Hindsight

Case:
H34

Logline:

Geographical Interest:
Global Sea Routes

Topic:
Panama Canal Drought

Tagline:

Title: Why the Panama Canal is Dying

1. **Hook**

This is a traffic jam at the entrance of the Panama Canal.

The number of ships that is allowed to transit has been drastically reduced, by as much as 50% in the first months of 2024.

To make matters worse, each vessel is allowed to carry 40% less weight. This prompted some ships to unload their cargo, and to move it by rail to the other side.

These unprecedented measures were taken by the Panama Canal Authority. They raised the alarm about a crucial artificial lake at Panama's inland. That was already in July 2023, but since then it has only gotten worse. [0]

This is an economic disaster. It is disrupting global trade routes during an already difficult period for shipping companies. And for the United States, who transits 40% of all their container traffic through this canal, the biggest blow is yet to come. [0]

What is going here?

This is whether the Panama Canal is Dying… with Hindsight.

2. **Bumper**

3. **Body**

Our story starts in France with a genius engineer.

Ferdinand de Lesseps was praised nationwide for his work on the Suez Canal. The canal was opened a few years prior and was now generating massive profits for its investors. This turned De Lesseps into a national hero.

In 1880, he announced that he would be working on another project. He would dig a similar canal in Panama, relying on the same techniques that had proven to work so well in Egypt.

Investors were eager to get on board, and in 1881, he had raised sufficient funds to start construction.

De Lesseps had visited Panama only a few times. He wanted to dig a canal from ocean to ocean, through the mountainous inland. But he soon realized that it was going to be a much bigger challenge than they had thought.

Panama is covered in a dense jungle. Little was known about tropical diseases and how they spread, and the small rivers that they were working on turned into raging torrents during the rainy season.

3 years into the project, the construction was costing the lives of hundreds of workers each month. Mostly from tropical diseases. They were going over budget, and the feasibility of the canal was being questioned.

In France, however, De Lesseps downplayed these setbacks to reassure investors. But after 8 years and little progress, they went bankrupt.

That's when the truth came to light.

Stories broke about

"Millions being paid in bribes" [Screen Shot 2023-11-16 at 12.13.24]

"corruption" [Screen Shot 2023-11-16 at 12.15.13]

scandals. [Screen Shot 2023-11-16 at 12.16.04, Screen Shot 2023-11-16 at 12.16.32, Screen Shot 2023-11-16 at 12.17.54]

It all came out, and prominent officials were sentenced to long jail sentences. Most of which were later overturned.

But that dream of building the canal never disappeared. For a ship in Florida to reach China, they can take the route around Cape Horn, which takes 41 days. But if they travel through the Panama Canal, it only takes them 35 days. This is by far the fastest and least expensive way for trade between the US East Coast, and East Asia. [0]

Around the year 1900, the United States was showing a keen interest.

Panama was still a province of Colombia, and in 1903, the U.S. government made a deal with the Colombians to lease the land to build a canal. They would pay a one-time fee of $10 million, in addition to an annual payment. But the deal wasn't ratified by the Colombian Senate, who was hoping to get a better deal.

That's when the U.S. shifted gears.

In Panama, a few months later, separatists declared independence from Colombia. They were swift to respond but were held back by the U.S. coast guard who denied them entry. There was nothing that they could do.

Panama gained independence, and only days later, the United States was granted the rights to build and indefinitely administer the canal zone.

They purchased the French assets and started building. A key component of their plan was to build the largest dam in the world. This would block a large river running through Panama's mainland and would eventually create the largest man-made lake in the world. [0]

The plan was to build locks that raise ships to the height of the lake, which is about 26 meters above sea level. Locks on the other side of the lake would then lower the ships back to sea level. The remaining challenge was that there was a mountain range on the Atlantic side. This was about 15 kilometers wide and had a tallest point of 100 meters. [0]

The United States, in those years, was the world leader of industrial manufacturing. They designed and deployed the biggest and most advanced machinery in the world in their attempt to cut through these mountains. They used steam-powered cranes, and giant rock crushers. They had to move millions of cubic meters of dirt, which then had to be transported and distributed elsewhere. They built these custom these steam shovels, and this track shifter, which allowed them to quickly reposition a train track. [0][0]

This was by far the largest American engineering project in history, and in 1914 it was completed.

A ship that transits the canal from the Pacific side first enters the Miraflores locks. Tugboats position the ship and the gates are closed. The operator then opens the sluice, letting water flow in by force of gravity. This process is repeated for each of the locks until the ship reaches Gatun Lake. [0]

The drive through the lake provides scenic views of the Panamanian Inland. On the other side, the same process is repeated in reverse. Ships with a length up to 1,200 meters can transit. Which means that nearly 97% of the world's container fleet can transit. [0]

The canal was owned and administered by the United States until 1977. It was then gradually transferred to Panama, who gained full control in 2000. [0]

It is a true marvel of engineering, but it has one fatal flaw.

Each time a ship passes through these locks, about 50 million gallons of fresh water is lost from the lake. That's roughly how much water 2,000 people use in an entire year. [0]

This process is repeated dozens of times per day, and this wouldn't be an issue if it's compensated with sufficient rainfall. And that's where the problem lies.

2023 was the driest year in Panama's history since records began in 1950. [0]

Over the past five years, the average water level in November was 26 meters. It is normal for the water level to drop during the winter months, and then rise again in the summer. But this year the water level continued to drop. By November, it was 2 meters lower than its average height for this month during the past 5 years. [0][0]

At the time of writing, mid-November 2023, there are only two months left in the rainy season, and the torrential rains still haven't come. This is caused in part by El Niño.

In July 2023, the Panama Canal Authority raised the alarm. If this year's rainy season doesn't raise the water level sufficiently, that could become catastrophic during next year's dry season. [0]

This would impact the canal's operation and shipping, but also over half of Panama's population who depend on this lake for fresh water. [0]

In July, the Panama Canal Authority lowered the number of ships that was allowed to transit. In September, and November, they announced further reductions, that will be in effect until at least February 2024. [0][0]

Record droughts and record low water levels are becoming more frequent. Two of the driest El Niño periods in the past 140 years occurred during the last quarter century, and this could be the third. [0]

Panama already spent billions on new and improved locks that can reclaim up to 60% of the water that is lost during transit. And they're motivating dual transits whenever possible. [0][0]

These improvements cost billions of dollars, but it might not be enough.

It is boiling down to an expensive calculus. Large containerships pay around $400,000 per transit. With these types of delays, companies can bid during an auction to skip the line. Some companies pay hundreds of thousands of dollars extra to avoid having to wait.

In August 2023, a ship paid $2.4 million to jump ahead of the queue. That record was broken in November, when a Japanese ship paid nearly $4 million ($3.97). [0][0]

If the problem gets worse, some ships might choose to avoid the risk of waiting for days and take a longer route. This would result in increased greenhouse gas emissions, and it would raise the cost of shipping, which at least partly will be passed on to the consumer. [0]

But there are potential solutions as well.

The canal's board recently proposed building a new reservoir from the Indio River. One proposal was to build three dams that would close the Indio River. The rainfall from this entire drainage area would over time create another lake. This water would then be transferred to Gatun Lake through a tunnel. [0][0]

It would cost about $900 million, and construction could start in the beginning of 2025. The additional water this would generate could allow for another 12 to 15 passages daily. The biggest challenge is that this would displace the people that are currently living in this area, and it would require the acquisition of protected lands. [0]

But without a new water source, the canal could lose significant amounts of business. It could stoke interest in building land routes through Mexico, Colombia, or other countries with coastlines on both oceans. [0]

The Panama Canal crisis comes at a challenging time for shippers. The higher oil prices have led to a massive freight recession, leading to global shutdowns. Danish shipping giant Maersk recently announced the layoff of more than 10,000 people worldwide. [0][0]

The efforts to secure new water and sustain the canal is a race against climate change and requires the ingenuity and technical inventiveness that led to its construction over a century ago.

4. **CTA**

These are two videos I selected for you to watch next.

MAIN SOURCES:

Panama Canal drought hits new crisis level with nearly half of vessel traffic targeted for cuts (CNBC):
https://www.cnbc.com/2023/11/03/panama-canal-drought-hits-new-crisis-level-amid-severe-el-nino.html

Panama Canal Water Source Gatun Lake Still Shrinking, Slowing Ship Traffic (DTN)

https://www.dtnpf.com/agriculture/web/ag/columns/cash-market-moves/article/2023/11/06/panama-canal-water-source-gatun-lake