

Tuva Activity: Dig into the data on Global GHG Emissions and Ocean Acidification

In this activity, students familiarize themselves with the data on GHG (Greenhouse Gas) emissions and ocean acidification by examining various attributes and the corresponding units in details.

They learn how human activities result in release of GHGs - mostly CO₂ - into the atmosphere, and how this is changing the ocean in a measurable way.

Introduction

Question 1:

What is the data about? Read the case card to list the different attributes provided in the dataset.

Question 2:

How do the 2nd and 3rd attributes in the case card differ?

Question 3:

What is land use change? Give at least 2 examples. (Hint: Refer to the 1st card in this activity as well as the keywords section)

Question 4:

What unit is used to measure GHG emissions? (Hint: Refer to the keywords section)

Compare the GHG emissions excluding forestry and land use change in 1990 to that in 2011.

Question 5:

What is the percentage increase or decrease in GHG emissions?

Compare the GHG emissions including forestry and land use change in 1990 to that in 2011.

Question 6:

What is the percentage increase?

Now compare the GHG emissions excluding forestry and land use change in 2011 with the GHG emissions including forestry and land use change in the same year.

Question 7:

Is there any difference between the two? What does this suggest?

Question 8:

What measure is used to describe the acidity of seawater? Is the relationship between acidity and this measure direct or inverse? (Hint: Look up the keywords section)

Question 9:

In its normal state, is seawater acidic, basic or neutral? Why do you think so? (Hint: Refer to the keywords section)

Compare the pH of seawater in 1990 to that in 2011.

Question 10:

What do you notice? What does it tell you about the change in acidity of seawater?

Question 11:

What factors could have caused the change in the seawater pH? (Hint: Refer to the dataset description and the 1st card in this activity)

Question 12:

List 2 ways in which acidification of oceans could affect sea life. (Hint: Refer to the dataset description)
