

Environmental Consequences of Connectivity

Dead bodies filled every corner.

—Giovanni Boccaccio (1313–1375)

Essential Question: What were some of the environmental effects of trade in Afro-Eurasia from c. 1200 to c. 1450?

Although trade networks enabled the spread of novel agricultural products, such as the introduction of certain citrus fruits to the Mediterranean basin, the most dramatic environmental consequence of increased commerce was not food, but rather disease. Bubonic plague or “Black Death” swept from Central Asia; struck in China, India, Persia, and Egypt; and arrived in Europe in 1347. The epidemic is estimated to have killed from 75 to 200 million people in Eurasia and peaked in Europe from 1347 to 1351. Boccaccio, whose famous work *The Decameron* was inspired by living through the plague, described the horrors he saw.

Agricultural Effects of Exchange Networks

Along with luxury goods, spices, textiles, and religions, merchants in some places introduced crops where they had not grown before. The new crops often had an impact on land use and population growth and distribution. In some areas, people found ways to sustain abundant production; in others, overuse of the land led to environmental degradation.

Migration of Crops Few crops had as significant an impact as the quick-ripening **Champa rice**, which was introduced to the Champa states by Vietnam, a Hindu state, and then offered to the Chinese as tribute. Because of the Hindu influence on Champa in present-day central Vietnam, some scholars believe Champa rice may have originated in India. It was drought-resistant, flood-resistant, and capable of yielding two crops a year. It was widely distributed in China to meet the needs of the growing population and in turn contributed to the population growth.

It also had an impact on land use. Through terraced farming in the uplands and paddies in the lowlands, Champa rice was grown in many parts of China where once land was thought unusable for growing rice. Nonetheless, as the

population of China grew, people tended to migrate southward to the original rice growing region, contributing to the growth of cities.

Indonesian seafarers traveling across the Indian Ocean had introduced **bananas** to Sub-Saharan Africa. The nutrition-rich food led to a spike in population. Many Indonesians settled on the island of Madagascar. Bananas allowed the Bantu-speaking peoples (see Prologue) with their metallurgy skills and farming techniques to migrate to places where yams—a traditional food source—did not easily grow. To grow bananas, farmers increased land for cultivation, which enriched diets and led to population growth.

As caliphs conquered lands beyond the Arabian Peninsula, they spread Islam, the Arabic language, and the cultivation of cotton, **sugar**, and **citrus crops**. New foods were also available at the markets along the trade routes. The markets of Samarkand, for example, introduced new fruits and vegetables, as well as rice and citrus products from Southwest Asia, to Europe. Europeans' demand for sugar would become so high that it became a key factor in the massive use of enslaved people in the Americas in the 1500s and after. (Connect: Compare the techniques used by Chinese farmers to raise food products with the techniques of Indonesian or Vietnamese farmers. See Topic 1.1.)



Source: Library of Congress, Prints and Photographs Division

This photo was taken in 1911 of a vendor in the central Asian city of Samarkand. In the valleys in this region, people have long grown melons, grapes, apples, citrus fruits, pomegranates, apricots, peaches, and other fruits. These products were then widely distributed by merchants who traveled on the Silk Roads.



Environmental Degradation Increases in population put pressure on resources. For example, **overgrazing** outside of Great Zimbabwe was so severe that people had to abandon the city in the late 1400s. (See Topic 1.5.) In feudal Europe, overuse of farm land and **deforestation** led to **soil erosion**, reducing agricultural production. The Little Ice Age (c. 1300–c. 1800) also contributed to a decrease in agricultural products. Environmental degradation was a factor in the decline of the Mayans in the Americas as well.

Spread of Epidemics through Exchange Networks

While scholars in Dar al-Islam and India were developing advances in medical understanding and treatment, no knowledge at the time could have prevented the spread of deadly infectious diseases that accompanied trade. The Mongol conquests helped to transmit the fleas that carried the **bubonic plague**, termed the Black Death, from southern China to Central Asia, and from there to Southeast Asia and Europe. Some historians believe the caravanserai that housed people and animals together may have contributed to the spread of the disease, since the animals likely carried infected fleas.

The Black Death had a tremendous impact on Europe, killing one-third of the population there in a few years. With fewer workers, agricultural production continued its decline. However, the reduced number of workers led to a new relationship between workers and those they worked for: each person’s labor became more valuable, so workers could demand higher wages. This shift helped lay the groundwork for the economic changes that developed as feudalism declined.

The Black Death led to similar loss of life in other areas, including North Africa, China, and Central Asia. About 25 million Chinese and other Asians died between 1332 and 1347. South Asia and Sub-Saharan Africa were spared because there were few trading ports in those regions.

KEY TERMS BY THEME		
ENVIRONMENT: Crop Diffusion Champa rice bananas sugar citrus crops	ENVIRONMENT: Degradation overgrazing deforestation soil erosion	ENVIRONMENT: Disease bubonic plague