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## 'Great Enterprises'

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# Space exploration, medical research, and infrastructure: the gains in 1982

by Marcia Merry Pepper

Twice during the 20th century, the United States has "mobilized the sinews of peace in order to provide the sufficient base to also produce the sinews of war. That means we do not have to have a war to get out of a depression," economist Lyndon LaRouche told an international conference in Bonn, West Germany May 6. But, LaRouche stated, we must have a way to mobilize the prerequisites for peace. To do this, entire populations must be mobilized to ensure their nations carry through "Great Enterprises" of economic and scientific development. LaRouche proposed two specific Great Enterprise projects: raising the standard of living of Third World populations, and colonizing space.

Japanese leaders had considered presenting a "Great Enterprises" policy to the annual summit meeting of heads of state in Paris on June 5. But in the conditions of that meeting, of maintaining the IMF financial system at all costs, the presentation was withheld. *EIR* became the only Western news journal to publish the Global Infrastructure Fund proposal written by Mitsubishi Research Institute founding chairman Masaki Nakajima. In January, Toshio Doko, former president of Keidanren, Japan's major business federation, had formed a 15-person study group to undertake critical discussions of the projects proposed in the GIF proposal, first released in 1977. The primary conclusion of the study group is the necessity for more intensive organizing for the projects proposal.

### Third World development

Third World development projects have been at the center of world politics in 1982. After the blatant neo-colonialism of Britain's U.S.-backed invasion of the Malvinas, political leaders and organizations throughout Ibero-America began to look for development strategies and trade routes outside the IMF-dominated system, particularly under the pressure of billions of dollars of unpayable debt. The most ambitious development projects for the 1980s outside of Siberia have been planned for Brazil. Most of these are endangered by the collapse of world trade and by IMF moves to co-opt Ibero-American governments under the pressure of bankruptcy at

the end of 1982. The project designs exist, but their realization in Ibero-America, as in Egypt, India, and other regions, depend upon the political resolution of the debt crisis.

Carlos Alzamora, head of the Latin American Economic System (SELA), released a new study at a December meeting held in Lima, Peru showing that Ibero-America will need \$400 billion in capital goods for development in the course of the 1980s. Ibero-America now produces 25 percent of its capital goods, but this could be increased to 60 percent with sufficient financial investment.

President Reagan was met with a memorable presentation of the "development or debt bomb" alternative during his early December Ibero-American trip. After seeing the projects underway in Brazil, he praised Brazil's "leadership and vigor" in undertaking "daring projects like Itaipu, the biggest hydroelectric plant in the world. . . ."

On Nov. 5, the presidents of Brazil and Paraguay inaugurated the massive new Itaipu Dam, on the Paraná River, the border between the two nations. Sixty-two stories high, the dam will have 18 generators to produce 12,600 megawatts of low-cost electricity, the largest hydroelectric facility in the world. Angra I, Brazil's first nuclear power plant, built with Westinghouse Corporation, was opened in March for testing on the coast south of Rio de Janeiro. A twin facility was planned for a nearby site, part of an ambitious nuclear power program, to eventually include exports.

Yet at year end, the Itaipu's electricity generation initiation date has been postponed from 1983 until 1984, and the nuclear program has been stalled. The official explanation is that there is an "oversupply" of energy, and therefore no need to bring on line new sources of energy, even those completed and waiting. The real explanation is that with collapse of trade, adverse exchange rates, and flight capital, Brazil's economy in 1982 will register a negative growth rate for the third year in a row. The letter-of-intent signed Dec. 16 between the government and the International Monetary Fund specifies that the government budget for state sector industry and infrastructure projects be slashed by 16 percent rather than the 4 percent cut already planned. The hydroelectric and

nuclear programs, and in fact all other major improvements will be in effect stalled. The only project approved by the IMF for go-ahead is the huge Carajás iron ore mountain—18 billion tons of hematite, 66 percent pure iron—which could begin in 1985.

During his February trip to Washington, Egyptian President Hosni Mubarak requested that a \$1 billion annual grant from the United States to Egypt be released from AID's control, which forbids Egypt to use the money for nuclear power development or large projects. One such outstanding project is the Qattara Depression. This refers to a massive geologic basin 450 feet below sea level, lying 50 miles south of the Mediterranean. A 4,200 square mile lake can be constructed by bringing in Mediterranean sea water. On the conduit canals, up to 10,000 MW of hydro-power could be produced.

Over a period of 50 years, the lake will produce a favorable surrounding climate and promote vegetation in what now is useless desert. The preliminary surveys have been completed with the help of German technical experts, and Mubarak has formed the Qattara Development Authority to do feasibility studies. This project, and other irrigation, port, and petrochemical developments could make Egypt the "Japan of Africa." Of all Third World nations, except India, Egypt has the largest pool of scientists and engineers—an invaluable resource for the Mideast and Africa as a whole.

### **Siberian projects scaled down**

The Siberian development projects have also been altered in scope and timetable due to the world economic downturn. There are three major development zones, each involving one or more "Territorial Production Complex," and the Soviets have contingency plans for how and when to scale down developments. In West Siberia, work is going ahead on the oil and natural gas fields, just east of the Ural Mountains. Despite political controversies, the famous Siberian pipeline is proceeding. It will be the second Soviet gas pipeline from the gas fields west. Preparatory work is also proceeding on a large river diversion project to channel water southward, away from the north-flowing Ob-Irtysh system, and into the central Asian rivers that empty into the Aral Sea, thus providing vast irrigation waters for the dry plains.

However, in far eastern Siberia, construction is being modified on the Baikal-Amur Railway (BAM), which goes north of the famous Trans-Siberian Railway. BAM was originally conceived as a key freight-export artery, but with world export prospects dim, BAM will be less fully developed. The rich Yakutsk gas fields—conceived only as an export venture—will probably not be developed at all in the foreseeable future.

### **Accomplishments in space**

After two test flights this year, the first fully operational flight of the Space Shuttle Columbia was launched Nov. 11. This flight successfully deployed two communications sat-

ellites, marking the first commercial success of the Shuttle.

The greatest success of the Shuttle flights is the significant decrease in turnaround time between flights. After just two flights in 1981, the Columbia made its third test flight beginning March 22, during which several scientific experiments were carried out. The June 27 final test flight carried the Shuttle's first Defense Department payload.

By 1985, NASA officials project that a Shuttle can be launched every month. The second orbiter vehicle Challenger, is scheduled for launch on Feb. 4, 1983, and two more vehicles are now under construction.

Of even greater long-term strategic importance, the Soviet Union announced Nov. 7 that it is pursuing a manned space program aimed at launching a large, permanent space station in 1985. This "Cosmograd," or space-city project, will be critical for space colonization. The NASA leadership brought in with the Reagan administration has proposed that the United States itself begin funding for a permanent space station in 1984—essential to the revival of U.S. leadership in space exploration, after the "no new projects" policy of the Carter administration. In line with this revival of the U.S. space effort, the first new planetary program since 1977 was also proposed this year, to do radar mapping of Venus by the end of the decade.

Although the Office of Management and the Budget has consistently attempted to cut space funding, funding has been maintained, by direct appeal by NASA officials to President Reagan. The success of the Shuttle this year becomes all the more important in the political fight to sustain space exploration as a U.S. national priority.

### **Space technology creates medical breakthroughs**

The space program's potential for broad economic effects is demonstrated in the successful implantation of an artificial heart, the world's first, by U.S. physicians at the University of Utah Medical Center Nov. 27.

Congress had voted up funding for an overview of artificial heart research in 1963, at the height of Kennedy-era enthusiasm for landing an American on the Moon by 1970. The report issued by a large task force called an artificial heart feasible by 1980.

Research depended in major part on work done for space exploration. NASA and the aerospace industry had pioneered computer-controlled sensing of biological parameters, miniaturization, materials, and energy sources used for the Jarvik-7 model implanted in Dr. Barney Clark. With the primary engineering problems now basically solved, funding at the originally charted \$50 million a year could make an artificial heart, with a fully implantable and long-lasting energy source, available in three years. Because heart disease is one of the leading causes of death in the United States, the increased longevity and prolonged working time possible with a mass-produced artificial heart would more than pay the social costs of completing this project.