KNOWS ABOUT THE EARTH MODULE



- 1 mainly outdoor use
- 2 long term or short term use
- 3 not stacked; placed next to each other, connected by cement
- 4 builds outdoor furniture/structures
- 5 replace/repurpose once cracked

Taking Action:



TAKE AN EMPTY PLASTIC BOTTLE

It can be any size, but generally speaking, the bigger the better.

SINGLE USE PLASTICS, GO IN THE BOTTLE

Any plastic wrappers or thin plastic should be stuffed inside the plastic bottle. If it's any wrappers for things like chips or fruit snacks, make sure it is fully clean beforehand.

FIND A PLACE TO DONATE

The BrikMarket can help find where you can donate or receive ecobricks near you.

DONATE!

Send off your bricks to be repurposed, or find ways at home to have them repurposed there.

[YouTube Guide](#)

ROTARY CLUB OF WYNBERG AND ECOBRICKING

In 2018, the club
set up a day for
ecobricking



Collected an
abundance of
plastic



Estimated Cape
Town can
produce enough
ecobricks to build
600 classrooms!



4. Water Monitoring

- **WHAT IS IT?**

Water monitoring helps determine the amount of pollution in your given body of water. Variables like fertilizer, wastewater release, and litter can decrease the quality of water.

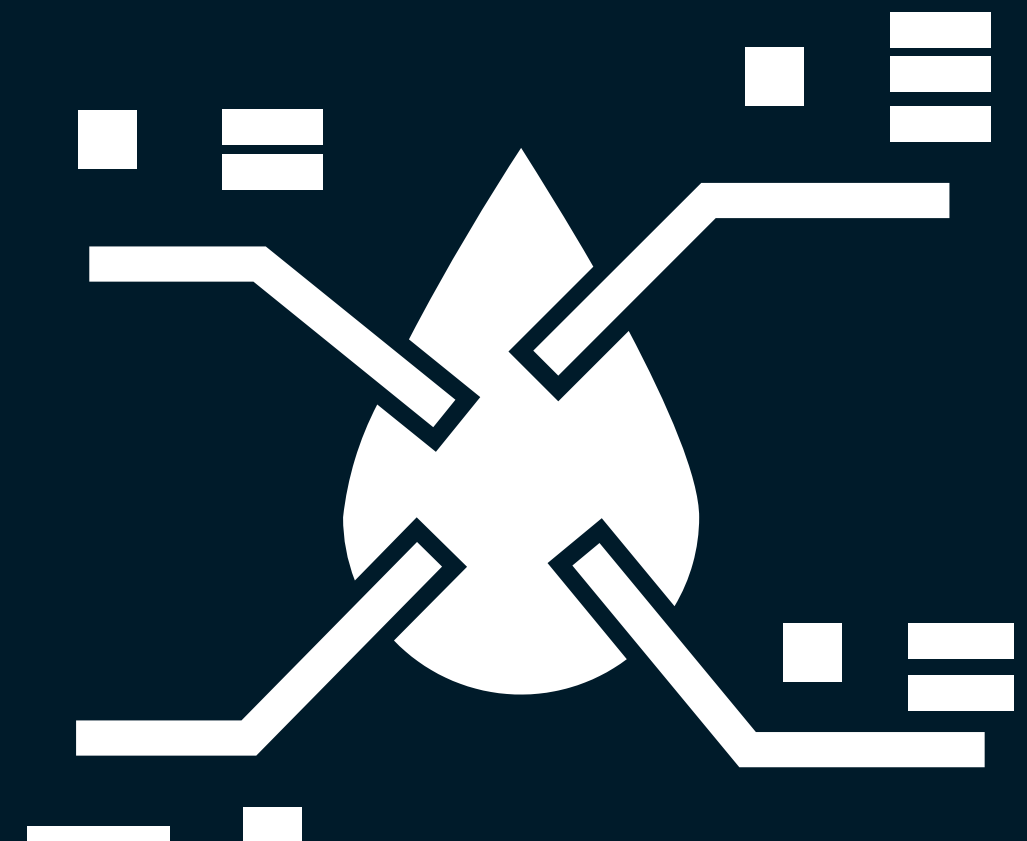


[Source](#)

WHY IT'S IMPORTANT



- often times wastewater/pollution is released in areas of water consumption
- the extent of it's effects on freshwater is not widely known



Why do it?



THE BENEFITS

- starting with the community leads to a big picture benefit
- communities gain:
 - clean water to drink
 - safe water to swim in
- marine life in the community is safer
- results in:
 - community involvement
 - environmental education

The How to Guide



1. Choose Your Location

- Helps set the basis for the rest of your plan

2. What Data do You Want?

- Determining if you want to monitor the effect of a species, community, or pollution on water quality

The How to Guide



3. Sample Your Water

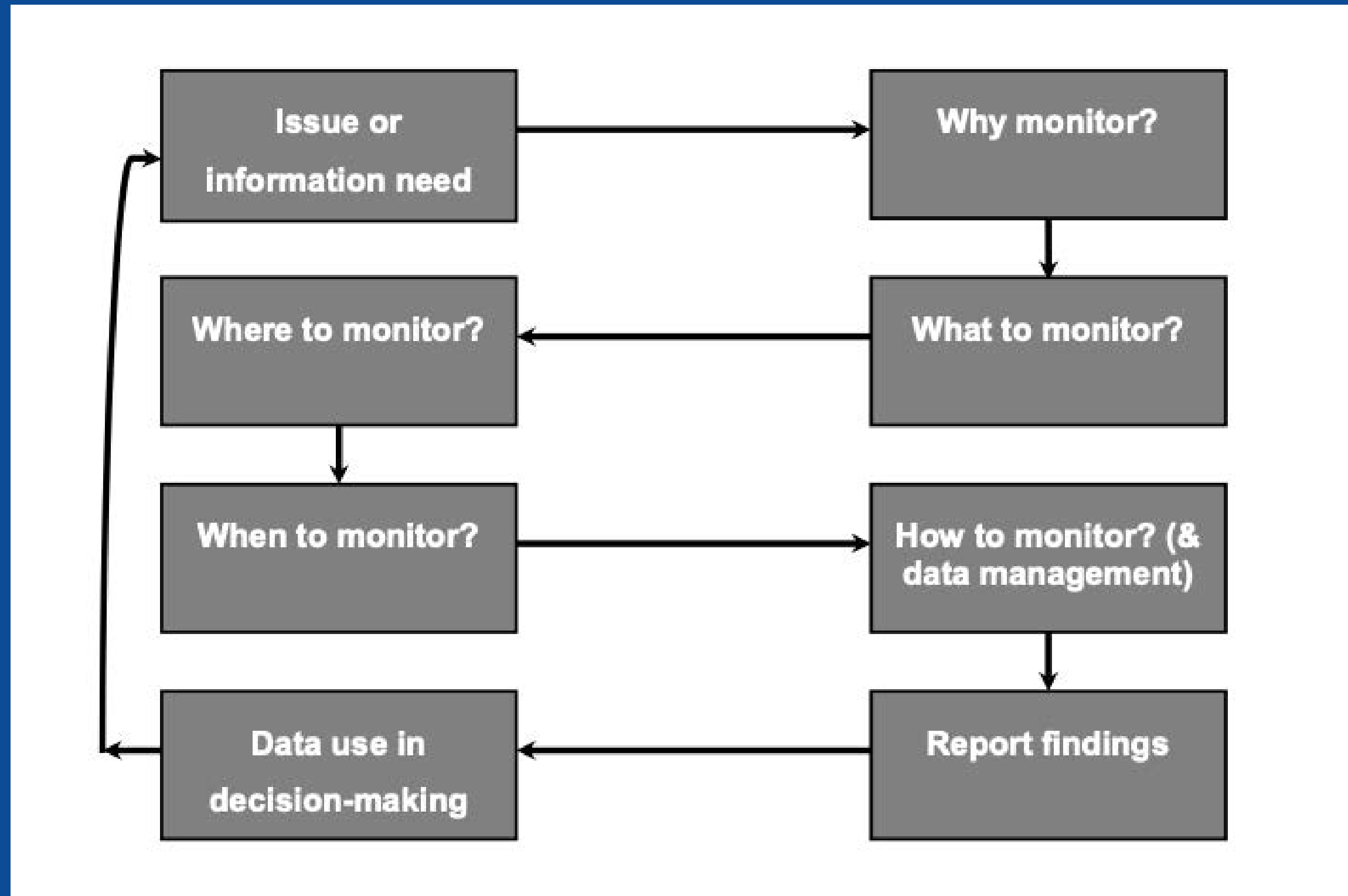
- Getting water samples will help you obtain the information you need

4. Send It to the Lab

- Analyze your results

5. Report Your Findings

Thought Process for Water Monitoring



Other Things to Consider:

1

Visiting local watershed/
reservoir



2

Monitor the trends of your
freshwater
source!



3

Capture/resuse
stormwater





The Rotary Club of Santa Rosa de Copán is working to clean their water sources.

- protecting/preventing pollution from reaching the water source
- removing pollution that has entered water source
- placement of water tank
- encouraging the storage of water



5. COLLABORATE

Many groups providing help are also looking for it!

International Volunteer HQ

Has programs around the world for individuals and groups to get involved in marine conservation

NOAA

Has volunteering and interning opportunities for the U.S. with ocean conservation



Other Tidbits That Help



1. Eating Sustainably



How to Guide:

- eat LOCAL
- choose foods in season
- with seafood: eat from sustainably sourced fisheries
- with meat: steer clear of beef



The Why Behind it All

- eating locally & in season prevents unnecessary shipping emissions
- 70% of shipping/trade is by sea
- eating sustainably sourced fish/seafood prevents overfishing
- steering clear of beef reduces carbon emissions, preventing further ocean acidification/warming

Finding Sustainable Sources



In season

Learn what foods are in season in your area



Image from MSC.org

Seafood: MSC label

MSC label on fish ensures it was obtained safely



Monterey Aquarium

Has several resources to promote safe brands/foods for seafood, dependent on your location (applicable internationally)

2. Sustainable Shopping



The How to Guide:

- buy from brands proven to be sustainable
- buy to make clothing last
- consumerism is unavoidable, so here are some alternates:
 - thrifting
 - clothing swaps
 - upcycling



Clothing Swaps:

Taking unwanted clothes to friends/people in the community, and exchanging them for their unwanted clothes



What is Upcycling?

Repurposing clothing, essentially

Sustainable Shopping (cont.)



Thrifting

Donating your clothing to be used by someone else is a great way to prevent the clothing from going to waste



Sell Your Clothes

Unwanted clothes can also be a point of profit! This ensures your clothes don't go to waste, and you get some money back.

3. Eliminate Single Use Plastics

Some alternatives, to get you started:

plastic water bottles



reusable water bottles

disposable pads/tampons



menstrual underwear,
menstrual cups

plastic grocery bags



reusable grocery bags



Take the Pledge!

GLOBAL CLIMATE *Pledge*

Sign the pledge:

Go to <https://www.globalclimatepledge.com/> to state your commitment

OR

Scan the QR code and sign the pledge there.

Share the pledge:

- Spread the word through social media and word of mouth
- Encouraging others to make the step amplifies our impact!

Individual Pledge:



Organization Pledge:



Contact Us!

U.S. Green Chamber of Commerce
National Headquarters 249 S.
Highway 101 #420 Solana Beach,
CA 92075

<https://usgreenchamber.com/>

<https://www.globalclimatepledge.com/>



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