

South America's Southern Cone Session II

The Richer 3: Argentina, Chile & Uruguay



Río de la Plata and Santiago, Chile shots from NASA

3 February 2010



The Jesuits in the Southern Cone



San Ignacio Mini, *Reducción*, Misiones, Argentina

2

The Physical Geography of Argentina, Chile & Uruguay

- The physical environment of Southern South America is a difficult one for human settlement:
 - A sizable area is at high elevation or ruggedly mountainous and thus largely unusable for agriculture; the Altiplano (Puno) in Argentina can be used for grazing and in oases some agriculture is possible.
 - A large share of the total land area is so arid that it is useless for agriculture or grazing, including the Atacama Desert and much of Patagonia.
 - The interior of Argentina includes a large lowland area, the Chaco, characterized by temperature extremes and seasonal flooding.
 - Two areas favor European style agriculture, the Pampas of Argentina and Uruguay and Mediterranean Chile.
 - The Pampas have climatic conditions similar to parts of Texas and Oklahoma with unreliable rainfall.
 - Agriculture in Mediterranean Chile (as in comparable parts of California) depends on irrigation and thus precipitation in the nearby mountains.

3

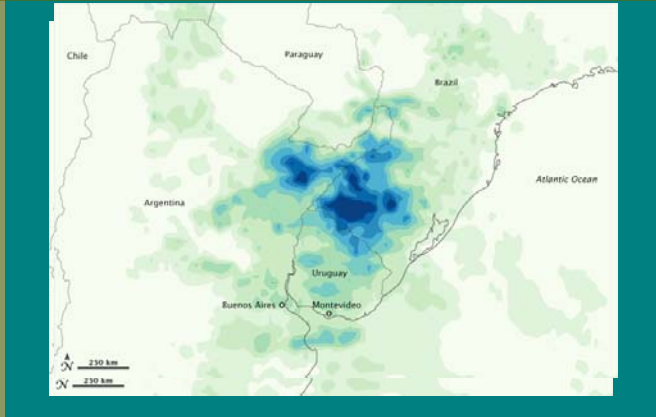
The Agricultural Heartland in Drought, late Summer 2009



Map compiled from NASA Terra Satellite imagery, Feb 2009

4

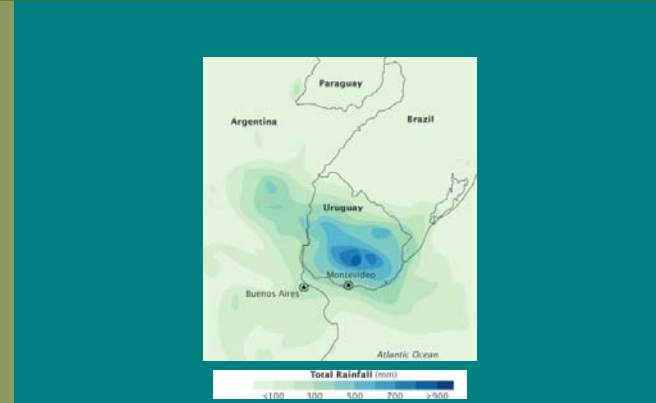
Flooding in Parana Basin, Spring 2009



NASA Multisatellite Precipitation Analysis, Nov 2009

5

Uruguay: Excess Rainfall January 2010



<http://earthobservatory.nasa.gov/IOTD/view.php?id=42588&src=eo-a-iotd>

6

A Little More History: At Independence

- At the time of independence the region was lightly populated, and much of the southern section was unexplored & unconquered by the Spanish
 - Small total population in the Southern Cone
 - Peripheral to Europe and the economic centers of Latin America
- Land ownership in Southern Cone countries was highly concentrated with a few owners holding vast tracts of land
- The Independence Era population was small
 - A few hundred thousand of "pure" European descent
 - Mestizos
 - A native American population of unknown size outside urbanized areas
- The European population was highly concentrated in a few urban places including Buenos Aires, Santiago de Chile, Asunción and the mining and administrative centers of Bolivia (La Paz, Potosi, Sucre etc.)

7

Independence to 1945

- At independence the regional economy of the Southern Cone was collapsing
 - Industrial revolution and the consequent change in world demand for precious metals
 - Reorganization of Europe and decline of Spain
- Genocidal, fratricidal, and territorial wars
 - Slow overall population growth
 - Elimination of much of the indigenous population
- The resource booms of the late 19th Century and early to mid 20th Century made the three countries wealthy by world standards
 - Imported capital
 - Immigration to supply labor
 - Issues of social and economic organization
- The three thought of themselves as developed countries, but they were really resource frontiers (similar to Australia and Canada)
 - remote from the core of the world economy
 - Specialized in a small number of commodities
 - Dependent on markets outside their boundaries

8

A Little More History: 1945 onward

- Economic collapse following WW I
- Collapse of commodity demand
- Import substitution
- Political instability

9

Universidad de Cordoba



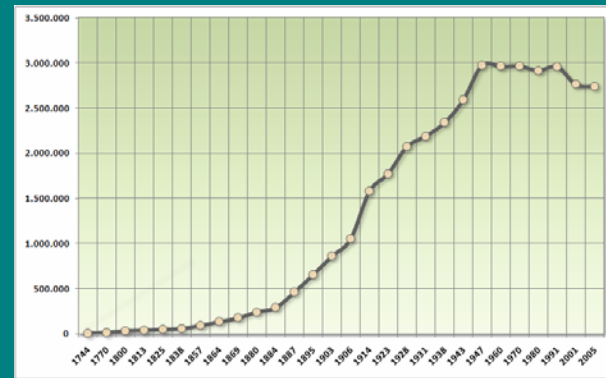
10

Cabildo, Buenos Aires



11

The Growth of Buenos Aires



Population of the City not including suburban areas. Estimated Metropolitan Area Population in 2010 is 13,500,000!

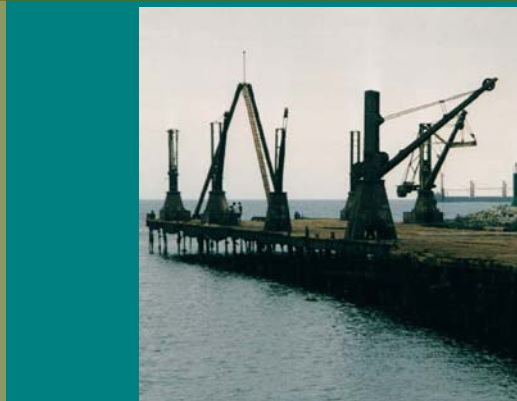
12

The Resource Booms

- **Dependent on agriculture and natural resources:**
 - Chile: initially guano (War of the Pacific and territory captured from Peru and Bolivia), then nitrates and finally copper.
 - Argentina and Uruguay: first hides, tallow and wool, then refrigeration and canning allowed shipment of meat. Grains came last prompted by European demand during the 20th century's 2 world wars.
- **Dependent on foreign markets**
 - Industrial revolution markets for raw materials and food, especially England and Germany; competition with US & Canada.
 - European wars
 - Nitrates for ammunition
 - Food
- **Dependent on foreign capital, primarily British, but also German and North American**
- **Dependent on foreign labor**

13

Chilean Nitrate Exports



Abandoned Nitrate loading dock, Antofagasta

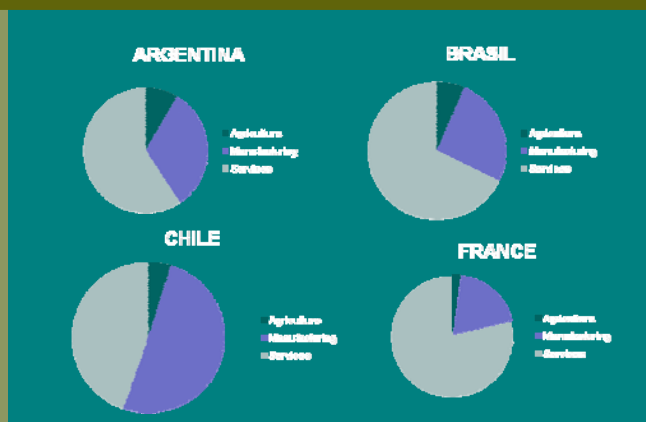
14

The Richer 3 Current Issues

- **Primary Production**
 - Resource base
 - Mining (including petroleum and coal)
 - Agriculture
- **Infrastructure**
 - Railroads
 - Roads
 - Other transportation including ports
- **Hyper-urbanization**
 - Primate City Problem
 - Distribution of opportunities
- **Inequities**

15

Employment Structure



<https://www.cia.gov/library/publications/the-world-factbook/>

16

Chile & Copper



- **Copper**

- 40% of world's known deposits
- 35% of world's mined copper
- 47% of Chile's exports
- 8% of Chile's GNP

Chuquibambilla copper mine,
Region , Atacama Desert, Chile

<http://www.infomine.com/>
& <http://www.mbendi.com>

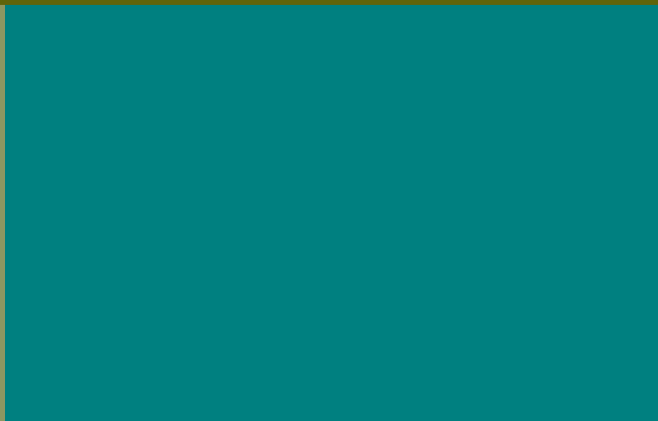
17

Energy Resources

- **Argentina:**
 - More or less self sufficient in petroleum/natural gas and export(ed) some to Chile & Uruguay
 - Some coal production
 - Hydroelectric capacity in Andes and along Paraná
- **Chile**
 - Inconsequential production of petroleum and natural gas, imports from Argentina, Brasil & Bolivia
 - Hydroelectric capacity, mostly in Southern Andes and remote from demand center
- **Uruguay**
 - Dependent on Argentina & Brasil for petroleum
 - Some hydroelectric capacity

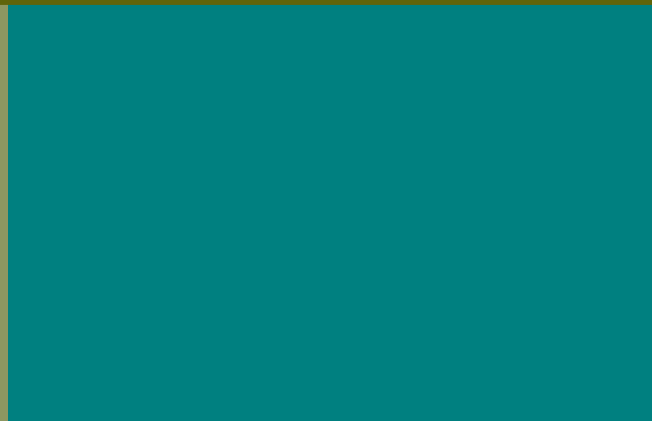
18

Natural Gas in Argentina



19

Natural Gas in Chile



20

Diversification?

Argentinean Energy Production



Yacyretá Dam, Paraná River,
Argentina-Paraguay

Chilean Forestry



Industrial clear-cutting, Region

21

Argentina & Soybeans



- Brazil, America and Argentina generated over 92% of global soybean exports in 2005.
- Brazil ... 25 million tonnes (39% of world soybean exports)
- United States ... 24 million tonnes (37%)
- Argentina ... 10 million tonnes (16%)
- Brazil became the world's largest soybean exporter in 2005, surpassing the U.S. for the first time. America's share of global soybean exports has declined from 73% in 1995 to 37% in 2005.
- In contrast, Brazil's percentage of world soybean exports jumped from 11% to 39% over the same period. Similarly, Argentina's market share rose from 6% to 16% in just 10 years.

22

Transportation Infrastructure

- Thin network
 - Low density of roads and rail lines
 - Inadequate water transportation facilities
- Inadequate or non-existent service to large areas
- Transportation designed to move raw commodities to ports for shipping abroad
- Hyper-concentration of facilities in a few places

23

Infrastructure: Railroads



31,409 km



6,782 km

24

Transportation Density

	Km of rail	Km of road	Land Area	Transport-Density*
Argentina	31,409	231,400	2,780,400	0.094
Chile	6,782	80,505	756,102	0.020
Uruguay	1,641	77,732	176,215	0.450
Brasil	28,857	175,190	8,514,877	0.023
France	29,213	951,500	551,500	1.783

Source: <https://www.cia.gov/library/publications/the-world-factbook/>
 * Road + railroad kms/sq km of territory

25

Freight Flows

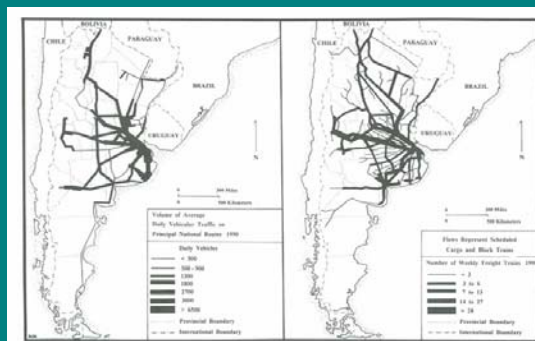


Figure 5. Argentina's road and rail traffic flow patterns, 1980. Source: República Argentina (1991).

26

Hyperurbanization: Buenos Aires & Montevideo



27

Santiago de Chile



28

Primate Cities

• Primate Cities:

- Single dominant largest city
- National Capital
- Dominates Economy
- Dominates Transportation
- Absence of important secondary cities



Rio de la Plata Estuary 2008: NASA EOS Satellite Image

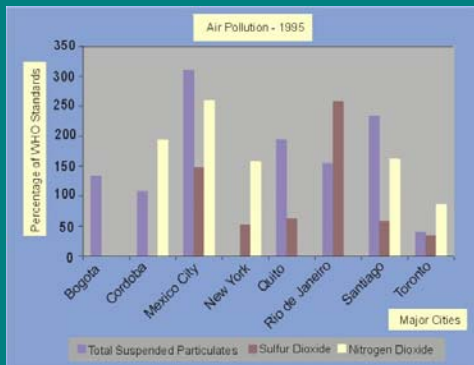
29

Primate Cities

Argentina	Chile	Uruguay	France	
33	37	44	18	Per Cent of Population in Capital City Area

30

Air Pollution in Santiago de Chile



31

Urban Problems



Inner Harbor with Custom House and Santiago Calatrava footbridge

32

Urban Inequities



La Boca, Buenos Aires

33

Vibrant Urban Culture!



San Telmo, Buenos Aires

34