The Panama Canal: An Important Passageway between Oceans

Outline Assessment


Prompt:
The Panama Canal: describe its history, how ships travel through it, and its economic significance.

Figure 1: Ship on the Panama Canal (Mason, 2014)
Text 1: Passage through the Panama Canal

The Panama Canal is an artificial 82-kilometer waterway in Panama that connects the Atlantic and Pacific Oceans. The canal allows quick passage between these two oceans for purposes such as trade, transportation of military ships, and tourism.

As shown in Figure 2, there are three lock gates located at three different places over the length of the canal. Entering the canal from Atlantic Ocean, these are the Gatun lock gates, the Pedro Miguel lock gates, and the Miraflores lock gates. The lock gates are in six steps. Three locks lift the ship up, and three locks drop the ship back down to sea level. Each lock has two lock chambers; this enables a two-way transit of ships, reducing traffic at the canal.

When entering the canal from the Atlantic Ocean side, there are three Gatun locks. These lift the ship up 26 meters in three steps. Once the ship is lifted up, it reaches Gatun Lake. This is a freshwater lake supplying water to the lock chambers, enabling the ships to be lifted up and dropped down. Then, the Pedro Miguel locks lower the ship down. The ship transits through Miraflores Lake, entering the Miraflores locks which again lower the ship by two steps, thus reaching the Pacific Ocean.

The Panama Canal was expanded in 2016. This expansion doubled the canal's capacity, allowing ships to sail through it much more quickly. It takes ships about eight to ten hours to cross the canal, but before the expansion, ships needed 15 or more hours to get through it. By providing a quicker passage of ships, the canal contributes to less fuel consumption and fewer greenhouse gas emissions.

Text 2: A Difficult Beginning for the Panama Canal

In 1882, the French government tried to build a canal across Panama. However, due to severe tropical diseases, it lost nearly 20,000 of its workers. This caused them to stop the project. At that time, Panama was part of the federation and country of Colombia. It separated from Columbia in 1903, and in 1907, civilians from the United States began blasting through tons of mountain stone. This began the American construction of the Panama Canal. Theodore Roosevelt, the United States president at that time, visited the construction area. He was the first sitting American President to travel outside of the United States. While in Panama City, Roosevelt gave a speech stating that the Panama Canal was a symbol of the ties between the two countries.

The Panama Canal was completed in 1914 at a cost of $366.5 million USD. It is a crucial shipping lane because it saves so much more time and distance than the route previously required. Before the Panama Canal opened, a ship traveling from New York to San Francisco had to sail all the way around the tip of South America, and then travel the entire distance back to the Northern California coast (see Figure 3). This was not only a much longer route, but also a much more dangerous one because of strong winds and storms. By using the Panama Canal, ships save 12,670 kilometers because they do not need to sail around South America.

![Figure 3: Shipping routes before and after the Panama Canal was built (Sapkota, 2011)](image)

Text 3: Operation of the Panama Canal

The Panama Canal makes the trip from the east coast to the west coast of the U.S. much shorter than in previous times. Before 1914, ships had to travel to the tip of South America to get from east to west. However, many oil supertankers, military battleships and aircraft carriers cannot fit through the canal and still need to take alternative routes.

The Panama Canal locks system is a necessary feature of the Panama Canal. This is because the main section of the canal is higher than sea level. The canal has a water lock system that acts like a massive elevator. When a ship enters the locks, it is raised by water from the lake (see Figure 4). Each lock raises the ship until it is about 26 meters above sea level, and then the ship is lowered by the locks to sea level. The locks were one of the greatest engineering works ever to be undertaken when they opened in 1914. No other concrete structure of comparable size was built until the Hoover Dam, which was constructed in the 1930s.

Considering the thousands of ships full of goods that pass through the Canal every year and the impact that closing the Canal would have on the world economy, it is understandable how important the Panama Canal is. Keeping the canal operating is very important to the United States and to the global economy.

![Figure 4: Cargo ships passing through the Gatun Locks (Franco, 2006)](image)

Text 4: Commercial Importance of the Panama Canal

The Panama Canal is a man-made waterway in Panama that connects North America with South America. From 1903 to 1979, the land surrounding the canal remained a United States territory. It was a 1977 treaty that established the canal as an international waterway, and even in times of war, any ship is guaranteed a safe journey.

The Panama Canal is important to Panama for income and jobs, and it is also vitally important to the economies of the United States and other countries. If trade through the canal is disrupted, it can lead to worldwide economic problems. For instance, without the canal, ships would have to travel around South America. This would make products more expensive; as a result, some countries would not be able to afford to buy them. The amount of revenue, or money received from selling these products, would decrease and there would be less money available to purchase goods from other countries such as the United States. This would create a “domino effect” as other countries could experience problems with their imports and exports.

Text 5: Panama finally owns the Panama Canal

When construction of the Panama Canal was completed in 1914, the country of Panama was divided into two parts. However, the Canal Zone, the land running approximately 80 kilometers across the Isthmus of Panama, came under the control of the United States. This caused tension between Panama and the United States for many years. One of the problems that angered the people of Panama was that the Canal Zone contributed very little to their economy.

In the 1960s, anger grew amongst the Panamanian people because they were not profiting from having the canal run through their country. The governments of the United States and Panama began to work together to solve this issue. In 1977, the U.S. signed a treaty which would guarantee the return of 60% of the Canal Zone to Panama in 1979 (see Figure 6). The 1977 treaty established the canal as a neutral international waterway. The canal and remaining territory, known as the Canal Area, was returned to Panama on December 31, 1999. Since the 1999 handover, the United States and Panama have jointly shared responsibility for defending the canal.

At present, several United States exports and imports travel through the canal daily. In fact, over 10% of all United States shipping goes through the canal. Exports and imports provide many jobs for both U.S. and Panamanian citizens.


Figure 6: U.S. President Jimmy Carter and the head of Panama’s military government, General Omar Torrijos, signing the Panama Canal Treaties in 1977 (Jeny, 1977)