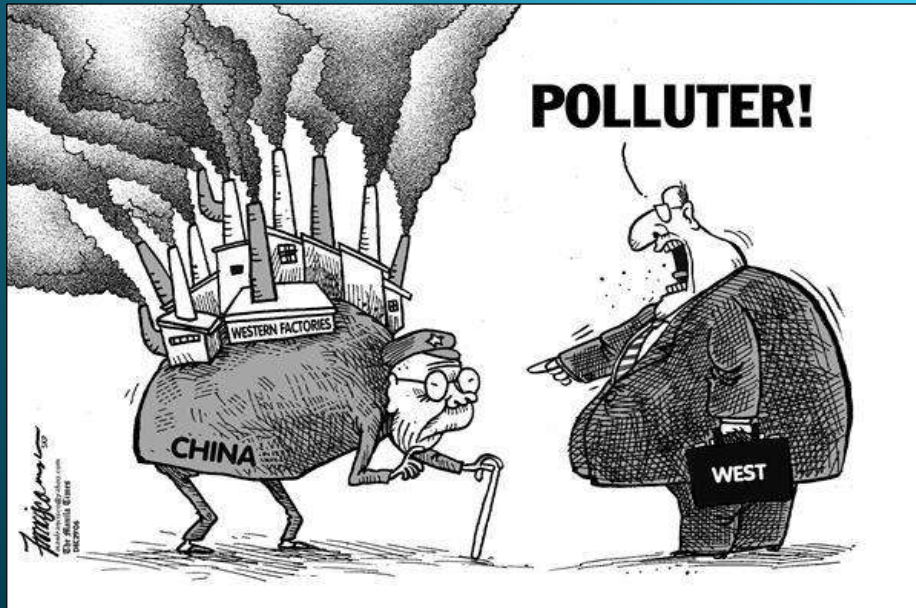
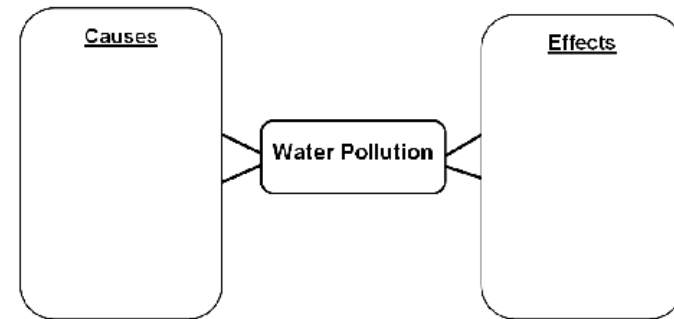
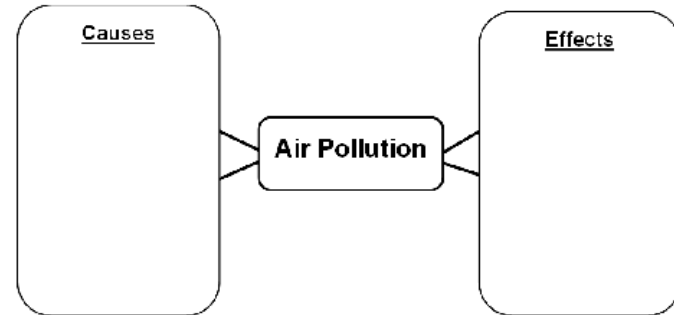
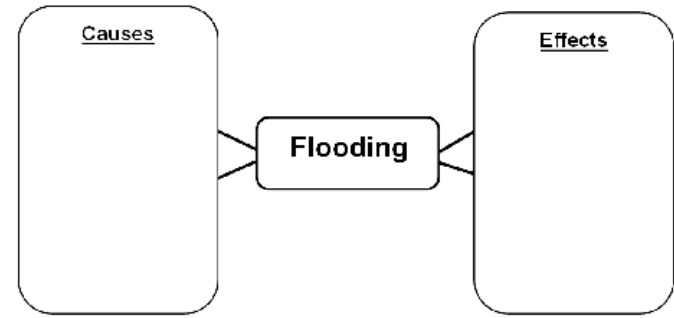


What environmental issues are illustrated in the pictures?



With a partner,  
brainstorm the  
causes and effects  
of the three  
environmental  
issues.

Southern & Eastern Asia Environmental Issues



## Causes

- Heavy rainfall
- Storm surge (from hurricanes and tropical storms)
- Tsunami
- Snowmelt
- Deforestation
- Land development
- High tide combined with high river levels

# Flooding

## Effects

- Loss of human life and livestock life
- Damage to property
- Destruction of crops
- Deterioration of health conditions due to waterborne diseases
- Disruption to communication

## Causes

- Emissions (release) of pollutants from cars, trucks, buses, factories, power plants, etc. that use fossil fuels
- Dust from fields, construction sites, and mines
- Natural disasters such as forest fires and volcano eruptions

# Air Pollution

## Effects

- Damages vegetation [plants]
- Harms the atmosphere (hurts the ozone layer that protects us from the Sun's UV radiation; linked to global warming/climate change)
- Harms humans (diseases)
- Emissions release pollutants that combine with moisture in the air to cause acid rain (contaminates drinking water, harms plants and animals, and damages rocks and buildings)

## Causes

- Sewage and wastewater
- Industrial waste
- Marine dumping
- Oil pollution
- Underground storage leaks
- Deposition

## Water Pollution

## Effects

- Health of humans
- Health of organisms living in and around the polluted water
- Disruption of food chains
- Destruction of ecosystems

# Essential Question: How has pollution and flooding affected Southern & Eastern Asia?

Standard:

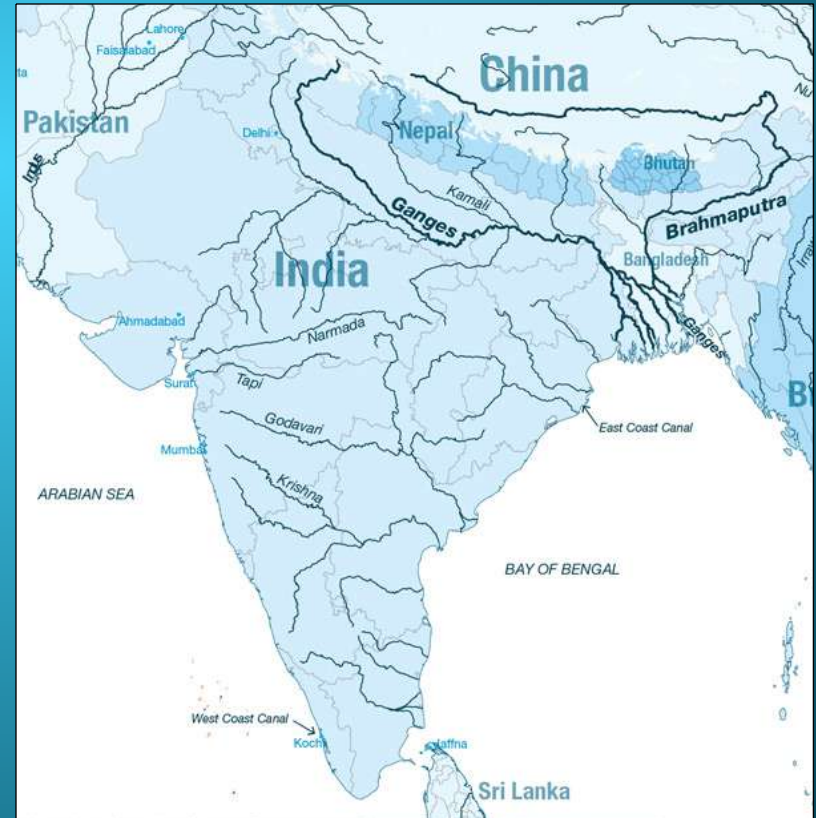
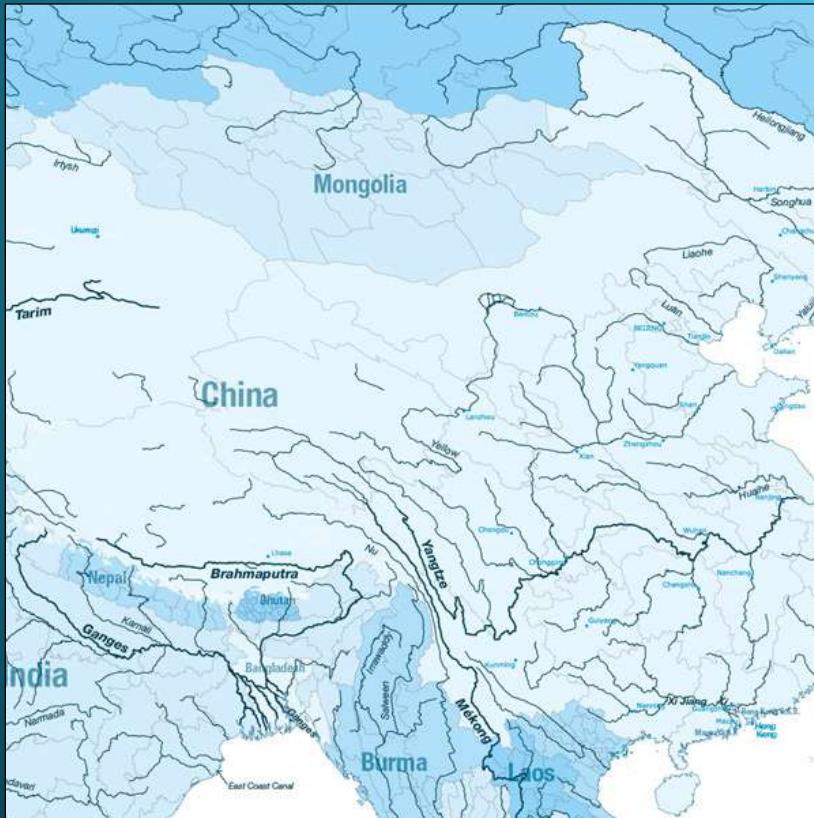
SS7G10a. Describe the causes and effects of pollution on the Yangtze and Ganges Rivers.

SS7G10b. Describe the causes and effects of air pollution and flooding in India and China.



# Flooding in India and China

Because parts of China and India are located along waterways, they are subject to flooding, which can damage the soil and make areas practically uninhabitable.





**Monsoons cause the majority of flooding in India and China. What are monsoons?**

**A monsoon is a seasonal change in the direction of the strongest winds of a region. Monsoons cause wet and dry seasons. Flooding can occur during the wet season.**

# Monsoons

[select one or two videos below]

Indian Monsoon Mechanism Animation

[3:08 animation explaining monsoons but there is no audio]

Monsoon in Kerala, India [1:22]

Effects of Monsoon Rain on India

[3:25]

# Think, Pair, Share

Why are monsoons a mixed blessing?

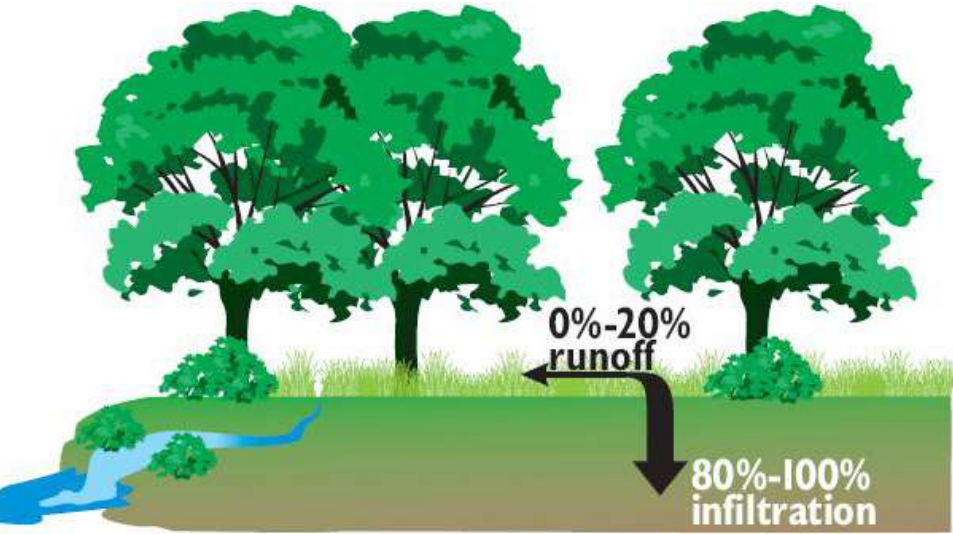
Monsoons help farmers because they rely on rainfall. Water from the rainfall can also be used to generate electricity.

**What types of human activity  
increase the effects of rainfall  
during the monsoon season?**

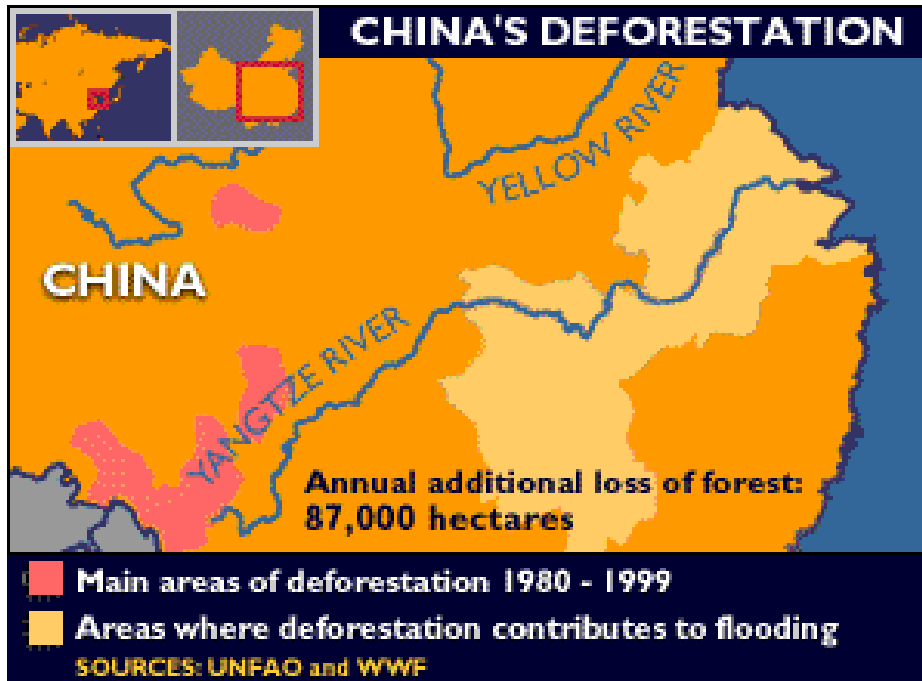
**Deforestation, Land  
Development, Removing  
Wetlands**

# Human Activities that can Affect Flooding





# Deforestation and the loss of wetlands has increased the effects of flooding in China.



# Summarize the Cause(s) and Effect(s) of Flooding in India and China on your graphic organizer.

Southern and Eastern Asia: Environmental Issues

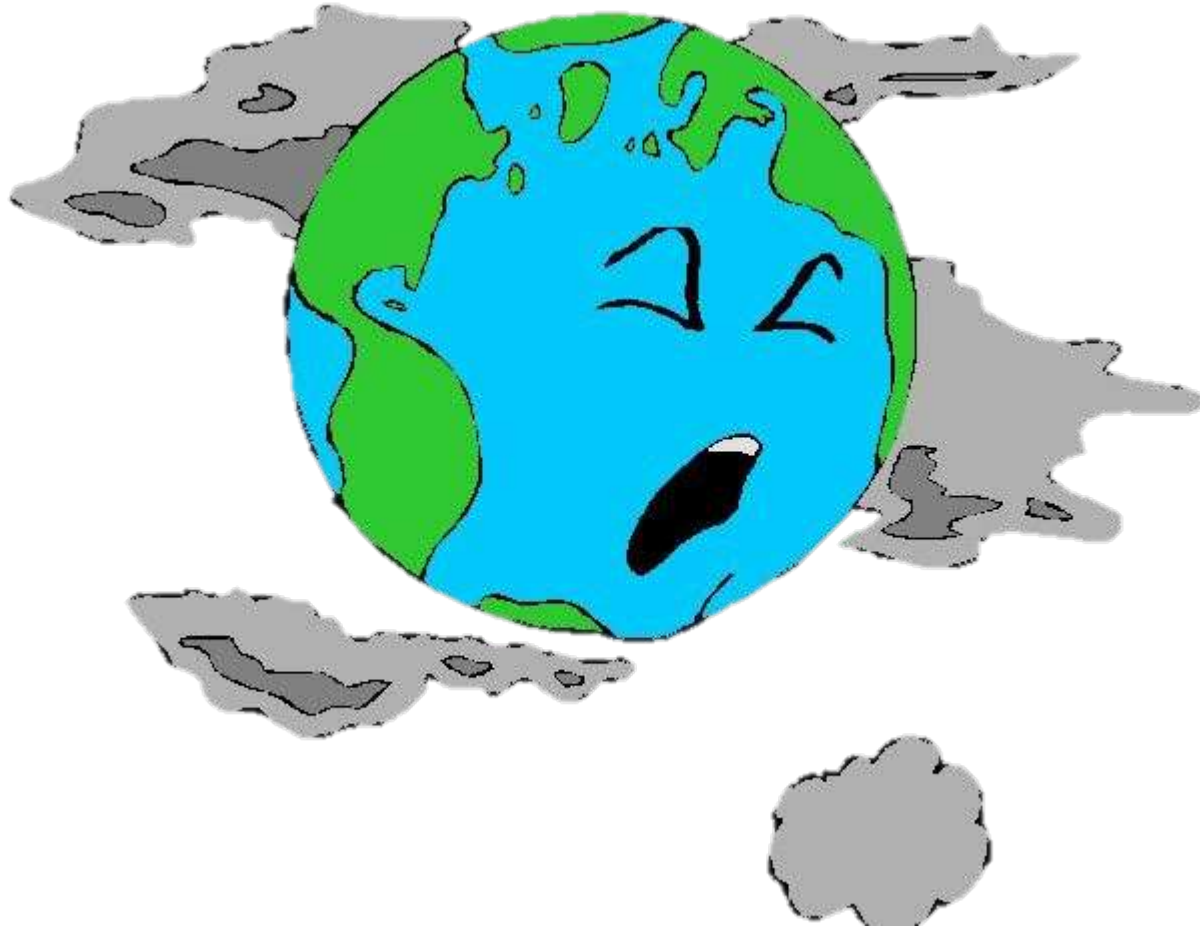
Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_

Country	Problem	Cause(s)	Effect(s)
India	Flooding		
	Air Pollution		
	Ganges River water pollution		
China	Flooding		
	Air Pollution		
	Yangtze River water pollution		

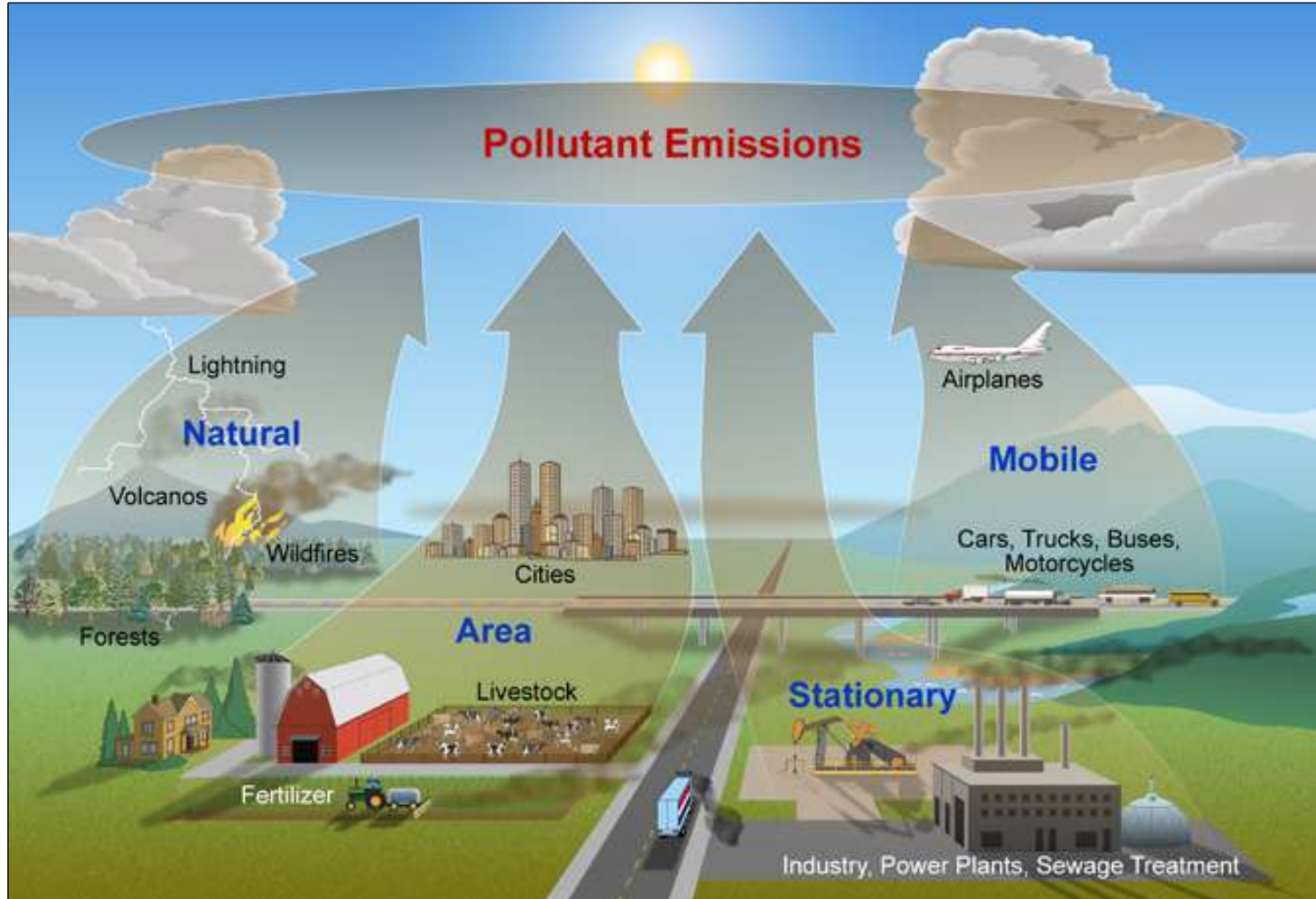


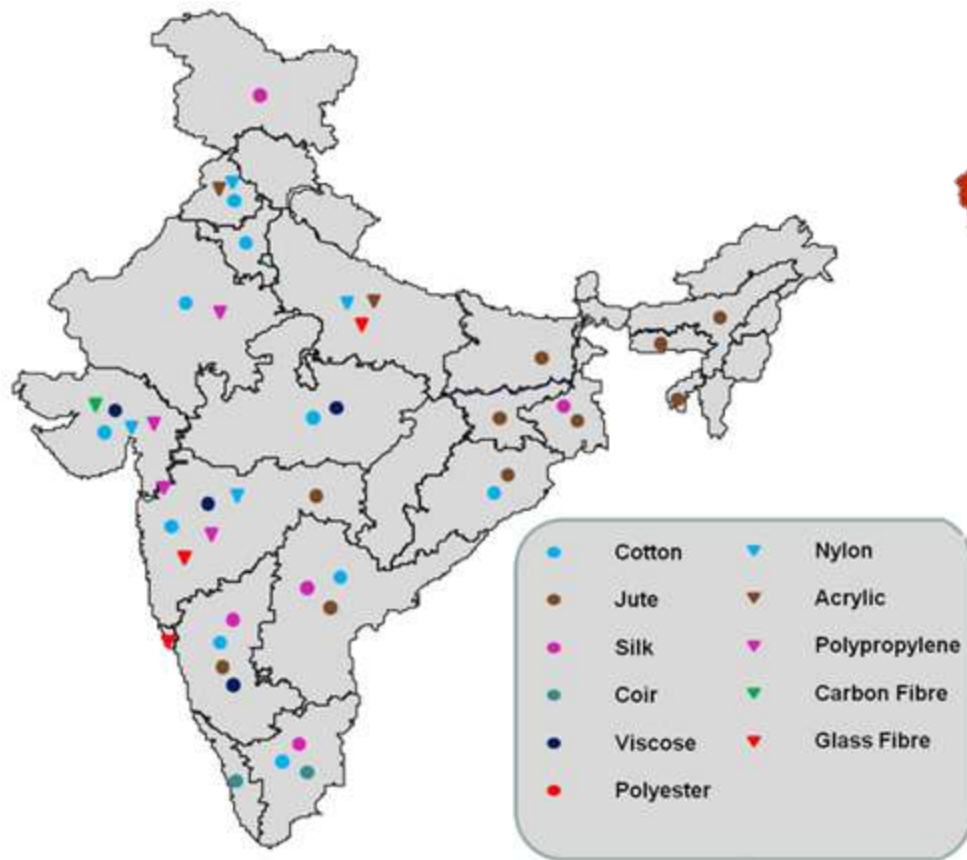
Country	Problem	Cause(s)	Effect(s)
India	Flooding	Monsoons (seasonal winds that bring rain) cause flooding in India. However, rain during the monsoon wet season helps farmers and is used to generate electricity.	Flooding caused by monsoons can harm living organisms (death or water borne illnesses), damage property and the environment, disrupt communication and transportation, cause economic losses.
	Air Pollution		
	Ganges River water pollution		
China	Flooding	Monsoons (seasonal winds that bring rain) cause flooding in India. However, rain during the monsoon wet season helps farmers. Over the years, China has cut down trees and drained wetlands which has increased flooding.	Flooding caused by monsoons can harm living organisms (death or water borne illnesses), damage property and the environment, disrupt communication and transportation, cause economic losses. Huang He causes more deaths than any other in the world.
	Air Pollution		
	Yangtze River water pollution		

**Air pollution is the introduction  
of harmful materials into the  
Earth's atmosphere.**



# Causes of Air Pollution





**The growth of industry has increased air pollution in India and China (burns fossil fuels).**



**Population growth has increased air pollution in India and China.**



**Vehicle emissions has increased air pollution in India and China.**

# Indoor Air Pollution is an increasing problem in India and China.



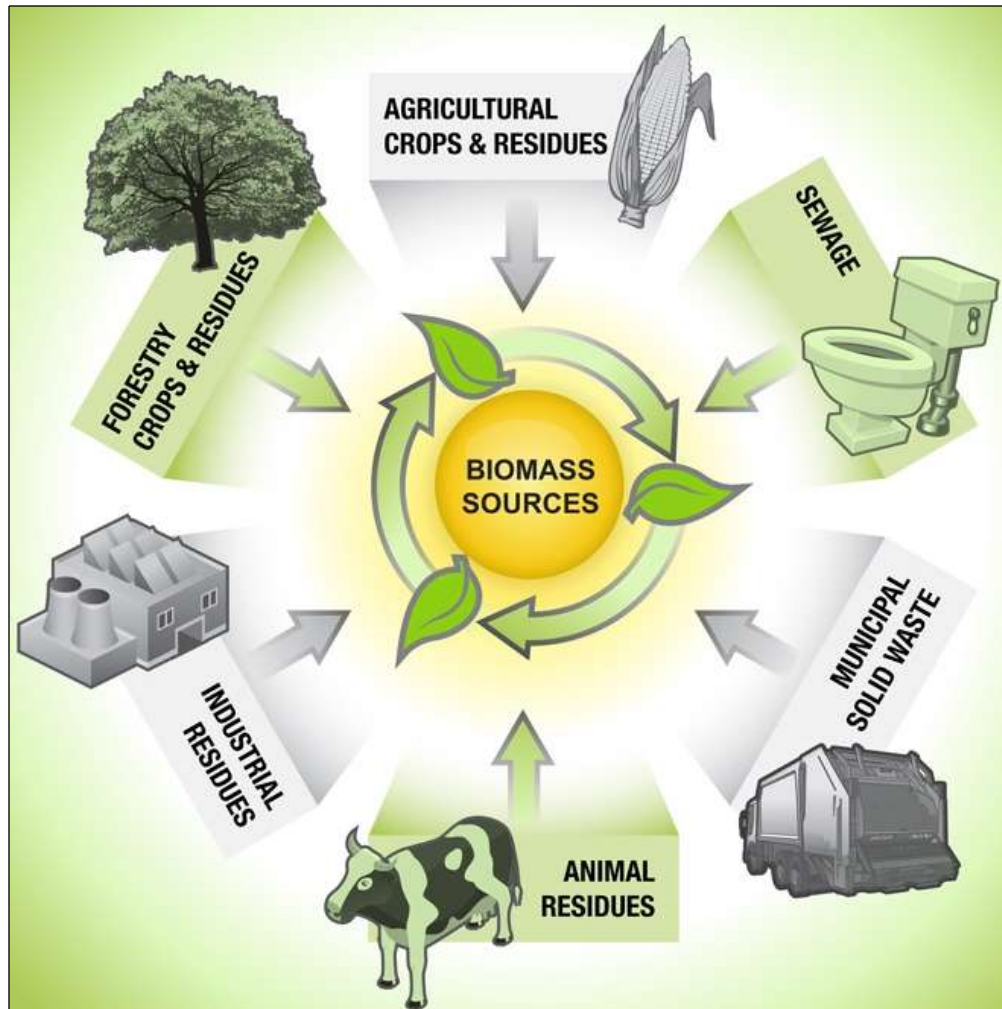


**Many Chinese people use coal (fossil fuel) to heat their homes which increases air pollution.**





**The use of biomass fuels for cooking has increased indoor air pollution.**



**Biomass is biological material derived from living, or recently living organisms**



**Cooking that**  
**Kills [3:00]**

# Think, Pair, Share

What are the causes of air pollution in India and China?

What are some of the effects of air pollution?

# Summarize the Cause(s) and Effect(s) of Air Pollution in India and China on your graphic organizer.

Southern and Eastern Asia: Environmental Issues

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_

Country	Problem	Cause(s)	Effect(s)
India	Flooding		
	Air Pollution		
	Ganges River water pollution		
China	Flooding		
	Air Pollution		
	Yangtze River water pollution		

Country	Problem	Cause(s)	Effect(s)
India	Flooding		
	Air Pollution	The burning of fossil fuels and car and factory emissions are polluting the air. Additionally, people in India use biomass for indoor cooking purposes which adds to indoor pollution.	Burning fossil fuels pollutes the air which can lead to health problems. Additionally, air pollution leads to acid rain which can damage buildings and natural locations.
	Ganges River water pollution		
China	Flooding		
	Air Pollution	The burning of fossil fuels and car and factory emissions are polluting the air. Additionally, people in China use coal (fossil fuel) to heat their homes which adds to indoor pollution.	Burning fossil fuels pollutes the air which can lead to health problems. Additionally, air pollution leads to acid rain which can damage buildings and natural locations.
	Yangtze River water pollution		

# Watch one of the video clips below about air pollution in China:

- Air Pollution becoming life-and-death Issue in China [1:56]
- 4,000 People in China Die Every day from Air Pollution [44 seconds]
- China Pollution Levels Hit 20 Times Safe Limit [59 seconds]

# Water Pollution

Dumping sewage and industrial and agricultural wastes cause river pollution, which in turn threatens plant and wildlife species.





# Water Pollution in India

- ▣ Water pollution only worsens India's water shortage problems.
- ▣ Artificial fertilizers from farming and industrial waste from factories seep into India's rivers and pollute them.
- ▣ India's Ganges River has been heavily polluted by industrial waste, sewage, and even human remains.



# Water Pollution in India

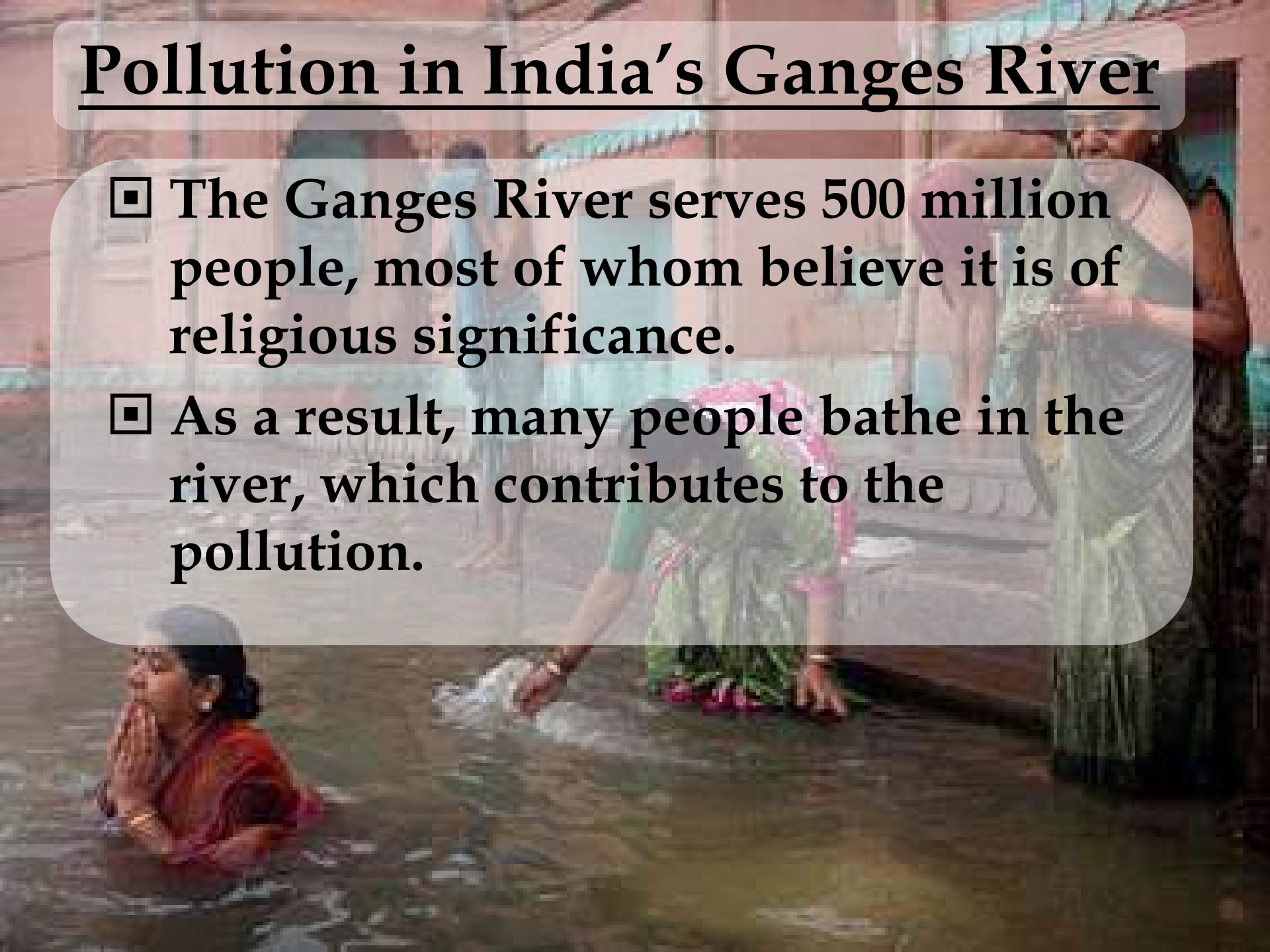


# Pollution in India's Ganges River



# Pollution in India's Ganges River

- ▣ The Ganges River serves 500 million people, most of whom believe it is of religious significance.
- ▣ As a result, many people bathe in the river, which contributes to the pollution.



# Pollution in China's Yangtze River



# Water Pollution in China

- ▣ Pollution in the river has increased over 73% in the past 50 years.
- ▣ Most agree the pollution is caused by large-scale industrial and domestic development, as well as agricultural runoff.
- ▣ Hundreds of cities located along the river contribute to the pollution.

# Pollution in China's Yangtze River



# Pollution in China's Yangtze River





# Think, Pair, Share

What are the causes of water pollution in India and China?

What are some of the effects of water pollution?

# Summarize the Cause(s) and Effect(s) of Water Pollution in India and China on your graphic organizer.

Southern and Eastern Asia: Environmental Issues

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_

Country	Problem	Cause(s)	Effect(s)
India	Flooding		
	Air Pollution		
	Ganges River water pollution		
China	Flooding		
	Air Pollution		
	Yangtze River water pollution		

Country	Problem	Cause(s)	Effect(s)
<b>India</b>	Flooding		
	Air Pollution		
	Ganges River water pollution	Most Indians believe it is of religious significance. As a result, many people bathe in the river, which contributes to the pollution. Industrial, agricultural, and human wastes contribute to the pollution.	Dumping sewage and industrial and agricultural wastes cause river pollution, which in turn threatens human, plant and animal life.
<b>China</b>	Flooding		
	Air Pollution		
	Yangtze River water pollution	Most agree the pollution is caused by large-scale industrial and domestic development, as well as agricultural runoff. Hundreds of cities located along the river contribute to the pollution.	Dumping sewage and industrial and agricultural wastes cause river pollution, which in turn threatens human, plant and animal life.

# Watch the video clips below about water pollution in India and China:

- Move Over Smog: China's Water Pollution Off the Charts  
[3:45]
- India's Polluted Water Systems  
[4:53]

# Summarizer

- ▣ Identify the causes of air pollution in India and China.
- ▣ Identify the effects of air pollution.
- ▣ Identify the causes of water pollution in the Ganges River.
- ▣ Identify the causes of water pollution in the Yangtze River.
- ▣ Identify the effects of water pollution.