ARGENTINA: LAND OF ECOLOGICAL WONDERS

Prepared by Anya Meave

Introduction

With a land mass larger than Mexico and landscapes that encompass several ecosystem types, Argentina is a country filled with natural wonders and a range of climates. Stretching from temperate valleys to the north, and cold tundra to the south. Island landscapes and a portion of the Antarctic the are also included as part of the nation's landmass, making Argentina a country rich in ecosystem diversity.

Regional Characteristics

North

The northern portion of Argentina includes a range of ecosystems. From deserts to forested areas, each ecological community depends on the country bordered and their respective climate zones. For example, northwest portions of the nation that border Andean regions include forests with cedar trees, shrubs, grasslands, and a slight number of cactuses. In Gran Chaco, an area that borders Paraguay, subtropical climate with savannas and lower forests appear to dominate the landscape.

Central

As noted on the map (Fig. 1), the central portion of Argentina includes the well-known Pampa region. This location displays two different types of climate types: one humid and one dry. The humid Pampas located near Buenos Aires tend to receive higher amounts of rain than the dry Pampas in Cordoba. Initially grasslands, the Pampas appear to be where most agricultural cultivation occur replacing local flora and fauna with goats, livestock, and annual crop production.

South

The southern portion of Argentina displays a mixture of forests, grasslands, and deserts due to mountain ranges present. Known as the Patagonia region which is shared with Chile, this area is centered between the Pacific and Atlantic oceans creating a range of weather conditions. Temperate climate zones are found

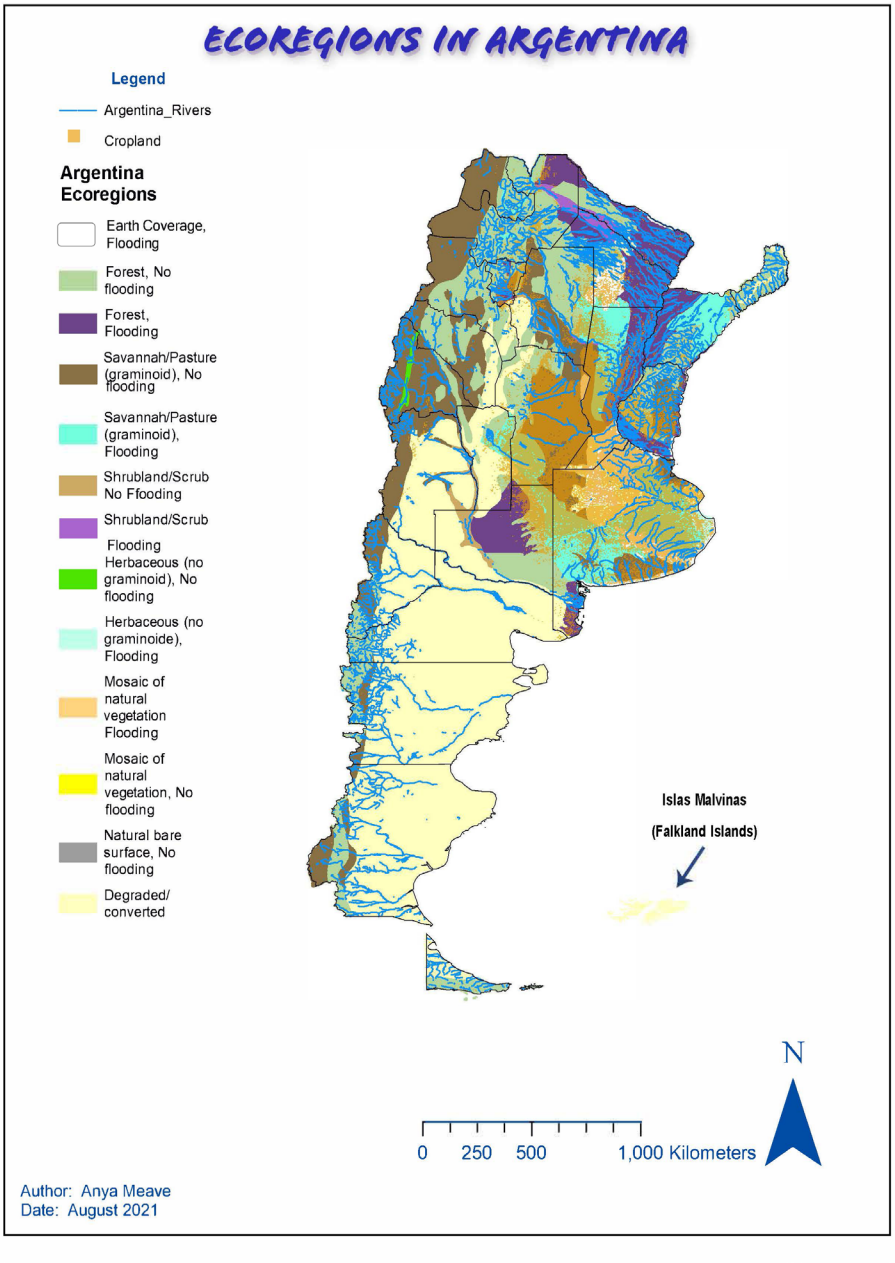

Figure 1. Map of Argentina's ecoregions. Credit: Anya Meave 2021.

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in unforested areas while icy conditions blanket the southern portion of the Patagonia.

Water Systems

Bordering the Atlantic Ocean and containing four river systems that feed in form northern countries, Argentina has a high number of water resources that touch upon each zone. The Parana River is the largest of three major river systems that supply fresh water to various provinces. Traveling from Brazil and Paraguay, this river system stretches for 4880 kilometers (km) (3,032 miles) while the second largest river, the Paraguay River, is a little more than half the length of the Parana. The Uruguay River, which travels down from Brazil through Uruguay, is 1838 km (1,142 miles). Several more rivers exist throughout the country which also travel from northern portions of South America such as the Uguazu River which creates captivating waterfalls as it travels through Brazil into Argentina.

Snowmelt from the Andes mountains contribute to rivers found in the southern part of the country throughout the year. Water features in these areas include the Colorado River which is known for swelling and flooding nearby communities as snowmelt occurs while additional rivers travel into the Atlantic Ocean.

Iguazu Falls. Credit: “Parque Nacional Iguazu Argentina” by K.B.L. Luccia-1.000 pic is marked with CC0 1.0.

Impacts of a Shifting Climate

Recent weather trends such as heatwaves, storms, droughts, and severe flooding indicate that Argentina is not immune to global warming.

From the early 1900’s to 2012, surface temperatures have increased by 0.5-degrees Celsius causing nights to become warmer. Like much of the world, warmer conditions lead to a boost in energy demands resulting in strained power grids and blackouts as experienced in the December 2013 when temperatures reached 40-degrees Celsius (104 Fahrenheit) in central Argentina.

As the heat intensifies, so do the strength of storms which escalate chances of flooding in areas of the country that have been urbanized such as La Plata in Buenos Aires Province. In 2013, a large storm battered the area and generated large sums of rain in less than 12-hours leaving behind 80 casualties and several damaged homes.

In addition to urbanization of natural landscapes, agriculture is also a culprit of warming conditions as grasslands and forests are turned into pasturelands to serve the growing human population in the nation. In places like Chaco, researchers found forests had decreased to 18.2% from 39% between the years of 1979 and 2010 to accommodate agricultural expansion while the production of soybean has led to an estimated 2.3 hectares of land being deforested from 1998 to 2006.

With so many changes made to urbanize areas and increase food production, Argentina will continue to warm through the end of the century by 1-degree Celsius (33.8 Fahrenheit). Northern portions of the country will be particularly affected as scientific models show the north warming by to 3.5-degrees Celsius (38.3 Fahrenheit) under extreme climate conditions by the end of the century. In the southern portions near the Patagonia region, the change in climate means less rainfall especially during the winter sea-

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son, affecting waterways and ecosystems.

Conclusion

Comprised of deserts, grasslands, forests, and ice, Argentina is a vast nation made of many ecological wonders. Situated between five countries and the Atlantic Ocean to the east, it is considered the eighth largest country in the world. Flowing water found throughout the nation feed several inhabitants, including livestock and local fauna, year-round, but the effects of climate change may alter such abundance as temperatures rise. Continuous deforestation for agriculture and urbanization of rural spaces appear to be the main source of warming trends in the region, leading to intense storms, flooding, and severe temperature fluctuations that will continue to heighten through the end of the 21st century.

Notes:

1 Donghi *et al.* 2021, 1
2 Donghi *et al.* 2021, 10
3 Donghi *et al.* 2021, 11
4 Caceres *et al.* 2015, 3
5 Donghi *et al.* 2021, 12
6 Kimutai 2017
7 Kimutai 2017
8 Donghi *et al.* 2021, 6
9 Donghi *et al.* 2021, 7
10 Barros *et al.* 2015, 4
11 Barros *et al.* 2015, 4
12 Barros *et al.* 2015, 7
13 Caceres *et al.* 2015, 3
14 Caceres *et al.* 2015, 2
15 Barros *et al.* 2015, 8
16 Donghi *et al.* 2021, 1

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