**Environmental Issues in Southern and Eastern Asia**

**Water Pollution**

**Ganges River**

* The Ganges River begins high in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and flows southeast through India and Bangladesh for more than 1,500 miles to the Bay of Bengal.
* It is the most important river to the Indian subcontinent.
  + The Ganges provides water for drinking, bathing, cooking, and for transportation for over \_\_\_\_\_\_\_\_\_\_\_\_\_ million people who live in its river valley.
  + It runs through India’s most fertile and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ populated areas.
  + The Ganges is nicknamed “Mother Ganges”, and it is very sacred to the Hindu religion.

**Causes of Pollution**

* About two million \_\_\_\_\_\_\_\_\_\_\_\_\_ of chemical, \_\_\_\_\_\_\_\_\_\_\_\_, and agricultural waste pours into the Ganges every day.
  + Cities pour millions of gallons of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the river that is eventually carried to villages farther south.
* Human and animal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ also pollute the river.
  + Hindus believe that they will have a peaceful journey to the next \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ if their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are scattered into the Ganges.
  + Many are too poor for cremation, so they place the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the water instead.

**Effects**

* The Ganges River is highly polluted with dangerous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* It is estimated that about \_\_\_\_\_\_\_\_\_\_\_\_% of all illnesses and 1/3rd of deaths in India come from diseases carried by dirty water.
  + Outbreaks of such diseases as \_\_\_\_\_\_\_\_\_\_\_\_\_\_, dysentery, typhoid, and hepatitis are common.
  + Cities along the Ganges have the highest rates of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_ diseases (found in drinking water) of any who live in India.

**Solutions?**

* India’s government started a program in 1985 called the Ganges Action Plan\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, with the purpose of cleaning up the river.
  + Indians have built many sewage and water treatment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ along the river.
* Unfortunately, it has not proved to be enough as India’s growing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the run-off from industrial and farm production have continued to pollute the river.

**Yangtze River**

* The Yangtze is China’s longest river and the third longest in the world.
  + It begins in the Tibetan Plateau and flows nearly 4,000 miles through 185 towns where 400 million people live until it reaches the East China Sea.
* The Yangtze is extremely \_\_\_\_\_\_\_\_\_\_\_\_\_\_to about a third of China’s population because it provides hydroelectric power, water for irrigation, and transportation for cargo ships.
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_stations along the river take water out to supply people with water for drinking, irrigation, and industrial uses.

**Causes of Pollution**

* Billions of tons of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and waste from agriculture, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and humans pour into the river each year.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from fertilizers and arsenic (poisonous chemical) from industrial uses are the leading pollutants in the river.

**Effects**

* The pollution puts all of the \_\_\_\_\_\_\_\_\_\_\_\_\_ along its banks at risk.
* Many species of plants and animals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from farm run-off has caused algae in the water to multiply and is contaminating and killing the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Chinese people are eating the \_\_\_\_\_\_\_\_\_\_\_\_ fish, which has led to many health problems.
  + Hundreds of millions of Chinese villagers do not have safe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ water because of the pollution.

**Solutions?**

* The Chinese government is building more water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ facilities along the Yangtze’s banks.
* It is encouraging cities to build \_\_\_\_\_\_\_\_\_\_\_\_landfills for garbage rather than dumping it into the river.

**Flooding in India**

**Causes**

* Monsoons are a ­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ for India.
  + Farmers depend on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ for their crops and the huge amounts of water are used to generate electricity.
  + Unfortunately, monsoons are also responsible for heavy \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Monsoon season begins in \_\_\_\_\_\_\_\_\_ and spreads heavy rain until \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + If flooding occurs, the rivers \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and cause mass destruction and spread \_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_ diseases.

**Effects**

* When monsoons are too severe, the rivers \_\_\_\_\_\_\_\_\_\_\_\_ their banks and water sweeps over the land.
  + When this happens, \_\_\_\_\_\_\_\_\_\_\_\_ close, \_\_\_\_\_\_\_\_\_\_ lines fall, humans and animals \_\_\_\_\_\_\_\_\_\_\_\_, and water-borne \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ spread.

**Flooding in China**

**Causes**

* Monsoons are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to farmers, but they also cause floods in China.
  + China’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ season runs from March through August.
  + Over the years, \_\_\_\_\_\_\_\_\_\_\_\_\_ have cut down many of the trees that used to contain flooding.
* Farmers downstream have also drained \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that used to act as sponges during floods.
  + These actions have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the effects of the storm water runoff and it now takes much less water to cause a flood.

**Effects**

* Monsoons usually cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ every two or three years in China.
* When the river floods, homes and crops are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and lives are lost.
  + Flooding from China’s Huang He River has caused more \_\_\_\_\_\_\_\_\_\_\_\_ than any other river in the world.

**Air Pollution in India**

**Causes of Pollution**

* India has some of the heaviest air pollution in the world due to an enormous population, automobile \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the development of industry.
  + Automobile emissions account for almost \_\_% of the air pollution in some urban areas of India.
  + Indoor air pollution is also a growing problem.
  + In rural areas, many families cook over \_\_\_\_\_\_\_fires, using wood, livestock dung, or coal as fuel.
  + These fuel sources emit carbon \_\_\_\_\_\_\_\_\_\_\_\_\_, soot, and other harmful chemicals into the air.

**Effects**

* Because of India’s rapidly growing population, more and more Indians are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to pollution every year.
* Indians living in cities have some of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_rates of respiratory disease in the world.
  + Air pollution is now the \_\_\_\_\_\_\_\_\_\_ leading cause of death in India.
  + The Taj Mahal, a sacred site and popular tourist destination, is growing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from high levels of air pollution.
* Some scientists believe that Indian smog could potentially change weather patterns in \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Solutions?**

* It has been very difficult for India’s government to enforce laws on industry and transportation to clean up the air because it would affect the economy.
  + A large part of India’s population is poor and does not want anything to slow down economic growth.
* India has been investing money in \_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_ efforts, but it has not proved to be enough.

**Air Pollution in China**

**Causes of Pollution**

* China’s cities have experienced tremendous growth in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and industry in the past few decades.
  + China is home to \_\_\_\_\_\_\_\_ of the world’s 20 most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cities.
  + Much of China’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is provided by burning \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a process that sends soot, ash, and chemicals into the air.
  + The Chinese people also burn coal to heat their \_\_\_\_\_\_\_\_\_\_, adding to the pollution problem.
  + Millions of Chinese people now drive automobiles, whose \_\_\_\_\_\_\_\_\_\_\_\_ is a major source of air pollution.

**Effects**

* The leading causes of \_\_\_\_\_\_\_\_\_\_ in China are heart and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_conditions related to overexposure to air pollution.
* Air pollution has also created \_\_\_\_\_\_\_\_\_\_\_\_\_\_ rain in China, a problem for at least a third of country’s agricultural areas.
* Unfortunately, air pollution created in Chinese cities is not confined in the country.
  + \_\_\_\_\_\_\_\_\_ carry the contaminated air and rain to Korea, Japan, and other parts of Asia as well.

**Solutions?**

* China’s government created the Beijing Municipal Environmental Protection Bureau to work on the quality of the city’s air before the \_\_\_\_\_\_\_\_\_\_\_ Olympics.
  + Automobile traffic was greatly \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and many factories were temporarily closed.
  + Many air pollutants were cut by as much as \_\_\_\_\_\_\_\_\_%.
  + Many people enjoyed the cleaner air and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the government to find long-term ways to clean it up.