"Ecosocialism is more than a strategy, it's a project for Civilization"
Alexandre Araujo Costa, a Brazilian ecology activist, spoke to Belgian ecology writer and activist Daniel Tanuro on a range of questions concerning ecology and ecosocialism.

For many years, left-wing organizations did not pay much attention to environmental issues in general but at least since its 15th Congress, the Fourth International seems to be increasingly concerned about what we call an "Ecological Crisis". What has changed?

Indeed, most left-wing organizations missed the point in the 1960s when the so-called "ecological crisis" emerged as a new question of broad social interest (though one can pin a symbolic date on this emergence: Rachel Carson's book, *The Silent Spring*, published in 1962). The main reason for this is that these organizations focused mainly on the anticolonial wars and revolutions in the dominated countries (Cuba, Algeria, Vietnam...), on the mass movements against the bureaucracy in the East (Poland, Hungary) and on the convergence of youth and workers' radicalization in the West.

But this reason is not the only one, in my view. One must also consider that left organizations couldn't easily cope with the ecological crisis from a theoretical standpoint. For instance, many authors felt uncomfortable with the denunciation of capitalist technology and with the very idea of limits to growth. Actually, Marx's work is very rich on these topics, but it was as if his successors had forgotten his contributions (on the enclosures, on capital's rupture of the humankind-nature social metabolism, on the consequences in forestry, agriculture, land management, for instance). This is even the case for very creative and open revolutionary Marxist thinkers like our comrade Ernest Mandel.

I want to be clear about this: in my view, to speak of Marx's ecology is a bit overstated; the tensions and contradictions in Marx's and Engels' work must be taken into account. But the ecological aspect of Marx's heritage is truly impressive, and his criticism of political economy provides us excellent tools to make it flourish. So, how should we explain the fact that most of the Marxist left missed the ecology train in the 1960s? Stalinism bears a great part of the blame, of course, but this explanation is not very convincing in the case of antistalinist currents... I think there has been a very broad contamination of the left by productivist and scientistic conceptions. It began in social democracy at the end of the 19th century, and was not really rooted out in the communist movement - perhaps because Russia, where the revolution took place, was a backward country.

I think what has changed is threefold: firstly, the nuclear threat has fostered a growing consciousness that technologies are not neutral; secondly, poor peasant and indigenous struggles showed the social dimension of ecological questions; thirdly, a few authors began to revisit Marx on nature and exhume his legacy. Nevertheless, the majority of the left was content with a pure propagandist approach, telling the people that no ecological alternative is possible within the framework of capitalism, which is true but doesn't mean we do not need concrete ecological demands and reforms, articulated with social demands in a transitional programme.

An important step in the direction of this programme was the Ecosocialist Manifesto written by Michael Löwy and Joel Kovel in 2001. The initiative of this manifesto was fostered by the deepening ecological crisis and its global character, with climate change as a major threat. At the same time, more and more activists in our organizations are involved in social movements on the ecological challenge, particularly the climate movement and the movement for food sovereignty (which are closely linked, given the important part agribusiness plays in global warming). Since its last congress, the Fourth International has defined itself as an ecosocialist organization.
From your viewpoint, how worrying is climate change? Is it simply a matter of using the right technologies such as substituting fossil fuel by renewables? Can the Earth's climate be set right by a combination of carbon capture and geoengineering?

Climate change is extremely worrying. Actually, it is probably the most dangerous social and ecological threat we must cope with, with huge consequences in the short, middle and long term. I won't go into too much detail, but one must know that a 3°C temperature rise will most probably provoke a sea-level rise of about 7 metres. It will take us a thousand years or more to get there, but the movement will be impossible to stop. In the short term, specialists think a sea-level rise by 60-90cm could occur by the end of this century. It would mean hundreds of millions of refugees. If you take into account the other effects of climate change (extreme weather events, decrease in agricultural productivity, etc.) the conclusion is frightening: above a certain threshold, there is no possible adaptation to climate change for a humankind of 8-9 billion people. Where you place the threshold is not (only) a scientific question but (above all) a political one. In Paris, the governments decided to act in order to maintain the warming well below 2°C and to try to limit it to 1.5°C. An average 2°C warming should be considered a catastrophe.

Obviously, climate change is not the only threat: other threats are the massive extinction of species, the acidification of the oceans, the degradation of soils, the possible death of marine life due to nitrogen and phosphorus pollution, chemical pollution, the depletion of the ozone-layer, overuse of freshwater resources and aerosol loading of the atmosphere. But climate change plays a central role and is connected, directly or indirectly, to most of the other threats: it is an important factor in biodiversity loss, ocean acidification is caused by the rising atmospheric concentration in CO2, the excessive amounts of nitrogen and phosphorus in the oceans come from agribusiness, which plays a central role in freshwater overuse and soil loss, and so on. The fact that most problems are interconnected entails that it would be wrong to isolate the response to climate change from the response to the other challenges. However, all these ecological challenges have the same fundamental origin: capitalist accumulation, quantitative growth driven by the race for profit.

This means that climate change is far more than a technological issue. It poses the fundamental question of a global alternative to this mode of production. And this alternative is objectively extremely urgent. Actually, it is so urgent that, even from a technological point of view, the strategy of green capitalism is biased. Of course, it is perfectly possible to rely only on renewable sources to produce all the energy we need. But how do you produce the PV panels, windmills and other devices? With what energy? Logically, you have to take into account that the transition itself will require extra energy, and that this extra energy, being 80% of fossil origin when the transition starts, will provoke extra CO2 emissions. Thus, you need a plan, in order to compensate these extra emissions by extra cuts elsewhere. Otherwise, the global emissions can continue to rise even if the share of renewables improves quickly, which means you may be exceeding the so-called "carbon budget", which is the amount of carbon you can add to the atmosphere if you want to have a certain probability of not exceeding a certain temperature rise threshold before the end of the century. According to IPCC, this carbon budget for 1.5°C and 66% of probability is 400 Gt for the period between 2011-2100. The global emissions are about 40 Gt/yr, and they're improving. In other words, the 1.5°C carbon budget will be spent in 2021. So, we have already hit the wall. This is the concrete outcome of the capitalist frenzy for profit and of its refusal to plan the transition in function of the necessary emissions reductions.

This, indeed, opens the debate on carbon capture and geoengineering. Within the framework of the capitalist productivist system, carbon capture and geoengineering are the only possible "solutions" to offset exceeding the carbon budget. I use quotation marks, because these are sorcerer's apprentice solutions. One of the most mature technologies is so-called Bio-energy with carbon capture and sequestration (BECCS). The idea is to replace fossil fuels by biomass in power plants, to capture the CO2 resulting from the combustion and store it in geological layers. Because growing plants absorb CO2 from the atmosphere, a massive deployment of the BECCS should permit to reduce the greenhouse effect, and, as a consequence, improve the carbon budget. It's a very hypothetical solution, among other reasons because nobody knows if it will be technically possible to keep the CO2 underground, and for how long. At the same time, it's an extremely tricky response to the problem, because producing the necessary
biomass will require huge land surfaces: about the equivalent of a fifth or a quarter of the land used by agriculture today. On the one hand, conversion of cropland to biomass plantation would be detrimental to food production. On the other hand, establishing industrial biomass plantations in non-cultivated areas would entail a terrible destruction of biodiversity, a phenomenal impoverishment of nature. It is, let's say, highly questionable that 95% of the IPCC climate scenarios include the implementation of such a technology. Between brackets, this is further evidence that science is not neutral and objective, especially when it comes to making social-economic projections.

It is important to note that the fact that the carbon budget for 1.5°C will be exceeded and that the 2°C budget will most likely be quickly exceeded too, does not mean that we should accept capitalist technologies as a lesser evil. On the contrary. The situation is extremely serious, the fact is that reducing and cancelling carbon emissions won't suffice. Saving the climate requires removing carbon from the atmosphere. But this objective can be better achieved without resorting to BECCS or other dangerous technologies. The reason capitalism opts for technologies such as BECCS is that they suit the race for profit. The alternative is to develop and generalize a peasant organic agriculture and careful forest and land management, respectful of Indigenous peoples. In this way, it will be possible to remove great amounts of carbon from the atmosphere and to store it in the soil, while fostering biodiversity and providing good food to everybody. But this option means a fierce anticapitalist battle against agribusiness and landowners. In other words: the solution will not be found in the technological field, but in the political arena.

Recently Oxfam presented a study showing that 8 men alone control the same amount of wealth as half of humanity. We also broke the global temperature record (again) and our atmosphere surpassed 400 ppm of CO2 concentration. Are climate change and inequality connected?

Of course they are. It is well known that the poor are the main victims of catastrophe in general and of climate catastrophe in particular. Obviously, this is also true for climate catastrophes due to human activity (more accurately: due to capitalist activity). It is already the case, as we have clearly seen in all regions of the world: in the Philippines in 2014 with the typhoon Haiyan, in the United States in 2005 with the hurricane Katrina, in Pakistan in 2010 with the great floods, in Europe in 2003 with the heat wave, in Benin and other African countries with the droughts and the rising sea level, and so on, and so on.

Furthermore, the capitalist response to climate change works as an accelerator of this social inequality. This is because this policy is based on market mechanisms, in particular, commodification/appropriation of natural resources. It relies mainly on the "internalising externalities", which means the price of environmental damage has to be assessed and included in the prices of the goods and services. Of course, this price is then passed on to the final consumers. Those with money can invest in cleaner technologies - electric cars for instance - the others cannot, so that they pay more for the same service (in this case, for mobility).

In the deepening of inequalities, the insurance sector plays a specific role: it refuses to ensure growing risks in areas where the poor live, or improve the premiums people have to pay to the companies. The financial sector in general plays a major role, because it invests in the carbon market, which is highly speculative. For example, it invests in forests because the function of forests as carbon sinks has become commodified. As a result, indigenous peoples are banned from their livelihoods, in the name of the protection of nature that they have shaped and protected for centuries. A similar process of expropriation and proletarianisation is under way in the agricultural sector, due to the production of biofuel and biodiesel, for instance. Here too, the protection of nature is used as a pretext for a policy that deepens inequalities and enforces corporate rule.

It is likely that these market mechanisms of commodification and appropriation of resources will become more and more important in the future, generating more and more social inequalities. This is obvious in the light of what has been said before, about the implementation of geoengineering, BECCS in particular. But it goes even further than that. The last report by the Global Commission, a very influential think-tank chaired by Sir Nicholas Stern, is
dedicated to the role of infrastructure in the transition to a so-called green economy. The document defines nature in
general as "infrastructure", explains the necessity to make the infrastructures attractive to capital and concludes that
a key condition for this attractiveness is generalization and stabilization of property rules. Potentially, capital wants to
incorporate nature in general as it incorporated the workforce (though the workforce also is a natural resource).

**Could you talk a little about the connection between ecological crisis and immigration and how you think
the tendencies for the future?**

This is one of the most horrible consequences of climate change. As told before, above a certain threshold, there is
no possible adaptation to climate change for a humankind of 8-9 billion people. The most endangered are those who
will be forced to leave the places where they live. This process is already underway in several regions, for instance in
West Africa, where it combines with the effects of war, dictatorship, terrorism and land grabbing by multinationals. It
is also underway in Bangladesh, Vietnam and some small islands state. What do the people who flee do? They
concentrate on the outskirts of towns. Their social structure is broadly affected - gender relationships in particular,
with a loss of economic power for the women. Some of them, mostly males, try to migrate to rich countries. If they
survive the journey, they try to send money to the family. It's a huge disaster.

**How do you evaluate the rise of Trump in this context?**

The figure I have given for the 1.5°C carbon budget means Trump comes to power at a moment where we are on
the edge of runaway climate change. During his campaign, Trump said climate change is a hoax created by "the
Chinese" in order to make US manufacturing uncompetitive, and he promised to quit the Paris agreement. His staff is
full of climate deniers, and the person he chose to lead the EPA wants to destroy it from within, after having tried for
decades to destroy it from outside, as an attorney general of Oklahoma.

All this is extremely worrying. We do not support the Paris agreement, nor do we support Obama's "nationally
determined contribution" (NDC) to this agreement: both are completely inadequate from an ecological point of view
and deeply iniquitous from a social point of view. In particular, we know there is a huge gap between the objective of
the Paris agreement (1.5-2°C) on the one hand, and the cumulative impact of the NDC (2.7-3.7°C) on the other
hand. In terms of emissions, this gap will amount to about 5.8 Gt in 2025. To assess the impact of a US decision to
quit the agreement, it must be known that the US NDC amounts to an emissions reduction by 2Gt by 2025
(compared to 2005), and that these 2Gt represent about 20% of the global effort included in the NDC of the 191
signatories of the agreement. As a result, Trump's programme, if put in practice, means the US would add 2Gt
carbon to the gap of 5.8 Gt between what the governments of the world have promised to do and what should be
done not to exceed a 1.5°C rise in temperature. In other words: with the US, it will be very, very difficult not to
exceed the 2°C, as I have said before; without the US, it might be impossible.

I think the majority of the ruling classes worldwide are now convinced that climate change is a reality, a huge threat to
its rule, and that this threatening reality is "of anthropic origin". This has not changed with Trump's election, as shown
by the reactions of China, India, the EU, etc. Even Saudi Arabia confirmed its commitment to the Paris agreement,
and its NDC. But the effect of the US defection, if confirmed, will be that the other countries will be even less
disposed to step up their efforts in order to fill the gap. From this standpoint, the EU's very conservative position says
a lot. We should demand everywhere that governments step up climate efforts: in order to fill the gap between Paris
and the NDC, on the one hand, and to offset the US defection, on the other hand. This is not possible to achieve
within the framework of current capitalist policy: it calls for reforms breaking with market logic, such as free public
transport, public initiatives to insulate buildings, support to peasants against agribusiness and to Indigenous peoples
against mining and logging companies etc.

It is true that it won't be easy for Trump to achieve his goal, because part of the US climate policy depends on states,
cities and businesses, on the one hand, and because CO2 is filed as a polluter in the Clean Air Act, on the other hand. But the problem must be seen in a much broader context. It's not only the problem of Trump's climate policy, but of his policy in general. Trump's project is to counter the decline of US hegemony in the world. This is also what Obama aimed for, but Trump's method is different. Obama wanted to achieve this objective within the framework of global neoliberal governance. Trump wants to achieve it through a nationalist, racist, sexist, islamophobic, anti-Semitic, brutal policy. He is mainly focused on capitalist China, the rising power that could challenge the US in the future. This project entails a serious danger of war, even of a third world war. There are analogies both with the decline of the British empire and the rise of Germany before WWI, and with the rise of Hitler in a context of a very deep economic, social and political crisis before WWII (I don't say Trump is a fascist, that's not the point). Yet, in this situation, by force of circumstances, the urgency of the climate crisis could be relegated to a secondary question, although intelligent people in the ruling classes are aware that it is not.

Every cloud has its silver lining. The positive side of the situation is that the polarization in the US benefits not only the right, but also the left. The Women's March, the mass mobilizations against the "Muslim ban" and the March for Climate on 29 April, among others, show it is possible to defeat Trump. The challenge is huge, not only for people in the US but for all of us, worldwide. In the present situation, defeating Trump is the best way to fight for the climate. In all countries, we should try to jump on the bandwagon of the social mobilization in the US. The women's movement in the US has just launched an international appeal to join their struggle on the 8th of March (International Women's Day). That's the example to follow. In the same spirit, we should try everywhere to organize demonstrations for the climate on 29 April (or 22, date of a March for Science in the US). Not to support the Paris agreement, of course, but to put forward radical ecosocialist demands.

As we live in a world that is so deeply modified by human activities, many scientists agree that we have entered a new geological epoch: the Anthropocene. What implications do you think this must have in the revolutionary left programme and strategy?

This is indeed a very interesting debate. The scientists consider that the Anthropocene started after the Second World War. This is because it is only from that moment that the impact of human activity resulted in geological changes, such as sea-level rise, nuclear waste, accumulation of chemical molecules that did not exist before, etc. From a geological point of view, this cannot be contested: the date relies on objective facts. But there are two underlying social and political debates: about the mechanisms driving this objective change, and about the implications in terms of programme and strategy. Both debates are linked.

The debate on mechanisms is a debate about the reasons why humankind is destroying the environment. Of course, capitalism bears the most responsibility for this destruction: its logic of growth, of production of abstract value and of maximization of profit is incompatible with ecological sustainability. The exponential character of the curves showing the evolution of the different aspects of the ecological crisis as a function of time is a clear illustration of that: all these curves (GHG emissions, depletion of the ozone layer, chemical pollution, aerosol loading of the atmosphere, species loss, etc.) show an inflexion point after the Second World War. The link with the long wave of capitalist expansion is absolutely obvious. To deny the major responsibility of capitalism, to pretend that the Anthropocene is an outcome, not of capitalism, but of Homo sapiens, and even of the genus Homo, is ridiculous.

But this is not the entire story. For environmental destruction existed before capitalism, and existed on a massive scale in 20th century non-capitalist societies, as well. There is a certain similarity with the oppression of women: it existed before capitalism and continued in the so-called "real existing socialist societies". The conclusion of the analysis is the same in both cases: abolishing capitalism is a necessary condition for women's emancipation and for a non-predatory relationship of humankind with the rest of nature, not a sufficient one. In the field of women's liberation, the implication of this analysis is twofold: women need an autonomous movement, and revolutionists should build a socialist tendency within this movement. Here, we have clearly the limit of the comparison, because no autonomous movement of nature can intervene in the social debate, of course.
What conclusion should we draw from that? That some humans must intervene on behalf of nature in the social debate. That’s what ecosocialists want to do. Thus, ecosocialism is much more than a strategy to link social and environmental demands: it is a project of civilization, aiming for the development of a new ecological consciousness, a new culture of the relationship with nature, a new cosmogony. Nobody could determine the content of this new consciousness in advance, of course, but I think it should be driven by respect, care and caution. We know that humankind has a huge capacity to dominate. It is a product of our intelligence. But the “domination” can be understood in two senses: as an act of brutality and appropriation on the one hand, as the capacity to understand, to solve difficult questions, on the other hand. We should urgently stop dominating nature in the first sense and try to “dominate” in the second sense - as a good student completely knows their subject. We have caused a lot of destruction, but there is no reason why our intelligence could not be used to take care of nature and rebuild what we have destroyed, if possible. Though, contrary to what Jared Diamond says, some other societies in the past took care of their environments very wisely, thanks to a very deep knowledge of it.

What we need, in short, is not only a social revolution but also a cultural revolution. It has to start immediately through very concrete behavioural changes, but it is not a pure question of individual behaviour; changes have to be fostered socially and will progress through concrete struggles, too. Indigenous societies are a source of inspiration. I think the small peasants will play a decisive role in this process, for obvious reasons. And women, too. Not because they would be more sensitive “by nature”, but as a result of their specific oppression. Firstly, because they produce 80% of the food, women are directly confronted to the reality of the degradation of nature and its consequences. Secondly, as a result of patriarchal oppression, women are most often in charge of reproductive tasks within the family: this gives them a specific point of view about the importance of the three drivers I have mentioned: respect, care and caution.