LATIN AMERICA AND NUCLEAR ISSUES

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Latin America and the atomic bombs: In 1945, the destructive power of the U.S. atomic bombs provoked a worldwide military-industrial interest for nuclear explosives. Expectations of limitless use of nuclear energy in the near future also contributed to a global nuclear race.

By 1950, practically all the industrialized countries and many Third World countries had nuclear programmes. Backed by the world powers, the United Nations then instituted the "umbrella" programme “Atoms for Peace” to control nuclear energy applications worldwide. To supervise these projects a UN agency was created, the International Agency of Atomic Energy, AIEA

In Latin America both Argentina and Brazil also began their nuclear programmes by the 1950’s. To this date these programmes remain the most advanced ones in Latin America. Both Argentina and Brazil have also achieved significant developments in rocketry. On the other hand –together with South Africa that destroyed its atomic arsenal close to the end of the apartheid regime, and with Ukraine that let nuclear warheads be removed from its territory after the collapse of the Soviet Union – these two countries distanced themselves from paths leading to nuclear weapons.

Full cycle nuclear technology in Argentina: In Argentina, President Juan Perón created the Nuclear Energy Commission in 1950, and very quickly Argentina moved to nuclear leadership in Latin America. Since its beginning, its Atomic Energy Commission adopted the option of natural uranium fuel cycle. They constructed two heavy-water nuclear power plants – a CANDU reactor in cooperation with Canada, and another with Germany technology.

Argentina had an early start developing an experimental and then a industrial-scale heavy water facility. Later, its Commission started a reprocessing facility that operated for a short period of time and then closed down due to pressure applied by the United States. But its most sensitive facility was a gaseous diffusion plant near

the Andes resort town of Bariloche that was publicly disclosed only in 1983. This facility has not enriched uranium above 20% but it could certainly be part of a nuclear-weapons project. Moreover the Argentine Air Force at the time was actively engaged with Egypt in the development of an intermediate range missile, the Condor 2.

Interestingly, Argentina's nuclear programme went well ahead based on indigenous capabilities. It is shown below that Brazil –that for many years tried to import nuclear technology—achieved success when followed Argentina's option and implemented an independent programme based on its own capabilities.

Full cycle nuclear technology in Brazil: Major Brazilian attempts for acquisition of the full cycle of nuclear technology happened during the military governments of 1964-1985. In late 1960's Brazil bought its first nuclear power reactor from Westinghouse hoping that the purchasing would include equipment for Uranium-235 isotopic enrichment. This did not happen due to the North American allegation that Brazil was not part of the NPT.

Brazil's second attempt in 1975 was a huge package contracted with West Germany for the acquisition of nuclear technology together with eight 1,200 MWe nuclear power reactors. In this deal, Brazil would receive –besides the eight reactors to be commissioned before year 2000– a Uranium-235 enrichment plant and complementary facilities for fuel fabrication, besides installations for reprocessing of the burned fuel. The enrichment was based on a dubious jet-nozzle enrichment technique and the reprocessing plant would have the capacity of one ton per year. To prevent international opposition to this deal, the Germans ignored the fact that Brazil was not signatory of the NPT claiming that all the imported facilities would be under inspection by the AIEA. International pressure and the Brazilian economic crisis in the 1980's crippled this agreement with serious financial losses to Brazil. In this adventure Brazil lost several billions of dollars. This contract went along a very "bumpy road" through the military→civilian transition time and produced no electricity during its first 25 years.

The third attempt was done by the Brazilian Navy in the late 1970's known as the "Parallel Project". Its details were only revealed after the military regime. It was only then that the military in charge started participation in debates

after its public recognition. The first open debate took place in 1985 during the annual meeting of the Brazilian Society for the Progress of the Science (SBPC). Admiral Othon Luiz Pinheiro da Silva, the project coordinator, participated in the debate trying to justify its conception. According to Admiral Othon, the Brazilian military soon verified that the 1975 agreement with Germany would not transfer any significant technology to Brazil.

The Navy's parallel project had a convenient operational link with the leadership of the Brazilian National Commission of Nuclear Energy (CNEN), needed for the purchasing of components and materials. Besides its own facilities the Navy had a close collaboration with the Institute for Energy and Nuclear Research (IPEN) – a federal laboratory in the campus of São Paulo University (USP). They have formed a network together with Brazilian industries and University laboratories and is at present the backbone of the Brazilian research and development of the full cycle of nuclear technologies: the Uranium isotopic separation by centrifuge technique; the production of nuclear fuel bars; and Navy facilities for construction of small nuclear reactors.

In 1988 –three years after the return of the democratic regime– a Uranium-235 enrichment pilot plant was publicly inaugurated in Aramar, the Navy installations near the city of Iperó, in São Paulo state. This installation is part of an ongoing project of nuclear-propelled submarines. Presently, commercial goals are in view.

However, the Navy project was not the only one secret project during the 1964-1985 military regime. In 1990, Fernando Collor de Mello, then recently elected president, revealed the existence of the Solimões project –a "hazy" programme at the technical installations of the Brazilian Army in the state of Rio de Janeiro. Soon after, in an initiative that received some attention outside Brazil, President Collor and his Minister for Science and Technology, the nuclear physicist José Goldenberg, closed the presumed site for nuclear tests that was located in a remote region of the Cachimbo Ranges, in the Amazon basin. Goldenberg revealed some years later that the Army programme did not have the Navy's technological level. The accepted relationship of the Solimões' project with nuclear explosive was the revelation of a set up intended to operate as a sub-critical nuclear reactor moderated by graphite. The commissioning of this pilot unity would allow the collection of technical data for the

design of a 20 MW thermal gas-graphite nuclear reactor that could only be associated with the production of plutonium, a nuclear explosive.

Civilian control. The civilian control of these secret projects had to wait the falling down of the military regime in Argentina (1983) and in Brazil (1985). Again, Argentina started ahead under the leadership of President Alfonsín who formulated the proposition of a rapprochement with Brazil.

Under civilian leadership, the Presidency and the Congress of both countries sought to restrain the political activities of the military. In Argentina the military was weakened due to the loss of the Malvinas/Falklands War, and with the increasing influence of its Foreign Office the government was working to end its isolation. Finance Ministries and private corporations began to view the independent nuclear programmes as a serious impediment to foreign investment and trade.

All the projects mentioned above were either dismantled or substantially modified after the fall of the military regime. The history of these projects still has several gaps, but, as it stands now, only the Brazilian Solimões Project was conceived with the purpose of production of a nuclear explosive; the only practical purpose for plutonium production. This Army's project is now scaled back to a 2-MW thermal reactor.

In Argentina, under the Alfonsín government, the resources allotted to the National Atomic Energy Commission were substantially diminished, the nuclear programme considerably stalled and in some areas stopped. Argentina's advanced technological projects are bearing the effects of the huge economic and political crises. The gas diffusion plant for Uranium enrichment is now closed.

In Brazil, parts of the original Navy project remain active. Based in German technology of diesel submarines, the Navy intends to build submarines in Brazil that can be adapted for nuclear propulsion. A nuclear reactor is under construction by the Navy in Aramar. The other section of the Navy's original project –the Uranium-235 enrichment plant– is now been transformed in a commercial venture. In 2000, the Navy announced the transfer of this plant to a Brazilian state company "Nuclear Industries of Brazil (UNB) in Resende, a city in the state of Rio de Janeiro. The plant should ultimately reach the production of 100.000 SWU/year, more than enough for

the current Brazilian nuclear power reactors. The price of the plant was about US$130 million and its first module with 20,000 SWU/year should be concluded in the end of this year.

Brazil and Argentina nuclear policies after the military regimes: In 1989 the new civilian governments of Argentina and Brazil opened discussions on bilateral agreements to prevent a nuclear arms race in the Latin American Southern Cone. These agreements were only possible because of a firm diplomatic effort that started in 1985. In 1991, the two countries agreed to establish a bilateral system of inspections that soon received the recognition of the International Agency of Atomic Energy (IAEA). This initiative paved the way for the approval by both Argentina and Brazil of the Tlatelolco Treaty, and the Non-Proliferation Treaty, NPT, in 1995 by Argentina, and more recently, in 1998, by Brazil. Interestingly, it was a joint Argentina and Brazil initiative in the 1990's that promoted changes in the Tlatelolco treaty to allow that its inspections be carried out by the IAEA. The last country to sign Tlatelolco was Cuba, 25 years after its creation.

The "road map" used by these two countries to accept international safeguards against nuclear weapons is quite singular. No other examples exist of countries accepting the international safeguards system against nuclear weapons before signing the NPT.

The Argentina-Brazil agreement was established in July of 1991 in Guadalajara, Mexico, and ratified by the two countries on December 12, 1991. This agreement is the legal base of a bilateral agency for safeguards against nuclear weapons, the Argentinean-Brazilian Agency for Accounting and Control of Nuclear Materials (ABACC in Portuguese). ABACC was installed officially in Rio de Janeiro on December 9, 1992, and started inspections after just one year! The inspectors are staff members of the nuclear agencies of the two countries. Two "pools" of about 60 technicians each are recognized for inspections missions: the Brazilians inspect the Argentinean facilities and Argentineans inspect the Brazilian ones. Specific technical problems have been resolved with the collaboration of international laboratories and the IAEA. For this collaboration, a "Quadripartite Treaty" was signed by Argentina, Brazil, ABACC, and the IAEA. The general activities of ABACC (including statistics and nature of the inspections) are annually disclosed to the public in well-elaborated

reports. Contrasting from the IAEA, there are windows for communication between ABACC and government agencies of the two countries. Thus each country has full knowledge of each other's activities in the field.

Current nuclear issues and Latin American diplomacy: The best known Latin American contribution for the elimination of nuclear weapons is the Tlatelolco Treaty. In 1962, Brazil, which was then under a civilian government proposed the idea of a Latin American Nuclear Weapon Free Zone. At the time, Argentina that was under a military government showed no interest. But in October of 1962, the Cuban Missile Crisis occurred. This was the catalyst for the 1963-1967 negotiations of the Tlatelolco treaty led by Mexico, its depository state. Argentina and Chile became full parties of Tlatelolco at the beginning of 1994, and Brazil followed a few months later.

The Latin America participation in UN initiatives against nuclear-arm race dates back to the 1980's when Argentina took part of the six-countries call for negotiations between Soviet Union and United States at the peak of the Cold War. Interestingly, it is Brazil that since June 1998 is participating with six other countries[1] in the "New Agenda", a diplomatic coalition in the UN to overcome the current stalemate of the Conference of Disarmament.

There are good reasons for the fact that within the UN the coalition's contributions have been noticed. They came after the nuclear tests of India and Pakistan in May 1998 that woke up world public opinion but had no effect in the nuclear policies of the permanent members of the UN Security Council. These tests demonstrated however that radical changes were required on the P5 nuclear policies. The seven state members forming this coalition were quite effective in collecting previous diplomatic support for their propositions. The New Agenda's proposal is realistic and based on multilateral negotiations leading to a World Convention on Nuclear Weapons. In November 13, 1998, the General Assembly of the United Nations approved this proposal by 97 votes in favour, and 19 against, with 32 abstentions. The United States led the opponents, but, surprisingly, 12 members of NATO did abstain. Another contribution by the New Agenda coalition proved more

[1] Brazil, Egypt, Mexico, Ireland , New Zealand, South Africa, and Sweden. Slovenia left the coalition shortly after its creation.

successful: the well-known 13 steps approved in the final document of the 2000 NPT Revision Conference (Appendix 3).

Latin American diplomacy is facing now a contrasting expectation: After that UN approval of the 13 steps, the new administration of USA is proposing unilateral "global order" over the trust and respect for international agreements (the rule of law). The process proposed by the New Agenda –stamped in the document of the 2000 NPT Revision Conference— remains the Latin American option over the U.S. proposals that ingest dangerous instability in world order. As commented by the Brazilian journalist Léo Schlafman[2]: *"After the first Golf War a lot has been spoken about a new international order that slowly progressed into emptiness. All of a sudden, an extraordinary acceleration was produced. In a short period of months the American leadership affected three essential pillars of the western system: NATO, the European Union, and the UN. As a matter of fact NATO had already lost its purpose a decade ago, Europe split with the Iraq war, and driven by the U.S a severe process of erosion was already going in the UN institution. It was no longer possible to save these alliances and world institutions in decline. Bush's role was thus limited to the last blow against something that was falling apart. During more than half century the Occident was intoxicated with its force. Now it is a declining and impotent outsider in the mechanics of events."*

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APPENDIXES

APPENDIX 1: Brazil: The new Government and the nuclear Issues

During the last presidential campaign, the then candidate Lula was invited to meet with representatives of the Brazilian armed forces. Asked about his position in connection with the nuclear technologies, candidate Luiz Inacio had the opportunity to comment about the main weakness of the NPT: its tacit recognition of the non implementation of Article VI by the nuclear powers (P5).

President Lula's wording however allowed the interpretation that he considered unfair that only the five nuclear powers could have nuclear arsenals under the NPT. This was then transformed into an issue by the campaign's staff of its main opponent -- candidate Jose' Serra of President Cardoso's party.

The Workers Party clarified its position immediately afterwards:

1- The 1988 Brazilian Constitution forbids nuclear weapons and a president of the Workers Party would never violate the Law;

2- The Workers Party recognizes that Brazil has signed three international safeguards treaties against nuclear weapons (The Treaty of Tlatelolco, The Brazil-Argentina Bilateral Treaty, and the NPT).

However, one should be aware that there is a strong nationalistic "wind" in Brazil, and that nationalistic leaders backed President Lula's candidacy. Members of the political parties that had given open support to the Workers Party candidate were invited to participate of President Lula's government. The left-wing parties keep the 1950's vision of nuclear power. This "vision" is shared by many Brazilian nationalistic groups outside the military – in special the nuclear engineers! They have lately been polarized by deeds and projects of the current U.S. administration. There are however influential members of President Lula's administration that know better and have already proven to be vigilant and responsive against any technological drive leading to weapons of mass destruction.

The official position of President Lula's platform is of explicit support to international treaties against weapons of mass destruction. The present administration has members that have been active in initiatives against these weapons – within the UN and in non-governmental organizations. In particular, the Brazilian minister of Foreign Affairs, Ambassador Celso Amorim, that has had a fairly important role in the New Agenda coalition in the UN, and Prof. Luiz Pinguelli Rosa, former Pugwash World Council member and now a member of President Lula's administration, that for

many years denounced the military projects in Brazil. Officials in charge of finance and trade affairs have also presented their positions to the press and openly declared that any initiative related to weapons' development would be damaging to current prospects of increasing international relations.

The international press however places gives to any ambiguous statements that might add ammunition against non-aligned governments. The newly appointed Minister of Science and Technology said in an interview with the BBC Brazilian Service of January 5th, 2003, that "*We cannot renounce any form of scientific-technologic knowledge, whether the genome, DNA or nuclear fission*" .

This BBC Service then added "*These remarks by Mr. Amaral coming as we face the "nuclear crisis" between the United States and North Korea and the U.S. preparing for war with Iraq over its weapons programmes, has reawakened debate over Brazil's own nuclear energy and research programme, the most advanced in Latin America.*"

But the BBC Service also added "*The new Brazilian government had a quick reaction and Mr. André Singer – the spokesman for President Luiz Inácio Lula of the Silva – was quick to distance the new president from Mr. Amaral's pronouncement saying that the minister's remarks were not an expression of official policy*."

Yet, according to an article in the New York Times of last January 8th, (Brazil Needs A-Bomb Ability, Aide Says, Setting Off Furor, by Larry Rohter) "*Mr. Amaral's declarations echoed the certain discontent expressed by Mr. da Silva when criticized the Nuclear Nonroliferation Treaty as unjustly favoring the United States and other nations that already had nuclear weapons*". Mr Rohter then states that: "*those remarks were made to a group of retired military officers, many of whom supported the ambitious nuclear programme undertaken by the military dictatorship that ruled Brazil from 1964 to 1985, and caused immediate alarm here.*" Mr. Rohter also added – and I quote again: "*a dozen members of the United States Congress, complaining of his "longstanding relation with and admiration for the Communist dictator and sponsor of terrorism Fidel Castro," sent a letter to President Bush saying that Mr. da Silva's remarks "raise grave questions concerning the international policies a government of Brazil might pursue under his presidency".*

APPENDIX 2: Brazil Space projects and the new government.

Since the first operation in the Alcântara launching site, in 1989, Brazil has: (a) launched more than 260 low-altitude vehicles for survey and meteorology; (b) placed two satellites in geostationary orbits (SCD-1 in 1993 and SCD-2 in 1998), using the USA rocket Pegasus, of the North American company Orbital Science; (c) founded the Brazilian Space Agency (AEB in Portuguese), in 1994; (d) implemented more than 10 international agreements of space cooperation. Among these the agreement with China, of July of 1988, for the construction of two satellites for search of Earth natural resources (Chinese-Brazilian Earth Resources Satellites), the first of them, Cbers 1, put into orbit from China in October of 1999.

Two positions (expressed in last January 17, just after President Lula's inauguration):

-- On January 17, 2003, the new Brazilian Minister of C&T stated that the Brazilian space project is a priority in the new government. Minister Roberto Amaral, in interview to the Voice of Brazil, listed as priorities the need to move forward in the development of the Alcântara launching site (CLAN in Portuguese), in the state of Maranhão; the construction of Brazil's launching vehicle; and, in cooperation with China, the development of Brazilian satellites. Thus the development of the Brazilian satellite launcher remains as a priority since the 1970's.

-- According the North American Ambassador Donna Hrinak on last January 17th, Brazil should continue participating in the project of construction of the International Space Station (ISS) but the Brazilian investments should be below the approved values. According to the agreement signed in 97, Brazil would enter in the project supplying six equipments, estimated in US$ 120 million. But the first budgets demonstrated that just one of the pieces would cost US$ 140 million, what placed in risk the permanence of Brazil in the consortium.

Relevant issues

a) The Brazil-US safeguards agreement on Alcântara launching facilities. [Alcântara is well located for the launching of satellites in geostationary orbits.] Still under the process of approval by the Brazilian Congress, these safeguards --required for future contracts with US private enterprises– have been approved by the Science and

Technology Commission but not by the Commission for the National Defence and Security. The discussion of this agreement has not been scheduled as yet in the Lower House of the Brazilian Parliament. The prospects are that these safeguards shall be discarded .

b) The Ukrainian partnership: A Brazil-Ukraine agreement for Cooperation on Peaceful Uses of the External Space was signed in January of 2002. Ukraine has already ratified the agreement but in Brazil the agreement is still under discussion in its National Congress. A Memo of Understanding was signed by the Brazilian Space agency and the National Space Agency of Ukraine on the use of Ukrainian rocket launchers from Alcântara launching site (CLAN in Portuguese). A new memo is now under consideration to enhance efforts by the two Space Agencies to adapt CLAN infrastructure for the commercial use of the Ukrainian Cyclone-4. The estimate of Brazilian government's is that this investment is of the order of US$30 million, until the end of 2005. Meanwhile, Ukraine should invest US$135 million for the additional developments for the conclusion of the Cyclone-4. Ukraine already did more than 200 successful launchings with the rocket Cyclone 3. The 4-series that would come to Brazil is a modern and improved version of the previous series.

c) *The Amazon surveillance system:* The concern with the defence of the Amazon region permeates all the Brazilian military institution, even among those high rank officers of conservative formation. That is the reason why the Amazon surveillance by the System for the Vigilance of the Amazon (SIVAM) is taken by the Brazilian military as fundamental to restrain potential conflicts in the region. With more than half of Brazil's territory taken up by the rainforests of the Amazon — a critical resource for both the country and the world — it is not surprising that the remote sensing of that region is a top priority. SIVAM became operational last summer. "*Combining data from satellites with sensors on aircraft and the ground, the system is the most ambitious of its kind in the world, and aims to promote sustainable development by providing real-time monitoring of issues such as deforestation, pollution and the spread of disease"* (see "Brazilian science: Under new management" by David Adam, *Nature,* May 2003**)**.

d) The VLS-1 launcher: The Brazilian Space Agency (AEB) and the Aerospace Technical Center (CTA) have announced that the third test in flight of the Satellite Launcher Vehicle (VLS-1) shall take place in August of this year from Alcântara. The VLS-1 can carry a satellite of about 300 kg into orbits of up to 1.000km of altitude. In this third test, VLS will take two satellites developed entirely in Brazil. One of them is the Technological Satellite (Satec), produced by the National Institute of Space Researches (Inpe), and the other, Unosat, the first Brazilian mini-satellite developed by the Northern University of Paraná state, with the support of the AEB, among other institutions.

Brazil's position on space rights (Extract from José Monserrat Filho. "Space Rights: A Confined Regulation" (in Portuguese); 54th Annual Meeting of the Brazilian Society for the Progress of Science, Goiânia, July 20th 2002.)

The Brazilian position in connection with space rights remains the one presented to the Space Juridical Sub-Committee in April 2001: "Taking into account that the remote monitoring by satellites became a vital activity for the humanity's well-being, for the development of all the countries, as well as its special relevance for peace and international safety and for the economic and social programmes of the developing countries, the Brazilian delegation considers that the remote sensing by satellite is as important for the world community as the telecommunication systems. In spite of that, the remote monitoring by satellite is a space activity not sufficiently regulated for there exists only one international instrument for this purpose – the 1986 Declaration of the General Assembly of UN with its Principles for Remote Sensoring – no longer in tune with current technological as well as economic and political scenarios. We understand that it is necessary to elaborate an international convention to up date these Principles and develop norms that would take into consideration the technological innovations in the activities of remote surveillance and of its commercial applications. The Brazilian delegation proposes the inclusion in the agenda of the Juridical Sub-Committee a new item, that of the discussion of an international convention based on the Declaration of the General Assembly of UN that established the Principles for Remote Sensoring."

APPENDIX 3 – Extracts from an overview of the 13 steps ("Towards NPT 2005: An action plan for the 13 steps" report by Jim Wurst on the "Strategy Consultation on

Implementing the Non-Proliferation Treaty Commitments" of the Middle Powers Initiative, United Nations, New York, April30-May 1, 2001.)

- **DE-ALERTING (Step 9D) :**The persisting launch-on-warning status of some 5,000 US and Russian nuclear warheads is irresponsible and unacceptable, especially in light of US President Bush's statement May 1, 2001 that "we are not and must not be strategic adversaries." The goal should be global zero alert. The US should make this a central element of its Nuclear Posture Review, being prepared to take into account the asymmetrical nature of their respective strategic nuclear forces, and offering major proposals for the removal of all strategic nuclear warheads from what President Bush described as "hair-trigger alert."

- **PRESERVE AND STRENGTHEN THE ABM TREATY (Step 7) :** The ABM Treaty must be preserved and strengthened, because of the potentially grave consequences for the whole treaty regime underpinning nuclear non-proliferation and disarmament – and thus for global security – if it is abrogated. Following President Bush's May 1 speech, this becomes more urgent. His clear intention to proceed with multi-layered ballistic missile defence risks reviving a nuclear arms race and stimulating the weaponisation of outer space. Strong interest was expressed, therefore, for a proposal that a group of like-minded states establish a conference outside the CD with a mandate to prepare and start negotiating a Treaty to Prevent War in Space.

- **UNILATERALISM VERSUS THE RULE OF LAW (Steps 7, 9A, 9C) :** The treaty-based approach to nuclear disarmament must be continued and reinforced, not abandoned. Recent US resistance to this approach, evidenced by Senate rejection of the CTBT and expressed willingness to abrogate the ABM Treaty if necessary, must be reversed, especially in the wider context of its uncooperative stance towards such treaties as the Kyoto Climate Change Protocol. However, unilateral disarmament steps can be productive if they are carried out to support, not undermine, the rule of law.

- **IRREVERSIBILITY (Steps 5,6):** Signatory states should insist that the unequivocal undertaking made by the NWS (Step 6) includes an understanding that the gains made in nuclear disarmament cannot be reversed by possible destruction of the non-proliferation regime following deployment of a US missile defence system. The principle of irreversibility should be applied to all cuts, including, in particular, the 1991 US/Russia unilateral reductions and dismantling of non-strategic nuclear weapons, systems covered by the START regime, and those removed from service by the UK and France. As part of this process, the work of nuclear weapons laboratories should be redirected to verification and dismantling.

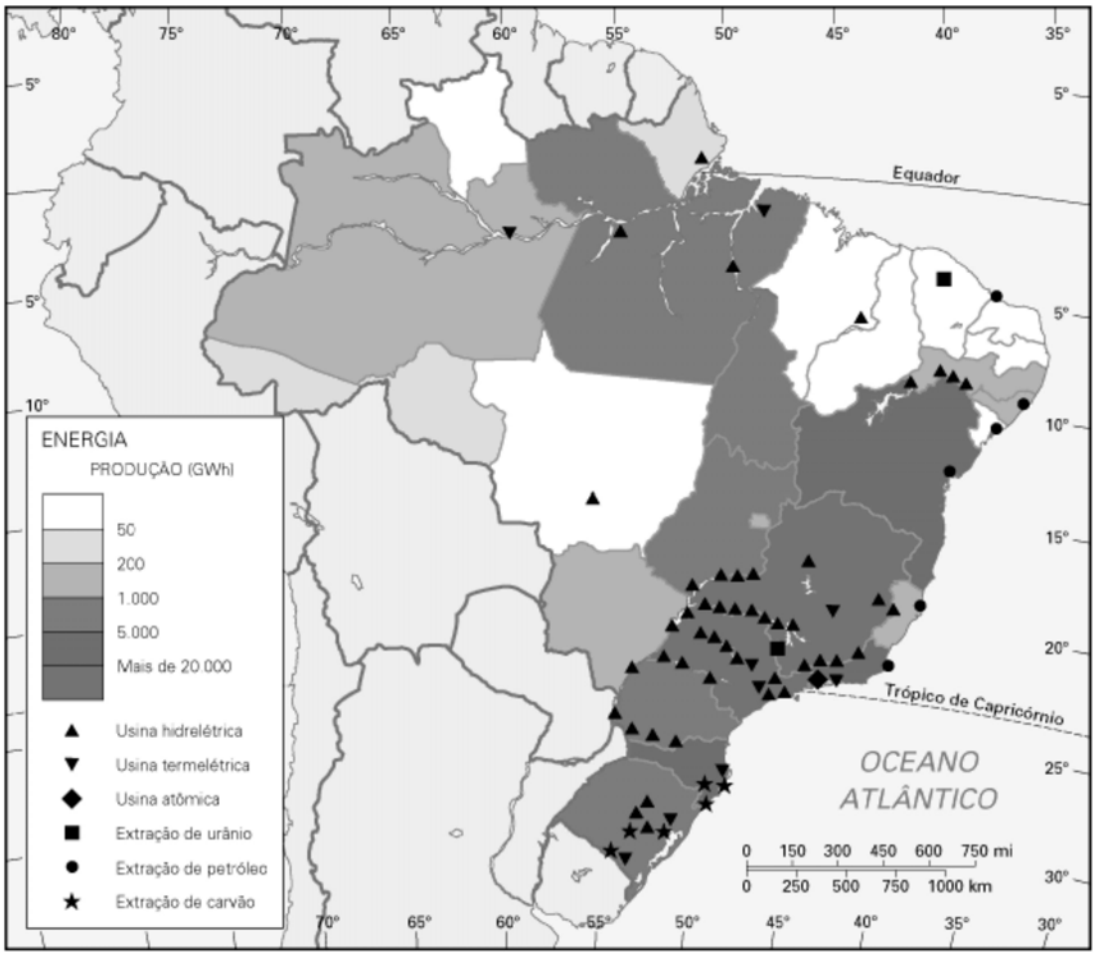
- **NON-STRATEGIC NUCLEAR WEAPONS (Step 9C) :** There is an urgent need to address the serious problem of non-strategic nuclear weapons, which are most likely to be used first. Suggestions included: supporting a UN resolution focusing on this issue; pressure for all such nuclear weapons to be withdrawn to their possessors' national territory; codification of the 1991 Bush/Gorbachev

declarations; establishment of a register with a view to much greater transparency and verification on numbers; and inclusion of them either in START III or a new global treaty.

- **NO TESTING, BRING CTBT INTO FORCE (Steps 2, 1):** All NPT member states are politically bound by the 2000 NPT Review Conference Final Document, which called for a moratorium on nuclear explosions pending the entry into force (EIF) of the CTBT. This was strongly endorsed, with a call for high-level ministerial participation – especially by the New Agenda and NATO 5 - at the EIF conference in New York September 25-27, 2001. A demand needs to come from that conference to the major holdout, the US, to ratify, without which little progress will be made. Meanwhile, pressure should be increased to close the test sites in the US, Russia and China (France has closed its site in the South Pacific).

- **INVENTORY OF ALL FISSILE MATERIALS (Steps 3, 10):** To help unblock the start of negotiations for a Fissile Materials Cut-off Treaty (FMCT), support was given to pressing for the establishment of an inventory of all weapons-usable fissile materials (plus Tritium) which would comprise a register and database. To this end, assistance should be sought from leading non-governmental agencies, such as ISIS and VERTIC, which would provide the leadership and expertise needed to kick-start the initiative. It was noted that the UN Department of Disarmament Affairs has a budget for a weapons of mass destruction database, of which this could form a part. It was proposed that informal meetings between NGOs and supportive governments should be arranged as soon as possible, with a view to preparing a message for delivery in September, 2001 to the UNGA.

- **STANDARDISED REPORTING (Steps 12, 6, 9F) :** There is a need for the NWS to be required to present reports to the NPT PrepComs in a standardised way, which should be devised as soon as possible (perhaps by the UN Department of Disarmament Affairs with assistance from NGOs). Their reports should be annual, with specific criteria (e.g. number of weapons cut/dismantled, budgets, de-alerting), and covering intentions as well as achievements. Such reports should be linked to: their unequivocal undertaking (Step 6), in that it cannot be indefinitely deferred; Step 9F under which all the NWS are required to be engaged as soon as appropriate; and the final, unanimous subparagraph 105f of the 1996 World Court Advisory Opinion. Similar reports should also be demanded nationally in the NWS for annual presentation to parliaments.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200
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5.000
Mais de 20.000
Usina hidrelétrica
Usina termelétrica
Usina atômica
Extração de urânio
Extração de petróleo
Extração de carvão
Equador
Trópico de Capricórnio
OCEANO ATLÂNTICO
0 150 300 450 600 750 mi
0 250 500 750 1000 km