

Biodiversity Threatened!



Your task

- ✿ You are on the Board of Directors of *Protect Biodiversity International*. Today, you received a \$10 million donation. Your job is to decide how to divide the money to help protect biodiversity. The donor imposed one condition – you may not spend all the money in one place.

Step 1: Research

☀ You will conduct research to discover:

1. What is biodiversity and why is it important?
2. Where is there the greatest biodiversity?
3. What are the causes?
4. What is being done to help increase biodiversity globally?

Taking Notes Using Two-Columns

- Your own words
- Examples
- Drawings
- Pictures
- "tips"
- Reminders
- Anything that will help you to understand it better

- "Official" notes
- Teacher notes
- Book notes
- Vocabulary terms
- You can copy exactly from the book on this side

Research:

What is biodiversity and why is it important?

Video

[What is biodiversity?](#)

[Why is biodiversity important?](#)

[Video: The Year of Biodiversity](#)

Other research

[Ecokids: Biodiversity](#)

[Biodiversity Facts](#)

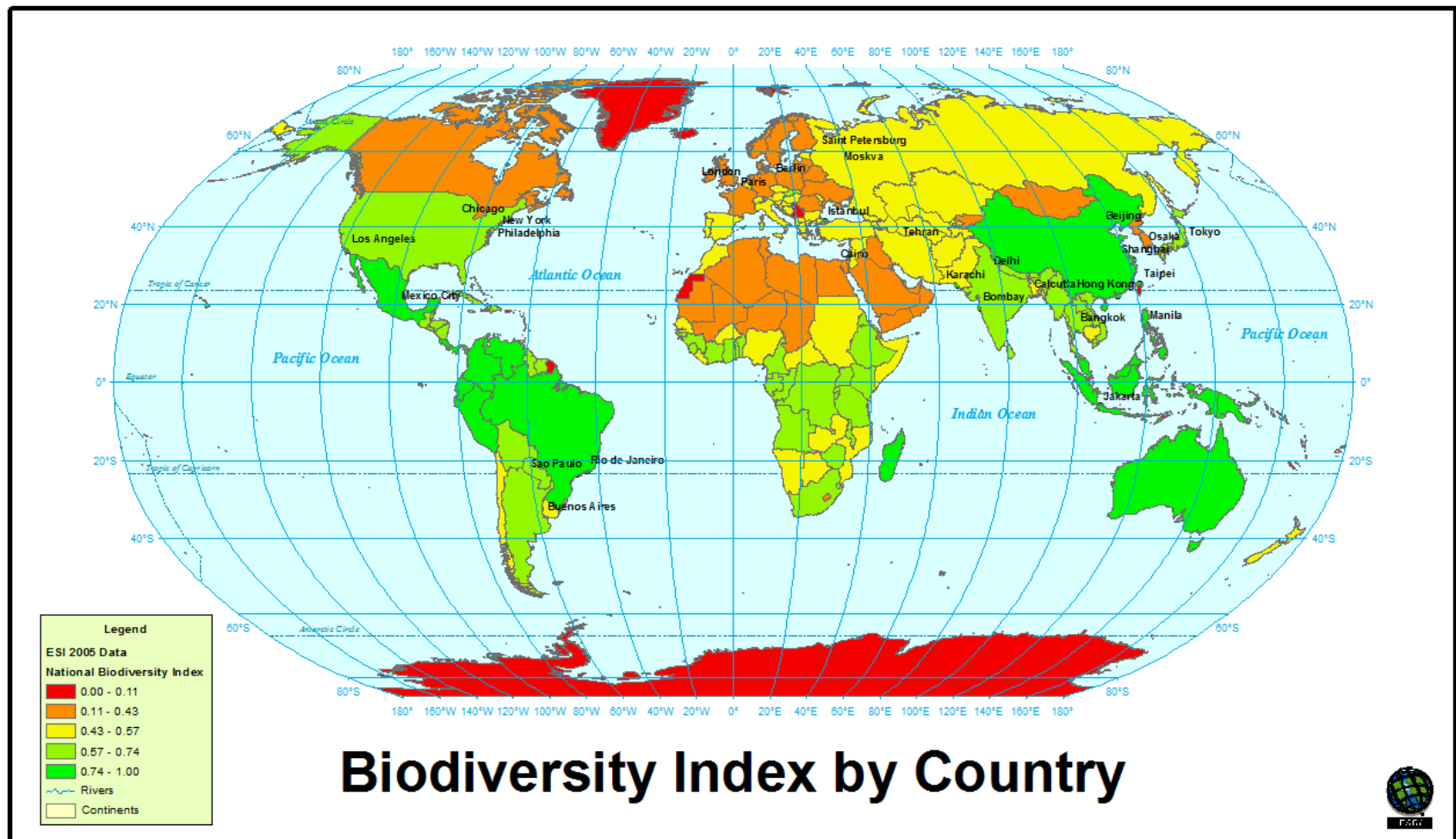
[American Museum of Natural History](#)

[National Wildlife Federation](#)



Research:

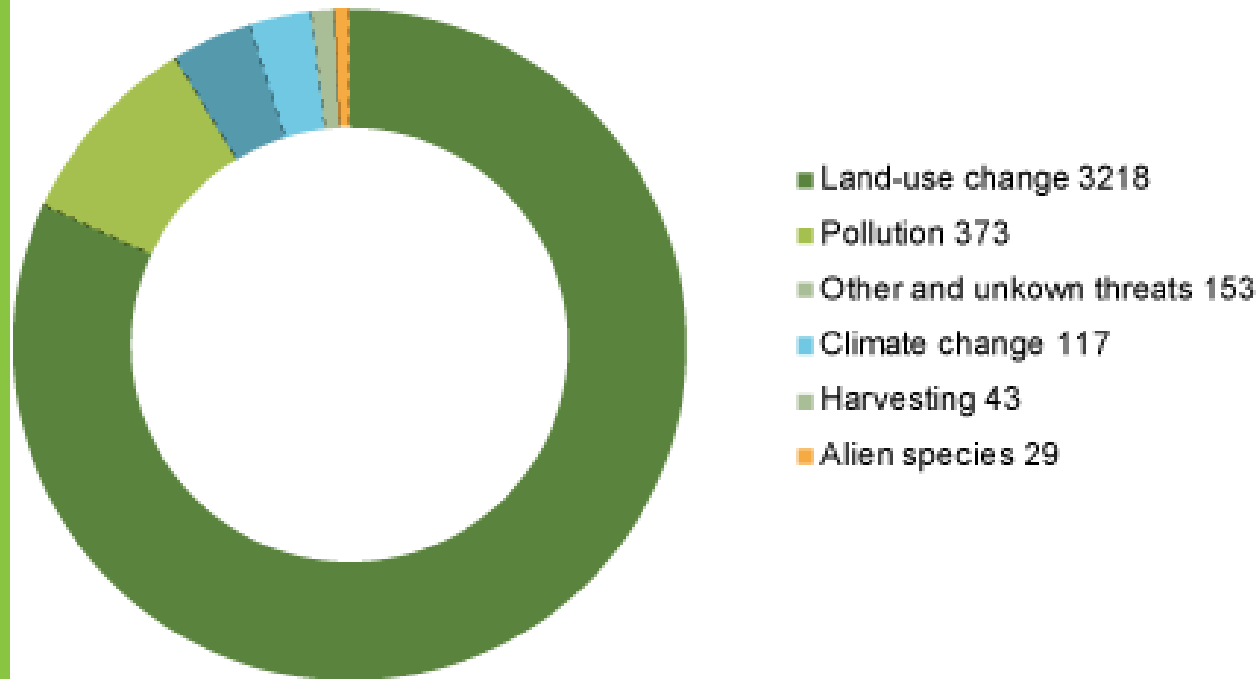
What continents and countries have the richest biodiversity?



Research:

Causes of loss of biodiversity

→ **Threats to biodiversity**
Number of species affected



SOURCE: The 2010 Norwegian Red List for Species.
Norwegian Biodiversity Information Centre, 2010 / www.environment.no



What are the main causes of biodiversity loss?

There are many threats to our natural world, which include:

HABITAT LOSS AND

This is one of the greatest threats to biodiversity. Habitat loss is directly linked to human induced pressures on land.

DESTRUCTION

ALTERATIONS IN ECOSYSTEM COMPOSITION



ALTERATIONS

Assemblages of species and their interactions with their ecosystems is critical for not only saving the species, but also for their successful future evolution. In the event of alterations, either within species groups, or within the environment, entire ecosystems can begin to change. Alterations to ecosystems are a critical factor contributing to species and habitat loss.

ALIEN SPECIES

The introduction of exotic species that replace local and native species is cited as the second largest cause of biodiversity loss. Alien invasive species replace, and often result in the extinction of native species. The annual economic damage caused by invasive plant and animal species is estimated to be in the region of US\$ 1.4 trillion.

INVASIVE

OVER-EXPLOITATION

Over-hunting, over-fishing or over-collecting of a species can quickly lead to its decline. Changing consumption patterns of humans is often cited as the key reason for this unsustainable exploitation of natural resources.

POLLUTION AND

Biological systems respond slowly to changes in their surrounding environment. Pollution and contamination cause irreversible damage to species.

CONTAMINATION



GLOBAL CLIMATE CHANGE

Both climate variability and climate change cause biodiversity loss. Species and populations may be lost permanently, if they are not provided with enough time to adapt to changing climatic conditions.



Research:

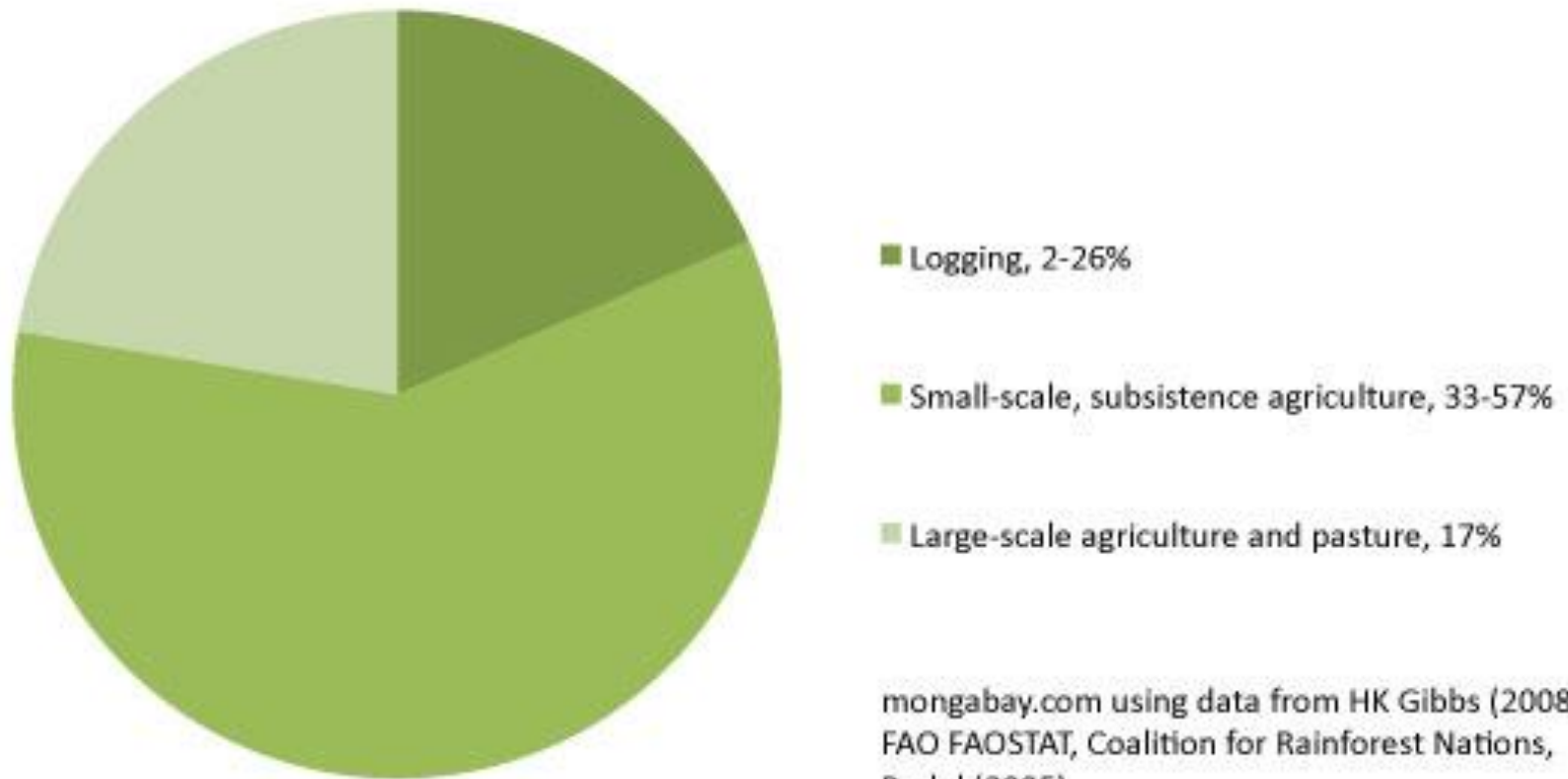
Causes of loss of biodiversity

- ☼ Biodiversity
- ☼ National Geographic: Deforestation
- ☼ Deforestation facts for kids
- ☼ How Deforestation Works
- ☼ Threats to Our Forests
- ☼ Biomes, Ecosystems, and Habitats

Research:

Causes of loss of biodiversity

Drivers of Deforestation in Central America, 1990-2000



mongabay.com using data from HK Gibbs (2008),
FAO FAOSTAT, Coalition for Rainforest Nations,
Rudel (2005)

Research:

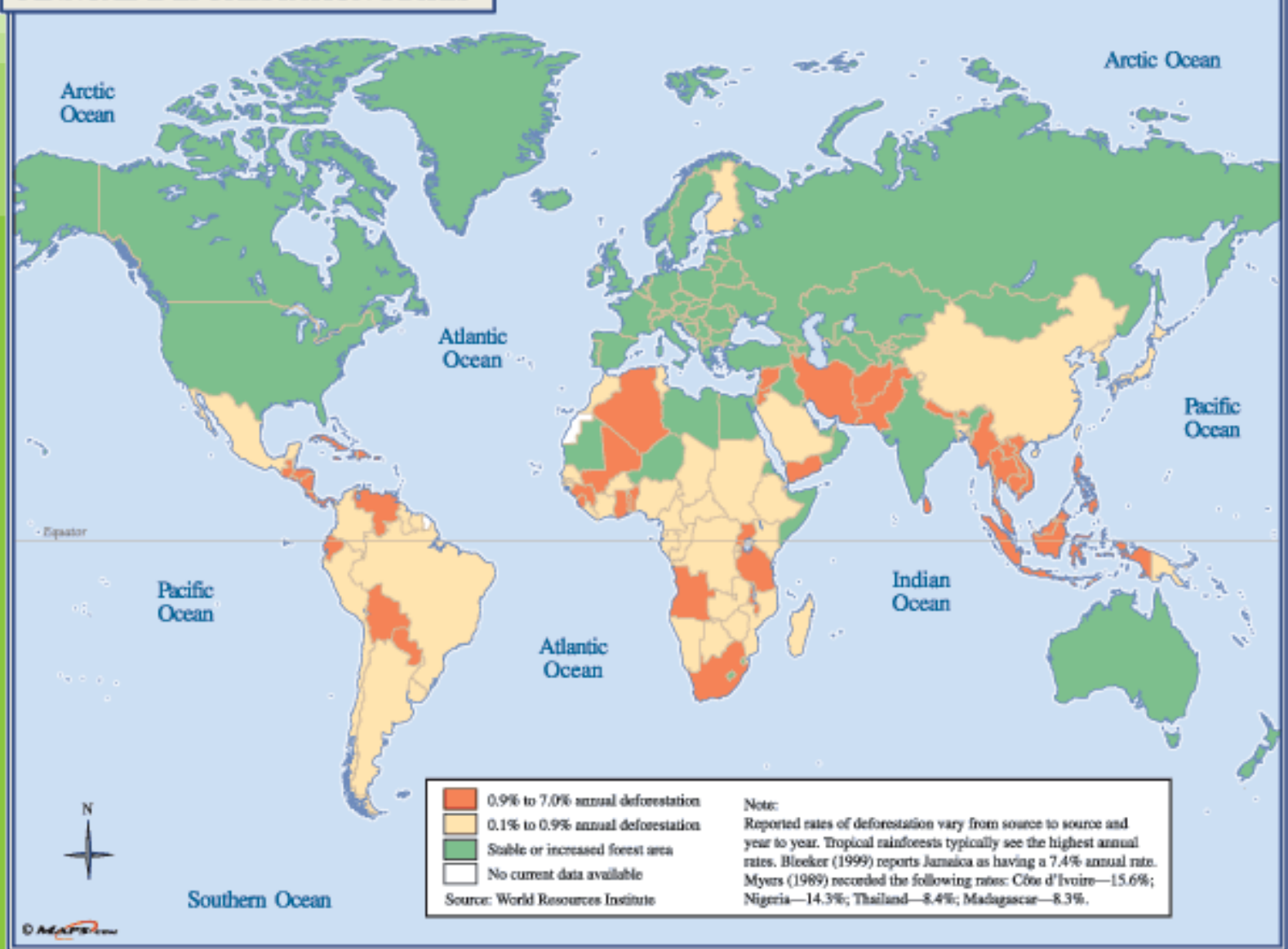
What is being done to increase biodiversity?

- ☀ Helping the World by Preserving Biodiversity
- ☀ Learning How to Protect Biodiversity
- ☀ Deforestation facts for kids
- ☀ Nourishing the Planet
- ☀ Ways to Reduce the Damage

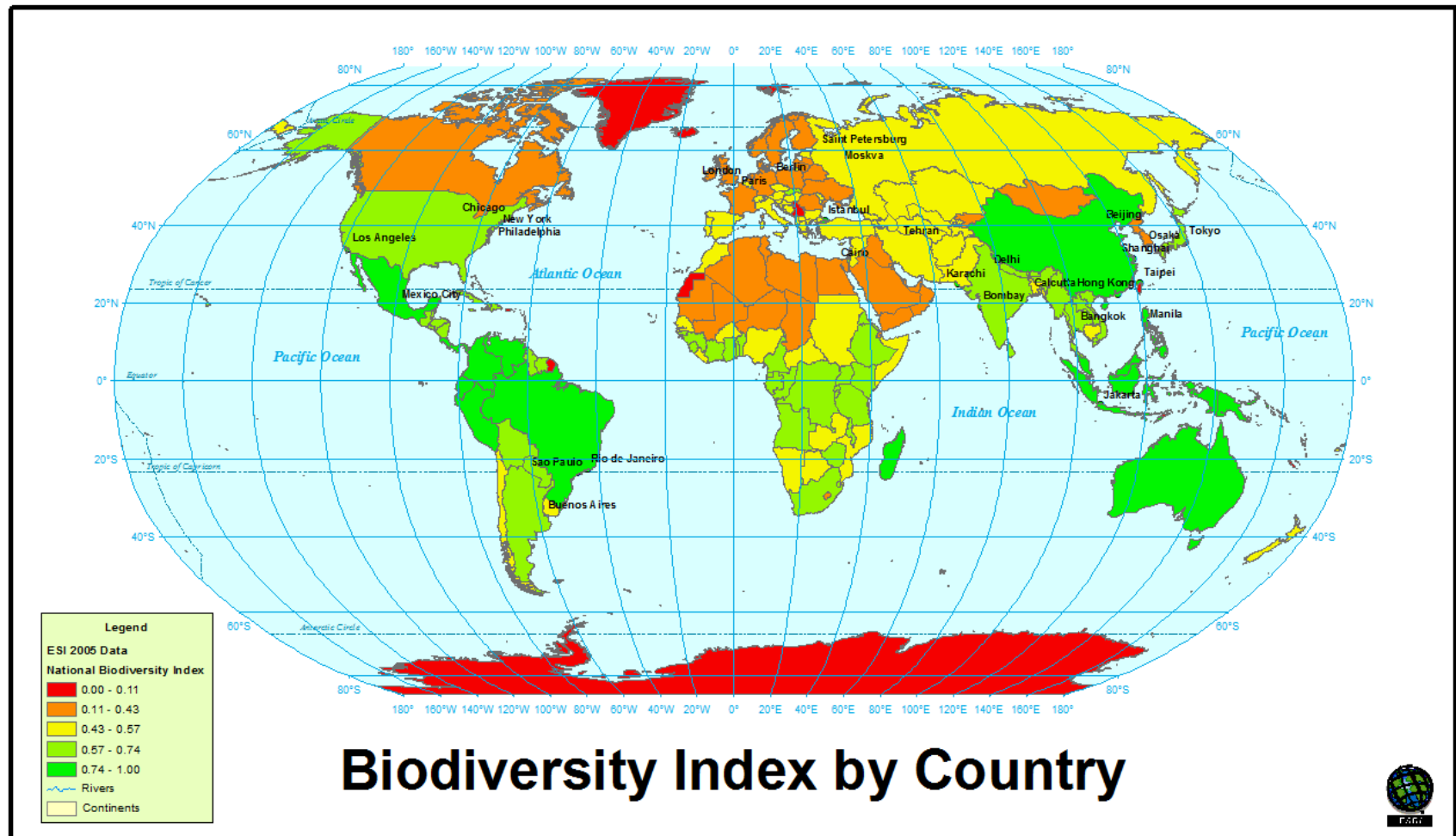
Step 2: Decisions

- ✧ Study the maps on the next two pages to decide with your team where you will spend your money.
- ✧ What countries or continents?

ANNUAL DEFORESTATION RATES



In what continents or countries is the most serious deforestation happening?



In what countries or continents is there the greatest biodiversity?

Reflect...

- ✧ What conclusions can you make from the previous two maps?
- ✧ What will happen if deforestation continues in the countries/continents?

Decide....

- ✿ Where will your money help the most?
What countries or continents will you help?
- ✿ Why did you choose these countries or continents?

Decide....

- ✿ What actions will you take to increase biodiversity in these countries?
- ✿ Be specific. For example, if you choose to decrease the rate of deforestation in these countries, how will you make that happen?

Present

- ✿ Create a PowerPoint that includes:
 - ✿ Title slide with team member names
 - ✿ 1 slide: what is biodiversity?
 - ✿ 1 slide: why is it important?
 - ✿ Where countries and continents have the greatest biodiversity?
 - ✿ 1 slide: what are the threats to biodiversity?
 - ✿ 1 slide: your plan – where will you help?
 - ✿ 1 slide: your plan – how will you help?
- ✿ No animations, sounds, etc.
- ✿ Pictures after approval of content