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REPORT OF THE INTERNATIONAL ATOMIC ENERGY AGENCY

ZONE OF PEACE AND CO-OPERATION OF THE SOUTH ATLANTIC

**UNITED NATIONS CONFERENCE FOR THE PROMOTION OF INTERNATIONAL
CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY**

**IMPLEMENTATION OF GENERAL ASSEMBLY RESOLUTION 41/45 CONCERNING THE
SIGNATURE AND RATIFICATION OF ADDITIONAL PROTOCOL I OF THE TREATY
FOR THE PROHIBITION OF NUCLEAR WEAPONS IN LATIN AMERICA
(TREATY OF TLAHELCO)**

**Letter dated 30 September 1987 from the Permanent Representative of
Brazil to the United Nations addressed to the Secretary-General**

I have the honour to transmit herewith a copy of the statement made by the President of Brazil, Mr. José Sarney, on 4 September 1987 regarding the achievements of the Brazilian autonomous Programme of Nuclear Technology and its effects (see annex).

I would appreciate the circulation of the attached statement as an official document of the General Assembly under agenda items 14, 27, 40 and 48.

(Signed) Paulo NOGUEIRA-BATISTA
Ambassador
Permanent Representative of Brazil
to the United Nations

ANNEX

Statement made by the President of Brazil on 4 September 1987
at the ceremony commemorating the achievements of Brazil's
autonomous Programme of Nuclear Technology and its effects

I address the nation today in order to make a most important announcement: Brazilian scientists from the National Commission on Nuclear Energy have succeeded in mastering the technology for enriching uranium by the process of ultracentrifugation. This fact is transcendental in the scientific history of Brazil.

Our country thus completes a decisive stage on the road to autonomy in the field of science and technology. The enrichment of uranium is one of the most advanced techniques in the whole range of human knowledge. Mastering it is a sine qua non for using nuclear energy to benefit mankind, by myriad applications in medicine, agriculture and industry.

The results now realized are the fruit of the dedication and the highest professional ability of Brazilian scientists, who were brought together at the Institute for Energy and Nuclear Research of the University of São Paulo and had the direct and indirect support of other segments of the technical and scientific world within Brazil. The achievement was made possible by the joint labours of scientists and experts in the different branches of knowledge.

It is fitting to say that in this achievement, Brazil relied exclusively on its own material and human resources, without any outside help. On the contrary, we even met with restrictions and difficulties. The satisfaction we feel today is, therefore, very great indeed.

We have mastered the technology of ultracentrifuges and of all the peripheral equipment for an experimental cascade for enriching uranium. It is an ongoing operation, over thousands of hours. With the process of industrialization in its possession, Brazil is guaranteed complete control over the technology of enriching uranium by the ultracentrifugal method. This technological victory will be consolidated shortly with the completion of a pilot plant in the experimental centre of Aramar, in the township of Iperó, State of São Paulo, and with the commencement of operations at the first module of the industrial demonstration plant next year.

We reaffirm our statement concerning the target that Brazil has decisively set for itself: broad and unobstructed access to the entire range of scientific knowledge and its practical applications.

This is also the moment to reiterate, with emphasis and in all solemnity, that the objectives of the Brazilian nuclear programme are exclusively peaceful: in promoting the use of the atom, in all forms of peaceful application to the benefit of national economic, scientific and technological development, the nuclear programme of Brazil will serve to advance the well-being of Brazilian society.

Moreover, Brazil's commitment to utilize nuclear energy for exclusively peaceful purposes cannot be questioned. A founding member of the International Atomic Energy Agency, Brazil actively participates in its work. We signed and ratified the Treaty of Tlatelolco, which bans nuclear weapons from Latin America, and the nuclear policy of Brazil has never deviated from the letter and spirit of that Treaty. Through our initiative, and with the decisive support of the countries of the region, the General Assembly of the United Nations in 1986 adopted resolution 41/11, by which it declared the South Atlantic a zone of peace and co-operation, free from nuclear weapons. In the United Nations and other forums, Brazil has consistently defended measures for general and complete nuclear disarmament.

As a country that has made peaceful interaction with other countries and international co-operation fundamental principles of its international posture, Brazil practises a policy of peace. We have no aspirations towards hegemony, and the instruments we most favour in our relations with other nations are those of diplomacy and co-operation.

Thus, the policy of peace incorporates a centuries-old diplomatic tradition and is based on international legal commitments that we have followed to the letter. Above all, this policy today reflects in depth the will of the nation. In the current debates in the Constitutional Assembly, moreover, the vocation of the Brazilian people for peace has come to the fore clearly and unanimously. There, one witnesses the renewal of the determination to give a clearly ethical sense to the foreign policy of democratic Brazil.

Our goals, those of both the Government and our society in general, are and will remain pacific.

On this occasion, as we are gathered together to make the solemn announcement of this historic event, I would like to give special emphasis to the nation's recognition of the men and institutions that have made it all possible.

I would like to single out, in particular, the work of the National Commission on Nuclear Energy (CNEN), the co-ordinating body for nuclear activities in Brazil, under the Presidency of the Republic, responsible to the political branch of Government, the synthesis of all the powers and of the will of the nation.

Created in 1965, during the Juscelino Kubistchek Administration, CNEN works through the Institute for Energy and Nuclear Research at São Paulo and the Institutes of Nuclear Engineering and of Radioprotection and Dosimetry at Rio de Janeiro.

The self-sacrificing administrators, scientists and researchers of CNEN are largely responsible for the progress made in developing nuclear materials in research on reactors, in applications of nuclear techniques and in the training of human resources. In its more than 30 years of existence, CNEN has been achieving results such as the production of radio-isotopes for use in medicine, the mastering of technologies for the production of fluorine, teflon and beryllium, and the

improvement of trade in perishable goods, with the first exports of irradiated foodstuffs. Moreover, special alloys of monel and inconel and compounds and alloys of zircon were developed, in addition to radiation detectors and associated electronics.

The results achieved to date would not have been possible, however, without the active participation of the Brazilian academic community and private national industry. From our universities and training centres came the men whose talent and determination made the Brazilian nuclear programme viable. National industry, for its part, played a creative and irreplaceable role in the development of the material and equipment that were indispensable for the programme.

It is equally fitting for us at this solemn moment to pay tribute to those in the past whose foresight and pioneer spirit provided the original stimulus for the Brazilian programme. Among them stands out the figure of Admiral Alvaro Alberto, who in the 1950s was responsible for the purchase of the first ultracentrifugal machines for enriching uranium. The initiative of Admiral Alvaro Alberto went no further for a series of reasons linked to the climate in which the debate on the utilization of nuclear energy was being carried on both internationally and within Brazil itself. His machines were deactivated, but his ideas remained alive. We are now accomplishing what the pioneer vision of Alvaro Alberto foresaw 30 years ago. He and all those who worked with him deserve the gratitude of Brazilian society.

Faithfully interpreting the most legitimate aspirations of our community, my Administration is committed to the scientific and technological development of Brazil. We have given our support to research by increasing the resources set aside for scientific institutions and the professional training of researchers and by enlarging the scholarship programme. This research has not been carried out for its own sake, but as an essential part of a project that has as its objective the creation of a modern country, defined by the best standards of social justice.

Today, science and technology are necessary elements for any development programme. The acceleration in the rhythm of growth, the guarantee of international competitiveness for our products, the definition of solutions compatible with progress, the ability to absorb the most modern advances of mankind and the broadening of the forms of exchange between Brazil and the rest of the world are facets of the modernization of a country that will rest on solid pillars if we have well-founded conditions for growth in science and technology. It is a modern country that I envision; it is a country without profound inequalities, without poverty, without misery, distinguished by a true sense of community.

It is for this reason that I have tried to give government support, in a practical way, to Brazilian endeavours in the field of scientific and technological innovation. Some notable results have been obtained, but the road still to be travelled is a very long one. As we compare the Brazilian situation with that of the developed nations, we are made vividly aware that the way is a difficult one, and that it will have to be opened up with our own efforts. But, with tenacity, we are now entering the rather limited roster of countries that have mastered the state-of-the-art technologies.

This achievement should stimulate the scientific community to an increasingly broad and intense interchange with the advanced centres of scientific production. It should lead to creative co-operation with countries like ours in the developing world that know as well as we do that progress and development cannot be achieved without the support of science and technology.

The announcement I make today, besides its special significance of success in the nuclear area, is thus a symbol of the capacity of the Brazilian scientist, his determination, his competence, a symbol of the unshakeable calling of Brazil to be modern.

Nuclear energy should also have a positive impact on Brazilian foreign policy. It will have to open the door to international co-operation, as, moreover, it has already done in relation to some friendly nations. The new achievements should rightfully reinforce the meaning of co-operation. And here, I would like to make particular mention of the productive avenues for co-operation opened up between Brazil and Argentina, a country that has also, since 1983, mastered the enrichment of uranium. The technological advances of Brazil and Argentina and the excellent level of relations between the two countries made it possible to establish machinery for co-operation in the field of nuclear energy, with a range and profundity perhaps without international precedent. I am positive that this co-operation will bear real fruit to the benefit of our two countries and Latin American integration as a whole.

Brazil has accepted the challenges of mastering technologies. This year we had the opportunity of announcing the national advances in the field of superconductors. In the areas of informatics, biotechnology, space science and other sensitive fields, we are engaged with our scientists in opening the doors to the future.

Brazil cannot renounce its own great destiny.

I had the occasion to affirm - and today reaffirm - that the nations of the future are separated into two well-defined camps: those countries which master technologies and those countries condemned to technological slavery.

Brazil has great reserves of uranium and other radioactive minerals. Nuclear energy, in the future as in the present, will be one of the most important markets in the industrial world. We must prepare ourselves to participate in it by creating technologies, producing reactors, selling combustibles, in short, seeking, on an equal footing with other countries, to open up new horizons and to create national wealth in order to improve our people's standard of living.

This ceremony demonstrates the openness of the Government, its desire to keep the nation informed, as one of the aspects of the reaffirmation of our purposes, without reservations or secrets.

To show the capability, self-sacrifice and competence of the men who worked on this project, suffice it to say the very low cost of the programme demonstrates the efficiency and productivity of the research.

In eight years, cruzado expenditures amounted to the equivalent of \$US 37,392,000.

This week we are celebrating the week of the fatherland; the progress we have made in independently and sovereignly mastering the process of enriching uranium reassures all of us in the conviction and certainty of progress for our nation, which has a great destiny, a destiny of peace, of co-operation, of fraternal existence with other nations and of participation in the world of the future.

We pay tribute, therefore, to our scientists with our gratitude, and we renew our faith in our Brazil.
