



## **Environmental Geography of Southeast Asia: Module Materials**

### **TEKS Alignment**

(8) **Geography.** The student understands how people, places, and environments are connected and interdependent. The student is expected to:

- (A) compare ways that humans depend on, adapt to, and modify the physical environment, including the influences of culture and technology;
- (C) evaluate the economic and political relationships between settlements and the environment, including sustainable development and renewable/non-renewable resources.

(19) **Science, technology, and society.** The student understands the impact of technology and human modifications on the physical environment. The student is expected to:

- (A) evaluate the significance of major technological innovations in the areas of transportation and energy that have been used to modify the physical environment;
- (C) examine the environmental, economic, and social impacts of advances in technology on agriculture and natural resources.

(20) **Science, technology, and society.** The student understands how current technology affects human interaction. The student is expected to:

- (B) examine the economic, environmental, and social effects of technology such as medical advancements or changing trade patterns on societies at different levels of development.

### **Key Vocabulary**

- Double cropping
- Deforestation
- Biodiversity

### **Module Introduction**

Environmental Degradation is a global problem, but some regions of the world have more difficulty addressing the issues and finding solutions than others. Less developed and newly industrializing countries often lack the resources needed to reduce the destruction caused by the primary and secondary economic activities which typically comprise the majority of their economic systems. In addition, governments in these countries may be unwilling to address environmental issues due to fear of losing industries and jobs vital to the future economic progress of the nation. Or, these governments may be unwilling to divert resources from issues they feel are more immediately pressing – such as education, health care, housing and sanitation. The final remaining obstacle facing countries both willing and able to address environmental issues is enforcement. Illegal activities are often even more destructive than legal

ones and enforcing the laws that are present again places governments in the position of diverting resources from other important issues.

There are numerous resources available online which deal with the various forms of environmental degradation across the globe. A few of the resources below focus on issues specific to Southeast Asia, but others address topics globally. Since Southeast Asia is taught towards the end of the school year in many districts, this unit provides an excellent opportunity to teach concepts at the regional level and apply them globally.

This module primarily deals with environmental issues such as deforestation and pollution. (Issues concerning climate change will be addressed in another module.) The video produced by TAGE provides an excellent introduction to the topic for teachers and students. The case study focuses on one of the world's largest mining operations and its effects on the environment in Indonesia. The lesson provided with this module allows students to select a topic they are interested in pursuing. The students will produce their own "documentary" introducing the issue and presenting possible solutions.

## Case Study

Grasberg Mineral District – Power Point

## Video Presentations

- Environmental Degradation
  - [http://stream.its.txstate.edu/users/tage/Fullll\\_Version\\_Env.mov](http://stream.its.txstate.edu/users/tage/Fullll_Version_Env.mov)
- Perspectives of Geography
  - [http://stream.its.txstate.edu/users/tage/PerspectiveOfGeo\\_Env.mov](http://stream.its.txstate.edu/users/tage/PerspectiveOfGeo_Env.mov)
- Dams along the Mekong River
  - [http://stream.its.txstate.edu/users/tage/Dams\\_Env.mov](http://stream.its.txstate.edu/users/tage/Dams_Env.mov)
- Deforestation
  - [http://stream.its.txstate.edu/users/tage/Deforest\\_Env.mov](http://stream.its.txstate.edu/users/tage/Deforest_Env.mov)
- Global Warming
  - [http://stream.its.txstate.edu/users/tage/Global\\_Warming\\_Env.mov](http://stream.its.txstate.edu/users/tage/Global_Warming_Env.mov)
- Wood Resources
  - [http://stream.its.txstate.edu/users/tage/WoodResources\\_Env.mov](http://stream.its.txstate.edu/users/tage/WoodResources_Env.mov)
- Tsunami
  - [http://stream.its.txstate.edu/users/tage/Tsunami\\_Env.mov](http://stream.its.txstate.edu/users/tage/Tsunami_Env.mov)
- Environmental Problems
  - [http://stream.its.txstate.edu/users/tage/Env\\_Problems\\_Env.mov](http://stream.its.txstate.edu/users/tage/Env_Problems_Env.mov)
- Flooding
  - [http://stream.its.txstate.edu/users/tage/Flooding\\_Env.mov](http://stream.its.txstate.edu/users/tage/Flooding_Env.mov)
- Physical Geography
  - [http://stream.its.txstate.edu/users/tage/Physical\\_Geo\\_Env.mov](http://stream.its.txstate.edu/users/tage/Physical_Geo_Env.mov)
- Resource Base
  - [http://stream.its.txstate.edu/users/tage/ResourceBase\\_Env.mov](http://stream.its.txstate.edu/users/tage/ResourceBase_Env.mov)

## Readings and Visual Resources

### Deforestation in Malaysian Borneo –

Collection of satellite photos, animations and a Google Earth kml file illustrating the impact plantation farming is having on the forests. Images are provided by NASA and Visible Earth.

- <http://visibleearth.nasa.gov/view.php?id=40139>

### Earth Pulse: State of the Earth 2010 Vital Statistics Interactive Map – National Geographic

This interactive map contains multiple layers of data including information on deforestation, cropland and pasture density, Population density and meat consumption.

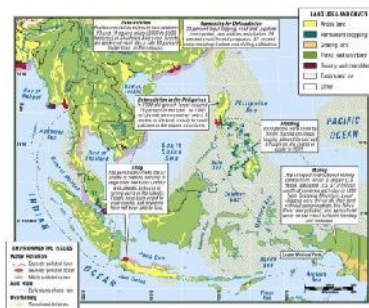
- <http://earthpulse.nationalgeographic.com/earthpulse/earthpulse-map>



### Environmental Issues in Southeast Asia

This map highlights some of the major environmental issues in Southeast Asia

- <http://www.roebuckclasses.com/105/regions/seasiapac/seasia/seasiaphys/physseasia.htm#Environment>



## Agriculture

This map highlights some of the major crops and types of agriculture found in Southeast Asia

- <http://www.roebuckclasses.com/105/regions/seasiapac/seasia/seasiaphys/physseasia.htm#Environment>



## Population and Natural Resources Case Study: Is population growth responsible for the loss of rainforests?

This case study investigates deforestation in Vietnam and the effects of development, population and natural resources policies. As the reading level might be challenging for high students, the case study is listed here as a background source for teachers. However, it might prove to be a good resource for an AP Human Geography course. The module is part of a collection of online modules designed for college courses by the AAG Center for Global Geographic Education.

- [http://cgge.aag.org/PopulationandNaturalResources1e/CS\\_Vietnam\\_Sep10/index.html](http://cgge.aag.org/PopulationandNaturalResources1e/CS_Vietnam_Sep10/index.html)

### **Population and Natural Resources**



#### **Case study:**

Is population growth responsible for the loss of rainforests?  
Focus: Southeast Asia

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## **Lesson Plan**

Environmental Degradation in Southeast Asia Documentary Lesson

Environmental Degradation Documentary Lesson Outline

Environmental Degradation Documentary Student Handout