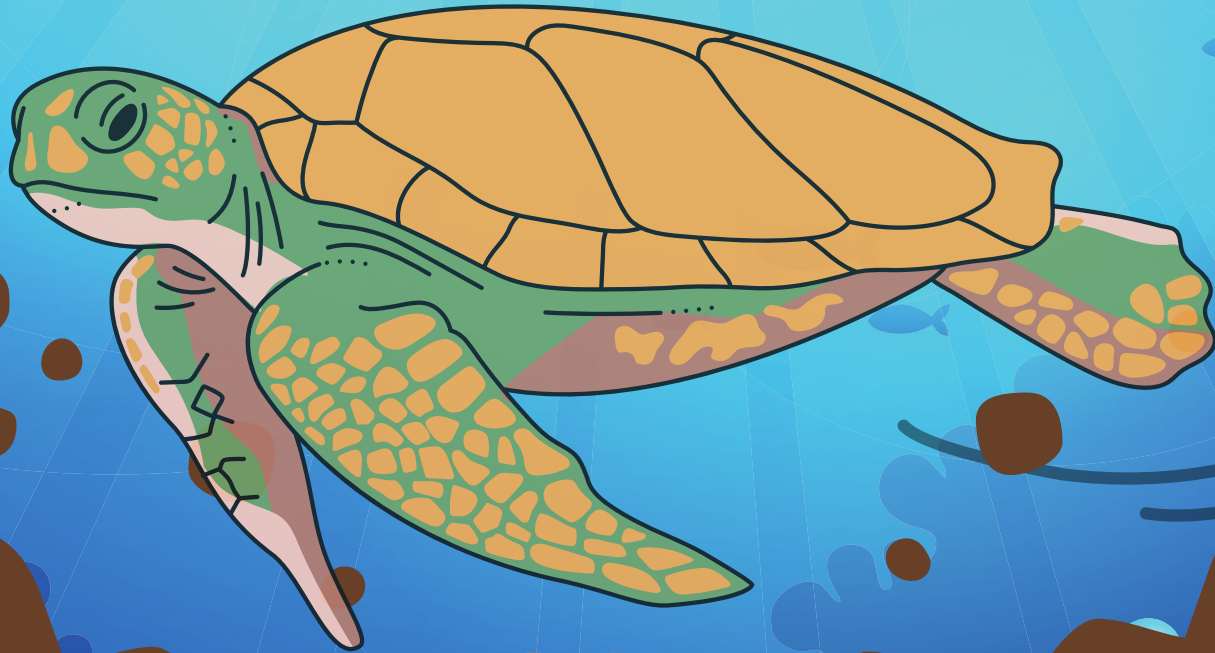


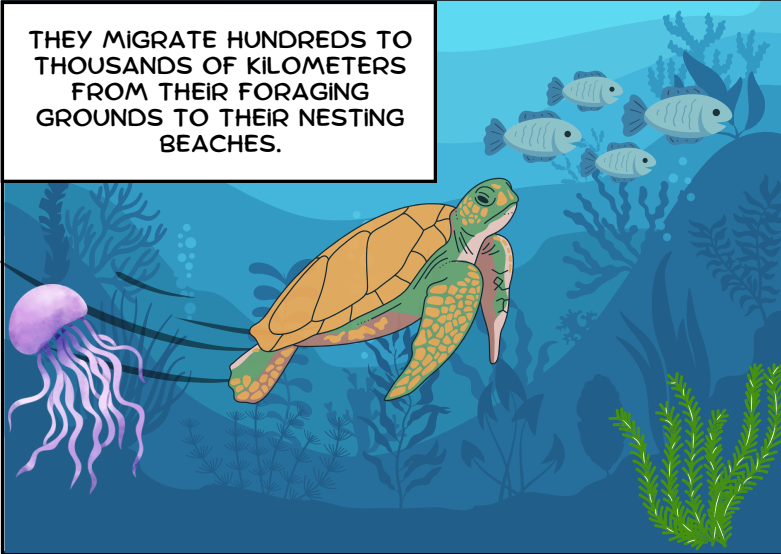
Within Shrinking Sands

The displacement crisis you haven't heard of

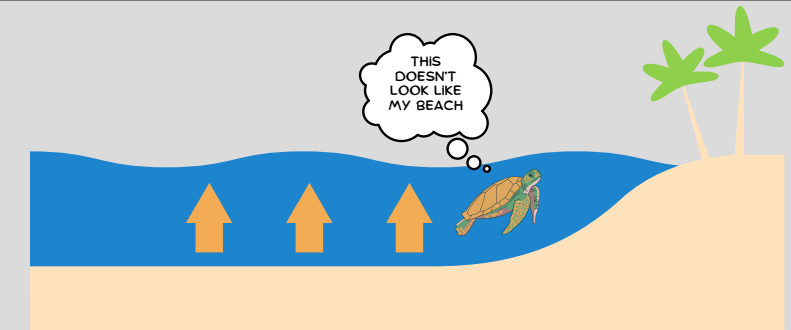
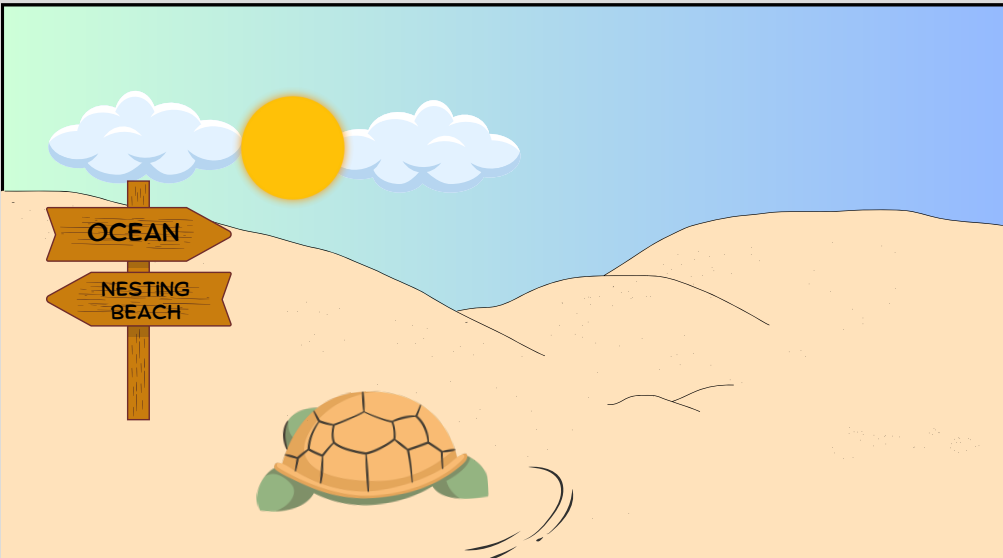
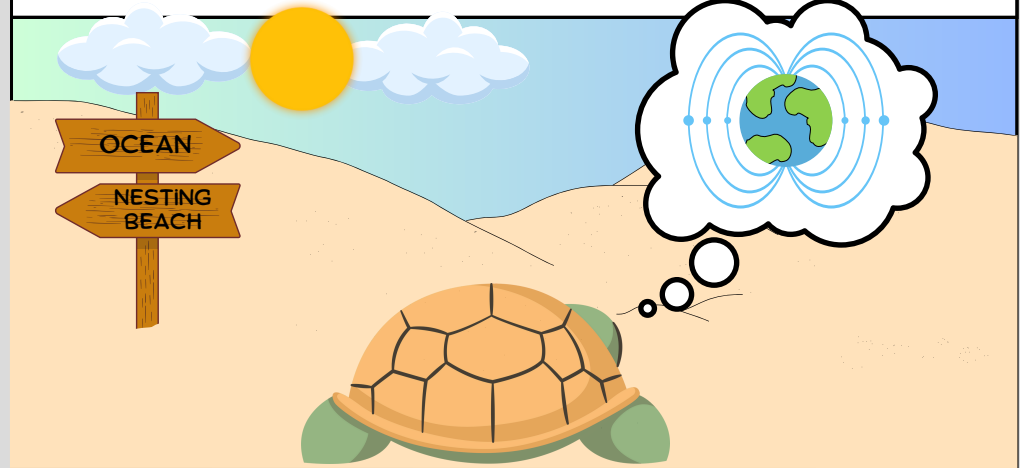


FOR MILLIONS OF YEARS, SEA TURTLES HAVE BEEN THE NOMADS OF THE OCEAN, RETURNING TO THE SAME SHORES TO LAY THEIR EGGS, GENERATION AFTER GENERATION.

THEY MIGRATE HUNDREDS TO THOUSANDS OF KILOMETERS FROM THEIR FORAGING GROUNDS TO THEIR NESTING BEACHES.

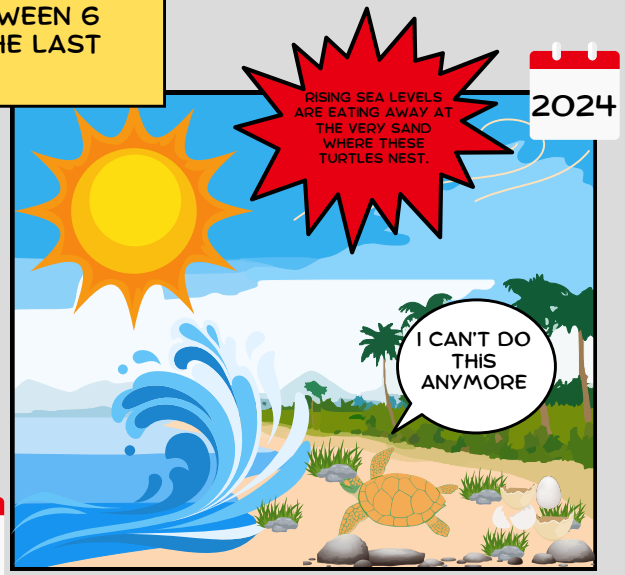
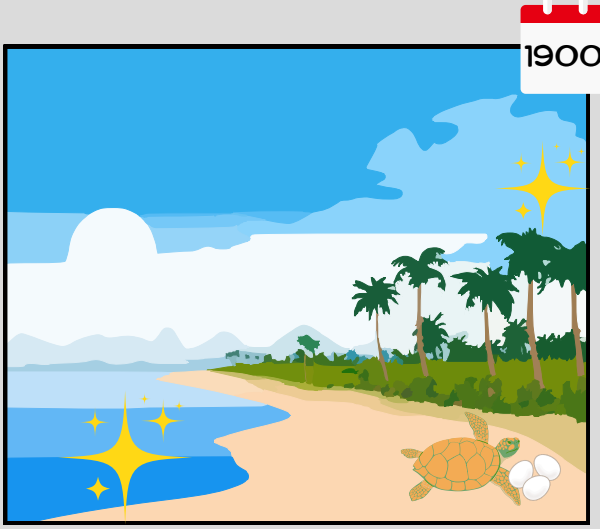


USING THE EARTH'S MAGNETIC FIELD TO FIND THEIR WAY BACK TO THE BEACHES WHERE THEY HATCHED, TO NEST



BUT IF YOU TAKE A WALK ALONG A NESTING BEACH ONCE BELOVED BY LOGGERHEAD AND GREEN SEA TURTLES, AND YOU'LL FIND A VERY DIFFERENT LANDSCAPE THAN WHAT THESE ANIMALS ARE USED TO, AND ALL BECAUSE OF ONE HUMAN-INDUCED EVENT:
CLIMATE CHANGE

GLOBAL SEA LEVEL HAS RISEN BETWEEN 6 AND 8 INCHES (15-20 CM) OVER THE LAST 100 YEARS

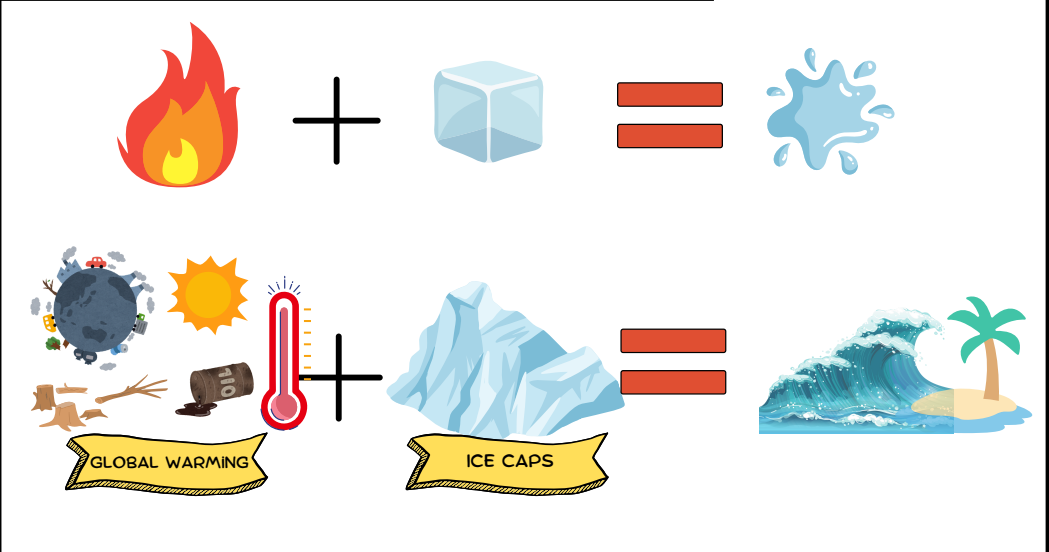


IMAGINE AN ANCIENT RITUAL DISRUPTED BY SOMETHING AS SILENT YET RELENTLESS AS THE TIDE ITSELF.



ACCORDING TO PROJECTIONS, BY THE END OF THE CENTURY, SEA LEVELS COULD RISE BY UP TO 0.59 METERS. EVEN A 0.5-METER RISE COULD ELIMINATE **A THIRD** OF BEACH NESTING AREAS GLOBALLY.

BUT WHY IS THIS HAPPENING?



IN SOME PARTS OF THE ARCTIC, THE LOSS OF SEA ICE EXPOSES THAWING PERMAFROST ON SHORELINES TO THE FULL FORCE OF WIND AND WAVES DURING FIERCE ARCTIC STORMS, RESULTING IN RAPID **EROSION**.

WHAT DOES THIS MEAN FOR SEA TURTLES?

IN SIMPLE TERMS, THEY'RE RUNNING OUT OF REAL ESTATE.



ACCORDING TO THE INTEGRATED VALUATION OF ECOSYSTEM SERVICES AND TRADE-OFFS (INVEST) COASTAL VULNERABILITY MODEL, **36%** OF THE WORLD'S CRITICAL NESTING BEACHES ARE NOW AT HIGH **RISK**.

THESE BEACHES, ONCE PRISTINE AND PROTECTED, ARE EXPOSED TO EROSION, STORMS, AND THE RISING SEAS.

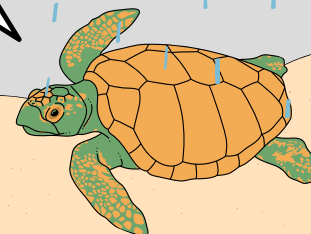
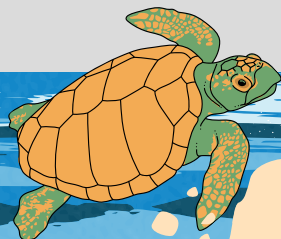


THE CURRENTS ARE TOO STRONG! IT'S SO MUCH HARDER TO GET TO SHORE

THIS SAND IS TOO COMPACTED FOR ME TO NEST IN

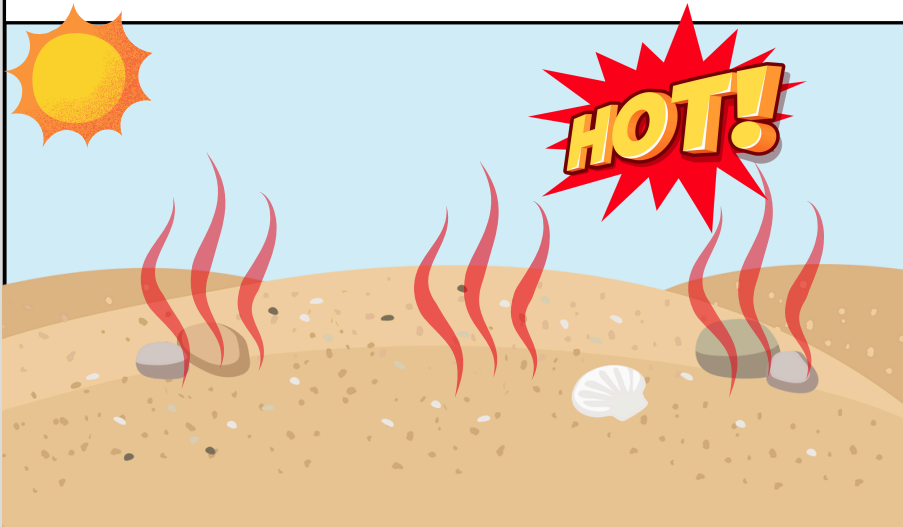
I CAN'T FIND ANY GOOD PLACE TO LAY MY EGGS

HOW ARE MY BABIES GOING TO SURVIVE UNDER THESE CONDITIONS?

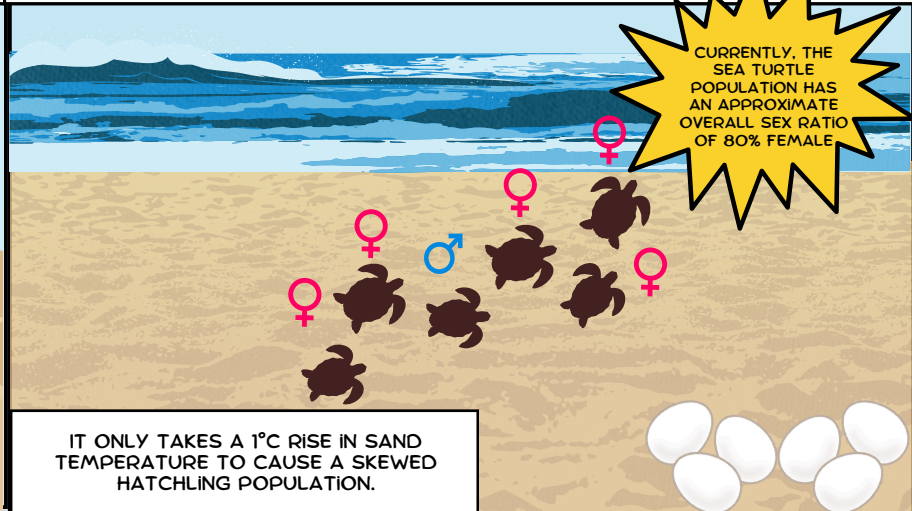


BUT THAT'S NOT THE ONLY PROBLEM.

THE VERY SAND BENEATH THEIR FLIPPERS IS GETTING HOTTER DUE TO RISING TEMPERATURES, AND THAT'S CRUCIAL FACTOR FOR THESE ANIMALS.

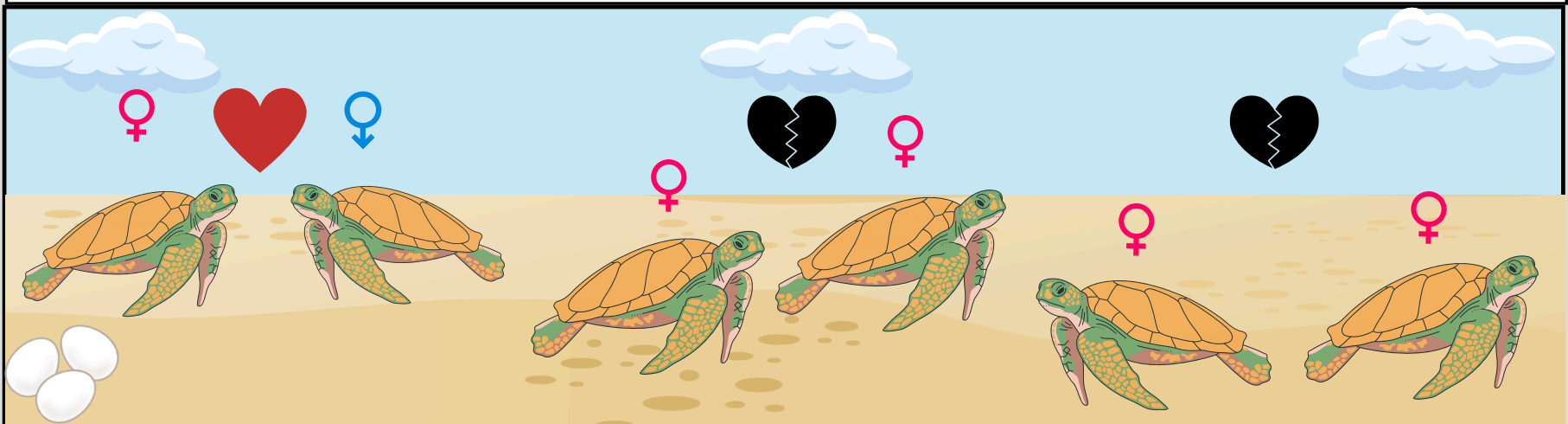


SEA TURTLES' GENDER IS DETERMINED BY THE TEMPERATURE OF THE SAND WHERE THEIR EGGS ARE LAID. WARMER SAND? MORE FEMALES.

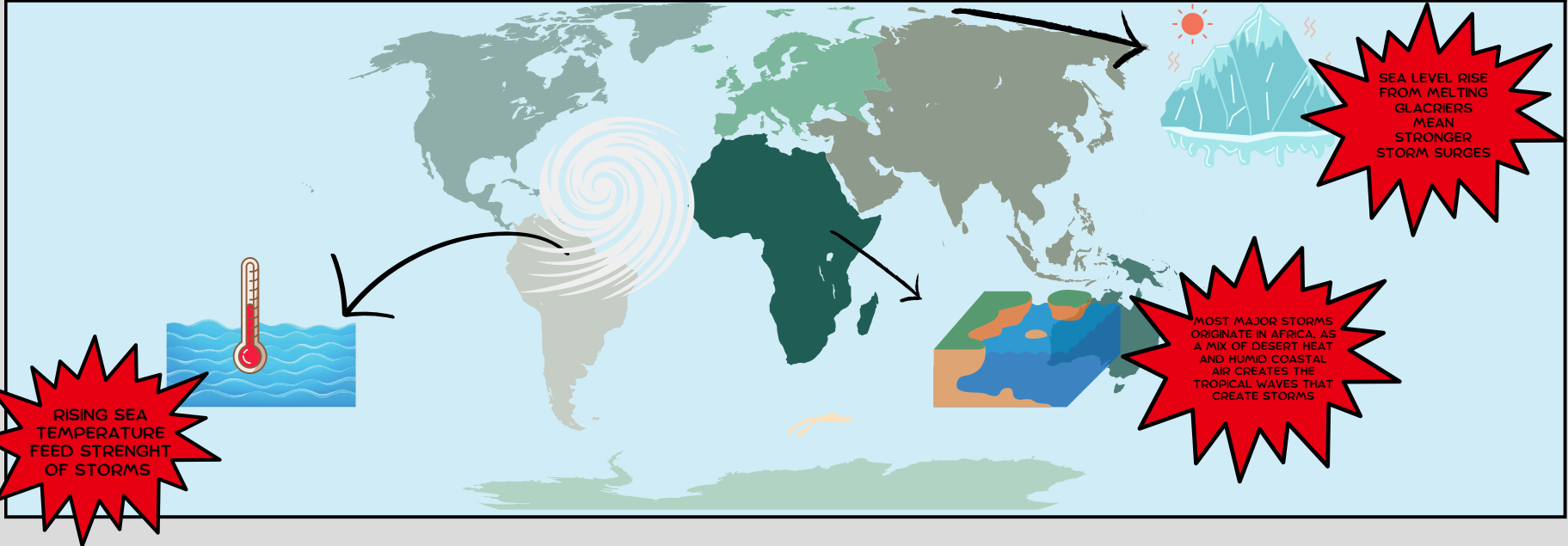


IT ONLY TAKES A 1°C RISE IN SAND TEMPERATURE TO CAUSE A SKEWED HATCHLING POPULATION.

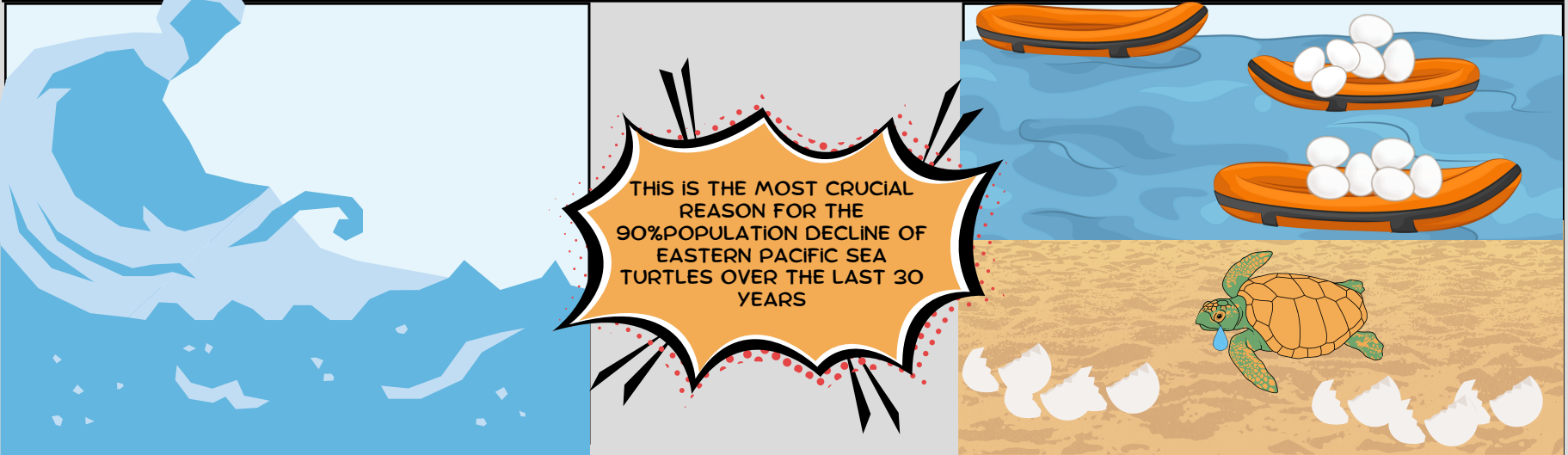
THIS MEANS THE NEXT GENERATION OF TURTLES MIGHT STRUGGLE TO FIND MATES, FURTHER PUSHING THEM TOWARD EXTINCTION.



AND IF IT WEREN'T BAD ENOUGH, STORMS—MORE FREQUENT AND SEVERE DUE TO CLIMATE CHANGE—ARE EXACERBATING THE PROBLEM.



COASTAL EROSION RATES ARE SOARING, WITH STORM SURGES FLOODING NESTS AND WASHING AWAY EGGS BEFORE THEY EVEN HAVE A CHANCE TO HATCH.



BUT WHAT
COULD HELP
THESE
TURTLES?

SUPPORTING COASTAL CONSTRUCTION SET-BACK POLICIES

TRYING TO BUILD CITIES FARTHER INLAND TO PROTECT BEACHES AND SEA TURTLES



PROMOTING BEACH NOURISHMENT

BEACH NOURISHMENT CAN HELP ADD NESTING HABITAT WHERE EROSION HAS REMOVED IT



PLANTING NATIVE VEGETATION



NATIVE COASTAL PLANTS CAN HELP PROTECT THE BEACH FROM EROSION AND PROVIDE NESTING HABITAT

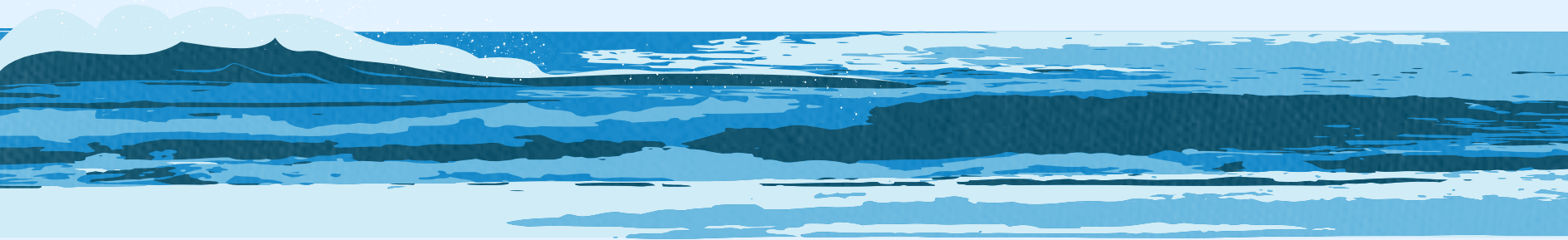
REDUCING MARINE DEBRIS



REDUCE PLASTIC USE AND PARTICIPATE IN COASTAL CLEAN-UPS TO KEEP BEACHES AND OCEANS CLEAN

SEA TURTLES ARE AN ECOLOGICAL CANARY IN THE COAL MINE. AS THE BEACH DISAPPEARS BENEATH THEIR FLIPPERS, IT'S A WARNING FOR ALL OF US.

THE QUESTION REMAINS: WILL WE HELP SAVE THE BEACH BY COMBATTING CLIMATE CHANGE BEFORE IT'S TOO LATE?



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