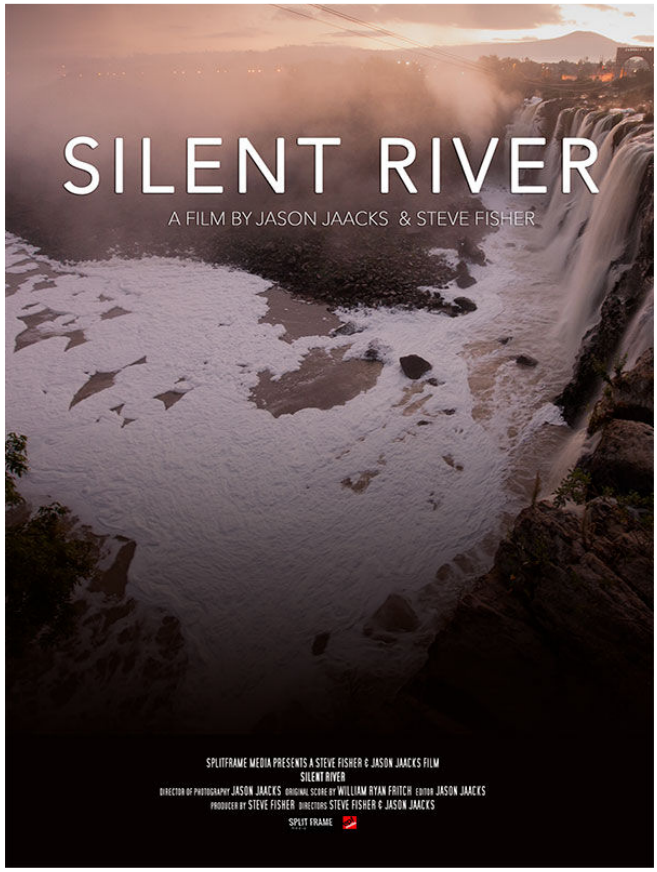
SILENT RIVER



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SILENT RIVER STUDY GUIDE

The Santiago River

This film deals with the ecological disaster of the Santiago River, also known as the Rio Grande de Santiago, and the subsequent health crisis affecting residents in the nearby municipalities of El Salto and Juanacatlán, located in the industrial corridor of the Guadalajara metropolitan area. Guadalajara is the state capital of Jalisco, and the second largest and second fastest growing city in Mexico. The Santiago River forms part of the nation's second largest watershed, the Lerma-Chapala-Santiago Pacific, which covers parts of six Mexican states: Aguascalientes, Durango, Guanajuato, Jalisco, Nayarit and Zacatecas. More than 7.5 million people live in this watershed, primarily in the Guadalajara metropolitan area, which is one of the most important regions of industrial development in Mexico. It is also the most polluted watershed in the country. According to The Latin American Water Tribunal, the Santiago River represents the most serious case of contamination in Latin America. Locals call it the "river of death." Yet, the river once boasted a popular tourist destination known as the "Niagara of Mexico," a 20-meter waterfall located near downtown El Salto. A tourist attraction until the 1970s, El Salto Falls was once replete with wildlife. Today it emits a foul-smelling toxic foam, the result of alarming levels of pollutants. Despite the obvious health risks of the river, the government, with support from the Inter-American Development Bank, has a project in the works to construct two dams and a reservoir that would supply water to Guadalajara. Given the lack of adequate treatment plants for municipal sewage and industrial waste in Guadalajara, this plan poses imminent danger for residents.

Historical Background

The history of industrial development in the region is rooted in the conquest and colonization of the area in 1530. Sent in the name of the King of Spain by Hernán Cortés, Nuño de Guzman took possession of the territory to the north and west of Lake Chapala, and south of the Santiago River. Over the centuries, the area became an important site for cattle ranching and food production for Guadalajara. The area where the waterfall of El Salto de Juanacatlán is located was for a time owned by the Jesuits. After the expropriation decreed by Carlos III in 1767, it was passed on to successive generations of landowners who produced primarily cane, wheat, garbanzo and alfalfa. In 1893, national industrialists set up a flour mill, establishing Mexico's first hydroelectric plant, followed by a yarn factory in 1896. In the late 1960s, the first industrial park was established in Guadalajara. Access to the Guadalajara International Airport was modernized, and new residential complexes emerged.

Companies

Located in this industrial park are over 300 metalworking, metallurgical, petrochemical, electronic, automotive, textile, chemical and pharmaceutical, and food and beverage plants. For forty years, these factories have been dumping toxic waste into the river. According to the

Mexican National Water Commission, 36.5 percent of the industrial waste comes from chemical and pharmaceutical companies, 15 percent from food and beverage companies, 12 percent from textile firms, and the remainder from paper mills and tequila production. Many companies with plants in the United States relocated to Mexico as environmental regulations in the United States became stricter. The North American Free Trade Agreement (NAFTA) reduced export tariffs for foreign companies, which facilitated the relocation of U.S. companies seeking cheaper sources of labor and more lenient environmental regulations. Among the multinational companies contributing to the problem of untreated waste are: Celanese, Ciba, Cydsa Crysel, Huntsman, Hershey's, Pepsi, Nestle, Sanmina, Quimikao, Honda, Hella, Yakult and IBM. Data on the state of the river is inadequate and difficult to obtain. However, as a result of a lengthy legal battle with Greenpeace, the Jalisco State Water Commission released a study, based on data from 2009 and 2010 that indicates that that factories are the main source of the more than 1,000 chemicals that course through the Santiago River.

Contaminants

Several national and international agencies found that factories dump large amounts of arsenic, benzene, chromium, cobalt, cyanide, lead, mercury, zinc, nickel, phosphorus, toluene, trichloroethane, as well as synthetic chemicals into the river. Several of these substances are known carcinogens. A study by the Mexican Institute of Water Technology (IMTA) found a total of 1090 toxic substances, chemicals and metals in the river, mainly from industrial sources. In addition, there is buried waste, smoke and gaseous pollutants, as well as tons of excrement to which insecticides and pesticides are added. The data also indicates an excess of nitrogen and phosphates in the river basin, which is associated with the process of eutrophication. Eutrophication is known to stimulate the growth of cyanobacteria, which have been linked to liver cancer.

Health Risks

Respiratory disease is the leading cause of death in Juanacatlán, followed by cancer. Local medical professionals report a steady increase in the incidence of leukemia, kidney failure, stillbirths, birth defects, asthma, eye infections, dermatitis, gastroenteritis and bug bites from contaminated insects. Yet, more extensive epidemiological investigations are needed to assess this health crisis. The rainy season exacerbates conditions, as phosphorus creates toxic spume, a foamy substance that smells like rotten eggs, burns the skin, eyes and throat, and is even powerful enough to eat the paint off cars. Also alarming is the exposure of school children who attend the two elementary schools located at the edge of the river. Constantly exposed to air pollution and fumes, many school children suffer from fatigue, headache, dizziness, and compromised motor function. Since 2008, in the El Salto area alone, there have been 669 reported deaths, 215 people ill with different kinds of cancers, and 678 people suffering from kidney failure, which is the fifth-leading cause of death in El Salto.

Cleaning Up The River

Following the arsenic poisoning death of eight-year-old Miguel Angel Lopez Rocha, who accidentally fell into the river in 2008, the National Commission on Human Rights, and a similar commission of the state of Jalisco, issued two recommendations in 2009 to clean up the river. A plan based on these recommendations has yet to be implemented. The current environmental regulatory system relies heavily on companies self-reporting chemical discharges. The National Water Commission cannot identify a single case in which a company was fined for dumping or discharging toxic waste into the Santiago River in the region of El Salto during the past decade. Instead, the state government misled residents, claiming that the problem would be resolved with a sewage treatment plant. Indeed, a water treatment plant, one of the largest in Mexico, opened in 2012. The plant was intended to address the contamination of the Santiago River. Yet, it does not treat heavy metals and synthetic chemicals, which are a critical source of health risk for residents. In 2016, Pavel Sulyandziga and Dante Pesce, of the UN Working Group on Business and Human Rights, visited El Salto Falls, and declared that contamination of the Santiago River continues despite the construction of the treatment plant. In the meantime, housing units continue to be constructed in the area.

Residents are exasperated with the demagogy of the municipal, state and federal governments. They are angry over the continued deception and negligence in executing actions and following the recommendations of international organizations. While the Jalisco State Human Rights Agency (CEDHJ is the Spanish acronym) has recommended that a state of emergency be declared, the city and state claim that a state of emergency would paralyze investment and devastate the local economy. According to one government study, 80% of companies, including US-based companies, violate environmental laws by discharging toxic waste into the river. There appears to be no clear no plan to stop this dumping of industrial waste. Locals and social organizations continue to demand that this crisis be addressed and a long-term plan implemented. The State Water Commission estimates that cleaning up the Santiago River would take at least 20 years and an estimated $ 643 million.

TIMELINE

- 1530: Nuño de Guzman, sent in the name of the King of Spain by Hernán Cortés, takes possession of the territory to the north and west of Lake Chapala, and south of the Santiago River.
- 1767: The area where the waterfall of El Salto de Juanacatlán is located is expropriated from the Jesuits by decree of Carlos III.
- 1893: National industrialists set up a flour mill and established Mexico's first hydroelectric plant.
- 1896: A textile factory is established.
- Late 1960s: The first industrial park was established in Guadalajara. Access to the Guadalajara International Airport is modernized, and new residential complexes emerge.
- 1970s: Once known as the "Niagara of Mexico," El Salto Falls declines as a tourist area due to environmental degradation.
- 2008: An eight-year-old boy, Miguel Angel Lopez Rocha, accidentally falls in the Santiago River and subsequently dies of arsenic poisoning.
- 2009: The National Commission on Human Rights and the Jalisco State Commission on Human Rights issues two recommendations to clean up the river.
- 2012: Water treatment plant intended to address contamination of the Santiago River is inaugurated.
- 2016: Pavel Sulyandziga and Dante Pesce, of the UN Working Group on Business and Human Rights, visited El Salto Falls, and declared that contamination of the Santiago River continues in this area despite the opening of the treatment plant in 2012.

Online Resources:

http://interactive.fusion.net/river-of-death/
Fisher, Steve, 2015. River of Death. Fusion.

http://www.earthisland.org/journal/index.php/eij/article/not_a_drop_to_drink1/
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http://www.greenpeace.org/mexico/es/Footer/Descargas/reports/Toxicos/Contaminacion-de-la-cuenca-del-Rio-Santiago/
Arellano Aguilar, Omar et al. 2012. Estudio de la contaminación en la Cuenca del río Santiago y la salud pública en la región. Un Salto de Vida A.C., Greenpeace, UCCS, 19 pp. (Spanish)

Books:

McCulligh, Cindy (ed.). 2014. "How to think about a dying urban river: Lessons from the Santiago River, Jalisco, Mexico". Waterlat-Gobacit Network, Working Paper, v. 1, n. X, Newcastle, United Kingdom.

Vida Instituto, Instituto Mexicano para el Desarrollo Comunitario A.C. 2005. Report on Violations to the Right to Health and to a Safe Environment in Juanacatlán and El Salto, Jalisco, Mexico, 10 pp.

Videos On Line

https://www.youtube.com/watch?v=iYpDpeeuNf0
Contaminación del río Santiago (Spanish)

http://docplayer.es/5172432-En-memoria-de-todas-y-todos-los-que-han-padecido-alguna-enfermedad-o-han-muerto-a-raiz-de-la-grave-contaminacion-del-rio-santiago.html
Mártires del río Santiago. En memoria de todas y todos. los que han padecido alguna. enfermedad o han muerto, a raíz. de la grave contaminación del río Santiago... (Spanish)

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