

EIR Special Report

Carajás: first step toward an Amazon industrialization drive

by Dennis Small, Ibero-America Editor

Anyone who has ever given even a moment's credibility to Malthusian propaganda about how the world is overpopulated and running out of raw materials, would benefit from a visit to Brazil's stunning Grande Carajás iron mine in the heart of the Amazon jungle. There, in the middle of rain forests so thick that a strong man can walk an average distance of only a half-mile per day, the Brazilian government has discovered and is now developing the world's largest, and purest, single deposit of iron ore yet known to man—an estimated 18 billion tons of 66.8 percent pure iron ore, which alone could meet the entire world's current demand for 25 years. To mine the iron and export it, Brazil is also constructing a 4-gigawatt hydroelectric plant (Tucuruí), a 550-mile railroad, and a deep-water port—in what amounts to one of the most ambitious integrated infrastructure projects underway anywhere in the world.

Under the supervision of the Planning Ministry, the Brazilian government has given primary responsibility for the project's execution to the highly respected state mining company, Companhia Vale do Rio Doce (CVRD). In 1985, scarcely five years and \$3.4 billion after the project's initiation, Carajás will begin exporting iron ore to the world.

Brazil, a country larger in land area than the continental United States, has over 50 percent of its national territory covered with Amazon rain forest much like that surrounding Carajás. No one has any idea of what riches it might conceal. It is all virtually unpopulated.

In the minds of its creators, such as CVRD President Dr. Eliezer Batista, the Grande Carajás project is to be only the first step in man's conquest of the Amazon, through its industrialization. CVRD brochures explain that the project "will undoubtedly serve as the backbone . . . to exploit the full potential of this vast, empty, but resource-rich region." The full project contemplates the establishment of downstream metals-refining and -working industries, such as aluminum, to contribute to domestic industrialization as well as gain export earnings. It will also provide the infrastructure for opening up an Amazon area the size of Italy to rational, agro-industrial settlement—a total project which will cost upwards of



NSIPS/Uwe Parpart

Facilities for sorting and crushing of iron ore, under construction at the Carajás mine site.

\$60 billion and provide direct employment to 1.25 million Brazilians.

But Brazil will have to conquer more than nature to make this goal a reality. The country's leaders are under tremendous pressure, in particular from international financial strategists, to entirely eliminate the second, industrial phase of the Carajás project and to resign themselves to having little more than the proverbial "a mine, a railroad, and a port"—in order to export the country's wealth and pay off the foreign debt, British colonial-style.

Carajás, in this sense, summarizes the dilemma now facing Brazil and its leaders. Will the country's prodigious natural wealth be used as the basis for transforming Brazil into a fully industrialized nation over the coming decades? Or will it be mortgaged to the decadent international monetary system, simply extracted and exported in order to pay Brazil's large foreign debt? Inside Brazil, there are political factions arguing each of these two options, and since the 1964 military coup d'état they have lived in an uneasy compromise, while publicly and privately fighting for dominant control.

But under current conditions of world financial crisis, the room for compromise is shrinking. The rapid, rigged decline in Brazil's terms of trade over the past three years has now made it virtually impossible to pay the foreign debt with cheap raw materials. And Brazil now has to choose, even as it goes to the polls for its first significant national elections in two decades, between dismantling its existing industrial base in order to pay the debt, as per the demands of the International Monetary Fund, or joining with other large Ibero-American debtor nations to force on the continent's creditor

banks the adoption of an entirely new world monetary order, geared to the Third World's industrial development.

In April 1982, this writer visited Brazil and discussed this point with many of the country's business, political, and military leaders. At the time, there was a pervasive pragmatism infecting the country's leadership which prevented them from facing up to the magnitude of the coming crisis. Nonetheless, *EIR* reported in its May 18, 1982 issue, "just underneath this glib disregard for international reality, one perceives a growing, uneasy realization within the Brazilian elite that something has to be done."

In September 1982, five months later, I returned to Brazil in the company of *EIR* Contributing Editor Uwe Parpart—among other things, to tour the Carajás project at the invitation of Brazil's Planning Ministry. I found that many of my Brazilian friends had undergone a significant change, over a few short months, in the way they were thinking about the world. Gone were the facile assurances that Brazil would fare perfectly well, thank you, even if the rest of the world sinks into depression. This was especially the case in the seminars Parpart was invited to give on the subject of "Energy and Economic Development" to audiences at Petrobrás (the state oil company), Eletrobrás (the national electricity utility), the prestigious Superior War College, and at various industrial associations, economic think tanks, and university departments in Rio de Janeiro and São Paulo.

Visiting Carajás

The Carajás iron mine itself is located a little over 300 miles south of the equator in the middle of the Amazon rain

forest, but in hills 2,000 feet above sea-level. This makes temperatures in the area quite tolerable, and also ensures that there are no mosquitos and thus no problem with malaria at Carajás—which has enormously facilitated the execution of the project.

The iron deposit was discovered in 1967 by a Brazilian engineer then in the employ of U.S. Steel. The man was engaged in helicopter reconnaissance work searching for manganese, when a range of reddish, denuded hills amidst solid jungle overgrowth indicated the presence of some kind of mineral deposits. Telegraph records demonstrate that the engineer's reports that he had found sizeable deposits of very pure iron ore were repeatedly and insistently dismissed by U.S. Steel officials in the United States—"forget the iron," he was instructed, "we are looking for manganese." The Brazilian government subsequently re-purchased all rights to the area from U.S. Steel.

Today the Grande Carajás project consists of the following related components.

The Carajás mine

An estimated 18 billion tons of iron ore are contained in the Serra dos Carajás, composed of two adjacent ranges. The mineral has an average purity of 66.8 percent, compared to average purities of 20-25 percent in almost all iron mines in the United States today. In many locations, the iron ore reaches 70 percent purity—the highest technically possible given the molecular structure of the substance Fe_2O_3 —and can literally be pulled off the mine wall in powder form with one's bare hand.

Open-pit mining will be used, and beneficiation plants which will crush, sort, and screen the ore will be located at the mine site. Production will start up in 1985 with 10 million tons per year, rise to 25 million tpy in 1986, and reach its scheduled output level of 35 million tpy in 1987. The iron will be mined in three eight-hour shifts, 303 working days per year.

The mine is capable of increasing production to 50-60 million tpy, if necessary—at which rate, the estimated deposits would last about 360 years.

The Serra dos Carajás is rich in other minerals—nickel, manganese, gold, copper, bauxite—and plans are being made to mine these as well.

There are currently about 6,000 workers involved in construction at the mine site, where a pilot mine and beneficiation plant are already operational. Eventually, there are expected to be about 20,000 people at Carajás, including workers, administrators, and their families.

São Luis Railroad

CVRD is also charged with building a 550-mile railroad from the mine site to the Atlantic port city of São Luis. Requiring only one major bridge (to span the Tocantins River) and traveling along largely flat jungle terrain, the single-

track railroad, with siding, will normally handle continuous traffic of 18 trains of 160 cars each, traveling simultaneously to and from the mine site. A round trip journey will take 52 hours.

The entire right-of-way has already been cleared through the jungle; the most difficult part of the job—and 13 kilometers of track have been fully laid. Brazil itself is producing all of the locomotives and cars to be used on the railroad, as well as a large portion of the steel rails and 2 million wood ties to be used in construction. Nearly 20,000 workers are currently employed in building the railroad.

Port of São Luis

The port of São Luis, a Portuguese colonial city of half a million, was selected over the nearer port of Belém for technical reasons. São Luis has excellent natural conditions for handling large cargo ships, of up to 280,000 tons dead-weight.

Tucuruí Dam

To provide electricity not only to Carajás but to the entire Eastern Amazon area, the government is constructing a 4,000-kilowatt hydroelectric plant, Tucuruí, the fourth largest in the world. Tucuruí will have a set of locks, permitting navigation up the Tocantins River. It is slated to be producing electricity in 1983 or early 1984, well before the opening of the Carajás mine itself.

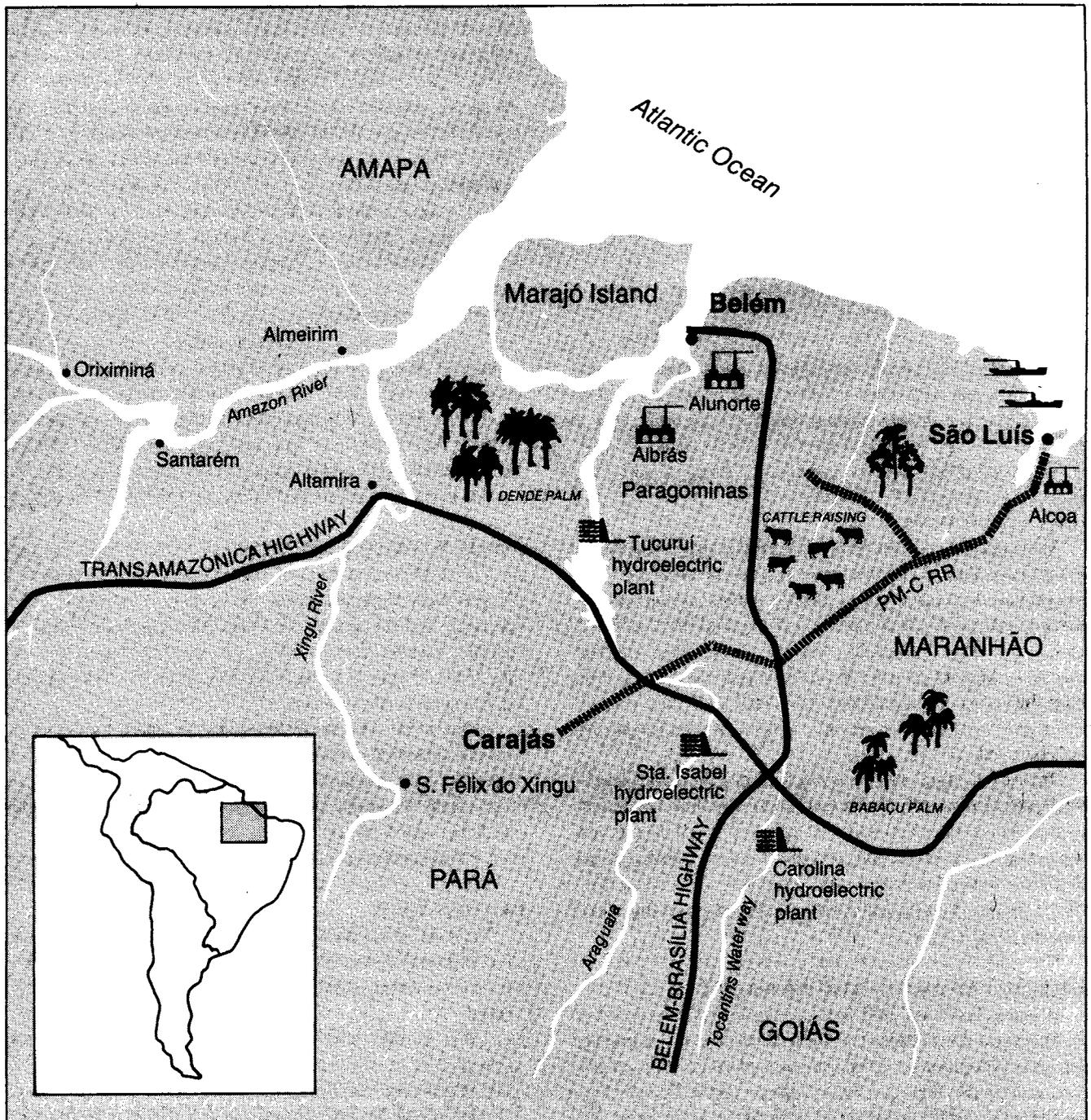
Cities

At the mine site, land is now being cleared for the construction of a new city, to be named Carajás, which is expected to accommodate an initial population of 11,000. Another six towns will be constructed along the rail route in the middle of the Amazon to service the rail line and act as agricultural centers.

Ecology

The CVRD planned the Grande Carajás project so as to have minimal disruptive impact on the eco-system of the Amazon rainforest. It set up an independent body of scientists to monitor the ecological effects of developing the Amazon; and it is careful to reforest the region faster than it is clearing trees.

Unlike bogus "environmentalist" concerns that are used to brake industrial development, the Amazon rain forest is indeed one of the "lungs" of the world. It also absorbs an immense amount of solar energy which it "couples" into the earth's environment. Excessive deforestation of the Amazon would have unfortunate, and non-linear, effects on global weather patterns. Such deforestation is inevitable should Brazil's debt problems force cancellation of the agro-industrial plans for Carajás and leave settlement to the spontaneous slash-and-burn process of primitive agriculture, which produces good crop yields only for a few years—and has already turned vast areas of forest into desert.



The Grande Carajás project involves a huge area the size of Italy in the eastern Amazon. In addition to opening up the world's largest and richest deposits of iron ore in the Carajás mountain range itself, a 550-mile railroad is being built from the mine site to the port city of São Luis on the Atlantic. There, a deep-water port is also under construction. A number of smaller cities will be built along the rail route, and the area opened up to agriculture and cattle raising. Tucuruí, the world's fourth largest hydroelectric dam, is now under construction on the Tocantins River, one of the Amazon's major tributaries, and will provide electricity

to the entire region, including to existing major cities such as Belém.

In a second stage, the Brazilian government is planning to use the Grande Carajás project to set up a broader pole of industrial development in the heart of the Amazon. Some of the mined iron ore will be turned into slab before exportation, and other plentiful minerals in the area, such as bauxite, will be similarly processed and refined—for example at the Alcoa, Albrás, and Alunorte aluminum plants now under construction.

EIR discusses the U.S. depression with *Jornal do Commercio*

On Sept. 27, 1982, the Rio de Janeiro daily *Jornal do Commercio* printed an article by Ana Badaró describing EIR Ibero-American Editor Dennis Small's September trip to Brazil.

Excerpts of the article, headlined "Bankers will force Brazil to go to the IMF," follow.

International bankers plan to cut off Brazil's credit during the first months of 1983 in order to force it to resort to the International Monetary Fund, American economist and editor of *Executive Intelligence Review*, Dennis Small, told this newspaper. This information was given to him last Wednesday by a high-level official of the Bank for International Settlements of Switzerland, which also indicated that the strategy of creditors is to do the same with Mexico and Argentina by the end of this year.

To prevent these three countries from forming a pressure bloc against the bankers of Wall Street, London, and Switzerland, the preferential treatment given to Brazil will be continued for the next few months on the basis of the argument that Brazil is more creditworthy than the others. The Bank for International Settlements of Switzerland plays the role of a world central bank.

Seminars on energy and development

Dennis Small was in Brazil last week, and, together with the physicist Uwe Parpart, presented a series of seminars on energy and economic development at various state companies and at the Superior War College, aside from private discussions with Brazilian politicians and businessmen.

By using their debts as a form of pressure, "while there is still time," the Latin American countries could eliminate the risk of being pushed to the IMF. In their favor is the very real possibility that the creditors could end up not getting back what they lent, which means that the "bust" will be of the financial institutions and not of the countries that owe. At present, affirmed Dennis Small, there is only one international bank with liquidity, and that is Morgan Guaranty Trust.

The assurance that new loans will not make an even bigger mess of the foreign debts of these countries would be

through the application of these new financial resources to those areas utilizing high technology and high productivity—for which interest rates would be lowest. In this way, says the editor of *EIR*, it is possible for the Third World to experience "an explosion" in its economic growth, which may not be in the interest of the international financial oligarchy, but which certainly is for the industrialized countries of the North, so that they can continue to progress technologically and export their products.

If in the attempt at negotiations with creditors, the debtors encounter a confrontation—which is quite possible—Latin America should form a common market and expand regional trade in order to absorb the imports from other nations, emphasized Dennis Small.

"This is the way out for the banks as well as for those countries that have no way to pay their debts. There is an urgency in this matter," the economist warned, "because we are at the edge of the precipice, looking into the bowels of hell. If the international financial crisis continues, 1929 will be considered a paradise compared to what can happen to the world in the coming years."

No U.S. recovery in sight

In emphasizing that the main reason for the world crisis is the deep depression the American economy is going through, the economist, who specializes in Latin American affairs, pointed out that "those who say that the economy of the United States is going to recover either do not know what is going on or they are lying."

The "stratospheric" increase in U.S. interest rates caused a deep industrial collapse there, in addition to channeling all liquidity into speculative and unproductive areas, such as real estate, finances, and the narcotics trade—which worldwide nets \$200 billion.

"Volcker is responsible for the death blow to the economy of the United States and its terrible effects on the destiny of the Third World."

Dennis Small said that as a result of the financial crisis, it is impossible, today, to refinance even the internal debt of his own country, a debt almost triple what the Third World owes.

With a total world debt of over \$1 trillion, there is no way to refinance it, he observes: "If we look at this portfolio, we will see that the best debt is that of the developing countries."

Analyzing the use of loans registered abroad by the Third World countries in unproductive areas, the economist classified the projects of the World Bank as highly inflationary by virtue of the fact that they use low technology. He compared the objectives of the World Bank to those of the International Monetary Fund.

The editor of the *EIR* foresees no way out for the developing nations from an internal perspective, and he reiterates that group pressure against the creditors for the industrial development of the Third World can mean the building, rather than the destruction of their economies.

‘We are directing investment toward increasing exports’

EIR's Contributing Editor Uwe Parpart and Ibero-America Editor Dennis Small met on Sept. 22 in Brasilia, the capital of Brazil, with Planning Minister Antonio Delfim Netto and senior members of his staff. The meeting included an exchange of views on the international monetary crisis, as well as on-the-record remarks by Minister Delfim Netto on the thinking behind the Carajás iron-ore project, which we print below.

Delfim Netto has a well-earned reputation for being both the “czar” who single-handedly determines economic policy for Brazil, as well as an astute and pragmatic player on the international and the domestic political scene. He is known to take special delight in poking holes in the incompetent economic criticisms made of his administration by the Brazilian opposition—a task which he in fact performs masterfully.

Delfim Netto is the consummate pragmatist, who has been so successful in short-term tacking and turning in convulsed international waters that he has turned this approach into a philosophy. But the Planning Minister's continued ability to succeed in this way now depends, as he himself would be the first to admit, on an upturn in the U.S. and world economies—an upturn which is simply not coming under circumstances of present policies. So the question now on the mind of many a nervous international banker, a question which has no doubt crossed Delfim Netto's own mind with increasing frequency, is whether or not he is prepared to become the Martínez de Hoz of Brazil, to preside, as did the former Argentine Finance Minister now on trial for malfeasance in office, over the industrial dismemberment of his nation's economy.

EIR: What is your view of the Carajás project and other large-scale development projects in Brazil?

Delfim Netto: The Carajás project, I think, is the only project we are really developing in this government. I think it is a project that satisfies our basic necessities now. What we need are some projects which will increase our exports in a very short time. We must change our investment pattern in the direction of the export sector. Carajás is really the beginning. We will try to finish some of our other big projects—we are just finishing Itaipú [dam], and some of our steel development. We will try to put all our money in projects

which can increase exports in a very short time. Carajás is a very good example: it is a partnership between consumers and producers. In Carajás we have already sold at least the first tranche of our production. We will try to do the same with some other projects.

EIR: Do you foresee attaching manufacturing facilities to the Carajás project production facilities?

Delfim Netto: It is our intention in the beginning to export the iron ore and in the second stage to produce slabs in Carajás. It is a normal course. We will try to do the same with manganese. We will begin exporting some manganese ore, and we will try to have at least one producer of metal there. What we will try to do in Carajás is to export minerals plus energy—this is the basic conception. We have the new energy of Tucuruí [Dam], and we can increase Tucuruí production to almost 8 million kilowatts, so that in the near future, maybe in 10 or 12 years, we can really export a package of minerals plus energy.

EIR: You also have aluminum production facilities in this same general region of Brazil, which will be coming on line at some point.

Delfim Netto: Yes, this is the Alcoa project. It is on schedule, and we will begin to export, I believe, in 1986. It is the same concept: to export not only the mineral, but also the energy. We intend to use the great facility of having hydroelectric plants, and some iron ore or some other mineral—manganese, alumina, copper, and so on.

EIR: When you look into the slightly more distant future, which admittedly in this world situation is very difficult, do you see the option, the possibility, of reinvesting these export earnings in Brazil for the development of manufacturing to improve your terms of trade?

Delfim Netto: Most certainly, certainly. As you know, we are giving a lot of stimulus to reinvesting in Carajás, in the next steps of production. Take the case of the United States: maybe they will reduce the production of traditional slabs. This is quite clear, because of a lot of problems they have. I think we will come in in the right direction. This combination of energy plus some metals I think is very important, and it is our intention to export the metals.