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Climate change

Drought, heat wave and revolution

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Global warming, extreme severity of drought in Europe, heat waves, snowball effect (or cascading reactions) among all these crisis factors... Risk of sudden changes in ocean circulation with incalculable consequences... This article addresses three points: the explanation of this incontestable observation, the possible evolution, and the policies to be implemented.

It is useless, within the framework of this article, to list facts and figures demonstrating the extreme seriousness of the drought affecting the European continent. Even those who hardly follow the news have seen the frightening images of the Po drying up, the Loire reduced to a trickle of water, the Thames dried up at the source and for eight kilometres, the Rhine so low that navigation becomes impossible there... This unprecedented situation is the result of a serious rainfall deficit, accumulated since the end of winter, after several consecutive years of drought. Water has become scarce, and in some areas very scarce.

It is also useless to align data concerning the heat wave. It is an understatement to say that the temperatures "are higher than the seasonal averages", as they say on television: they exceed them by a lot. The 40°C mark has been crossed several times in many regions - including regions with a temperate maritime climate, such as Britain. The heat wave obviously aggravates the drought. The current combination of the two phenomena is exceptional in terms of its geographical extent, its intensity and its duration.

Three points will be briefly discussed: the explanations and their cause, the possible evolution, and the policies to be implemented.

Explanations and causality

Let's start with the explanations. It will be useful to refer to this good popularization article on the [RTBF-Info site](#). It explains simply, with supporting diagrams, how the splitting of the polar jet stream encloses an anticyclone (an area of high pressure) in a geographical region, so that a mass of hot air remains permanently blocked above it.

The articulation of the splitting of the jet with the northward movement of the Azores anticyclone is the subject of debate among scientists. As the author of the article says: for some people, "it is the high pressure that causes the jet to split"; for others, "it's the doubling that favours the rise of the anticyclone". One thing is certain: "duplication is indeed a reality which increases the extent of dry and hot periods in our latitudes".

Another certainty: there is little doubt that global warming is the underlying cause of the splitting of the jet stream. Indeed, its stability is conditioned by the temperature differential between the pole and the equator. As the warming in the Arctic is greater than the global average, the differential weakens and the jet stream becomes more irregular, slower, more capricious, which can lead to its splitting.

Heat waves and drought are therefore very clearly attributable to climate change, against which the IPCC has been warning for thirty years. According to the latest IPCC report (GT1) "it is virtually certain that the frequency and intensity of heat waves has increased since 1950 (globally) and will continue to increase in the future even if global warming is stabilized. at 1.5°C". The report states that "the combination of heat wave and drought has probably increased" and that "this trend will continue". For Europe, the report projects (with a high level of confidence) an

increase in pluvial flooding in the north-east of the continent and an increase in droughts in the Mediterranean region, with reduced summer rainfall in the south-east.

No surprises, therefore: the observed reality is consistent with scientific projections. Except for the fact, and this is not a detail, that it far exceeds them. By a long chalk.

In reality, everything is going much faster than the mathematical models indicated. The climatologists interviewed by the press do not hide their surprise at temperatures which suddenly jump 4° or 5°C above the seasonal averages. Rather, such extremes were expected around 2030, or beyond - if governments continued to do (almost) nothing.

We must bear this observation in mind to address the second point: possible evolution.

What the future holds for us, and what it is likely to hold

Like others, I have often drawn attention to a [fairly recent scientific publication](#) which has caused quite a stir. Authored by luminaries in the field, it discusses the positive retroactions of warming (in other words. the effects of warming promoting warming). Its originality is to examine the way in which positive feedbacks could feed each other in a sort of snowball effect, or cascading reaction.

The following quote is crystal clear: "Cascading retroactions could push the Earth system towards a planetary threshold which, if crossed, could prevent climate stabilization at intermediate temperature rises and cause continued warming towards a "planet oven", even if human emissions are reduced".

According to the authors of the article, the process could begin at a relatively low level of warming, between +1°C and +3°C.

One of the feedbacks most likely to trigger the process is the destabilization of the Greenland ice cap. This cap constitutes a particularly fragile point. Specialists estimate that the tipping point for its disintegration is somewhere between +1° (+1.5°C according to the IPCC) and +3°C of average warming. We are therefore probably already in the danger zone, or in the process of approaching it at high speed (with unchanged policy, +1.5°C will be crossed before 2040, according to the IPCC).

If this tipping point were crossed, what would be the consequences? On the one hand, the influx of water into the ocean would accelerate the rise in sea level. The process would take a long time to come to an end - a new equilibrium point - but would be irreversible. On the other hand, this influx could lead to an abrupt, sudden collapse of the ocean circulation called AMOC (Atlantic Middle Ocean Circulation), which conditions the climate of the regions bordering the Atlantic. And there, the impacts would be immediate.

Here is what the recent IPCC Working Group 1 report says about the risk of AMOC collapse: "While there is medium confidence that the projected decline in the AMOC will not involve an abrupt collapse before 2100, such a collapse might be triggered by an unexpected meltwater influx from the Greenland Ice Sheet. If an AMOC collapse were to occur, it would very likely cause abrupt shifts in the regional weather patterns and water cycle, such as a southward shift in the tropical rain belt, and could result in weakening of the African and Asian monsoons, strengthening of Southern Hemisphere monsoons, and drying in Europe." (IPCC AR6, WG1, TS p. 73)

Everything is obviously in this "if" which opens the possibility of "abrupt shifts". One thing is certain: the consequences of these shifts would be extremely severe for ecosystems and populations. Especially obviously for the poor masses of Asia and Africa. Hundreds of millions of humans would be faced with dramatic situations.

As we have read, Europe would not be spared. The Iberian Peninsula is particularly threatened. Desertification has been progressing there for years. It would cross a qualitative threshold, irreversible on a human scale.

What is the possible link with the current drought and heat wave, knowing that Greenland is not surrounded by the splitting of the jet stream which explains these phenomena. The link is that, for a variety of reasons, warming over the Arctic is twice the global average. According to the IPCC, it is "virtually certain" that the Greenland ice cap has been losing mass since 1990: specialists estimate that 4890 gigatons (billion tons) of ice (+- 460) melted between 1992 and 2020, leading to an increase in the sea level by 13.5 mm.

The IPCC emphasizes (once again!) a very important point: these projections are based solely on estimates of ice melt: they do not include the dynamic processes that would accelerate the loss of mass (the detachment of huge fractions of the cap sliding into the ocean), because "Importantly, likely range projections do not include those ice-sheet-related processes whose quantification is highly uncertain or that are characterized by deep uncertainty." (IPCC AR6, WG1, TS, p. 79)

In view of what is happening elsewhere on the planet, it is not unreasonable to fear that evolution, in Greenland too, will be faster than the models project. That's an understatement. In fact, a number of clues clearly point in this direction.

Thus, at the end of July 2022, the temperature in Greenland far exceeded seasonal norms. The melting of the ice was twice as important as the other years at the same period. In three days, an estimated 18 billion tons of ice were transformed into water. Scientists have calculated that the amount of water thus released would cover the territory of West Virginia (62,259 km²) with a layer of water of about thirty centimeters. This acceleration of melting processes is unprecedented. [1]

No need to expand further: the climate future is more threatening than ever. The lights are red, flashing insistently, and the poorest, the most fragile risk taking the brunt of it.

What to do ? (a well-known tune)

Let's move on to the policies to be implemented. The catastrophe is underway and the IPCC tells us that it will continue to progress "even if the warming is limited to 1.5°C". Note in passing that the current disaster is the product of a warming of "only" 1.2°C compared to the pre-industrial era. It is not very difficult to imagine what will come after...

Given the situation, it goes without saying that we cannot content ourselves with demanding radical measures to reduce greenhouse gas emissions: these measures are obviously essential - more than ever! - but they must be combined with an immediate and very concrete policy of adaptation to the observed and foreseeable warming.

Faced with the increasingly frequent and intense combination of drought and heat wave, what can be done to protect people, plants and animals? A short, medium and long term vision is necessary. It must aim to articulate a public adaptation plan that is both binding (to be effective) and flexible (to be adaptable to the unexpected).

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This plan must include priority components in terms of water management, prevention of the health effects of extreme heat (for vulnerable people and at city level, confronted with the phenomenon of "heat islands"), agriculture - forestry, land use planning, infrastructure and energy.

The latest report of the second IPCC Working Group can give ideas on how to design the plan and fight for the plan from social movements. This report is obviously not anti-capitalist, but it reads that "Prevailing development pathways do not advance climate resilient development" (very high confidence). (IPCC AR6, TS.E.1.1, p. 100)

The reasons cited are: the widening of income inequalities, unplanned urbanization, forced migration and displacement, the continuous increase in greenhouse gas emissions, the continuation of changes in land use, the reversal of the long-term trend towards longer life expectancy... [\[2\]](#).

The denunciation of neoliberal policies is implicit, but quite clear.

On the positive side, the IPCC report rightly insists on the fact that adaptation to climate change must be holistic, social, democratic, participatory, reduce inequalities, rely on the weakest social groups, strengthen the social positions of women, young people and minorities, etc. But its approach is focused on the decision-makers it seeks to convince, not on social movements and their struggles. However, it is on these social movements that everything depends, not on governments.

This is not the place to elaborate a catalogue of demands, we will content ourselves with a few indications and reflections.

Water management is a key point. As the IPCC (GT2) writes, "'Central to equity issues about water is that it remains a public good" (high confidence)." (IPCC AR6, WG2, TS.E.2.5) It's the guiding line.

In particular, it involves questioning the monopolization of water resources by capitalist groups producing bottled water and various beverages, that of forests by producers of paper pulp, pellets or other goods (see the ecological and human damage caused by eucalyptus plantations in Portugal!), that of groundwater by agribusiness (in Andalusia, for example).

But the guiding line of water as a public good also implies a host of more immediate concrete demands: going back on the waterproofing of surfaces, on the sewerage of rainwater, on the rectification of streams, on the destruction of wetlands; promote agricultural and forestry techniques that restore soils and their absorption capacity by limiting runoff; reorient agriculture much more radically towards agroecology; without forgetting the investment in the distribution network (in Wallonia, for example, 20 per cent of the water produced is not invoiced - network leaks are therefore very significant).

A rational, social and ecological management of water requires another pricing policy. The liberal 'true-cost' policy is socially unjust, since all consumers pay for industrial wastewater treatment in large quantities. Moreover, the neoliberal policy encourages the waste of the resource, since the financial income of the distributor depends in part on the fact that the users also pay for the purification - useless! - of the rainwater put into the sewer...

Another system must be implemented: for households, free consumption corresponding to the reasonable satisfaction of real needs (drinking, baths and showers, washing the house, doing the dishes and laundry, etc.), then rapidly progressive pricing above beyond this level.

The protection of people should be another effective priority. This is not the case. Led by climatologist JP van Ypersele, the Walloon Platform for the IPCC notes that the 2003 heat wave killed more than 1,200 people while that of 2020 killed more than 1,400... Between the two dates, nothing was therefore done... in spite of [promises](#)...

A public plan for adaptation to extreme heat should at least organize the systematic greening of agglomerations (trees everywhere, to provide shade) as well as the thermal insulation of all hospitals, schools, homes for the elderly or disabled .

More broadly, we must reaffirm the urgent need to insulate and renovate all housing. Not only to radically reduce emissions from heating (and air conditioning!) but also to protect health and well-being. In this matter as in others, the observation is there: the neoliberal policies of incentive by market mechanisms are both ecologically inefficient and socially unjust. This policy of half measures must give way to a public initiative, otherwise individual solutions such as the purchase of air conditioners will prevail, leading to an increase in energy consumption and CO2 emissions .

The IPCC insists on the importance of a holistic policy, which considers both adaptation to global warming and the reduction of emissions ("mitigation", in the jargon). Typically, the energy sector straddles both areas. There is a lack of water to cool the nuclear reactors. In view of the projections, this reality can only worsen in the years to come, so that the adaptation policy will be faced with infernal alternatives: should the water be used as a priority to cool the power stations (by heating rivers!) to generate electricity? to drink ? or to water the crops? (and which crops?) All the more reason (there are many others!) not to count on nuclear power as a "mitigation" solution...

I will not go back here on the measures to be taken in terms of structural reduction of greenhouse gas emissions, I have already devoted many writings to them. In short: energy and finance must be socialized, in the same way as water, we must get out of agribusiness and organize the rapid end of mobility based on the individual car. This bouquet of deep structural transformations is the necessary - but not sufficient - condition for a rapid and effective decarbonization of the global economy.

Without this drastic anti-capitalist remedy, it will prove to be strictly impossible to respect the climatic constraints explained by the scientists. In this case, the "hothouse planet" evoked by Johann Rockström and the other authors mentioned above will most certainly become an irreversible reality. It would mean a human and ecological cataclysm of unimaginable magnitude. Inconceivable.

"Notional" climate policy or ecosocialism ?

Every cloud has a silver lining: everyone can now become aware of the extreme gravity of the situation and the terrible danger we are facing . I reproduce here an excerpt from a [post published on August 11](#) on social networks, concerning the drought in Europe:

"With the floods (of 2021 in Belgium and Germany), climate change has given us, so to speak, a blow on the head. A blow from a club hurts, it can kill those who are on the front line. With the drought, warming shows that it can take us by the throat and squeeze slowly, each day a little more, without rushing, so that we will have plenty of time to see death progress - the most lucid see it already : the death of plants, the death of rivers, the death of animals, our own death. Because how could we survive when everything disappears? »

Faced with what is at stake, everyone can also become aware of the fact that government policies are totally inadequate, and to be honest, criminal.

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These policies do not make it possible to reduce emissions quickly (emissions continue to increase!) to reach "zero carbon" in 2050. It is even the opposite that is happening before our eyes: the post-pandemic recovery and Putin's war against the Ukrainian people have unleashed an all-out rush on fossil fuels (coal in China, Russia, Turkey; lignite in Germany; shale gas in the United States; gas in the European Union). With on top of that a frenzy of neocolonial grabbing, rivalries between powers and barbaric management of migrations.

Not only are government climate policies ineffective, not only do they increase social inequalities, but they also do not protect populations against disasters. This protection of populations is however, in theory, the elementary constitutional task of any government, of any state.

This formidable mess is a potential factor in the spectacular deepening of the crisis of legitimacy of the powerful of this world, regardless of the "camp" to which they belong.

The instability thus created should not fail to have repercussions on the ideological level. We had an example of this recently, in Belgium, with the free forum in the form of self-criticism that Mr. Bruno Colmant published in "[La Libre](#)".]]].

In this text, the ex-chief of staff of the very liberal Didier Reynders, the economist who designed the "notional interest" scam, believes that "neoliberal capitalism is no longer compatible with the climate challenge".

Mr. Colmant is right: the "free market" will not get us out of the impasse. Meeting the climate challenge imperatively requires a public plan, social and ecological objectives other than profit, public resources, and therefore a radical redistribution of wealth, contrary to "neoliberal reforms".

However, having criticized "neoliberal capitalism", Mr. Colmant finds himself in the uncomfortable position of someone who stops in the middle of the road.

Indeed, the neoliberal dogma of the free market is not the only obstacle on the way to a rational management of the climatic catastrophe: the capitalist obligation of growth is another, even more fundamental obstacle, and one that Mr. Colmant is not ready to overcome. A non-liberal, Keynesian or neo-Keynesian capitalism can exist. A capitalism without growth is, as Schumpeter said, a contradiction in terms. However, without a decrease in final energy consumption - and therefore without a decrease in production and transport - it is impossible to reach "zero emissions" in 2050. Even by sweeping the carbon under the carpet with "offsets", "capture-sequestration", and other "notional emission reductions", this is excluded.

It is an objective necessity: we must produce less, work less, transport less, share wealth, take care prudently and democratically of beings and things. It is necessary, in other words, to break the productivist capitalist machine. Productivist? we should say "destructivist", so clear is that "Capital ruins the only two sources of all wealth: the Earth and the worker" (as Marx said after his anti-productivist turn).

The climate war has begun and it is a class war. By this I mean that it requires a point of view on the REAL needs of men and women, that is to say a point of view freed from commercial alienation and the race for selfish profit which stands reality on its head.

Outside of an ecosocialist, internationalist, feminist orientation, there will be no salvation. Let us organize ourselves to say so and to act in this perspective, beyond borders, "camps" and "blocs". In short, it's time to dare to be revolutionary.

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Translated by International Viewpoint from [Gauche anticapitaliste](#).

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[1] Phys.org, 25 July 2022 "[Greenland hit with 'unusually extensive' melting of ice sheet, boosting sea levels, scientists say](#)".

[2] IPCC, AR6, WG2, full report, 27/2/2022