**SOUTH AMERICA**

Statistical information (as of 2021)

Area: 17.8 million square kilometers

Population: 429 million

Total Countries: 12

Natural Resources:

Forests Minerals Agricultural Land

Freshwater Resources Amazonian Biodiversity

**WATER**

This map depicts water use in South America during the last three decades ending 2021.

The effect climate has had on water use during the past 30 years in South America attributed to several factors, including hotter temperatures, changing rainfall patterns, sea-level rise, and intensified storms such as hurricanes.

Like its northern neighbor, South America experienced increased populations and urbanization because of investments in industrial development during the 30 years between 1992-2021. Water demand for cities affected by urbanization increased substantially. An expansion of the agricultural production of crops like soybeans and increased ranching and livestock also led to higher water consumption in South America.

A few of the extreme water events occurring during the 30 years analyzed have been:

* Glacial retreat of the Andes mountains is the result of rising temperatures caused by climate changes.
* Sea level rises and saltwater intrusion in low level regions and coastal areas as a result of climate change have impacted the way South America accesses and utilizes water.
* Despite being south of the Equator, many countries in South America experienced destructive hailstorms which damaged crops and infrastructure.

**LAND**

Land-use increases in South America during the 30 years between 1992-2021 have been impacted by climate change and other factors. Like the other continents analyzed in the project, South America experienced agricultural expansions to support the population increases on the continent. Demands for food, soybeans for export, and beef led to an exchange of land for forestry. Infrastructure development leading to the construction of new roads, highways and commercial and residential buildings have led to deforestation and land-grabbing.

This map depicts land use in South America during the last three decades ending 2021.

Extreme land events occurring during the 30 years analyzed have included:

* Floods and landslides resulting from heavy rainfalls following periods of prolonged droughts. Dry land not capable of absorbing increased moisture from the rains caused floods. Floods displaced communities, damaged infrastructure and have resulted in the loss of life.
* Wildfires in South America have been especially devastating to forests, grasslands and air quality which affect humans and animals alike. Wildfires have been both naturally caused and the result of human disregard and negligence. The latter cause for wildfires are especially damaging to the delicate ecosystem of areas like Brazil, because they haven’t been properly planned and have been in many cases illegal.

**FORESTRY**

Forests in South America accounts for 49%, nearly half the land area on the continent! Climate change has had significant impacts on the forests of South America. The effects can be seen in the extreme weather events that have occurred during the past 30 years. Below are some of the most impactful.

This map depicts forestry use in South America during the last three decades ending 2021.

Most of the devastation occurring in the forests of South America are directly related to human causes and climate change:

* Amazon Rainforest Fires whether caused by extreme temperatures and drought or land grabbing and illegal logging, are devastating to its ecosystem, the local communities that rely on them and contribute to the Greenhouse Effect which affects the entire global environment.
* Coincidentally, whenever there were fires in the rainforest, they were preceded by droughts. Droughts which are attributed to climate change increased in frequency during the 30 years analyzed according to research. Decreased rainfalls and increased temperatures during periods of droughts made the rainforest more susceptible to wildfires.