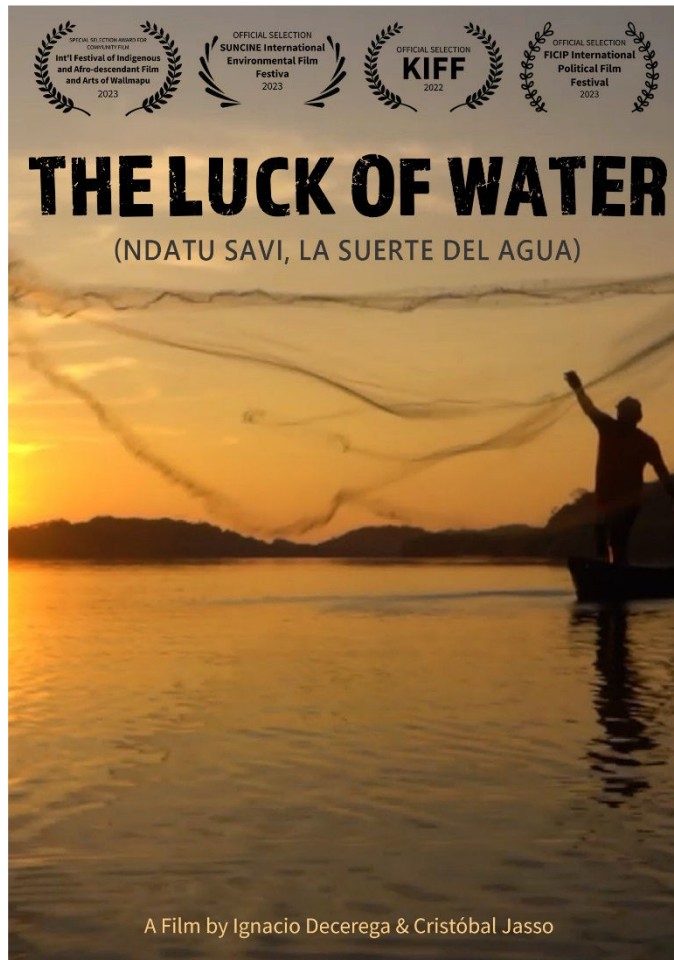




# THE LUCK OF WATER NDATU SAVI, LA SUERTE DEL AGUA



## STUDY GUIDE

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## **The Luck of Water**

The Luck of Water profiles two rivers and a sacred saltwater lagoon system in the indigenous Mixtec, mestizo, and Afro-descendant communities in the Oaxaca's coastal region in Mexico. For indigenous Mixtec communities upstream, the fate of water is in the hands of gods and rain goddesses that dwell in caves and mountains. For mestizo farmers and population in urban centers, everything revolves around water scarcity and pollution. For Afro Mexican fishermen downstream, the crucial issue is the quantity of fish and the complex relationship between river runoff and ocean saltwater. The Fate of Water delves into this struggle and the threat that these communities face.

## **About Oaxaca**

Oaxaca is a state in southern Mexico. It borders Puebla and Veracruz to the north, Guerrero to the west, and Chiapas to the east. To the south it borders the Pacific Ocean. A large percentage of the state is mountainous. Its capital city is Oaxaca de Juárez, also called Oaxaca. This state has a population of about 4 million people. A significant percentage of them are indigenous. There are sixteen official indigenous groups. The two largest are the Zapotecs and the Mixtecs. However, History.com notes, "While there are officially 16 indigenous groups in Oaxaca, every group actually has hundreds of subgroups, each distinguished by unique linguistic and social traditions. Oaxaca, like the nearby states of Guerrero and Chiapas, contains a startlingly diverse range of indigenous cultures with roots that reach back many centuries."<sup>1</sup> Many people believe that Oaxaca is the most ethnically diverse state in Mexico.

## **Water**

People need water for many different reasons. Without clean drinking water they will quickly die. Water is also essential for growing food and raising animals. Other important uses of water include sanitation, industrial use, power generation, and recreation. As a result of these many needs there are frequently conflicting options about how to use and manage water supplies. In recent years, water supplies have become more unpredictable and scarce in many parts of the world, as a result of climate change and human activities, and conflicts over water supplies have increased.

## **Climate Change and Water**

Climate change is one of the biggest factors affecting the world's water, and is having a significant effect on water supplies in Oaxaca and around the world. The United Nations explains, "Water and climate change are inextricably linked." In fact, it says, "Most impacts of climate change come down to water."<sup>2</sup> Water moves between the land, the atmosphere, and the oceans in a complex

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<sup>1</sup> <https://www.history.com/topics/latin-america/oaxaca>

<sup>2</sup> <https://www.un.org/en/climatechange/science/climate-issues/water>

process known as the water cycle. The National Oceanic and Atmospheric Administration explains the water cycle. It says:

Liquid water evaporates into water vapor, condenses to form clouds, and precipitates back to earth in the form of rain and snow. Water in different phases moves through the atmosphere (transportation). Liquid water flows across land (runoff), into the ground (infiltration and percolation), and through the ground (groundwater). Groundwater moves into plants (plant uptake) and evaporates from plants into the atmosphere (transpiration).<sup>3</sup>

Climate change is disrupting that water cycle in many different ways. It is changing where and when precipitation falls, and causing droughts in some places and floods in others. Sea level rise is also occurring as a result of climate change, and is resulting in contamination of water supplies with salt water. In addition, climate change is causing glaciers and ice to melt faster, which is also impacting the water cycle. The UN stresses that the effects of climate change on the world's water is a serious problem. It says, "Globally, each 1°C increase caused by global warming is projected to result in a 20 per cent reduction in renewable water resources, affecting an additional seven per cent of the population."<sup>4</sup>

### **Other Human Activities**

Many other human activities also influence water supplies, including altering the landscape, exploiting water resources, and polluting the environment. For example, when people cut down forests, it often has a negative impact on water supplies because forests are an integral part of the way water moves through the water cycle. The National Forest Foundation explains, "Forests capture, store, and filter water. High elevation forests hold water as snow in the winter, releasing it gradually through the spring and summer in to downstream water supplies. Other forests funnel water into lakes, streams, and groundwater aquifers." Further, forests ensure that all that water is clean. The Foundation says, "Fallen needles, leaves, branches, logs on the forest floor absorb nutrients and sediment before they reach water. These processes have made water from forested watersheds of the highest quality in the nation. Conversely, when forests are degraded, nutrients and sediment flow into the stream, making the water unsafe for us to drink without additional treatment."<sup>5</sup>

The construction of dams also alters water supplies. People build dams as a way to store and control water so they can use it for things like agriculture and power. They have been doing so for hundreds of years. However, dams can also have a negative impact on water resources. NOAA explains, "Rivers are very dynamic systems, always changing shape and moving things from the headwaters downstream like giant conveyor belts. Dams block these processes."<sup>6</sup> Dams can

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<sup>3</sup> <https://www.noaa.gov/education/resource-collections/freshwater/water-cycle>

<sup>4</sup> <https://news.un.org/en/story/2022/05/1118722>

<sup>5</sup> <https://www.nationalforests.org/blog/earth-month-watersheds>

<sup>6</sup> <https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/how-dams-affect-water-and-habitat-west-coast>

drastically change rivers and landscapes, and impact the people and animals that depend on these rivers and landscapes.

## **The Rio Verde**

A significant percentage of the state of Oaxaca drains into the Rio Verde, which runs to the Pacific Ocean in the South. There was a recent attempt to build a hydroelectric project on the river, but in 2007 a group of people living near the Oaxaca coast formed a water protecting movement called the Council of Peoples United in Defense of the Río Verde. This group was able to stop the construction of the dam. A news article explains the importance of the river. It says, “The Río Verde . . . is the main source of life for dozens of farming and fishing towns in the Southern Sierra and Pacific Coast of Oaxaca.” It goes on to explain, “The Verde-Atoyac River Basin, where the hydroelectric project would be located, covers 20% of the state’s surface area, home to over a third of its residents. The basin maintains nearly 15% of Oaxaca’s existing mangrove area. The Río Verde is considered one of Mexico’s 51 most important rivers, through which 87% of the country’s surface water runoff flows.”<sup>7</sup>

## **Protecting Water Supplies**

In recent years, more and more parts of Mexico have been suffering from water scarcity and pollution. There are many different causes including a lack of adequate water treatment and sanitation in some areas, pollution by industry, and climate change. Water activist Ricardo Ovando says, “Seventy percent of our water in Mexico is contaminated to some degree.”<sup>8</sup> Activists who fight to protect these water supplies often risk their lives to do so. Environmental group, Global Witness, has documented the killing of numerous activists in Mexico, and calls it “one of the most dangerous places for land and environmental defenders.”<sup>9</sup>

Most people believe that there is no escaping the fact that climate change and other human activities will continue to negatively affect the world’s water resources. However, there are many things that can be done to reduce the negative impacts. Communities can have a big impact on water supplies by improving the ways that water is used and managed. This includes things like water re-use and water conservation strategies, developing plans to effectively manage existing water supplies, building wastewater treatment facilities, and keeping aquatic ecosystems healthy. UNICEF insists, “The world needs to get water smart. Everyone has a role to play, and we cannot afford to wait.”<sup>10</sup>

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<sup>7</sup> <https://nacla.org/news/2019/05/30/coast-oaxaca-afro-and-indigenous-tribes-fight-water-autonomy>

<sup>8</sup> Quoted in <https://www.courthousenews.com/mexico-water-crisis-in-the-spotlight-on-world-water-day/>

<sup>9</sup> <https://www.globalwitness.org/en/campaigns/environmental-activists/decade-defiance/#accounting-over-half-2021-attacks-mexico-colombia-and-brazil>

<sup>10</sup> <https://www.unicef.org/stories/water-and-climate-change-10-things-you-should-know>

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