

# CLIMATE CHANGE

## IN BELIZE



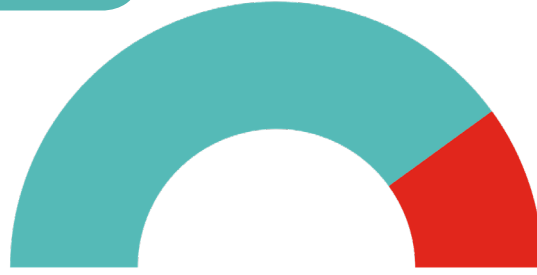
The United Nations Development Program estimates that without intervention, Belize's annual temperatures may increase by as much as **3.3°F** by **2080**.

**SMALL BUT BIODIVERSE**, BELIZE IS EXCEPTIONALLY VULNERABLE TO CLIMATE CHANGE GIVEN THAT HURRICANES, SEA LEVEL RISE, COASTAL EROSION, AND CORAL BLEACHING WILL LIKELY INTENSIFY IN THE FUTURE. WHAT ARE EPI STUDENTS DOING TO HELP?

### DEPENDENT ON BIODIVERSITY

#### 1 OUT OF 4 JOBS

in Belize is tourism-related. This industry is largely dependent on the coastal areas that are home to an astounding amount of wildlife. Climate change threatens the natural resources that are critical for the sustainability of the tourism sector.



Nearly **80%** of the Mesoamerican Barrier Reef, the 2<sup>nd</sup> largest reef on the planet, resides in Belize.

# \$22 BILLION

PROJECTED LOSS IN BELIZE'S GDP DUE TO CLIMATE CHANGE BY 2050

### THE FORESTS BETWEEN THE TIDES

MUCH OF BELIZE'S STAGGERING MARINE BIODIVERSITY DEPENDS ON THREE TROPHIC FOUNDATIONS: **CORAL REEFS, MANGROVES, AND SEAGRASSES**.

#### CORAL REEFS

The structure of coral reefs provides protection for coastal communities against storms and tidal volatility, but rising sea-surface temperatures and acidification due to increased atmospheric carbon are damaging reefs.

## ONLY 7%

OF THE WORLD'S MANGROVES ARE PROTECTED

#### MANGROVES

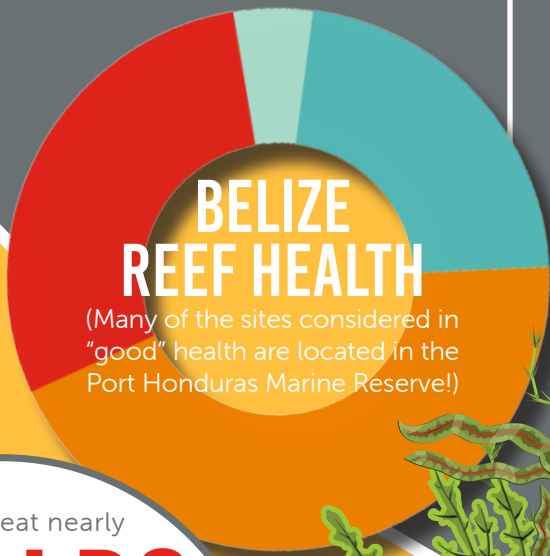
Mangroves provide coastal stability in the face of elevated tides caused by climate change, but increasing sea levels inundate mangrove flats, reducing their distribution and survival.

#### SEAGRASS

Seagrass beds store carbon like underwater forests, helping to offset climate change and ocean acidification, but warming waters deposit algae on them – reducing or even eliminating these important marine nurseries.

SEAGRASS BEDS CAN STORE UP TO **237,000 TONS** OF CARBON PER SQUARE MILE

- GOOD 5%
- FAIR 22%
- POOR 44%
- CRITICAL 29%



Manatees eat nearly **100 LBS** of marine vegetation daily, the majority of which is **seagrass**.



In the first 6 months of the monitoring project, **121 MANATEES** were spotted!

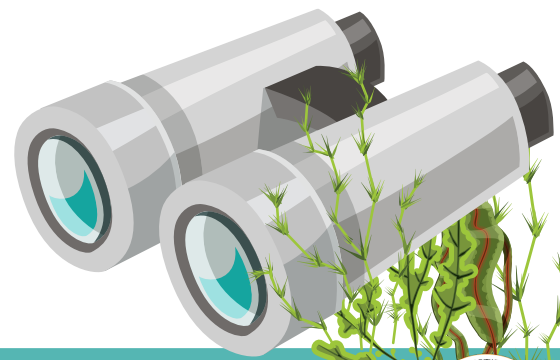
### INFLUENCING POLICY

Alongside EPI's newest field experience partner,



EPI students monitor **4 SPECIES OF SEAGRASS** and identify organisms that depend on them. This body of data will contribute to management decisions of the Port Honduras Marine Reserve.

Last year, more than **130 EPI STUDENTS** contributed to studies that helped identify the distribution, movement, and threats to endangered manatees in Belize's Port Honduras Marine Reserve.



# HANDS-ON SCIENCE & CLIMATE EDUCATION

Ecology Project International (EPI) is a nonprofit organization that gets students and teachers involved in real scientific research and wildlife conservation projects.

There's no better way to engage your students in the study of science and inspire them to make a difference in the face of climate change.

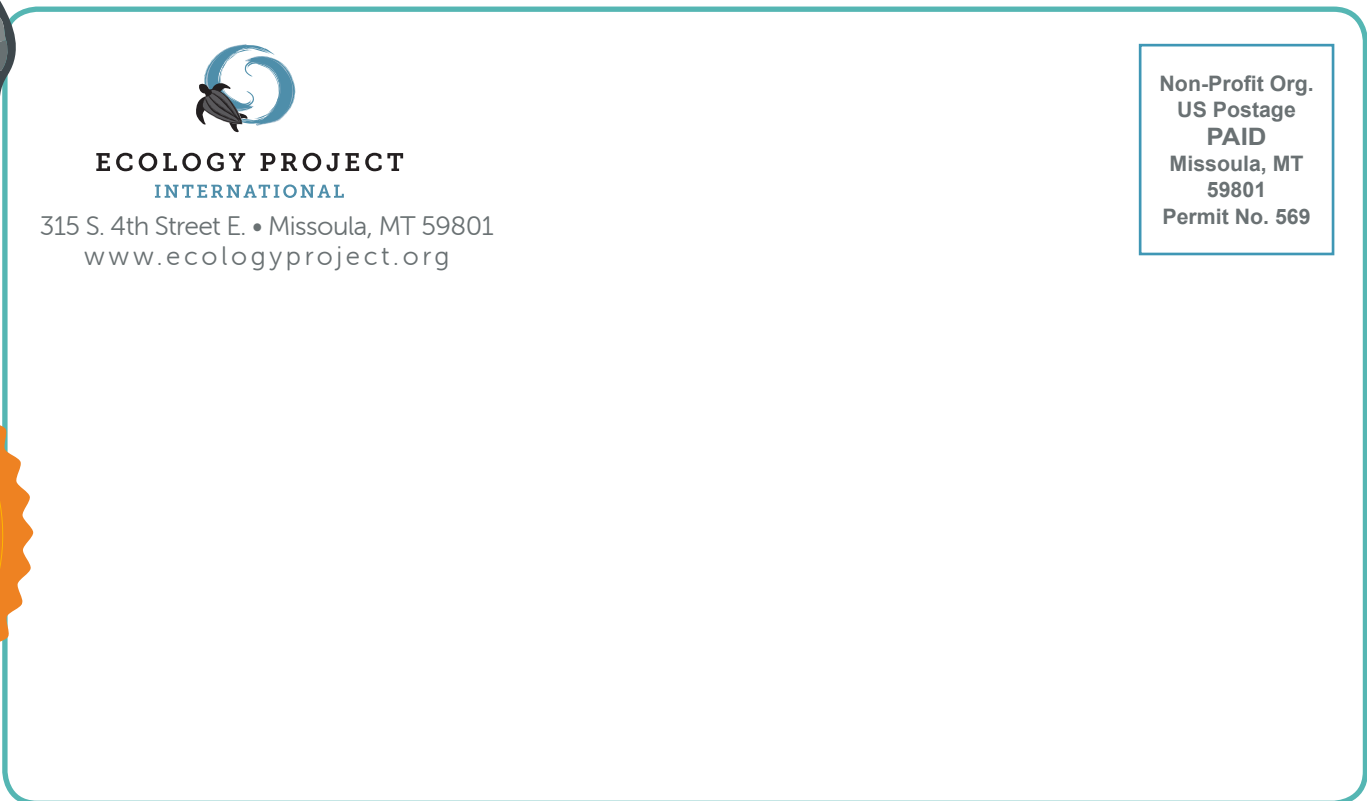
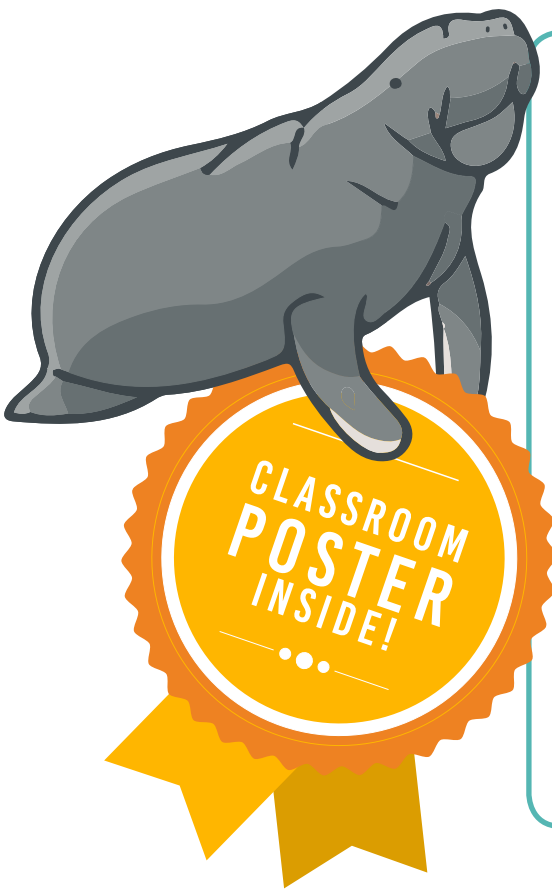
#### Want to Get Involved?

Join us in the field. EPI's Belize Marine Ecology Program is a 9-day science-focused travel program that gives students and teachers the opportunity to study marine biology in the field and help on issues of critical environmental importance.

If you're new to EPI, you can qualify for a \$1000 scholarship for participation in EPI's Belize Marine Ecology Program. Want to learn more?

Get started at [www.ecologyproject.org/marine](http://www.ecologyproject.org/marine)  
Or give us a call at 406 721 8784

WWW.ECOLOGYPROJECT.ORG



SEAGRASS BEDS  
CAN STORE UP TO  
**237,000**  
**TONS**  
OF CARBON PER SQUARE MILE



EPI's Belize-based field experience partner, the Toledo Institute for Development and Environment (TIDE) was established in 1997 to conduct ecological studies that inform the management policies of important marine and terrestrial ecosystems in the Toledo District of Southern Belize.

Through this cooperation, EPI participants contribute to essential, long-term ecological studies in TIDE's managed areas from ridge to reef.

