

# LET'S TALK ABOUT WATER and MAYORS MAKE MOVIES

## AUGUST 2024 WATER NEWSLETTER

*This newsletter is a publication of **Let's Talk About Water** and **Mayors Make Movies** organizations, sponsors of the **2024 Latin American Prize for Short Films about Water and Science**.*

Remember to submit your film by going to Filmfreeway, and compete for awards by accessing:  
<https://mayorsmakemovies.org/prize-page/>

### In this issue, LET'S TALK ABOUT... WATER POLLUTION

The Tietê river, the most polluted river in Brazil and the fifth in the world, crosses the city of São Paulo and along its 1.010 km<sup>2</sup> receives 690 tons of sewage daily. It is now undergoing a clean-up project.



Photo: Gabriel Bonamichi-Sabesp

**Water Pollution** occurs when toxic substances, often chemical products, or microorganisms, pollute a stream, river, lake, ocean, aquifer or other body of water, degrading its quality and effectively poisoning it for humans and the environment. **This degradation in water quality translates directly into environmental, social and economic problems.** These contaminants can originate from a lot of places like industries, runoff from farms, poor waste disposal, and sewage treatment plants. And in many cases **in Latin America the key problem is the lack of sanitation.** In fact, currently, 69% of the population (490 million people), lack proper sanitation. (IDB). If you want to know the rate of clean water available in your country, as recently as July 2023, check out this graphic from Statista: <https://www.statista.com/statistics/1423467/access-clean-drinking-water-latam-by-country/>

**Water pollution is a great theme for a short film** because it's everywhere. It touches us all very closely. And it's a top priority in the fight for clean water. Says Nature Magazine: **"Water pollution 'timebomb' threatens global health: Simulations predict a water-pollution crisis by the end of the century."** <https://www.nature.com/articles/d41586-023-02337-7>



If we want to create strategies to reduce the effects of this problem, we need to understand the main sources and causes of water pollution:

- **Industrial activities** generate residues that are dumped into rivers and other bodies of water.
- **Agricultural runoff** can spread excess fertilizers and pesticides and excess nutrients can help grow algal and lead to oxygen depletion.
- **Improper waste disposal** is a major contributor to water pollution and particularly plastics that can be eaten by fish in both rivers and the oceans.
- **Inadequate sewage treatment** can lead to harmful diseases gives way to substances such as bacteria, viruses, and chemicals that can make their way into wastewater. The UN says that over 80% of wastewater in the world reaches the sea and rivers untreated.
- **Radioactive water pollution** is the presence of radioactive elements at levels higher than what would be considered natural in water bodies, resulting from the irregular disposal of atomic waste produced by plants or hospitals or by nuclear accidents.
- **Deforestation of areas**, making the soil exposed and more susceptible to erosion. During the rainy season, sediments are carried into bodies of water, which can result in what we call *siltation*.

See more about the causes of water pollution here: <https://www.activesustainability.com/water/causes-consequences-water-pollution/>

## WATER POLLUTION IN LATIN AMERICA

According to the **World Water Council**, 77 million people in Latin America still **lack access to safe water**. Despite great advances – the percentage of people in Latin America and the Caribbean with direct access to water has increased from 33 percent of the population in 1960 to 85 percent by 2000 – this still leaves 77 million people without a water connection in their homes – 51 million rural residents and 26 million urban ones.

**Sanitation** is still a great challenge. An estimated 256 million people depend on latrines and septic tanks only, and 100 million people have absolutely no access to any safe sanitation. Sewage from less than 14 percent of houses is treated at sanitation plants, greatly increasing the chances of ecological damages “down the line,” as the untreated sewage enters rivers, lakes, underground aquifers and oceans.



Photo: Alexander Schimmeck – Unsplash+

**The use of groundwater.** In South America, 40-60 percent of water comes from aquifers that are facing ever-growing pollution from over-mining and agriculture. In Mexico, 102 of the nation’s 653 aquifers are overused, the main source of water for 65 percent of the population. In some areas,

farmers in Mexico have had to switch from water-intensive cotton to less profitable grain crops used to feed cattle, because the aquifers no longer produced sufficient water to grow cotton.

**Transboundary water issues** are requiring management models that can provide rational water allocation at the basin level while respecting states sovereignty. Many river basins are shared throughout the Americas – among Central American states, and among Brazil, Argentina, Paraguay and Uruguay. Important agreements in the Plata Basin (shared by Brazil, Argentina, Paraguay and Uruguay) have allowed important water resources development in the region, including the **Guarani Aquifer agreement** and notably hydropower and navigation.

**Climate change and extreme weather events.** In recent decades, population growth has been huge in coastal regions that lie in the path of hurricanes, greatly increasing the danger of widespread deaths and economic losses. The periodic effects of changes in the Pacific Ocean current off the coast of South America, known as El Niño, alternately brings large scale droughts and more severe storms to this area that is ever more highly populated.

In the past 20 years, Latin America and the Caribbean has experienced more **than 548 extreme flood events** that have caused US\$ 26 billion in damage. If climatic change scenarios develop, as some scientists believe, hurricanes will become even more powerful and damaging. ([https://www.worldwatercouncil.org/fileadmin/wwc/News/WWC\\_News/water\\_problems\\_22.03.04.pdf](https://www.worldwatercouncil.org/fileadmin/wwc/News/WWC_News/water_problems_22.03.04.pdf))

The **World Bank** says that Climate change is a critical pressure on the water cycle. Climate change fundamentally disrupts the water cycle: Increasing heat is causing the **Andean glaciers to melt or disappear**. When this happens, summer flows into rivers also decrease or disappear. Less rainfall and higher temperatures may cause the available river water to decrease in many countries and the most critical basins.

**To learn more about the issues facing Latin America**, check out this comprehensive and beautiful presentation from **The World Bank Group**: <https://www.worldbank.org/en/news/immersive-story/2023/03/21/time-for-water-action-in-latin-america-and-caribbean>

## WATER POLLUTION PREVENTION AND MITIGATION



Photo: Getty Images – Unsplash+

To fight water pollution in increasingly populated areas is an expensive challenge, demanding high investments that may be available to your regional or local governments. The **Inter-American Development Bank (IDB)** is committed to ensure availability and sustainable management of water, sanitation and solid waste services for all through several **mechanisms of investment and financing**. (<https://www.iadb.org/en/who-we-are/topics/water-and-sanitation>).



To preserve and maximize water use, the region can adopt policies, institutions and regulatory frameworks with robust water governance systems and improve their technical autonomy, accountability and transparency. Countries can also work on **better information, modeling and planning instruments** to safeguard and leverage their water assets and predict and anticipate water risks. **River basin institutions** must be empowered in a participatory manner for increased integrated water resources management. But some simple steps can help prevent and mitigate water pollution in Latin America.

### WHAT CAN GOVERNMENTS DO?

Public policies by local governments can help reduce the problem of water pollution if they:

- Guarantee sanitation for the entire population.
- Carry out garbage collection.
- Treat urban waste and dispose of it appropriately.
- Develop awareness campaigns and environmental monitoring policies.

### WHAT CAN WE DO?

As for personal attitudes that can help reduce the pollution of water, here is what we can do:

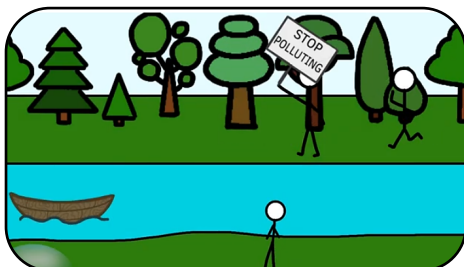
- Watch our garbage disposal and do not throw it in bodies of water (lakes, rivers, seas).
  - Avoid the use of plastic objects that will be easily discarded (such as bags, straws, cups, bottles).
  - Do not discard oils, paper, hair or any other waste down drains.
  - Avoid the use of products such as pesticides and herbicides that pollute soil and water.
  - Use biodegradable products, adopting more sustainable forms of consumption."
  - Take actions that help stop global warming. In this way, you will help avoid droughts and other such meteorological phenomena that can affect the availability of water.
- (<https://brasilescola.uol.com.br/quimica/poluicao-agua.html>)

If you want to dive deeper into the subject, check out this broad review of scientific research on the effects of water pollution on human health: <https://www.mdpi.com/2073-4441/15/14/2532>

### WATER MANAGEMENT EDUCATION

Science has a key role to play in water scarcity mitigation, drought prevention and vulnerability reduction. Among these fields of study, **water management** is a growing one, both in research and technical jobs. Check out our June issue to learn more about opportunities in education and employment, by watching our interviewee of the month, **Miguel Doria, PhD** [here](#). He presents many options for those interested in careers in the field.

### SHORT FILMS ABOUT WATER POLLUTION



"Bottle" animation from Canada



"Private Waters", documentary from El Salvador

**Let's Talk About Water** and **Mayors Make Movies** have previously sponsored short film competitions on this subject and past winners have explored this issue in compelling short films. It's worth checking out these two: "[Bottle](#)" from Canada and "[Private Waters](#)" from El Salvador.

**STAY CONNECTED!**

Watch your inbox for our next September newsletter issue. Or send us an email at [info@mayorsmakemovies.org](mailto:info@mayorsmakemovies.org) with your email address requesting to receive our monthly newsletter. We will be happy to include you in our newsletter mailing list. And keep up with all about the **2024 Latin American Prize for Short Films about Water and Science** in the coming months!

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