

CLIMATE CHANGE

IN COSTA RICA



RISING TEMPERATURES AND BEACH DEGRADATION ARE PREDICTED TO REDUCE THE VULNERABLE LEATHERBACK SEA TURTLE POPULATION BY **7% PER DECADE** THROUGHOUT THE NEXT 80 YEARS. HERE'S A LOOK AT THE THREATS SEA TURTLES AND COSTA RICA FACE FROM CLIMATE CHANGE, AND WHAT EPI IS DOING TO HELP.

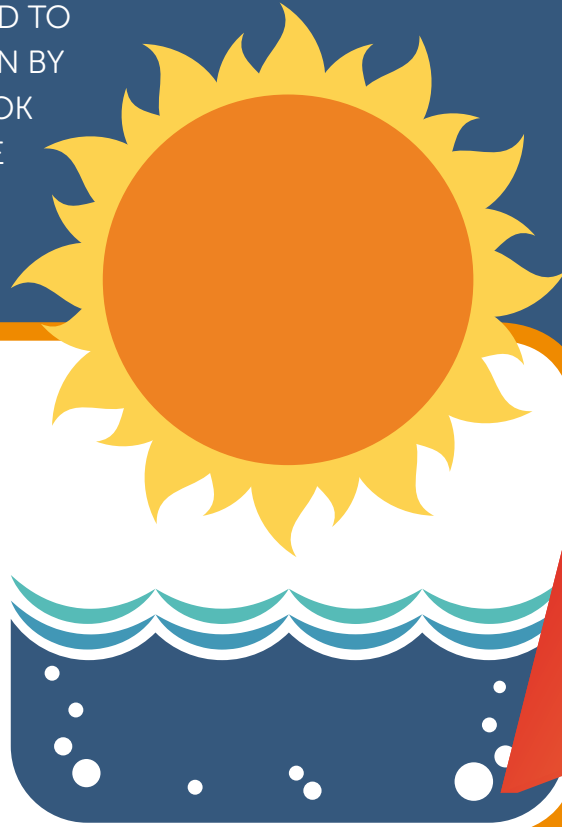


A VULNERABLE REGION



Temperatures are predicted to rise at an increased rate in the Caribbean Basin—including Costa Rica. At Pacuare Reserve, that could mean an increase of

7°F by 2100



The Intergovernmental Panel on Climate Change (IPCC) projects that sea levels in Costa Rica may rise more than **3 FT** by **2100**.



A SPECIES DEPENDENT ON CLIMATE

Leatherback sea turtle nests are deeper and closer to the sea than those of other sea turtle species, making them especially susceptible to erosion, inundation, and excess salinity. Degradation of nesting habitat can result in nest-loss rates of more than

50%

FOR LEATHERBACKS, TEMPERATURE IS KEY

- Temperature determines the sex of leatherback hatchlings. A clutch can shift from 100% male to 100% female if temperatures increase as little as 10°F
- Embryonic development only occurs within a range of 77°F to 95°F
- Hatchlings will only emerge from the nest chamber if the surface sand temperature is lower than 90°F

90%

OF LEATHERBACK NESTS WERE RELOCATED TO HATCHERIES OR OTHER SAFE LOCATIONS ALONG PACUARE RESERVE'S 4 MILE COASTLINE. **23% MORE EGGS HATCHED** THAN AT OTHER LOCATIONS IN COSTA RICA.



IMPROVING THE ODDS

Environmental challenges like climate change, illegal harvesting, and plastic pollution result in a hatchling survival rate of only **1 in 1000**, but EPI is working to give leatherback sea turtles a better chance at success. Thanks to researchers, volunteers, & EPI students, the rate of nest loss due to illegal harvest has remained **below 2% since 2015**.

Last year, EPI students removed

227 LBS

of trash and other beach debris - helping to clear a path for hatchlings to find their way to the sea.



17,366
HATCHLINGS

WERE SUCCESSFULLY RELEASED AT PACUARE RESERVE IN 2018

