

GEOGRAPHY WORKSHEET 32

Human-Environment Interactions

The Dust Bowl and Desertification

Directions: Read the paragraphs below and study the map carefully. Then answer the questions that follow.

During and after World War I, thousands of Americans moved to the Great Plains area of the United States. An increased demand for grain encouraged many of them to try farming. Improved agricultural machinery made sowing and reaping easier, but many of these new farmers did not prosper. They lacked farming skills and had problems adapting to the area's environment and climate.

From 1935 to 1938, the southern Great Plains—mainly in parts of Kansas, Oklahoma, Texas, New Mexico, and Colorado—suffered severe environmental damage. Wind, rain, and severe dust storms eroded the land and depleted the topsoil. Erosion occurred, in part, because much of the natural grassland was converted to wheatland during the early 1900's. The wheat—as it was grown then—did not adequately protect the ground against winds. In addition, overgrazing had destroyed much of the remaining grasslands. By the 1930's, the lack of soil protection and a lengthy drought had together ruined the land, creating the Dust Bowl.

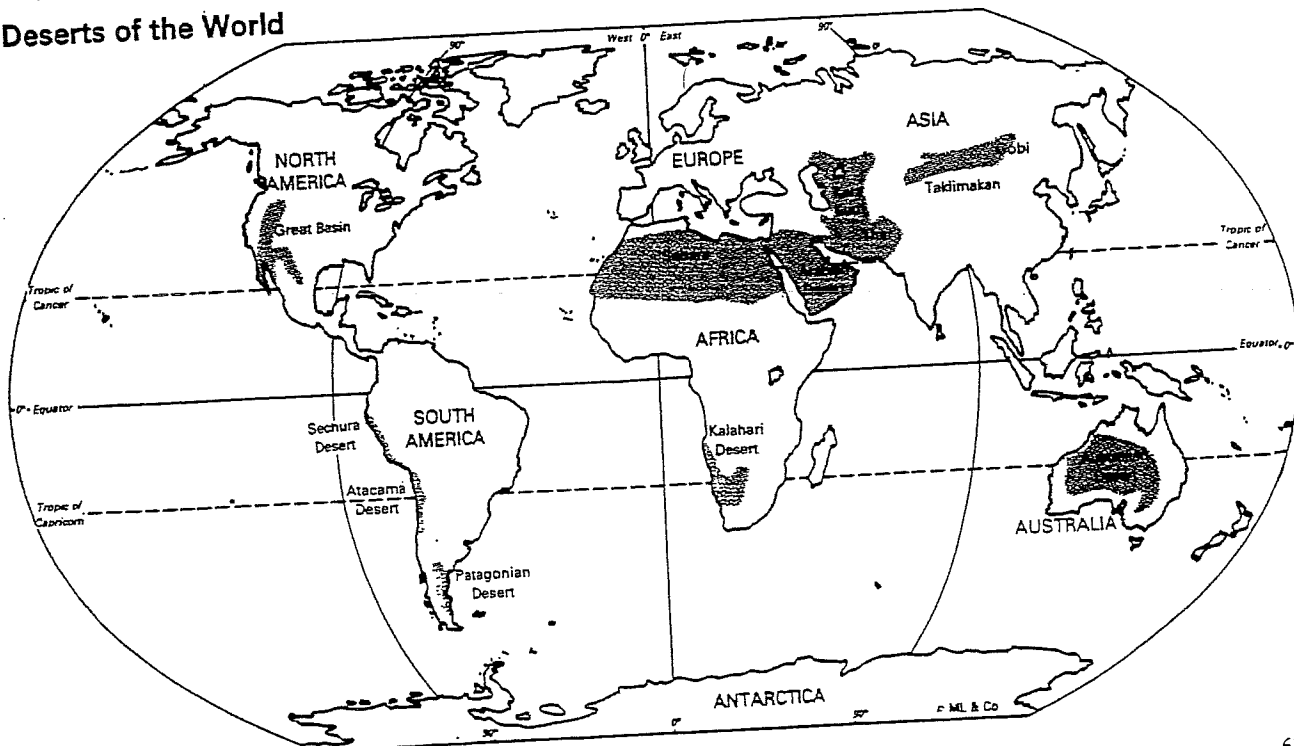
The formation of the Dust Bowl is an example of a process called **desertification**, which affects environments throughout the world. The process involves the turning of arid or semiarid land into desert. Dry lands are most likely to become desert because there is very little or only sporadic moisture for plants to use.

However, some form of human activity is usually required for such areas to become deserts. Such activity might include changing the geography by removing the natural vegetation—cutting down trees, for example. Farming too intensively or using scarce ground water for irrigation and industrial projects can also cause problems. Overgrazing the land is another major cause of desertification. Overgrazed land is land from which animals have eaten the grass and plants that helped to protect the soil from the elements. Animals can also damage the land by damaging the roots of plants with their sharp hooves. This kills the plants and exposes the soil to the elements.

In response to the desertification of the Great Plains, the federal government sent aid to the stricken area. The Soil Conservation Service, established in 1935 as part of the New Deal programs, taught farmers ways to slow erosion and protect the soil. Over 18,500 miles of trees were planted in groups, or shelterbelts. Vast areas were allowed to return to their natural grassland state.

Today, people understand how deserts are formed and can use that knowledge to halt desertification. For example, plants should be left in the soil during times of drought. The roots help hold the nutrients, while the foliage protects the soil from the elements. Plants also slow down the evaporation of ground water.

Deserts of the World



Mastering Facts

- 1. What is desertification?

- 2. How can animals contribute to the process of desertification?

- 7. According to the map, where is there a risk of desertification in the United States?

Inferring Information

- 8. Why do you think desertification is a risk in the Great Plains?

Seeing Relationships

- 3. How does the creation of the Dust Bowl in the Great Plains exemplify the geographic theme of human-environment interaction?

- 9. How might migration to the Sunbelt increase the risk of desertification there?

- 4. What were the human and environmental factors that contributed to the formation of the Dust Bowl?

Judging Policies

- 10. How would the planting of huge shelterbelts of trees have helped alleviate the problems of the Dust Bowl?

Reading Maps

- 5. At what latitudes are the majority of desert areas throughout the world located?

- 6. It is a general assumption that deserts only occur in hot areas. Do you think this assumption is correct? Use information from the map to support your answer.

- 11. What steps might be taken to prevent the development of another Dust Bowl in the United States?

