

EIR Operation Juárez

The industrial backbone of an integrated continent

Part 24 Ibero-American integration

EIR continues its exclusive translation of the Spanish-language book that is transforming Ibero-America, *Ibero-American Integration: 100 Million New Jobs by the Year 2000!* The book, published in fall 1986 in Spanish, was written by an international team of experts for the Schiller Institute, elaborating Lyndon LaRouche's proposal to free the continent of economic dependency and spark a worldwide economic recovery, "Operation Juárez."

This installment concludes Chapter 7, on the mining and industrial projects that will be required to fulfill that program. Only by converting the immense mineral wealth of Ibero-America into heavy industry, can the continent overcome its historical underdevelopment in this sector, which is indispensable for economic independence.

Numbering of the figures, tables, and maps follows that of the book.



The regions that must form the industrial backbone of Ibero-America can be seen in **Map 7-3**. In each of these, one can see the principal centers for developing heavy industry and capital-goods industry, where the most skilled labor force is concentrated and where the highest density of productivity is located. All of these regions will have to act as a single integrated industrial force, with their productive capacities closely linked through the intercontinental transportation grid already outlined. One can observe that the majority of the areas where the greatest industrial concentration is projected are de facto the principal productive centers today; nonetheless, we will also need to build totally new industrial centers where there is an appropriate confluence of resources, infrastructure, and so forth.

Below we summarily describe the most relevant aspects of each of these regions for the development of both heavy industry and of a capital-goods industry.

La Plata basin

As with agriculture, this area offers enormous possibilities for developing Ibero-American industry: In addition to its vast mineral and energy reserves, and good levels of infrastructure, it also has the highest concentration of skilled labor on the subcontinent. Industrialization of this region, which encompasses six Ibero-American countries, should become one of the priority tasks of the Ibero-American Common Market. As the centerpiece of this effort, the mineral and energy resources of all the area nations must be joined in

Main centers of heavy industry and capital goods in Ibero-America





TABLE 7-7

Parameters of the Greater Carajás project, Brazil

	Production capacity (thousands of tons*)	Direct investment (millions of dollars)	Total reserves (millions of tons*)	Area (millions of hectares)
Extraction and refining of metals:				
Iron				
-iron ore	68,495	2,500	18,000	
-sinter	5,000	260		
-pig iron	5,000	1,670		
-sponge iron	2,000	500		
-semi-manufactured	10,000	10,200		
Coke	2,000	400		
Copper				
-concentrated	1,070	950	1,000	
-metallic	470	550	10	
Aluminum				
-bauxite	19,780	1,420	4,600	
-alumina	6,480	4,050		
-aluminum	1,740	6,090		
Nickel	20	450	47	
Manganese				
-manganese ore	1,700	500	60	
-ferromanganese	500			
Industrial centers	7 cities	6,900		
Forestry				
annual planting	180,000	330		2.3
Agriculture				
grain	9,915	3,790		3.95
rubber	900	354		0.3
Cattle-raising				
meat production	400	1,730		30.0
Hydroelectricity	6,420 MW	9,000	70,000 MW	
Transportation				
railroad	890 km			
internal	2,000 km	16,600		
navigation				
ports	2 (new)			
highways				

*Except where indicated

Source: Companhia Vale do Rio Doce, Brazil

a single effort to develop large centers of heavy industry in each of them, which in turn would feed a series of industrial corridors where the most advanced productive capacities for producing machinery and equipment would be concentrated.

The area's industrial capabilities will be dramatically complemented by the greatest mining-industrial project to be undertaken on the continent: Mutúm, on the border between

Bolivia and Brazil, next to the Paraguay River. The area around Mutúm is exceptionally rich in mineral deposits, especially iron and manganese. Experts estimate that Mutúm has the world's largest iron ore deposits, even surpassing those of Brazil's Carajás, with more than 40 billion tons of very high purity mineral. Production levels could reach 100 million tons of iron ore per year by the year 2000. There are

other bordering deposits in the area, such as the huge reserve of Urucum, in Brazil. In these, there are manganese beds which overlie the iron ore, making its exploitation particularly economical.

Mutúm is the ideal location to establish a major mining-industrial complex. Gas from Bolivia's fields near Santa Cruz can provide a cheap method for the direct reduction of the iron ore, and for the production of fertilizers and petrochemicals. Mutúm is also located next to the Paraguay River, which, with proper infrastructure development, can be made totally navigable for bulk cargo. The railroad line that already exists between Santa Cruz and São Paulo passes less than two hundred kilometers from Mutúm, so that a connecting spur is a relatively easy task.

The Gran Chaco area west of Mutúm also has great agricultural potential, and it would therefore be feasible to construct an entirely new, major urban center near the mine and next to the Paraguay River. In this way, Mutúm will represent the first real thrust to open the interior of the South American continent, and it is also located at a point almost equidistant from São Paulo, Brasília, Buenos Aires, La Paz, and Antofagasta.

These cities would all benefit from and participate in the downstream industries associated with Mutúm. The main industrial corridors would extend down from Buenos Aires

to Córdoba and Resistencia in the center of Argentina; between Tucumán and Salta in the north of the country, and from Mendoza in Argentina to Santiago in Chile; they could be expanded to include other important cities in contiguous countries, linking up with Uruguay, Paraguay, Bolivia, and Brazil to encourage the development of this important region.

The Andean region

As with the La Plata basin, this region also possesses an enormous potential in mineral and energy resources which extend across the five Ibero-American nations and which embrace a large and varied number of basic and strategic minerals along the length of the Andean mountain range, as well as important oil and natural gas deposits in Venezuela, Ecuador, and Peru, huge coal deposits in Colombia, and substantial bauxite and other key mineral reserves in Venezuela, Guyana, Surinam, and French Guiana. Utilizing this wealth will prove decisive in promoting the industrial development of the region, which would be based on the productive integration of the two broad strips of land on either side of the Andean range, integration that would be made possible by the transportation infrastructure we have outlined in the preceding chapter.

The main centers of heavy industry and capital-goods industry will be located in a series of industrial ports along



Aerial view of the Gran Carajás project, taken in September 1982. Facing page: Stretch of rail bed near Carajás mine, photographed in the early 1980s; this rail link goes from the Atlantic Ocean terminal into the Amazon heartland.

both the Atlantic and Pacific shores, where enormous quantities of raw materials from the Andean belt and the Orinoco basin converge. The most important will be Ciudad Guayana and Puerto Cabello, in Venezuela; Barranquilla in Colombia; San Lorenzo in Ecuador, Chiclayo in Peru; and Arica in Chile. This last will be a strategic point of multinational development, in which Chile, Peru, and Bolivia would all directly participate, the latter acquiring an outlet to the Pacific.

Near the mouth of the Orinoco, Ciudad Guayana will become one of the most important points of heavy industry development, since it is in the center of huge iron ore reserves, sufficient for supporting a high level of steel production around which would be established a great number of capital-goods industries. It is also a strategic point for the production of aluminum and other strategic metals, since it is not only near enormous bauxite and other mineral reserves that extend throughout Guayana but also has tremendous hydroelectric potential for feeding electricity-intensive metallurgical processes.

The Brazilian northeast

In the Brazilian northeast there are two areas with strategic importance for the industrialization of Ibero-America. First, there is the area of Gran Carajás, one of the most mineral-rich areas of the world, whose large-scale exploitation and industrialization was in part planned and launched by the Brazilian government through mines and ore-processing plants, whose production converges principally on the ports of São Luis and Belém.

The Gran Carajás project is without doubt the largest of its kind ever launched in Ibero-America, and perhaps in the world. The project in its entirety encompasses the mining of 35 million tons of iron ore a year, erecting several primary iron factories, four aluminum factories, several for copper, manganese, and nickel, a series of large-scale hydroelectric projects, as well as the large-scale development of agriculture, cattle-raising, and forestry, and construction of seven new cities connected by a transportation network that includes rivers, railroads, and highways. Once the project is finished, the zone will have a population of six million. In **Table 7-7**, you can see in sum the productive capacity of the principal aspects of the work and its cost. In **Map 7-4**, you can see its size: It covers an area larger than all of Italy!

In all its scope, Gran Carajás exemplifies the kind of development that must be launched in every region with a substantial resource potential. With the exception of certain bulk iron ore exports, minerals extracted in the Carajás district will be refined at or near the mine site. Agriculture and the new cities are planned as integral parts of the overall project, such that the area will be developed in its entirety instead of remaining underdeveloped, alongside one or two mines.

The only weakness of the original project, which can be

easily remedied, is the lack of manufacturing industries that use the metals that would be produced in the area. Therefore, the Gran Carajás must go further toward establishing a vast heavy industry capability whose principal components would be located in the port of São Luis, and which would become an important industrial center oriented to the production of steel, basic metals, and heavy industrial equipment in the manner of the industrial super-ports of Japan. In this way, Gran Carajás would be the model for other regions with tremendous mineral wealth to follow, in particular Mutúm-Santa Cruz and Ciudad Guayana.

The other strategic zone of Brazil is the northeast, today one of the most backward sectors of the country but with ample agricultural and mineral potential. The advance of agriculture will be accompanied by a surge of major manufacturing centers dedicated primarily to the production of chemical products, fertilizers, agricultural machinery, and transport equipment, forming a long corridor from Natal to Salvador. The main mining center will be established at Juazeiro, along the border of the São Francisco river, where the huge variety of minerals that abound in the area could be exploited.

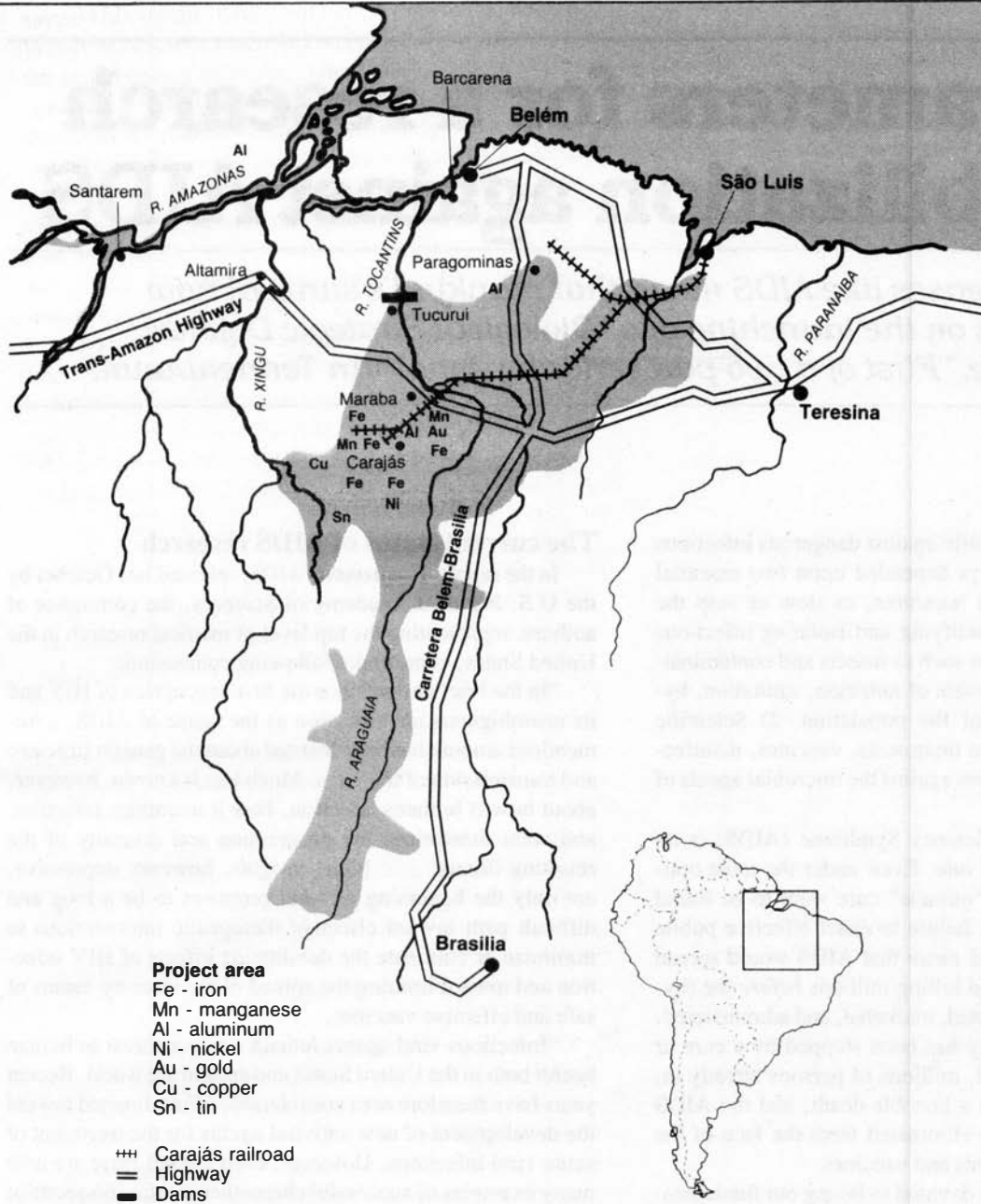
The Brazilian southeast

This is the actual industrial heartland of Brazil, which encompasses the cities of São Paulo, Rio de Janeiro, and Belo Horizonte, where Ibero-America's largest industrial capacity is concentrated. The development of this zone is a question of decisive importance for all of Ibero-America, in view of the fact that its high productive and technological intensity offers substantial opportunities for the development of an industry for the production of modern machinery and equipment, which could extend throughout an industrial corridor similar to that existing in the advanced regions of the United States, West Germany, and Japan. This is the ideal region for the development of the aerospace industry, for example, which would become one of the most advanced aspects of continental industrialization.

Mexico and Central America

In the case of Mexico, industrial development has two facets. The first is that of heavy industry, which would expand primarily in the various industrial ports that form part of the broad industrialization program begun by the preceding government, where the bulk of the productive capacities for steel, petrochemical products, fertilizers, heavy machines and equipment, and naval construction would be concentrated. Regarding capital goods, the center of productive capacity will be located in two industrial corridors; one which crosses the central plateau joining the cities of Mexico, Queretaro and Guadalajara, and that which runs through the north of the country, joining Monterrey with Torreon and Matamoros. Both corridors today contain the main industrial capacity of the country, and will have an important role to play,

Mining-industrial project of Greater Carajás



above all in the production of high-technology capital goods.

Regarding the Central America region, development of heavy industry here will be concentrated on three main ports modeled on the Mexican ports indicated above, which will be built as multinational projects with the participation of several or all of the Central American countries. One of these could be located near Puerto Barrios on the border between

Guatemala and Honduras; another in the Gulf of Fonseca, with the participation of El Salvador, Honduras, and Nicaragua; and the third in the new Panama Canal. Regarding production of capital goods, the main factories will be initially concentrated in Costa Rica and Panama, which today are industrially the most advanced countries in the Central American area.