

The Panama Canal: climate change threatens segment of a global network

Carilyn Pointer

08/27/2023



Panama Canal, 1994

Carilyn Pointer – Globally temperatures rise, reducing ship traffic in important water ways such as the [Panama Canal](#), the Rhine River, the Yangtze River, and the Mississippi River. Hotter temperatures due to the burning of fossil fuels are causing the water levels across the globe to decrease. As the impacts on the global trade network become apparent, concerns for the future of international trade network arise.

[Networks](#) are comprised of a collection of nodes. The nodes may vary in function, but all contribute to the same goal and are connected by the network. To illustrate, in the global trade network, nodes are represented as ports, individual countries, or large international companies. What connects the different nodes then, is the common desire for a variety of goods which are exported and imported via the main water ways. This network allows for goods to be available in stores year-round, regardless of season. However, with less water in places such as the Panama Canal, ships are having to limit their weight to pass through. This in turn disrupts the network of trade and may affect entire countries, as the supply chain simply cannot keep pace with the demand for goods. According to the OECD, “Ocean shipping is how 90 percent of global goods reach one part of the world from another.” As droughts, heat waves, and tropical storms increase across the globe, this problem is only likely to reoccur.

[Scales](#) are another important concept to consider with this topic. The disruption of trade is happening at the global

scale, but the impact will be felt at the individual level. As goods struggle to be transported across the ocean, individuals are likely to see less fresh produce on the grocery store shelves in the winter and longer shipping times for their Christmas gifts.

Photo Credit: Family collection of Information of New Orleans, distributed via [Creative Commons Attribution-Share Alike 4.0](#)