

WHERE HAVE
ALL THE FISHES
GONE?

OVER
FISHING

This publication is translated from an original comic book developed and produced by the Coastal Resource Management Project (CRMP) of the Department of Environment and Natural Resources (DENR) and the United States Agency for International Development (USAID), 2009.

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The Fisheries Improved for Sustainable Harvest Project

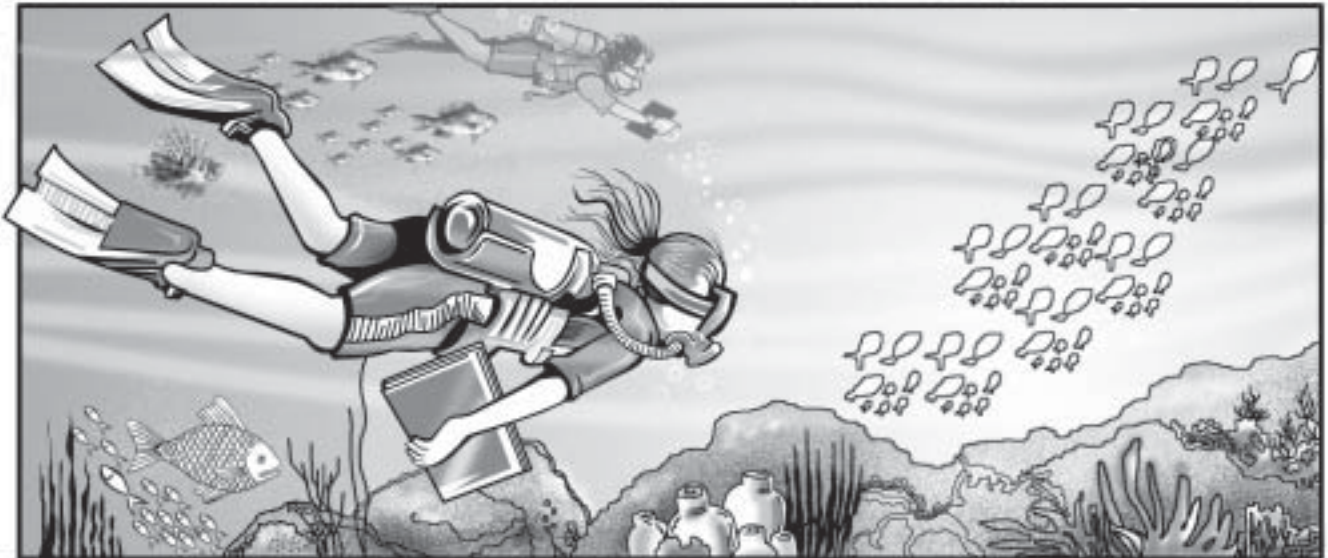
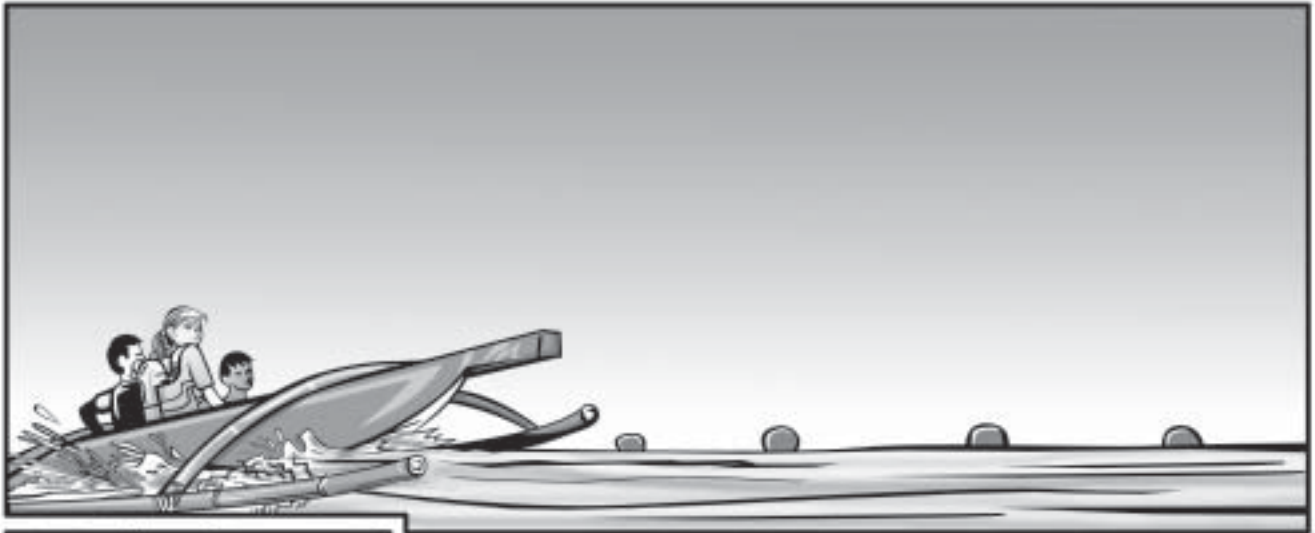
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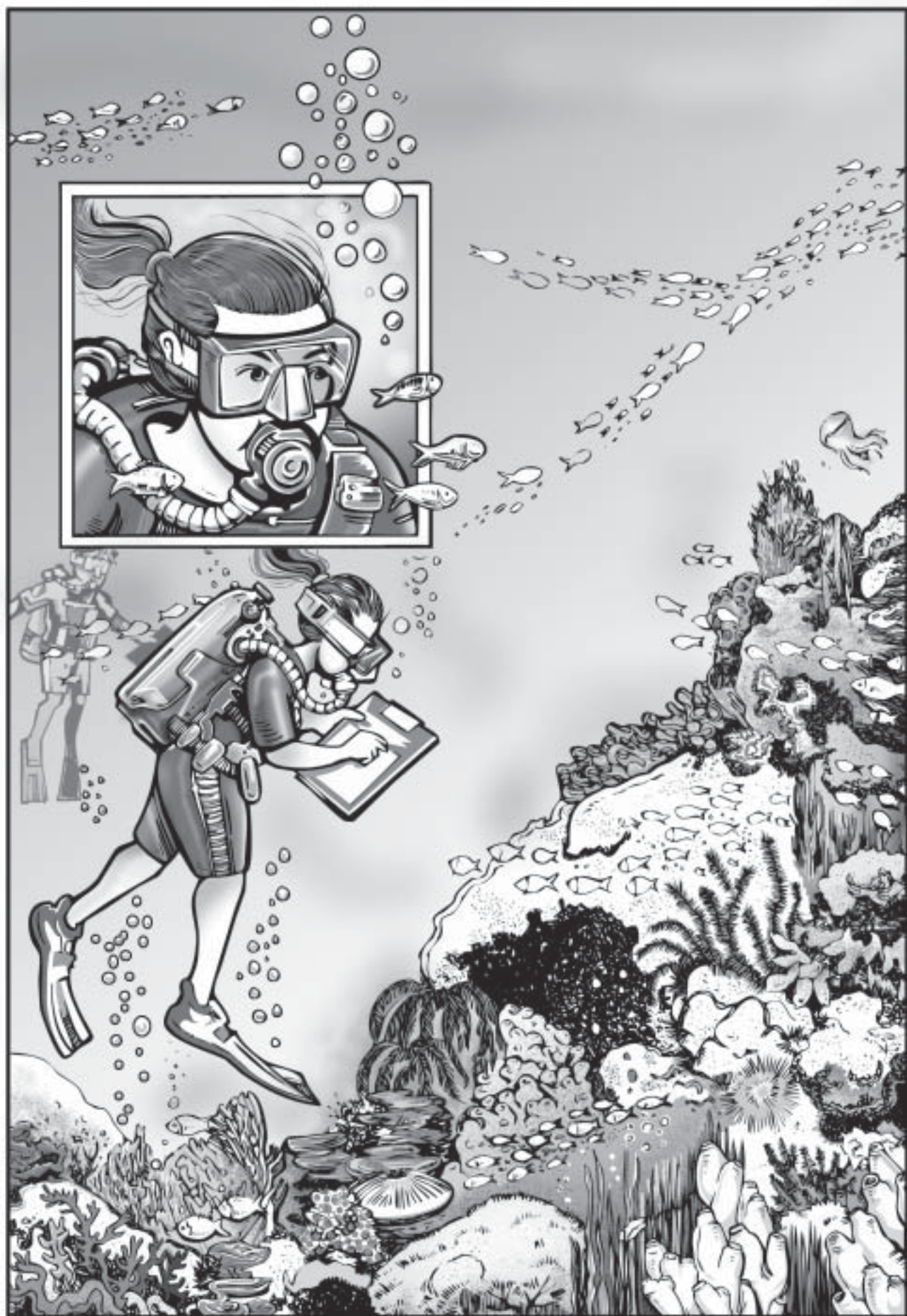
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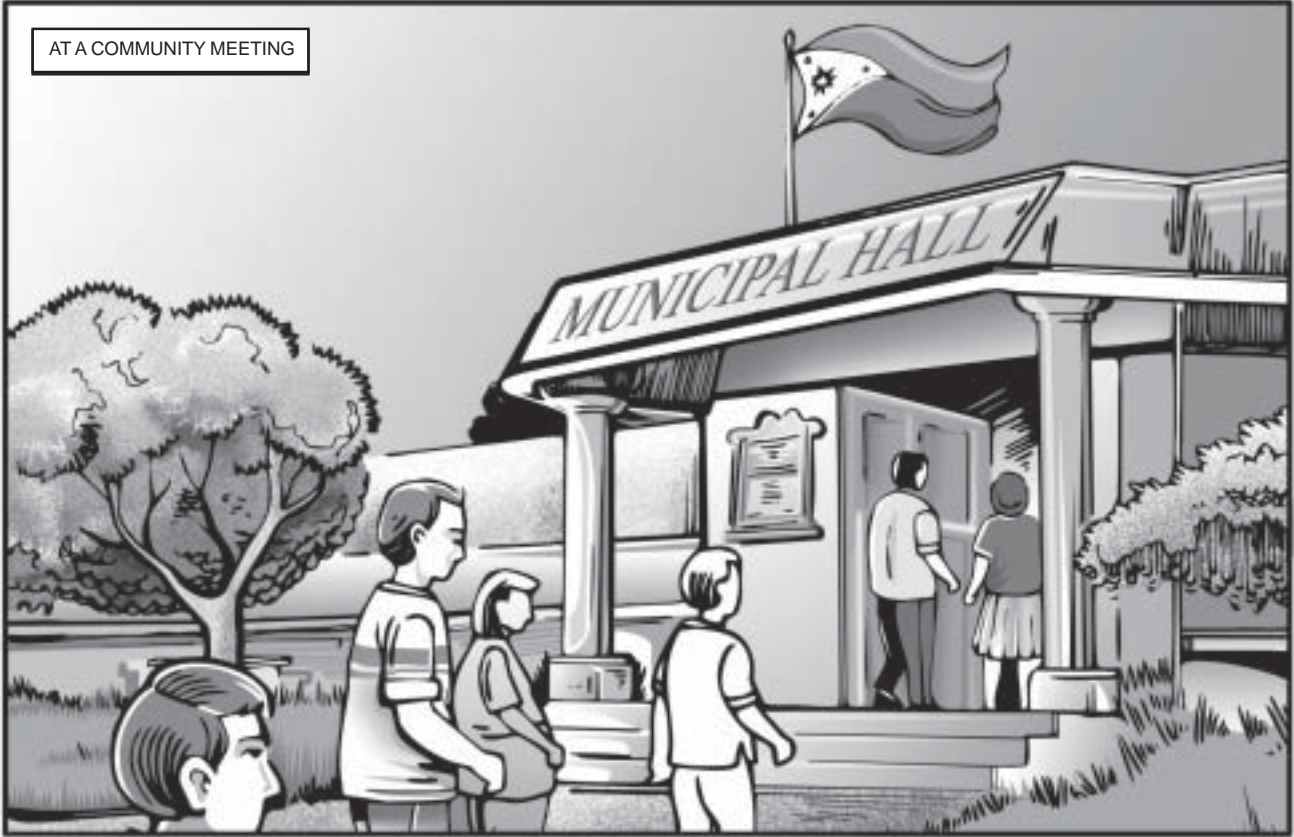
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AT A COMMUNITY MEETING



CRISPIN, CRESPO,
ELMO AND OTHER
FISHERS GREET
THEIR VISITORS





ANGEL, A MARINE BIOLOGIST, AND HER TEAM OF DIVERS



GOOD MORNING EVERYONE. THANK YOU FOR COMING. MS. ANGEL IS HERE TODAY

WITH HER FELLOW MARINE BIOLOGISTS TO HELP US WITH OUR MARINE SANCTUARY

SHE'S HERE TO TELL US WHAT THEY FOUND OUT FROM THEIR DIVE AT THE SANCTUARY YESTERDAY



THANK YOU CRISPIN. I HAVE GOOD NEWS. IT SEEMS YOU'RE DOING VERY WELL IN YOUR EFFORT TO GUARD YOUR MARINE SANCTUARY.



WE SAW QUITE A SIGNIFICANT INCREASE IN THE NUMBER OF INDIVIDUAL FISHES AND FISH SPECIES IN THE SANCTUARY

THIS IS A GREAT DEVELOPMENT FOR ALL OF YOU, BECAUSE SOON, YOU WILL SEE YOUR CATCH BEGIN TO INCREASE.



BUT MS ANGEL NOTHING BEATS BLAST FISHING!



SHUSH ELMO, YOU NEVER LEARN. JUST BECAUSE YOU HAVEN'T LANDED IN JAIL, DON'T THINK YOU'D BE SO LUCKY NEXT TIME!

AW GRAN'MA, IT WAS A JOKE! IT'S ALL GOOD. I DON'T DO BLAST FISHING ANYMORE! I REALLY DON'T!



VERY WELL, ELMO.

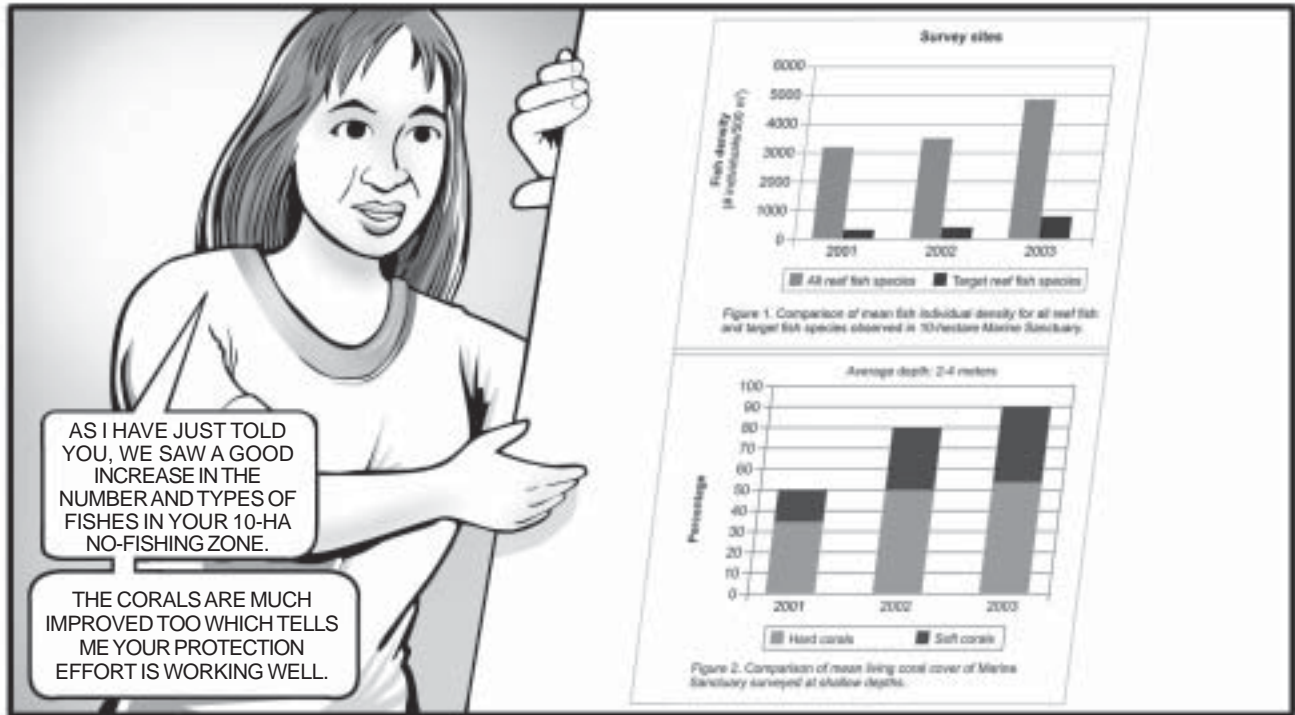
BUT HE HAS A POINT, DOESN'T HE MS ANGEL? ARE WE EVER GOING TO CATCH AS MANY FISH AS WE USED TO?

GOOD QUESTION. YOU KNOW THAT YOUR SANCTUARY IS THERE AS A SAFE PLACE OR REFUGE FOR FISHES TO BREED AND GROW.



HAVING SUCH A REFUGE WILL HELP RESTORE YOUR FISH STOCKS, NOT ONLY WITHIN THE SANCTUARY BUT ALSO IN ADJACENT AREAS, WHERE YOU ARE ALLOWED TO FISH





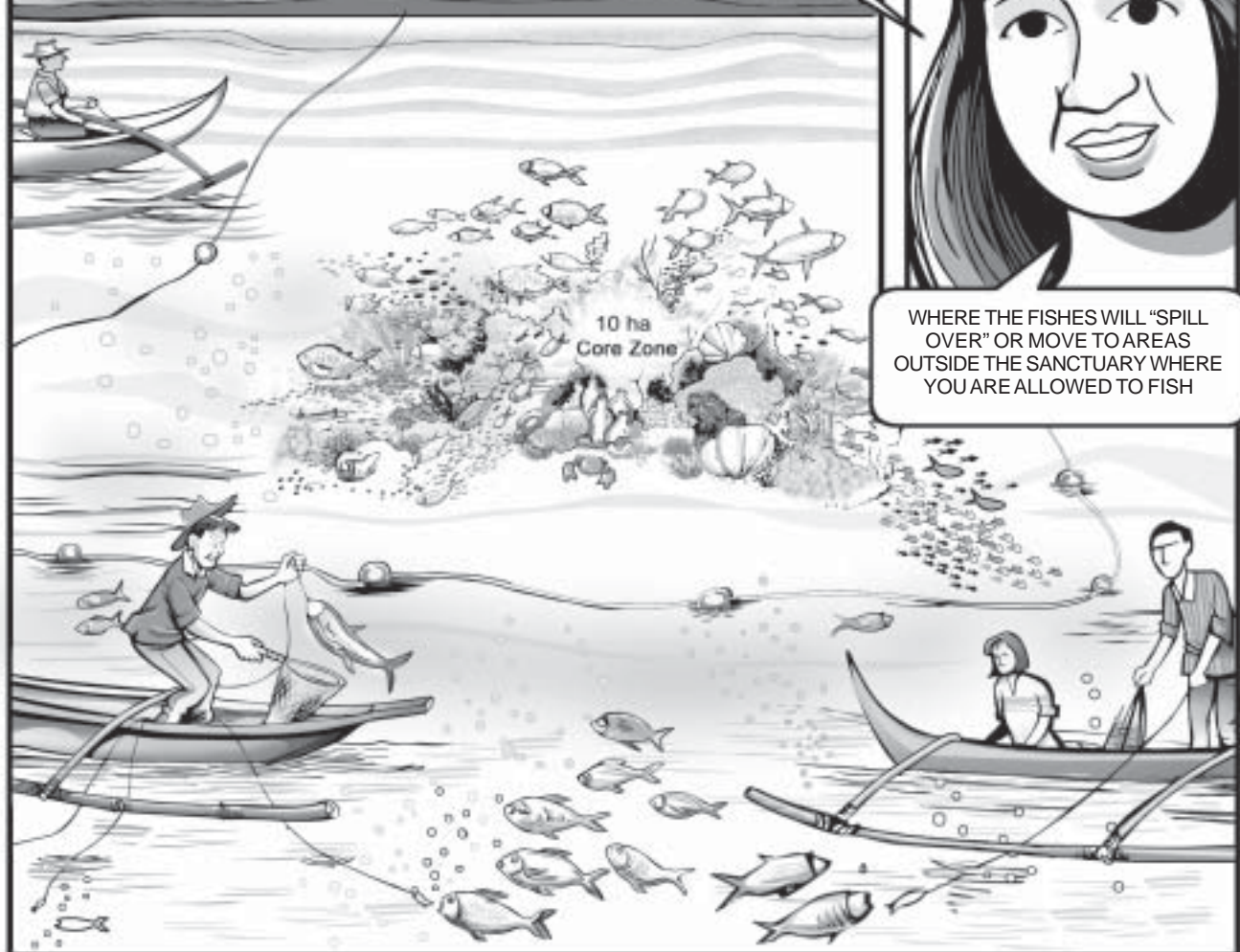
AS I HAVE JUST TOLD YOU, WE SAW A GOOD INCREASE IN THE NUMBER AND TYPES OF FISHES IN YOUR 10-HA NO-FISHING ZONE.

THE CORALS ARE MUCH IMPROVED TOO WHICH TELLS ME YOUR PROTECTION EFFORT IS WORKING WELL.

IF YOU'RE ABLE MAINTAIN -- PERHAPS EVEN IMPROVE -- YOUR LEVEL OF EFFORT, THE FISHES AND THEIR HABITATS INSIDE THE SANCTUARY WILL STAY PRODUCTIVE AND HEALTHY, AND THIS WILL RESULT IN WHAT WE CALL THE "SPILL-OVER EFFECT"



WHERE THE FISHES WILL "SPILL OVER" OR MOVE TO AREAS OUTSIDE THE SANCTUARY WHERE YOU ARE ALLOWED TO FISH



IT'S ONLY BEEN TWO YEARS SINCE YOU STARTED PROTECTING YOUR SANCTUARY. JUST GIVE IT A LITTLE MORE TIME AND YOU WILL SEE YOUR EFFORTS REWARDED.



NOW I HAVE A NOT-TOO-GOOD NEWS. YOUR SANCTUARY IS A VERY EFFECTIVE FISHERIES MANAGEMENT TOOL, BUT IT WILL NOT SOLVE ALL YOUR FISHERY PROBLEMS.



WE HAVE MUCH MORE TO LEARN -- AND DO -- TO FULLY RESTORE THE PRODUCTIVITY OF OUR SEA.

A MAJOR REASON FOR THE DECLINE OF YOUR CATCH IS OVERFISHING

IT MEANS TAKING MORE FISH THAN THE STOCK CAN REPLENISH



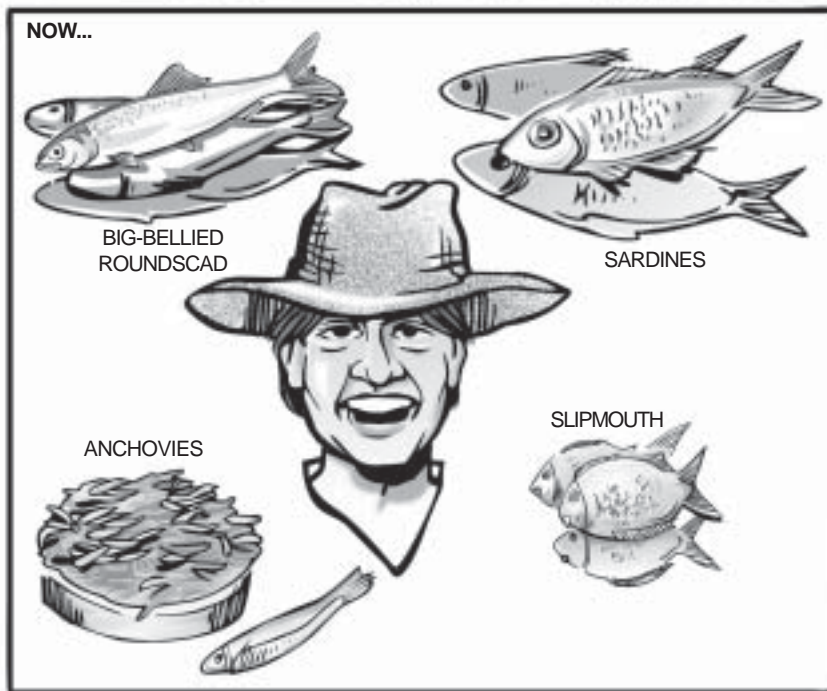
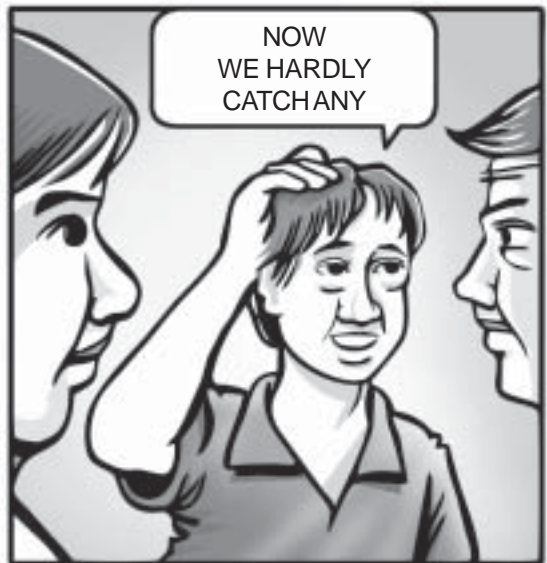
THAT'S RIDICULOUS! WE CAN HARDLY CATCH ANYTHING ANYMORE!

AH, THAT PRECISELY IS A SIGN THAT WHAT YOU HAVE HERE IS AN OVERFISHED STOCK



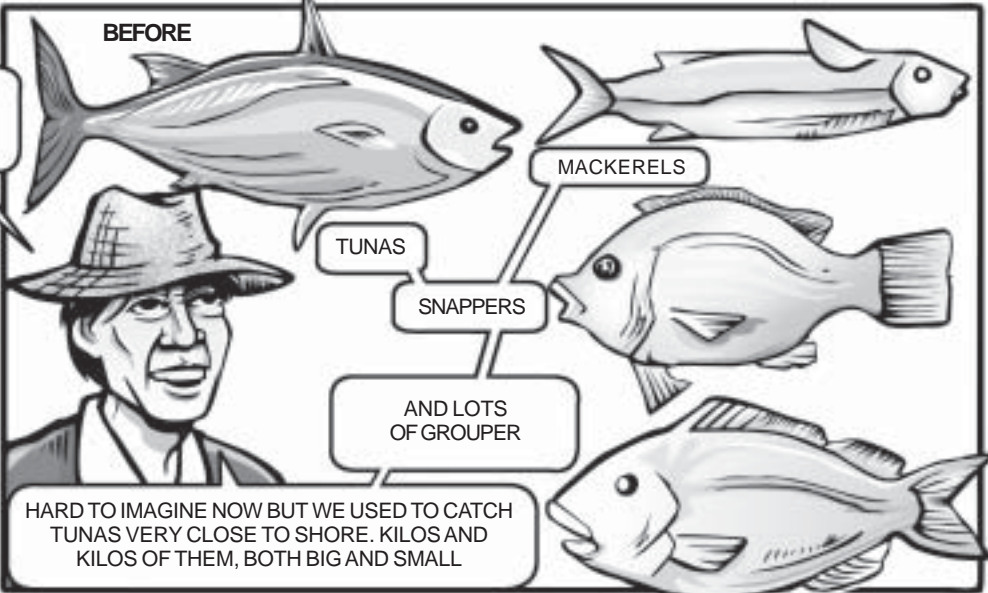
HERE, LET ME EXPLAIN





AND BEFORE?

WE USED TO CATCH THE BIG ONES, THE PRICEY KINDS



COME ON MR. CRESPO HOW LONG AGO WAS THAT?

ELMO!! USE YOUR EARS...

SO WHAT HAPPENED TO OUR TUNAS, MS ANGEL?



OUCHHH!

AND STOP BEING SMART ALECKY!

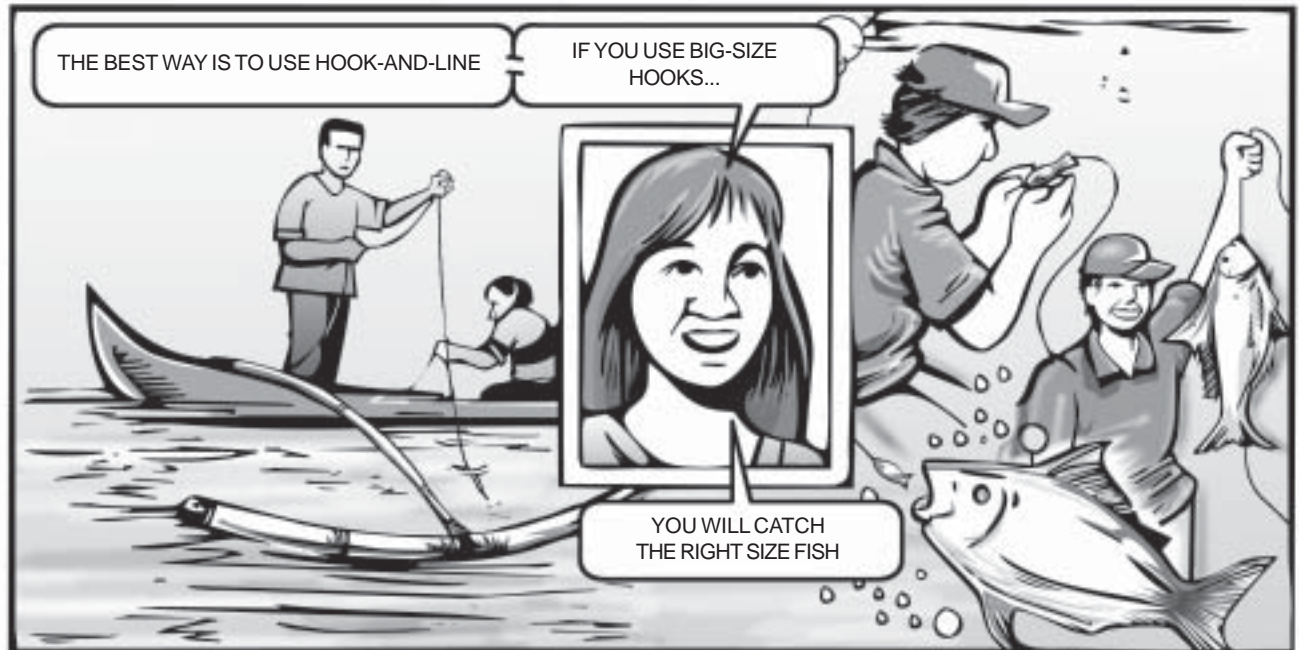
TUNAS ARE MIGRATORY SPECIES

THEY TRAVEL LONG DISTANCES IN SEARCH OF FOOD OR SUITABLE SPAWNING GROUNDS

SOMETIMES THEY SWIM HUNDRED OF MILES TO FIND BETTER LIVING CONDITIONS...

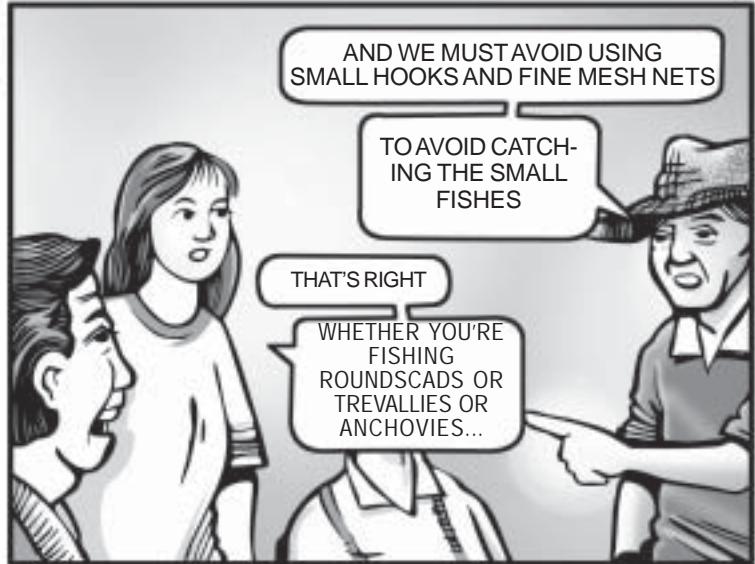
SUCH AS THE RIGHT WATER TEMPERATURE

SO IT'S QUITE POSSIBLE THAT THE OTHER TOWN IS CATCHING AND PREVENTING THE TUNAS FROM GETTING HERE





MS ANGEL IS RIGHT. WE MUST USE THE BIGGER HOOKS TO CATCH THE BIG FISHES



AND WE MUST AVOID USING SMALL HOOKS AND FINE MESH NETS

TO AVOID CATCHING THE SMALL FISHES

THAT'S RIGHT

WHETHER YOU'RE FISHING ROUNDSCADS OR TREVALLIES OR ANCHOVIES...



YOU SHOULDN'T USE NETS WITH MESH SIZES OF LESS THAN 3CM

OF COURSE, BECAUSE THAT'S ILLEGAL



WHY ELMO, I'M SHOCKED! THAT BRAIN OF YOURS ACTUALLY WORKS!

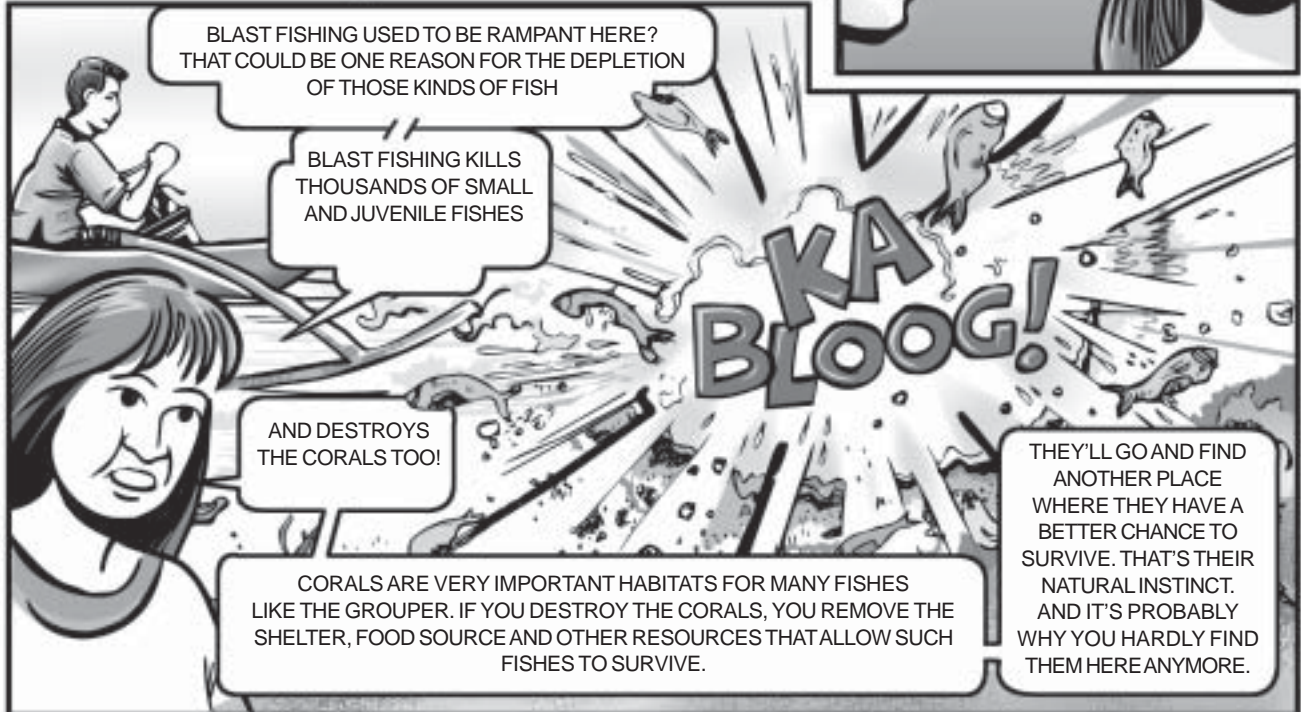
OUCH, GRAN'MA!



DID THE SAME THING HAPPEN TO OUR GROUPERS AND SNAPPERS?

POSSIBLY. HAVE THEY GOTTEN SCARCE TOO?

VERY SCARCE.



BLAST FISHING USED TO BE RAMPANT HERE? THAT COULD BE ONE REASON FOR THE DEPLETION OF THOSE KINDS OF FISH

BLAST FISHING KILLS THOUSANDS OF SMALL AND JUVENILE FISHES

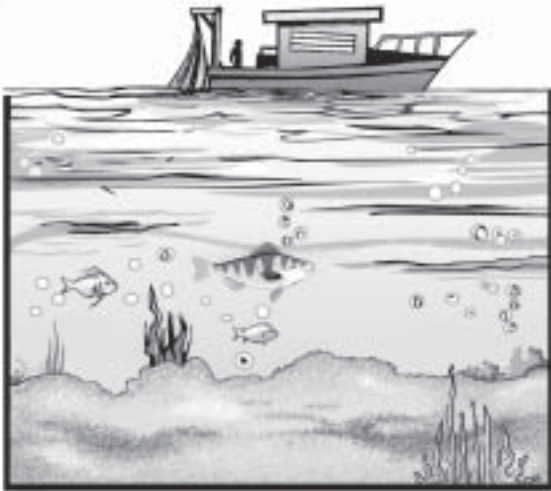
AND DESTROYS THE CORALS TOO!

CORALS ARE VERY IMPORTANT HABITATS FOR MANY FISHES LIKE THE GROUPER. IF YOU DESTROY THE CORALS, YOU REMOVE THE SHELTER, FOOD SOURCE AND OTHER RESOURCES THAT ALLOW SUCH FISHES TO SURVIVE.

THEY'LL GO AND FIND ANOTHER PLACE WHERE THEY HAVE A BETTER CHANCE TO SURVIVE. THAT'S THEIR NATURAL INSTINCT. AND IT'S PROBABLY WHY YOU HARDLY FIND THEM HERE ANYMORE.



LIKE DYNAMITE, TRAWLS DESTROY CORAL REEFS AND THE SEA BED. ALSO, THEY ARE HIGHLY EFFICIENT AND NON-SELECTIVE, ABLE TO CATCH HUGE NUMBERS OF FISH OF ALL TYPES AND SIZES



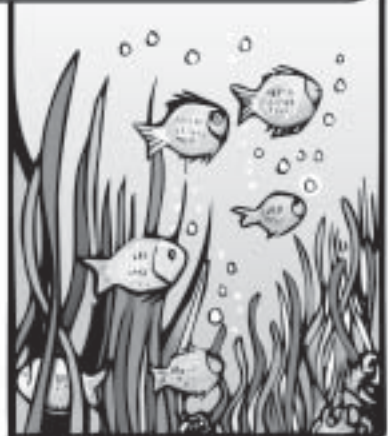
OH YES. TRAWLS DESTROYED OUR SEAGRASS AREAS WHERE RABBITFISH USED TO THRIVE. BUT IT'S BEEN YEARS SINCE WE SAW THE LAST TRAWL HERE, THE SEAGRASSES ARE GROWING BACK, AND WE'VE SEEN THE RABBITFISH SLOWLY COMING BACK

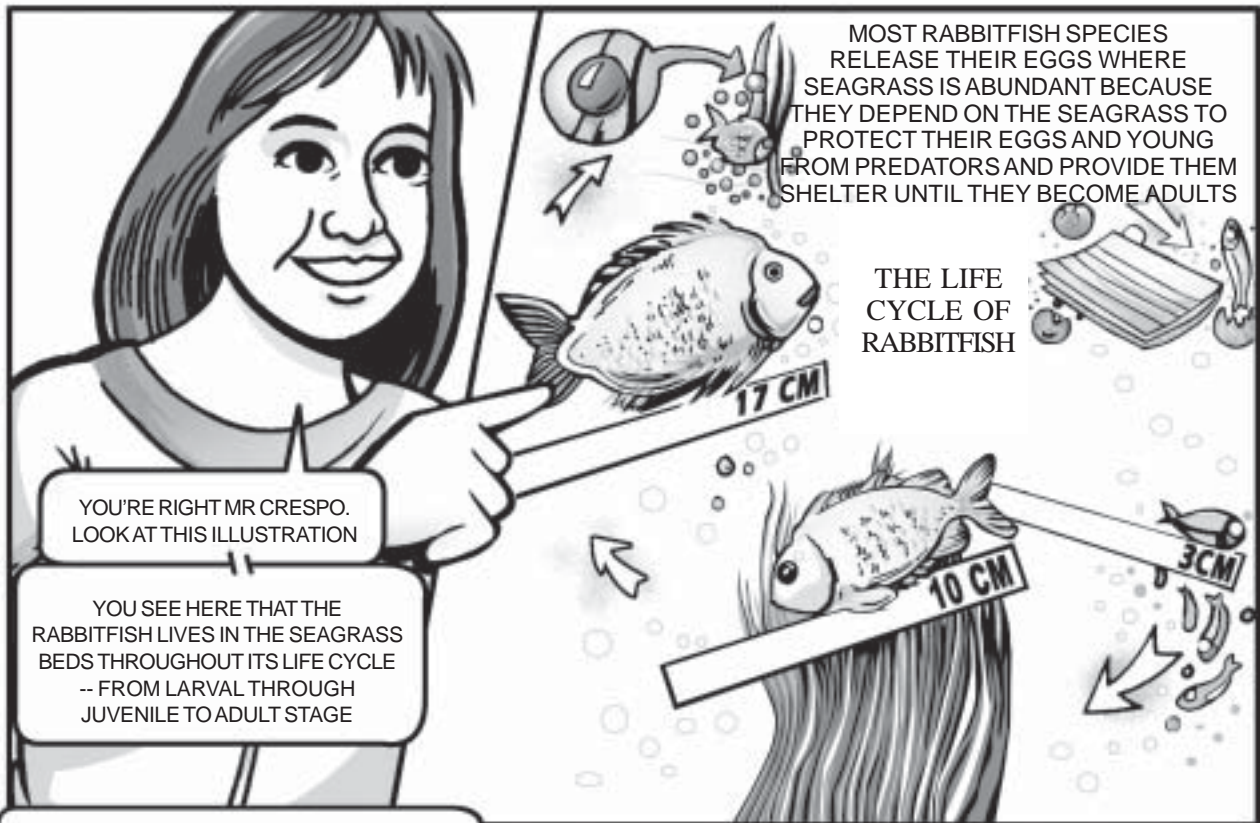


THANK GOD TRAWLING ISN'T ALLOWED IN OUR WATERS ANYMORE



I JUST HOPE THEY NEVER RETURN SO OUR SEAGRASS HABITATS AND RABBITFISH STOCKS CAN FULLY RECOVER





I HAVE A QUESTION: BAGNETS ARE PROHIBITED BECAUSE THEY USE FINE MESH NETS. I GET THAT.

BUT I DON'T UNDERSTAND WHY PURSE SEINES ARE ALSO BANNED. I DON'T THINK THEY'RE DESTRUCTIVE, ARE THEY?



PURSE SEINE OPERATIONS ARE EFFICIENT, USUALLY LARGE-SCALE AND THEY USE ADVANCED TECHNOLOGY TO CATCH ENORMOUS NUMBERS OF FISH. IT'S ONLY FAIR THAT THEY ARE KEPT OUT OF NEARSHORE WATERS WHERE THE SMALL FISHERS OPERATE

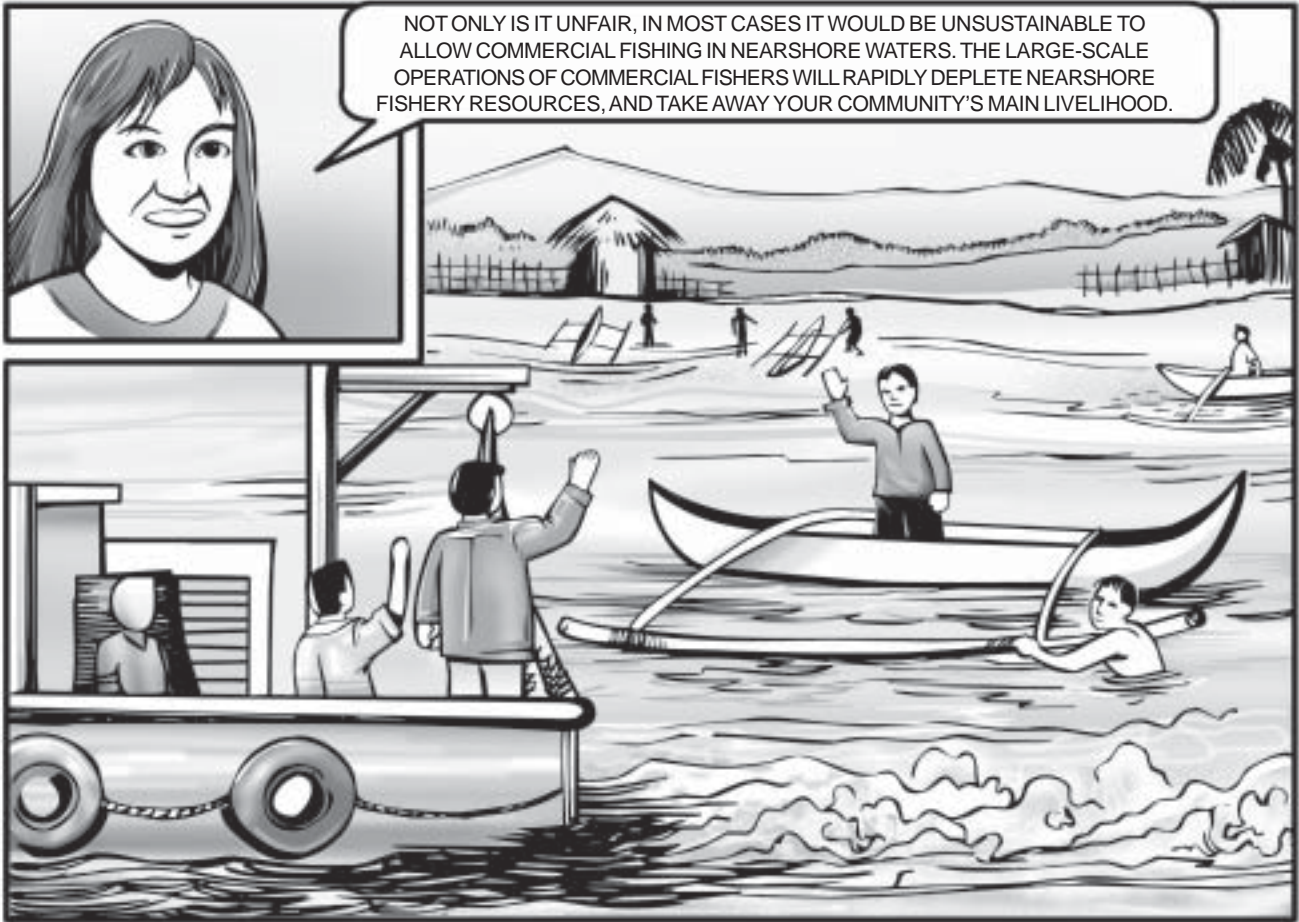


I MEAN WHO WANTS THEM HERE WHEN WE CATCH BARELY ENOUGH FISH TO FEED OUR FAMILIES?



AGAIN MR CRESPO IS RIGHT. OUR LAW GIVES SMALL FISHERS PREFERENTIAL RIGHTS TO FISH IN MUNICIPAL WATERS





NOT ONLY IS IT UNFAIR, IN MOST CASES IT WOULD BE UNSUSTAINABLE TO ALLOW COMMERCIAL FISHING IN NEARSHORE WATERS. THE LARGE-SCALE OPERATIONS OF COMMERCIAL FISHERS WILL RAPIDLY DEplete NEARSHORE FISHERY RESOURCES, AND TAKE AWAY YOUR COMMUNITY'S MAIN LIVELIHOOD.



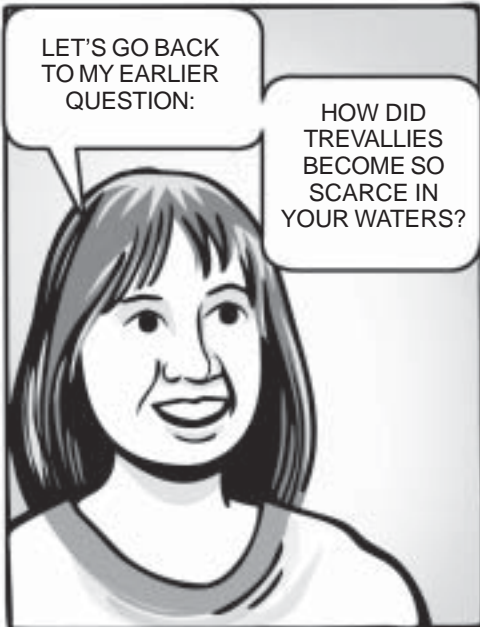
WILL OUR FISH CATCH EVER IMPROVE?

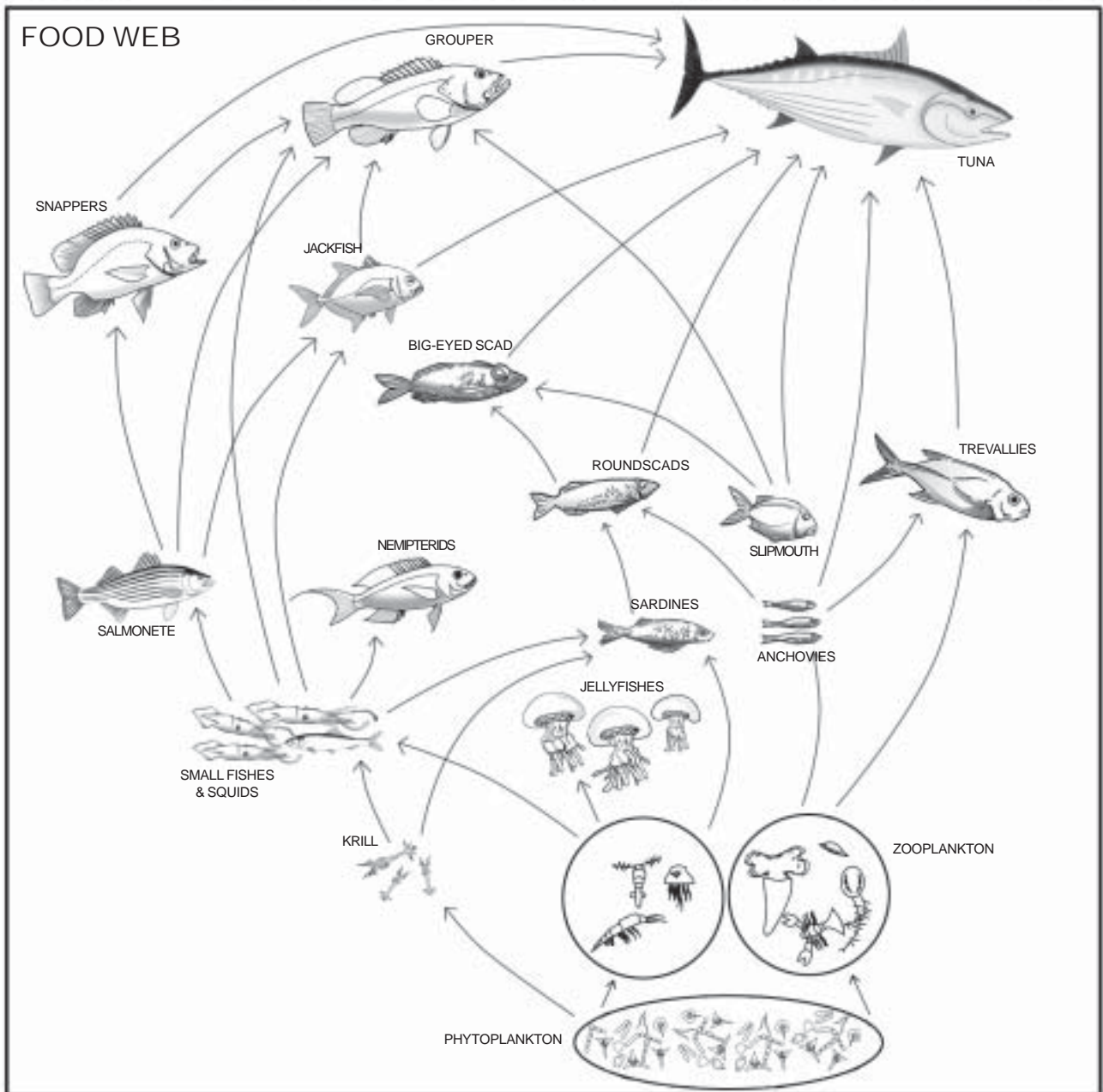
LET'S HOPE OUR SEA CAN BE RESTORED TO ITS PRODUCTIVE STATE

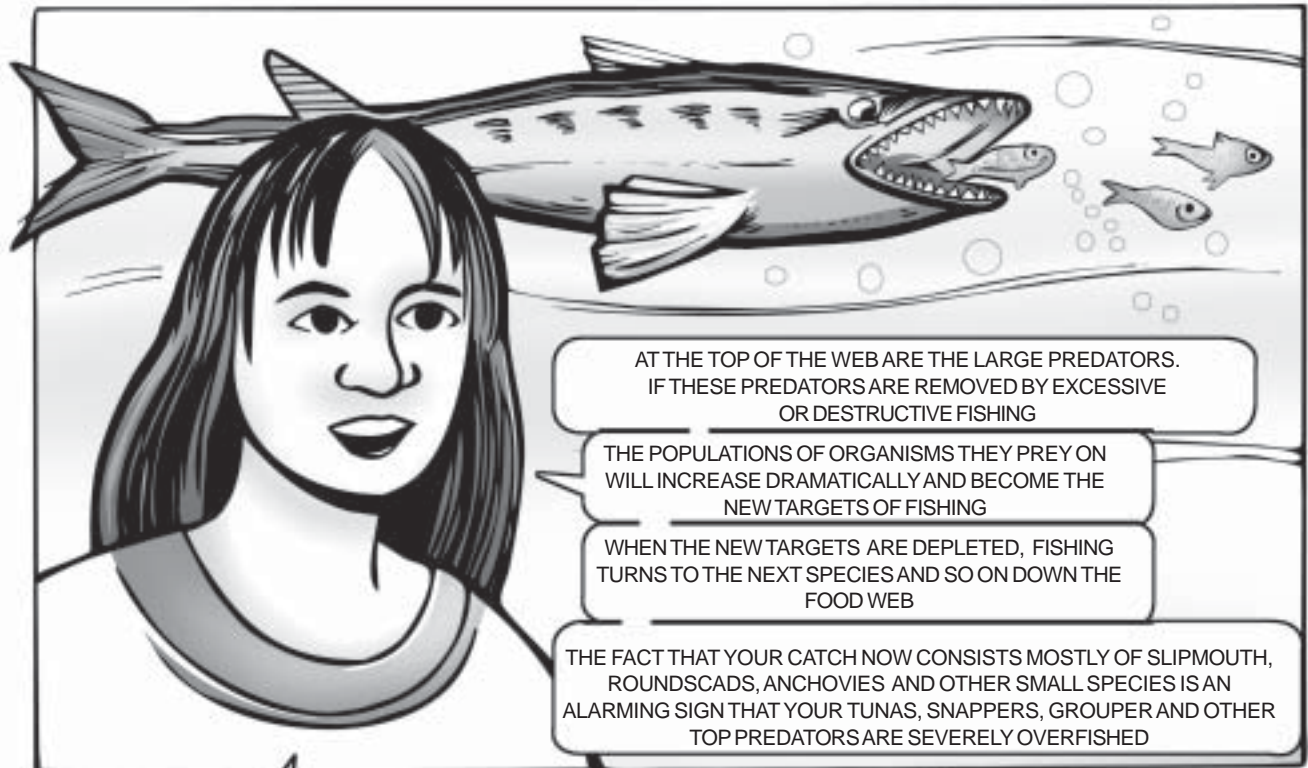


IF WE WORK TOGETHER, WHY NOT? THE LAW HAS GRANTED LOCAL GOVERNMENT UNITS THE AUTHORITY TO FORMULATE AND IMPLEMENT LOCAL ORDINANCES FOR THE MANAGEMENT OF MUNICIPAL WATERS

YOUR PARTICIPATION IN CONSULTATIONS LIKE THIS WILL HELP ENSURE THAT THE GOVERNMENT DOES ITS JOB, AND DOES IT WELL







AT THE TOP OF THE WEB ARE THE LARGE PREDATORS. IF THESE PREDATORS ARE REMOVED BY EXCESSIVE OR DESTRUCTIVE FISHING

THE POPULATIONS OF ORGANISMS THEY PREY ON WILL INCREASE DRAMATICALLY AND BECOME THE NEW TARGETS OF FISHING

WHEN THE NEW TARGETS ARE DEPLETED, FISHING TURNS TO THE NEXT SPECIES AND SO ON DOWN THE FOOD WEB

THE FACT THAT YOUR CATCH NOW CONSISTS MOSTLY OF SLIPMOUTH, ROUNDSCADS, ANCHOVIES AND OTHER SMALL SPECIES IS AN ALARMING SIGN THAT YOUR TUNAS, SNAPPERS, GROUPER AND OTHER TOP PREDATORS ARE SEVERELY OVERFISHED

THAT YOU'RE ABLE TO CATCH ONLY THE SMALLER, LOW-VALUE SPECIES WOULD OF COURSE MEAN YOU WILL EARN LESS FROM FISHING





THAT IS ALL WE HAVE FOR TODAY. IF YOU DON'T HAVE ANY MORE QUESTIONS, I'LL BE ON MY WAY. I STILL HAVE FAR TO TRAVEL



THANK YOU MS ANGEL, AS ALWAYS



WE LEARNED SO MUCH TODAY



NOW WE APPRECIATE EVEN MORE THE VALUE OF OUR MARINE SANCTUARY, AND THE IMPORTANCE OF RESPECTING THE LIMITS OF OUR FISHERY RESOURCES



NOW WE KNOW WHY WE SHOULD NOT USE FINE MESH NETS

THAT IF WE TAKE EVERYTHING, INCLUDING THE SMALL FISHES



WE'LL TAKE THIS.

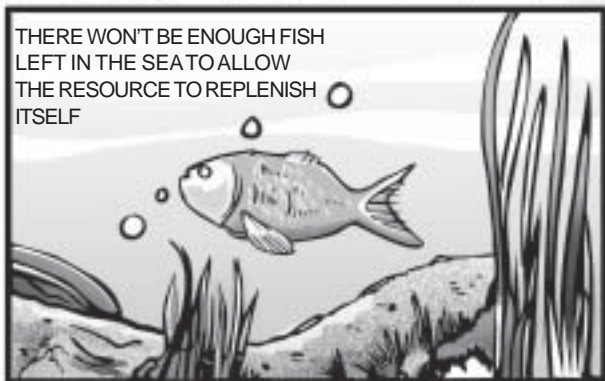
THIS ONE'S TOO SMALL

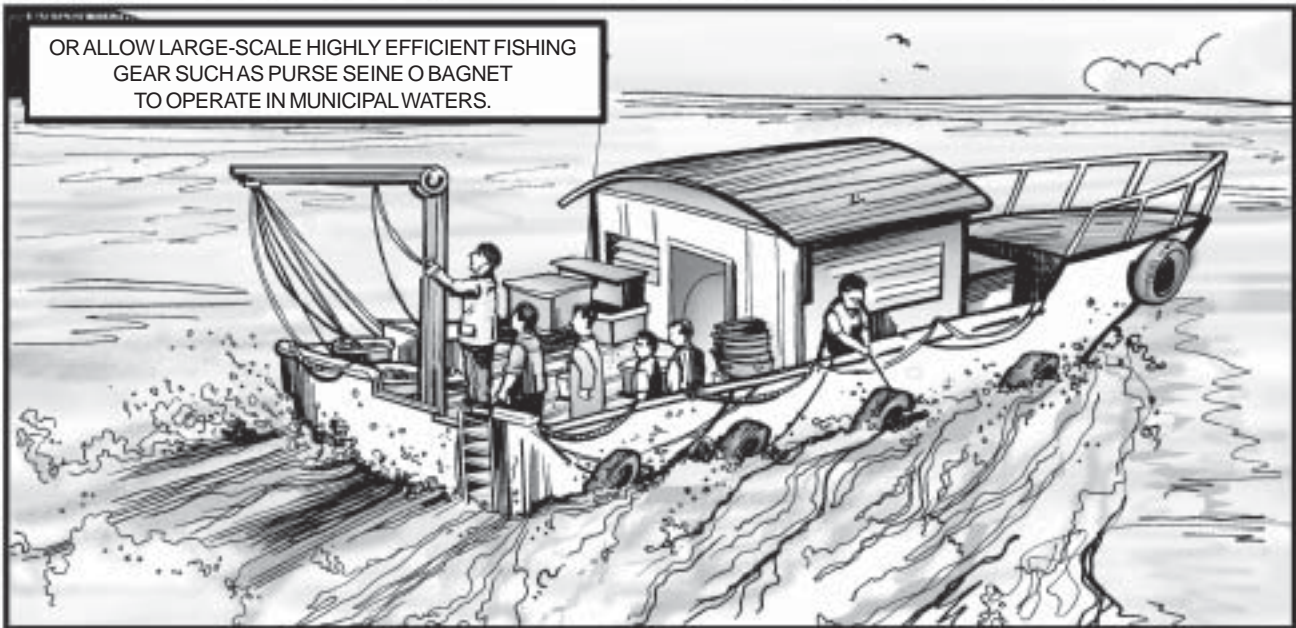


THAT'LL DO. THERE'S NOTHING ELSE



THERE WON'T BE ENOUGH FISH LEFT IN THE SEA TO ALLOW THE RESOURCE TO REPLENISH ITSELF







CAN WE ALL TAKE HOME WHAT WE'VE LEARNED TODAY AND FOLLOW MS ANGEL'S ADVICE?

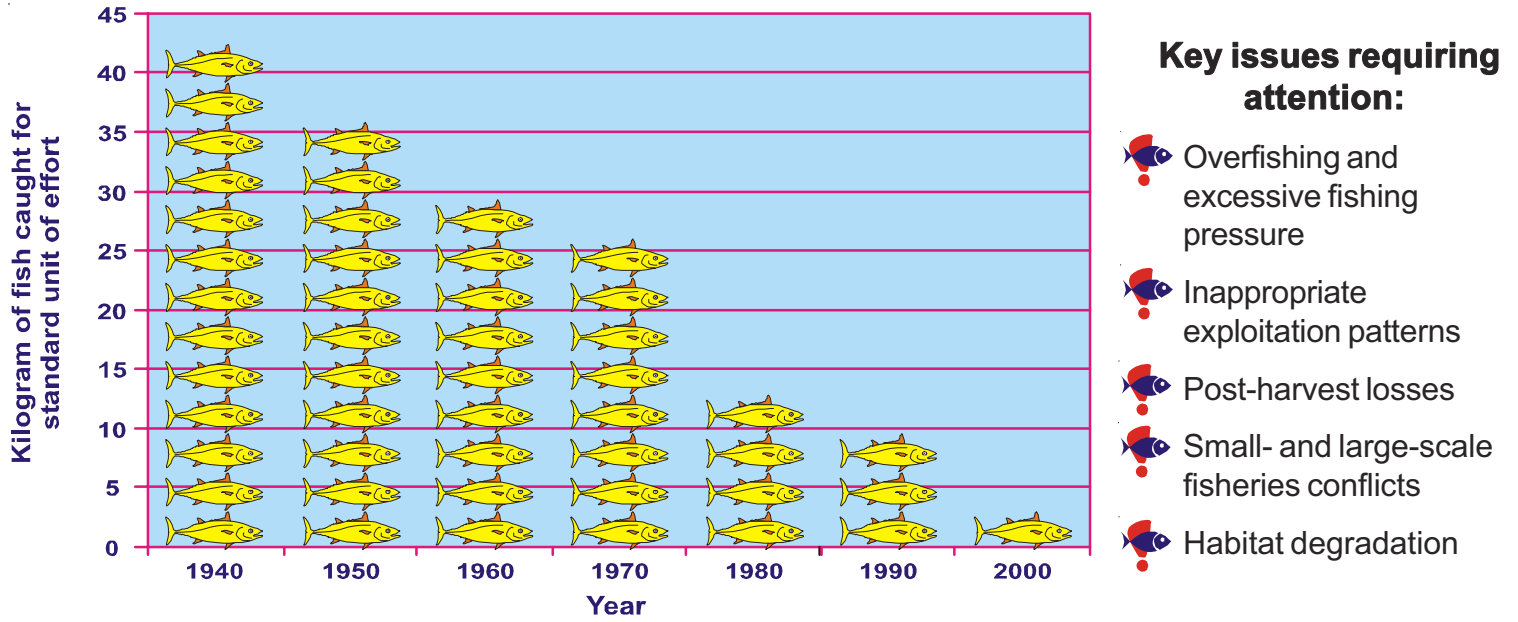


OF COURSE! WE MUST FOLLOW THE LAW AND NEVER FISH ILLEGALLY. IT'S THAT SIMPLE.



GOOD FOR YOU, ELMO! THAT'S WHAT I'VE BEEN WAITING ALL DAY TO TELL YOU!

Philippine Fisheries in Decline



Average CPUE since 1940s for fishers using hook-and-line from 6 provinces in the Philippines



Save our Fisheries