

"A CANDLE TO GOD, ANOTHER TO THE DEVIL"

The Brazilian government's (un)sustainable policy for climate change and the response of civil society

Sunday 24 February 2008, by [TELLES MELO João Alfredo](#) (Date first published: 24 February 2008).

Contribution to the "Climate Change" seminar, International Institute for Research and Education (IIRE), Amsterdam, February 22-26, 2008.

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1. Introduction

This paper intends to make an analysis, even if brief and not conclusive, of the environmental policy — addressing its interfaces with the development policy and, particularly, its relation to climate change — in the government of President Luis Inácio Lula da Silva, currently in his second term.

Initially, it will address the issue of climate change, with clear emphasis on the issue of global warming, from the last report of the Intergovernmental Panel for Climate Change (IPCC); and its impacts in Brazil, with an approach more focused on the issue of the Amazon, considering the importance of this forest's preservation, not only for being a huge carbon sink, but also due to its importance to the climate system and rain patterns across all of South America.

Since, according to data from the last national inventory of greenhouse gas emissions, 75% of these emissions arise from the changes in land use (especially by burning and deforestation), the impact of government policies on the region will have a more emphasized approach than regions situated in other Brazilian biomes. This without forgetting - even though it doesn't deserve too much effort- the issue of the energy matrix, included in the so-called Growth Acceleration Plan (PAC).

□ This approach will not ignore, however, neither the actions nor the proposals of the ecological, social, and socio-environmental movements, as protagonists in defense of the forest. Rather, it will give voice to civil society, through a look within perspective, in the closing of this paper.

We must also warn that this paper, when dealing with the environmental issue opposite to the

federal government's policy focused on climate change, is going to be more about domestic policies - especially in development versus environmental protection contradiction - rather than just examining the performance of the country in international forums; in particular, concerning the meetings in the Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The comprehension of what is happening today in the country - in terms of developmental policy - is the key to understand the position of the Brazilian diplomacy, in the field of climate change.

The choice of this methodology is consistent with the title of this article - "A Candle to God, Another to the Devil" - since it tries to address the profound and, at times, irremediable contradictions that exist in the proposals and actions of the Brazilian government regarding its development and environment policies.

The coexistence, in the government team, of an icon in the global environmental struggle, the Minister of Environment Marina Silva, and one of the most authentic, prepared and aggressive cadres of Brazilian agribusiness, the Minister Roberto Rodrigues of Agriculture, has produced a permanent (and sometimes deaf) clash between two different and antagonistic visions. This has led, in many cases, to "alleged" solutions of conciliation which collide head-on with what, in recent decades, the social and environmental movements in the country have proposed as well as with the attitude of not confronting the real causes that have produced the deterioration of the Brazilian biomes, ultimately putting our country in the uncomfortable position of fourth or fifth largest emitter of greenhouse gases (GHG).

2. Global warming, the human race and social injustice

Author of one of the most important books for ecosocialists - Marx's Ecology: Materialism and Nature (2000), John Bellamy Foster, in a recent article entitled "The Ecology of Destruction" (Monthly Review, february 2007, Vol. 58, number 9), draws our attention to the fact that "it is a characteristic of our time that the global devastation seems to override all other problems, threatening the survival of the earth as we know it."

The extraordinary impact of the IPCC's (UN's Intergovernmental Panel of Climate Change - fourth report) - where thousands of scientists from virtually all over the planet, not only found a direct relationship between intense climate phenomena resulting from global warming due to the emission of so-called greenhouse gases (GHGs) by industrial, agricultural and energetic activities; but also pointed out catastrophic projections for this century if there isn't a drastic change in the energy matrix and our pattern of consumption - gave scientific merit to the documentary "The Inconvenient Truth" by the former US Vice President Al Gore, who received the Oscar this year and, along with the same IPCC, the Nobel Peace Prize.

Therefore, except for the minority of the so-called "skeptical" , among which are - obviously, in an involuntary way - serious scientists, such as the great Brazilian geographer Aziz Ab'Saber and organizations financed by the Bush government and large oil and coal corporations in the world, there is a large majority - very large I would say - of people from the scientific community (including Brazilians deserving of greater respect, such as Jose Goldenberg, Carlos Nobre and Luis Pinguelli Rosa), the environmental movement, governments and even from the business sectors, which based on the data from the IPCC, try to find solutions to the global crisis, expressed today by global warming that threatens life on Earth.

I will allow myself, here, to open a parenthesis to expose that the bet made by the skepticals - in its serious version and not the one committed to the interests of the mining and oil capital - is a lost bet

within its two possibilities. If they are wrong (when they affirm that the phenomenon of global warming is blown out of proportion, that it is a natural phenomenon and that the IPCC's forecasts are wrong), may be, in an involuntary way, contributing to the lobby of the major oil and mining corporations, preventing the change in the pattern for renewable and clean energy and may even become, even if unintentionally, co-responsible for the expected disaster. Moreover, if they are right (which is not very likely, given the broad scientific consensus reached after almost twenty years of IPCC), they are delaying our evolution to cleaning the planet. In other words, even in an extremely remote possibility, even if global warming hasn't been caused by human activities, the IPCC at least questions the means of production and the way of life on the planet and induces deep and necessary changes in the relationship of societies with their natural surroundings.

I think that, given the wide dissemination that the press has given to the issue, it is not necessary to detail, but only list, in part, the extensive and shocking line up of climate phenomena and their consequences to life on the planet, such as the increase in the average temperature of the earth, the melting of glaciers and polar ice caps, the disappearance of species, the rise of sea levels, desertification and the intensification of droughts and floods and its profound impact on mankind, which may live - in fact it is already living - with the so-called "environmental refugees" (victims of floods, tornados, droughts, hurricanes, which, in recent times, have affected diverse populations such as Asia, the small islands of the Pacific, or even in lands of the American Empire, with Katrina, in New Orleans, and the forest fires that devastated California recently).

In the words of Brazilian physicist Paulo Artaxo, a professor at the University of São Paulo and a member of the IPCC, "what is happening to our planet is that mankind has acquired such supremacy as the dominant species, that several of natural bio-geochemical processes governing the composition of the atmosphere and functioning of ecosystems, over the last 4.5 billion years of evolution of our planet, are being profoundly changed by man. Especially in the past 150 years" ("Caros Amigos" Magazine, special edition "Aquecimento Global", year XI, No 34, September 2007, p. 4). Or, in other words, "human beings have been converted into a force of nature" (Jane Lubchenko, quoted Carlos Gonçalves Walter Porto, in "Aquecimento Global e Mudança Climática Global", "Sem Terra" Magazine, Year X, No 36, nov-dez/06, p. 42).

This (destructive) force of the human species appears in the summary report on global warming, in which scientists of the IPCC meeting in Valencia, made a serious warning: "changes can be rapid and irreversible." The third chapter of the document, which deals with "climate change and its impacts on the medium and long terms, under different scenarios," focused on the likely changes ranging from the optimistic scenario of 1 °C and the scenario of 5 °C of increase in the average temperature of the Earth (which is still not the worst forecast, which is up to 6.4 °C) by the end of the twenty-first century. Observe the risks that the planet is subjected to, according to these forecasts:

Increase of 1 °C: The melting of glaciers will threaten the supply of water for 50 million people, about 80% of coral reefs around the globe will die; it will increase coastal damage caused by floods and storms;

Increase of 2 °C: The production of cereals in tropical Africa will drop 10%, up to 30% of living species are threatened with extinction and the layer of ice from Greenland Ice Sheet will begin to melt irreversibly; □

Increase of 3 °C: Between 1 billion to 4 billion additional people will face water shortage, between 1 million to 3 million additional people will die of malnutrition and the collapse of the Amazonian forest will begin;

Increase of 4 °C: The crop of agricultural products will decrease between 15% and 35% in Africa and up to 80 million people will be exposed to malaria in the continent, up to 40% of ecosystems in the world will be affected; □

Increase to 5 °C: Major glaciers will disappear, the increase of the ocean's level will threaten places like London and Tokyo, the health system will be overloaded with the increasing number of affected people (O Estado de São Paulo, 17.11.2007) .

That document stated that all countries, in general, would be affected by the impacts of climate change. However, the United Nations Development Programme (UNDP) Report Fighting climate change: Human Solidarity in a divided world (2007-2008), warns of the fact that “the world is moving to a point where the countries and the poorest citizens can be permanently trapped in a spiral of poverty in which hundreds of millions of people will have increasing difficulties to ensure their survival, escape from malnutrition, lack of living gradually with water and with ecological imbalances”. (www.pnud.org.br/rdh). □

In the words of Kemal Dervis, Administrator of UNDP, “Ultimately, climate change is a threat to the world as a whole. But are the poor, those who have no responsibility for the ecological debt that we live in, that are faced with the stricter and more urgent human costs”(idem). □

It is the combined and uneven development of the capitalist system that ultimately generates and distributes, also in an uneven and combined manner, the social and environmental impacts of climate change around the world. This puts into question the (im)possibility of overcoming the current global environmental crisis which is faced with what Jose Correa Leite called its root: “the unsustainable pattern of consumption in the “rich nations” , and above all, the United States, with its automobile, waste and planned obsolescence civilization, with a high consumption of natural resources and its matrix based on the burning of fossil fuels (oil, coal and gas) (“The Revenge of Gaia”, mimeo).

Inequality became clear - and measurable - when ecologists and economists from the University of California, Berkeley (USA), led by Richard Norgaard, found that the “environmental damage caused by the actions of developed countries on developing countries is greater than the external debt of the poor area of the world (...) The consumption of resources and the destruction of nature by the rich between the decades of 1960 and 1990 should impose on the 21st century a loss of U\$ 7.4 trillion in the economy of countries with low and average income per capita. The external debt of poor countries in the same period reached U\$ 1.7 trillion.” This survey quantified the environmental damage that was caused to mankind, in that period, by the rich countries: the stratospheric sum of 47 trillion dollars, when “the environmental costs of human activities related to climate change, destruction of the ozone layer, expansion of agriculture, deforestation, predatory fishing and damage to wetlands” were estimated (Rafael Garcia, Folha de São Paulo, 22.01.2008).

So to address that issue on a global scale, what we should seek, in the first place, is to make compatible the so urgent, drastic reduction of CO₂ and other greenhouse gas emissions into the atmosphere, with the right and the need of poor countries to develop themselves and meet the basic needs and rights of their people.

However, how do we meet such needs without touching the standards of living and consumption of the middle and high classes both in the North (where they are a majority) and in the southern hemisphere (where they are a minority)? (After all, we have spent 25% more of the natural capital of the land and we would need at least four planets in order for all of us to reach the standard of the so-called “American way of life”.) Would a new “utopia” (environmental sustainability, social equality and economic development on a global scale) be possible in the current global geopolitical

configuration where the destructive power of the arms industry, oil and mining is materialized in governments, such as Bush's, the Lord of Wars in the world? Is it possible to overcome the current crisis in the capitalist system? In the words, again, of Foster: "How this relates to social causes and how social solutions can be offered in response have become the most urgent issues mankind is facing." □

It is those issues that, if on the one hand, are posed to mankind as a whole, on the other, compel us to understand the role of Brazil - fourth or fifth largest emitter of greenhouse gases and home of the largest rainforest in the world - in this confrontation. How does the country contribute and how is it impacted by global warming? What are the government's development, environment and climate change policies? These are the issues with which we want to deal in the next chapters.

3. Brazil and climate change: contribution and impact

Brazil, which still does not have a national plan that focuses on the issue of climate change, is currently the fourth (or fifth, in the newest figures) largest emitter of greenhouse gases in the world (with 2.5 to 3% of global emissions). According to the National Inventory of Greenhouse Gas Emissions, 75.4% of these emissions arise from changes in land use (including here the conversion of forest areas for livestock and agriculture through burning and deforestation); 22.5% comes from burning fossil fuels, 1.6% from industrial production and 0.5% from the extraction of coal, oil and natural gas (www.mct.gov.br).

Such data - which, by itself, are worrisome, not to say shameful - is the first and only inventory ever published, which, despite being released in 2004, is composed of data collected between 1990 and 1994. Since then, according to preliminary indicators that will integrate the next inventory, the situation has only become worse, with a 45% increase in the greenhouse gas emissions between 1994 and 2005, according to a study by the organization Economia & Energia (www.ecen.com), hired by the Ministry of Science and Technology. □

According to the study, emissions from the energy sector grew from 7.6 million tonnes of carbon in 1994 to 15.2 million in 2005. In transportation, the emissions rose from 25.4 million to 36.9 million tonnes of carbon in the same period .

According to Carlos Feu, director of Economia & Energia, two factors are responsible for the increase of emissions: Brazilians are driving more cars and consuming more dirty energy.

"In the first inventory, thermoelectric plants hardly existed in Brazil. They exist now and will continue to exist." The national energy matrix, which was predominantly hydroelectric before (whose emissions are not accounted for due to the lack of scientific criterion), has included in the last decade plants powered by fossil fuels such as natural gas, diesel and coal" (Claudio Angelo, Folha de São Paulo , 19.11.2007) □

To have an idea of the current and future impact, still according to the report, "the federal government has already taken as a given fact that the future growth of the country will require more fossil energy. The National Energy Plan, prepared by EPE (Brazilian Enterprise of Energetic Investigation) foresees that the participation of gas in the national matrix will have almost doubled in 2030 in comparison to 2005. The installed capacity of the coal plants should quadruple in the period, from 1.400 to 6.000 megawatts. The estimates were made before the confirmation of the Tupi oil field potential, in the Santos basin - that tends to make the oil a source of energy even more important in the country"(FSP, 19.11.2007). □

Betting on coal as a fuel for the thermal power plants is a setback with serious repercussions for the climate in Brazil and the world. If we take into account that coal contributed in 2002 with 41% of CO₂ emissions into the atmosphere and that - according to the numbers given by Tim Flannery, it does "not count the impurities which it contains, many of which (such as sulfur and mercury) are powerful pollutants; the best black coal is almost pure carbon. Burn a ton of it and you create 3.7 tonnes of CO₂" - we can picture a gloomy scenario with the expansion of this dirty matrix in our country ("Os Senhores do Clima", Rio de Janeiro: Record, 2007, pages 96/97) □

The most serious part is that the increase in the release of CO₂ did not mean an increase in national income and wealth. "During this period, the average annual growth of greenhouse gases production, excluding deforestation, was of 3.4%, while the GDP (gross domestic product) grew by 2.6%. In other words, the country is polluting more than generating wealth" (idem, ibid). □

It is within this context of increased greenhouse gas emission, when the whole world is trying to move along in what Greenpeace has called the "decarbonization path", that the darkest - if not catastrophic - scenarios, due to the impact of an increase superior to 2°C in the average temperature of the Earth, are forecast for Brazil's biomes and other regions.

The scientist José A. Marengo, research Doctor of the National Institute for Space Research (INPE), author of several papers in the field of climatology, in a recent study based "on observational evidence and trends already observed in Brazil, as well as studies considering the climate projections of the future derived from climate models of the IPCC, and along with a number of climate change impacts in Brazil presented by Greenpeace, in the Report 'Climate Changes, Life Changes' (Greenpeace 2006), and other recent studies," outlined what would be the impacts of climate change in Brazil, which we transcribe below: □

"Amazon - *If the advance of the agricultural frontier and the wood industry is maintained at the current levels, the forest cover will decrease from the current 5.3 million km² (85% of the original area) to 3.2 million km² in 2050 (53% of the original forest cover). Global warming will increase temperatures in the Amazon region, and the weather may become drier, converting the forest into a savannah. The observed increase may reach 8°C in the A2 pessimistic scenario. The levels of rivers may have a significant decrease and the dryness in the air can increase the risk of forest fires;* □

"Semi-arid - The temperatures may increase from 2°C to 5°C in the Northeast by the end of the 21st century. The Caatinga will be replaced by a more arid vegetation. The deforestation of the Amazon may leave the semi-arid drier. The heating causes an increase of evaporation and water availability decreases. Warmer and drier climate could lead people to migrate to large cities in the region or to other regions, generating waves of "environmental refugees";

□

"Coastal Zone - The increase in sea level will bring great damage to the coast. □ Constructions at the seashore could disappear, ports could be destroyed and people would have to be transferred to other areas. Precarious sewage systems could collapse. New hurricanes could reach the coast of Brazil; □

"Southeast and the Coast basin - Even if rainfall tends to increase in the future, high air temperatures simulated by models could in a way compromise the availability of water for agriculture, consumption or generation of energy □ due to the increase of evaporation or evapotranspiration. The length of □ a drought season in some regions of Brazil could affect the regional hydrological balance, and consequently compromise human activities, even if forecasts indicate an increase of rainfall in the future; □

"South Region - The production of grains could become unfeasible in the South of Brazil due to temperature increase, more frequent droughts and rainfall restricted to extreme events of short

duration. The increasingly intense rains could punish the cities, with greater social impact in poorest areas. Intense winds of short duration could also affect the coast. With higher and extreme temperatures in a short period of time, more diseases would be recorded; □

“Agriculture - perennial crops, such as orange, tend to seek regions with a milder maximum temperature and such production might be transferred to the South. High summer temperatures will determine the displacement of crops such as rice, beans, and soybeans to the Mid-West region, promoting a change in the current axis of production; □

“Water Resources - A reduction in rainfall and the reduction of riverbeds will limit sewage capacity and river transportation. There may be an overflow of treatment plants and of the sanitary systems. The generation of energy will be compromised by the lack of rainfall and high evaporation rates due to heating in some regions; □

“Big cities - Even warmer metropolitan regions, with more floods and landslides mainly in hillside areas; □

“Health - Cases of infectious diseases may increase. Dengue can be spread throughout the country. Disease proliferation tends to increase in urban areas. (Marengo, José A. “Mudanças Climáticas Globais e seus Efeitos sobre a Biodiversidade: caracterização das alterações climáticas para o território brasileiro ao longo do século XXI”. Brasília: MMA,2006).

By the way, more recent studies, such as the one by scientist Daniel Nepstad (“Os Ciclos Viciosos da Amazônia”) gives us an even more frightening scenario: the conversion of the forest into a savannah in a shorter period of time, in which, by 2030, we will have lost half of the Amazon forest due to deforestation, fires and drought (check www.wwf.org.br/informacoes/index.cfm?unewsID 10,881).

Let’s take a look at the importance of the forest biome in the debate about climate change. Understanding the significance of preserving the planet’s biggest tropical forest is vital in the struggle against global warming. That is what we will address below.

□

4.The Amazon at the centre of global warming: carbon sink and emitter

First of all, it is necessary to define the concept of the Amazon, since it involves several meanings. It is not the geographic or legal concept of the Brazilian region that will interest us, but the ecological one. Therefore, following the classification of the “Almanaque Brasil Socioambiental 2008”, we will focus more on the biome and its forest, which are defined as: □

“Amazon Biome (with 5 million km², of which only 4.2 million are in Brazil) - corresponds to the network of ecosystems (beyond the forest, wetlands, cerrado, várzeas etc.) that form the Amazon Basin (...) present in nine South American countries (...) In Brazil, the core of its landscape, the Amazon hylea (or forest), with great concentration of large trees, up to 50 meters high, having the Amazon River (the largest in the world, with 6,850 km) as the axis that dominates 300 km on each side of its course, occupies 3.5 million hectares” (p. 100, Instituto Socioambiental, 2008, with data from the magazine “Amazônia”, O Estado de São Paulo, nov./dez./2007).

There, everything is superlative. It is estimated that over one third of all species on the planet live in the Amazon - the greatest biodiversity on Earth (to have an idea, the number of fish species catalogued in the Amazon, over 2,000, is more than 10 times greater than the entire European continent) - one third of all tropical wood, 12% to 18% of all the sweet surface water that runs into

the seas, 170 indigenous peoples, with over 180 thousand individuals (“Almanaque”, op.cit. p.84 in “Amazônia”, op.cit., str. 30). □

In regards to the rain cycles across South America, the release of 7 trillion tons of water into the atmosphere through evapotranspiration turns the forest into a real “rain machine,” in the words of Herton Escobar, one of the authors of the excellent special report of the Estado de São Paulo quoted above. There, the meteorologist Gilvan Sampaio, INPE, says: “when you drink a glass of water in São Paulo, you are also drinking water of the Amazon.” Which leads to the warning of the likewise INPE researcher, Antonio Nobre, that if “you deforest, the entire continent can turn into a savanna” (“Amazônia”, op.cit., Str. 37). □

When the issue is capturing carbon, there is no scientific consensus about the ability of the forest to remove the CO₂ from the atmosphere. There are estimates that vary from 250 million tonnes to the impressive figure of 1.5 billion tonnes per year. Whichever the case, it is a fact that there you will find one of the world’s largest and most significant carbon reservoirs. Professor Carlos Nobre, of the Institute for Space Research (INPE) and Brazilian member of the IPCC, said that the Amazon “stores more than one hundred gigatonnes of carbon in vegetation and soils” (“Scientific American Brazil,” www2.uol.com.br/sciam/reportagens).

This variation is recognized by Carlos Nobre, when he estimates the capacity of carbon dioxide absorption of our forest and says, in the same article: (...) “studies about the carbon cycle of the Large Scale Biosphere-Atmosphere Experiment and forest inventory studies (Phillips et al., 1998) indicate that if intact, the forest could absorb carbon in rates ranging from 0.8 to the high figure of 7 tons of C/ha-1 annually (Malhi et al., 1998; Malhi et al., 1999); Araújo et al., 2002; Noble et al., 2000)” (idem). □

The fact that the Amazon is, at the same time, a CO₂ sink and emitter is what explains its importance in the struggle against global warming in the country and in the world. After all, if in the Amazon we find a hundred gigatons of carbon, it is burning and deforesting which ultimately put the issue of preservation of forests – and amongst them, the largest tropical forest in the world – in the center of the climate change debate. □

Also because, as a recent study of Greenpeace (Cool farming: Climate impacts of agriculture and mitigation potential), prepared by Professor Pete Smith of the University of Aberdeen and member of the IPCC, “agriculture is currently one of the most important sources of greenhouse gas emissions and urgent changes on how the activity is done are needed in order to make it environmentally sustainable”. □

According to the same report, it is already estimated that the “total contribution of world agriculture to climate change, including deforestation for harvest and other uses, is estimated at somewhere between 8.5 billion and 16.5 billion tons of carbon dioxide, or between 17 % and 32% of all emissions of greenhouse gases generated by human beings”(idem).

□ Certainly, much of that contribution came from more than 700 thousand square kilometers of forest destroyed in five decades - between 17% to 19% of its original area - of which 100 thousand km² were deforested only in the last 5 years, an area larger than Portugal. According to Herton Escobar, “researchers of the Amazon Institute of People and the Environment (IMAZON), in Belém, estimate that only 43% of the biome truly remains intact, free of occupation and the influence of human activities - whether they are legal or illegal” (“Amazônia”, cit., pp. 45).

After showing the importance of the Amazon rainforest for the balance of the planet’s climate, we

are going to try, as it follows, to understand how the predatory occupation in the region has been happening, examining not only the action of the heavy - and not at all invisible - hand of the market, but also the State which, due to negligence, action or encouragement, has great responsibility in this process. □

5. The State and the Capital, almost always holding hands in the attack of the forest

It is widely known that the massive occupation process of the Amazon occurs particularly during the military governments (1964-1985), which disguised by the ideology of national security common to all dictatorships of the South American continent at the time, preached the occupation of the forest under the slogan “to integrate not to give away”. After all, until the beginning of the 70’s, only 1% of the forest had been destroyed; in mid-1998 it reached nearly 14% (an area the size of France) and today, as mentioned, more than 17% of the forest area is destroyed.

It is since that time that the major projects of infrastructure - such as roads like the Transamazônica and large hydroelectric plants, such as Balbina, responsible for one of the biggest environmental disasters in the region - have been developed and executed, along with tax incentives - implemented by the Superintendency for the Development of the Amazon (SUDAM) and the Bank of Amazon (BASA) - who have financed large unsustainable agricultural projects in the region (not to mention the corruption), and also the colonization policy geared towards small farmers who clear the forest for the later arrival of loggers, soybean growers and cattle ranchers.

A whole other chapter would be a study about the impacts of mining and the production of cast iron for steel industry, from the use of charcoal. To give an idea of the impact of such activity, it is estimated that in 2006, out of more than 35 million cubic meters of the charcoal consumed in the country, 49% (more than 17 million cubic meters) were obtained from the native forest. It is in Pará that the largest reservoir of iron in the world is located, in the steel industry pole of Carajás.

□ Already in 1998, Greenpeace, in its publication “Alongside the law: A report about the log supply for plywood and veneer exporting companies in the Amazonas”, warned: “the participation of the Amazon wood in the total amount of Brazilian production went from 14% to 85% in only two decades, from the 36 critical points of deforestation in the Amazon, 72% are related to the wood industry, 80% of the wood extracted from the Amazon have illegal origin”. In the study, it was already noted that “the construction of roads and deforestation carried out by farmers for agricultural purposes are financed by the sale of tropical wood from these areas (Veríssimo et al, 1995)” (Greenpeace, May 1998).

□ Moreover, this situation has only become worse in the last five years of President Lula’s government. According to a study by Roberto Smeraldi, Peter H. May, the NGO Friends of the Earth - Brazilian Amazon, there was a displacement of livestock from the Mid-West part of the country to the Legal Amazon, in a quite intense way. Today, 94% of cattle head increase registered in the country between 2003 and 2006, reside in the Amazon. Of the 10,334,668 new cattle heads registered in Brazil by the IBGE, in the period considered, 9,680,511 were in the Legal Amazon. (www.amazonia.org.br: “O Reino do Gado. Uma nova fase na pecuarização da Amazônia”).

□ The study had a wide impact on one of the main vehicles of the Brazilian press, the newspaper Folha de São Paulo, which printed in its edition of January 13th this year, the headline: “With official encouragement, forest turns into grass” (p.A31). There are reports that the cattle herd in the

Amazon grew from 35 million heads in 1994 to nearly 74 million in 2006.

□ It is a destruction subsidized by the banks and public funds. The news report from Marta Salomon states that “the expansion of livestock production in the region relies on two lines of financing operated by the Bank of Amazon, with subsidized interest between 0.5% and 10.5% a year - the cheapest in the country. From small to large, the cattle raisers in only one of the states in the region (Pará) received U\$ 80 million in loans in 2007 from Pronaf (National Program of Family Agriculture) and from the FNO (Constitutional Fund of the Northeast)” (Folha de São Paulo, 13.01.2008, p.. A31).

□ Furthermore, this occupation is facilitated by the agrarian chaos, which makes the public land, occupied illegally, extremely cheap, and the absence of the state institutions in the environmental, agrarian or even public safety departments, given the large number of conflicts for land possession in the region, makes the State of Pará the champion of violence and rural workers murders in the country. To give an idea, according to the Joint Parliamentary Committee of Inquiry that investigated the land situation in the country (CPI of Land), out of 42 deaths in the countryside that occurred in 2003, 19 occurred in Pará (“Reforma Agrária Quando? CPI mostra as causas da luta pela terra no Brasil” João Alfredo Telles Melo (ed.): Brasília, 2006).

□ But it is not only cattle raising. Also, soybean has become one of the vectors of deforestation in the region. Between 2004 and 2005, encouraged by the illegal construction of a river port at Santarém, in the State of Pará, the giant multinational Cargill (which along with ADM and Bunge, controls 60% of the Brazilian exports of soybeans), planted in the Brazilian Amazon around 1.2 million hectares of soybeans, which corresponds to 5% of the national production (“Eating up the Amazon” Greenpeace International, Netherlands, 2006).

□ Let’s open a parenthesis to add that, in view of the campaign launched by Greenpeace across Europe, from “fast food” chains such as McDonald’s (one of the main consumers of soybeans produced in the region), the Brazilian Association of Vegetable Oil Industries (ABIOVE) and National Cereals Exporters’ Association (ANEC) and its associates announced, in July 2006, a moratorium of two years for the purchase of soybeans from new deforested areas in the Amazon, in addition to the exclusion of farms that use slave labor. This experience which is in full swing, with the monitoring of environmental NGOs, goes through a critical and decisive phase, that is, the ability to monitor the deforested areas and the credibility of traders under trial regarding the acquisition of soybean planted in the region.

□ Even important social programs, such as land reform, in its environmentally correct version - such as the so-called PDS (Plans for Sustainable Development), a creation of the Catholic religious Dorothy Stang, murdered in Pará in 2005 - are misrepresented to serve the criminal interests of the large logging companies. A Greenpeace study revealed in August last year, a plot between the government, through Brazil’s National Institute for Colonization and Agrarian Reform (INCRA), and logging companies in the region, to regularize the illegal wood and artificially inflate the number of people settled by the settlement programme of landless rural workers

(<http://www.greenpeace.org.uk/media/press-releases/brazilian-government-agency-driving-rainforest-destruction-20070821>).

□ To work around the requirements of Ordinance 10/2004 of the Ministry of Agrarian Development (MDA) and of INCRA itself, which demand the title of ownership in order to release plans for management of wood extraction, a massive creation - often artificial and even virtual (because it was done without workers effectively settled) - of settlements was arranged in the region of Santarém / Pará - a total of nearly 100 in an area of 30 thousand square kilometers - to be used as regulated area in terms of land for logging.

□ In the words of Mauricio Torres, the logger is now the “customer of agrarian reform.” INCRA established settlements in areas with still untouched noble wood supplies or in distant primary forests not yet pillaged. However, this exact condition eliminates any possibilities of families moving there (“O Liberal Oeste”, 05.12.07). According to the mentioned report by Greenpeace, “companies even determined where the settlements should be created by choosing areas with more availability of wood with commercial value” (www.greenpeace.org.br).

To ban what the geographer and professor of USP, Ariovaldo Umbelino, called “criminal use of agrarian reform,” the Federal Public Ministry of Pará petitioned and the Justice ordered to interdict 99 settlements established illegally in the region (“Carta Capital” of October, 31st 2007).

The case above is one of the most emblematic of the Brazilian government’s contradictory - and unsustainable - policy to the region, its biome, its people and their forest. The current government presents conflicting indicators: between August 2003 and August 2004 (in the first two years of the first government), the second highest annual rate of deforestation of the Amazon was registered in all of its history: 26,130 km². Furthermore, there was a reduction of approximately 50% from then to the middle of last year, and from the second half of last year to now a rise in deforestation can be verified. It is this contradictory policy that we want to address in the next chapter.

6. Lula’s Government: unsustainable development versus environmental resistance (drying ice in times of global warming)

□□ When this article was written, the Brazilian newspapers printed in their headlines: “Deforestation in the Amazon booms and puts government on alert. An area of 3,223 km² was deforested from August to December: the total could reach 15 thousand km² in twelve months” (João Domingos e Nelson Francisco, “O Estado de São Paulo”, 24.01.2008). This news comes at the worst time for the government, which had been celebrating, since last year, the reduction of deforestation rates in three years in a row, as it had reached one of the lowest figures - although still very high - since satellite monitoring began: 11,224 km², for the 2006/2007 period.

□ The alert had already been done since the last quarter of 2007. On September 23, the newspaper “O Globo” printed: “Devastation of the Amazon increases again: forest burning increases 30% this year compared to 2006 and lumber mills operate full steam” (Rodrigo Taves). On October 16, “O Estado de São Paulo” printed, from the data of Deforestation Alert System (SAD) operated by NGOs and IMAZON ICV: “Deforestation grows again and makes government review its plan for the Amazon”. The article reports that the devastation in the state of Mato Grosso (next to Pará and Rondônia, the leaders of deforestation), “increased 107% in the same period compared to June/September of 2006” (Cristina Amorim).

□ Even the Minister of Environment, Marina Silva, according to the report, acknowledged that “we can already say that the increase in the price of soybeans, the advance of cattle raising in the Amazon and cutting down trees for the steel industry are the main causes of deforestation. Her advisors pointed out that the deforestation occurred mainly in Mato Grosso, Rondônia and Pará, states where these sectors of the economy have developed a lot in recent years”(O Estado de São Paulo, 24.01.2008).

□ Variation in the price of agricultural commodities had already been identified by NGOs as being one of the reasons - although the government at the time didn’t want to admit it - of the decrease of deforestation from August 2004 (after its peak of 26,130 km², between August 2003 and August 2004). In the publication “Faltou Ação ao Plano de Ação” , Greenpeace pointed out that amongst the

factors that had contributed to the decrease of the rate was the "unpropitious time for Brazilian agricultural commodities in the international market. The optimism of producers who strongly stimulated deforestation in the 2003/2004 period was shaken by the reduction in prices of soybeans and an overvalued Real compared to the American dollar. The sales of the country's grain industry in general - US\$ 47 billion in 2004/2005 - dropped US\$ 13 billion compared to the previous harvest" (Greenpeace, op. Cit., 2005, page. 7).

□ Evidently, it is known that the actions of the government contributed to the registered decrease that occurred from 2004 to 2007. Therefore, the creation of large protected areas - units of conservation and homologation of Indigenous land - in an area of approximately 287 thousand km²; major joint actions of the federal environmental agency, the IBAMA, with the Federal Police led to the apprehension of illegal wood and the arrest of corrupt public officials, as well as wood cutters and lobbyists; amongst other strong measures - some of them taken after the murder of Ms. Dorothy, in February 2005 - should be recognized as important steps to fight deforestation, land grabbing (illegal acquisition of public lands) and violence in the Amazon region.

However, a vigorous continuation of deforestation shows that not even the presence of Marina Silva as head of the Brazilian government's Ministry of Environment is enough to deal with the challenge which is the creation of an effective policy to handle the fight against global warming. A symbol of the environmental struggle, to the point that she was recently appointed by the British newspaper "The Guardian" as one of the 50 people who can help save the planet, Marina - who has an outstanding history of overcoming political and personal issues - is the heiress of another icon of the Brazilian socio-environmental struggle, the rubber extractor, like herself, Chico Mendes, murdered in the last century due to his fight in defense of the forest.

The real issue lies elsewhere. Or, to use a concept that the minister likes to use, the government actions directed to the binomial environment/development lack "environmental integrity", vis a vis the issue of climate change. It is enough to say that while Marina imputed responsibility on cattle and soybeans for devastation, another minister of the Lula's government, Reinold Stephanes, from Agriculture, was emphatically in defense of agribusiness. Let's open here a parenthesis to comment that this member of government defends the planting of sugarcane for ethanol in the Amazon and his Ministry is responsible for all policies in the sector which have been responsible for the degradation of the forest (in another confrontation with the head of the same Ministry of Agriculture, Roberto Rodrigues, Marina was defeated with the introduction of transgenic plants in the country).

A social and political alliance between the government and agribusiness, which has the ruralist sector as its representative in the Brazilian parliament, is essential to the chosen economic model and the so-called "governability". In the economy, the export of products from agriculture and cattle raising play an important role in the trade balance equilibrium. In Congress, the presence, on the basis of government support, gives the ruralist sector a privileged position in granting favors and privileges - which almost always means, besides jobs within the government structure, generous reductions in their agricultural debts with official financial institutions - to ensure the adoption of legislative matters of interest to the Executive.

It is this alliance that, with a false "green" discourse, encourages the monoculture of sugar cane for the production of ethanol fuel, which has been unsustainable, both from a social point of view - the super exploitation of cane cutters and the replacement of subsistence crops - and an environmental one; since its expansion, in addition to push soybean and cattle even further into the forest, is responsible for the degradation of another large Brazilian biome, the Cerrado, which is the savannah with the greatest biodiversity of the planet.

A study from the Institute for Society, Population and Nature (ISPN), concluded that “important areas for conservation and sustainable use of the biodiversity of the Cerrado that should be protected are being taken by sugar cane plantations for the production of ethanol. This means that natural resources, rural populations and food security in the region may be compromised”. It also reports that the Cerrado, which covers about two million square kilometers, has already lost half of its vegetation, and the causes of deforestation are “related to agriculture and cattle raising practiced even on areas that should be under protection, which are the basis of ISPN’s study.” According to Nilo Dávila, public policy advisor for the institution, “although there is no official monitoring, it is estimated that the deforestation in the region is around 1.1% a year, equivalent to the destruction of approximately 22 thousand km² per year, and is larger than the deforestation in the Amazon” (www.ispn.org.br).

It is this solid alliance of the agribusiness capital with Lula’s government that explains the fact that one of the biggest beneficiaries of the so-called Growth Acceleration Plan (set of actions, policies and businesses, which determines the developmental policy of the Brazilian government), in the refined analysis of Gerson Teixeira, is “the agribusiness exporters, in particular in their expansive trajectory on the North border” (“O Programa de Aceleração do Crescimento e o Meio Ambiente, mimeo, 2007, pág. 7). Teixeira notes that to “consolidate once and for all the expansion of agribusiness in the Amazon, the PAC foresees heavy investments in the binomial ‘energy and asphalt,’ and also in waterways, which, among other effects, will break the main barriers for such activity in the region and its transformation into means of access to international markets for products from other regions”(idem, *ibid*).

That is, the same government that announces tough measures to fight deforestation, as the recent Decree 6321/2007 - that “dispose of action for the prevention, monitoring and control of deforestation in the Amazon Biome” - makes heavy public investments in infrastructure (roads, waterways, energy) that could turn the Amazon into, according still to the harsh analysis of Teixeira, not only a great frontier of electric energy, but also “the last frontier of Brazilian agribusiness” (idem, pág. 8).

Besides these impacts on the flora and fauna, the government itself acknowledges, according to information from the Indigenous Missionary Council, 201 companies of PAC interfere in indigenous lands, of these 21 with isolated peoples. Among these constructions are the Santo Antônio and Jirau dams, in the River Madeira (RO), which will impact isolated groups of Indians living in the region; the hydroelectric of Belo Monte, in the Xingu River (PA), which affects the land of the Arara, Xincrin and Juruna peoples; the Estreito hydroelectric, in the Tocantins river, which has impacts on the indigenous lands Avá Canoeiro, Kraolândia, Funil, Xerente, Apinayé, Krikati e Mãe Maria; the road BR-156 in Amapá, which crosses 40 km of the land of Galibi-Marworno, Palikur and Karipuna people; the road BR - 242, in Tocantins, which affects the people of the Ilha do Bananal: Avá Canoeiro, Javaé, Karajé e Cara Preta. In not even one moment up to now there was a prior consultation with these peoples, which shows the profound disrespect with the right of indigenous peoples.

The most important evidence that there is no integrated environmental policy with other government departments is, precisely, the Growth Acceleration Plan which is actually the name of the development project for President Lula’s second term. In this Plan, beyond what has been listed above, other actions that harm the environment and climate of the planet are foreseen, such as the construction of 77 thermoelectric power plants (the majority operating with coal and oil), the resumption of the Brazilian nuclear program, the transposition of the São Francisco River, the construction of hydroelectric plants above the Rio Madeira (which was first opposed by the environmental body due to its social impacts), the incentive for the steel industry (with the exception of the Taxes on Industrialized Products (IPI) for steel) etc.

Therefore, the unsustainability of the Brazilian government's development policy is not present only in the Amazon - where the PAC, in the opposite direction of the actions of the Ministry of Environment, encourages the continuous deforestation - but also in other sectors - such as energy, industry, transportation - which are mainly responsible for the greenhouse effect. The preparation of a plan to face climate changes and its prevention, mitigation and adaptation aspects, by one or two ministries, is of no use if at the center of public policies carried out or encouraged by the government - with investments, credits, tax incentives and subsidies - is the ideology of growth at any cost, where the economy overruns society and ecology, where the government is surrendered to the logic of the market, where environmental policies are still - and they are! - on the sidelines of the major decision making processes. As mentioned before, this internal policy explains the Brazilian positions in the field of environmental diplomacy and its resistance to the adoption of quantifiable targets regarding the decrease of greenhouse gases emissions.

In this context, to conclude this article, we will take a look at what the social, ecological and socio-environmental movements have to say and look at what they are; understanding that it is within the social sphere where seeds of change - which are necessary to confront the global crisis in which we are immersed not only in the climate aspect, but, fundamentally, in what concerns the patterns of ownership, production and consumption standards - will germinate. A crisis that does not only pertain to a model, but has a civilization basis. After all, it is the principles behind the capitalist means of production and its "ethos" which are questioned in this crucial moment for the human race.

7. Towards conclusion: a vision within the socio-environmental struggle perspective (proposals to the crisis and new alliances which are being woven)

Our vision of the world (and I believe that it became clear during this article) is that the current global environmental crisis - given its seriousness and extent, in face of the current political-economical-cultural dominant system, capitalism, with its unsustainable logic of private ownership of natural resources, which turns everything (including living beings) into merchandise, with its incessant search for profit through the encouragement of the limitless consumerism - will not be resolved in this very same system. We must, therefore, from now on organize what Bellamy Foster, cited above, calls the Ecological Revolution.

However, this process is only under construction, both in regards to what is expected of a new economic system and a new sociability, which establishes a different relationship with its non human natural surrounding, as well as regarding alliances, proposals and methods for reaching this goal.

Therefore, it important to be aware of the proposals being raised within NGOs, as well as the new forms of struggle by the social and social environmental movements, and even of the experiences of the traditional peoples (as Indians, quilombolas, ribeirinhos, etc.) which, inside of the unsustainable capitalist society, constitute new (sometimes based on ancestral experiences) ways of life, production and consumption).

In the country, the major environmental NGOs have already submitted a range of very important discussions and proposals for the solution of the current crisis. In regards to the issue of clean renewable energy, the WWF, along with researchers from the University of Campinas (UNICAMP) and the Pontifical Catholic University of Rio Grande do Sul (PUC/RS), presented its "Sustainable Electricity Agenda 2020 - Brazil: scenarios study for an efficient, safe and competitive Brazilian electric sector" (WWF - Brasil. 2 Ed. - Brasília, 2007).

(http://assets.panda.org/downloads/wwf_sustainable_electricity_agenda.pdf).

Along the same lines, in partnership with, among others, University of São Paulo (USP) and the European Renewable Energy Council, Greenpeace published in the year 2007, its "(R)Evolução Energética: perspectivas para uma energia global sustentável" [Energetic (R)Evolution: perspectives for a sustainable global energy]

(http://www.greenpeace.org/brasil/documentos/energia/greenpeacebr_070202_energia_revolucao_energetica_brasil_port_v1).

We can not, therefore, blame civil society - movements, universities, NGOs - for not presenting solutions which are technically and economically feasible and environmentally sustainable to the energetic issue. Solutions which will free us from the dirty matrix that the government insists on enlarging.

Regarding the crucial issue of the Amazon, an alliance of 9 NGOs (Greenpeace, WWF, IPAM, ICV, CI, TNC, Friends of the Earth, IMAZON and ISA) made an encouraging and daring study to extinguish deforestation in 7 years, through the adoption of public policies of incentives, financing and of command and control, through the creation of financial mechanisms, including the forecast of a public fund (called "Fund Amazon") for the strengthening of forest management and payment for environmental services, with quantifiable targets year after year, enabling the "extinction of the Amazon deforestation by 2015, safeguarding the traditional uses of the forest"

(www.greenpeace.org.br).

It's worthwhile to emphasize here that the "National Pact for the Valorization of the Forest and for the End of Amazon Deforestation" is based fundamentally on the idea of "forest governance" and on incentives to "social actors responsible for the conservation of the forest (indigenous peoples, local communities, traditional populations, family farmers)", without, however, forgetting the so-called productive sector, as long as they assume "strategies for reducing deforestation and conservation of the forest" (idem). (For more info go to

http://www.brazzilmag.com/index2.php?option=com_content&do_pdf=1&id=8726).

Also, Via Campesina, organization that brings together millions of peasants around the world and in Brazil is made up by, among others, the Landless Movement (MST), the Movement of the Affected by Dams (MAB), the Movement of Small Farmers (MPA), the Movement of Peasant Women (MMC), the Pastoral Land Commission (CPT), understanding that "no technological solution will solve the social and the environment disaster" because "only a radical change in the way we produce, sell and consume can give healthy land for rural and urban communities", submitted its proposals to fight global warming (www.mst.org.br).

For Via Campesina, which has a very vigorous criticism to the industrialized agriculture, including the agrofuel sector, the solution for the countryside has to do with an agro-ecological vision, with a "sustainable agriculture on a small scale, intensive work with low energy consumption that can contribute to the cooling of the earth" (idem).

These are the seeds of the future we want to build: a society founded on environmental justice and sustainability, social equality and on participative political democracy. A future that, according to Michel Löwy, has to be built now. In his own words: "*It is necessary to participate in all the struggles, even in the most modest one, such as, for example, when a community defends itself against a polluting company; or the defense of a part of nature that is threatened by a destructive commercial project. It is important to build the relationship between social struggles and the environmental struggles, because they tend to agree, united around common objectives*" ("Ecology and Socialism," mimeo).

This relationship between social and environmental struggles described by Löwy is of fundamental

importance, not only for the ecosocialists, but for the very future of the planet. They contain a resistance that - from the practical struggle for basic human rights, housing, culture, means to live and of production, and also for a healthy environment - questions not only the principles of the current economic model, but in an ultimate analysis, thrusts against the foundation of the capitalist system's own way of private appropriation, responsible for the current stage of the global environment's degradation. In these struggles, as well as in the experiences of traditional communities, not only opposing material interests coexist, but also antagonistic ways of life and production.

We believe, therefore, that at the moment (even if still in a non articulated manner) are being forged not only alliances which are fundamental to this urgent and necessary transformation process - the Ecological Revolution - but also to the socio-economic-eco-cultural-ethical-political basis of a new society that is able to overcome the current global environmental crisis and become, all at once, environmentally sustainable, socially just and equal, culturally and ethnically diverse and political and radically democratic: the ecosocialist have to face, but all humanity. Are we up to it?

P.S.

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