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Chile: Air Pollution

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CHILE: ONGOING AIR POLLUTION THREAT

Introduction

Location: Chile is located on the western coast of South America and is bordered by Peru, Bolivia, and Argentina while sharing a western coast with the Pacific Ocean (World Atlas, 2017).



Image from World Atlas

Overall Population: 17,909,754 (World Bank, 2016)

Race and Ethnicity: As of April 2017, according to World Atlas, 59% of Chileans come from a European background of which many originate from Spain. Other prominent ethnicities consist of 25% Mestizos (Euro-Amerindian) and 9% Mapuche.

Religion: Roman Catholicism is

practiced by approximately 63% of the Chilean population. Other beliefs are split by Atheism and other forms of Christianity (World Atlas, 2017).

Political Structure: The Chilean government currently follows a separation of powers-meaning split into judicial, legislative, and executive branches-yet was once led by a “brutal” dictator. There are two main political parties under which elected representatives serve. Legislation is focused on liberal-economic reform (Nations Encyclopedia).

Major Challenges

a. Internal issues consist of air pollution created by growing industries and the need

for urban areas to burn wood for heat (Berry 2015). Also, little improvement has been made on the income inequality gap despite a growing economy (BBVA, 2016).

b. External challenges can be recognized as climate fluctuations related to “El Niño,” a large surge of warm air that causes dangerous water levels (National Geographic, 2015), and high risk of the spread of Zika virus from other nations (World Health Organization, 2016).

Air Pollution Issue

Air pollution has been a frequent struggle for the Chilean people. Pollution coming from industrial wastes and wood-burning smoke creates a haze of smog—a fog combined with atmospheric pollutants, identified from apparent harmful airborne particulate matter—over Chile’s cities. In the late nineties, this poor air quality caused a rapid spread of influenza through Chile’s capital city, Santiago, hospitalizing approximately 3,500 children per day and has only become more of a threat since (COHA, 2015).



Image from COHA.org

Basic Epidemiology

Prominent threats occur as much as every few years. Some of the most recent have been 1996, 2004-2007, and even 2015-2016. This smog puts citizens at risk of influenza, cardiovascular and respiratory disease, lung infection, chronic bronchitis, and more. Those living in cities such as Santiago along with other urban areas are especially at-risk

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due to proximity to growing industrialization and necessary wood burning for heat (COHA, 2015). Multiple studies have shown that ingestion of high smog levels is correlated with an increase in respiratory disease and mortality in the elderly (Ostro, Sanchez, & Feyzioglu, 1999). In addition, children have been reported to also be at risk for increased medical visits due to lower respiratory symptoms during times of heavy smog (Cakmak, Dales, & Vidal, 2007).

What's Being Done

Specific treatment approaches depend on the specific symptoms of each individual and how large of a population was affected. This is because of the many effects and health problems air pollution can create. As far as public health legislation, regulations have been implemented that include bans on wood burning heaters, taxes on vehicle

emissions, and reducing business emissions of methane and black carbon (UNEP, 2017). These are all attempts to improve the average exposure to harmful particulate matter.

What Else Can Be Done

To further help improve the air pollution issue, Chile can relocate industrial factories away from highly populated areas to decrease exposure of polluted air. Another option would be to implement a tariff on the amount of pollutants produced by businesses and heaters, which will discourage over pollution and damage to the environment. A more effective way to protect citizens from current danger is to provide educational information on the issue as well as providing face masks and warnings to stay indoors when pollutant levels are high.

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