



Apocalypse Now! Climate change, capitalism and revolution

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In the year since the publication in October 2018 of the IPCC (Intergovernmental Panel on Climate Change) Report warning that the world has 12 years, that is until 2030, in which to limit global warming to a 1.5 °C increase, the impending apocalypse of catastrophic climate breakdown has moved dramatically from future tense to present tense.

It is difficult to find the words adequately to express either the scale of the crisis that is upon us or its urgency. This is because we are entering a situation for which there is no historical precedent or analogy. It is not like the Black Death or similar to the First or Second World

Wars. Nor is it the same as a nuclear holocaust. And it hasn't happened yet, so none of us know concretely what it will be like or exactly how it is going to unfold. Nor will the climate crisis be a single event or even a series of events with some kind of time limit. Rather it will be a multitude of interacting events and processes which may extend indefinitely over decades or even centuries.

But what we do know is that both the rapidly accumulating scientific evidence and the evidence of events around the world show that climate change is developing, and climate catastrophe is hurtling towards us at

an even faster rate than the IPCC report predicted.¹ We know that July 2019 was the hottest month the world has experienced since records began. The European Union's Copernicus Climate Change Programme, which analyses temperature data from around the planet, said that July, was around 0.56 °C warmer than the global average temperature between 1981 and 2010. That's slightly hotter than July 2016, when the world was in the throes of one of the strongest El Niño events on record.² We know that Canada and the far north are warming at twice or more the rate of more southerly latitudes. This is producing a much faster melting of the ice caps, glaciers and permafrost (soil, rock or sediment that is frozen for more than two consecutive years) than was expected. The following quotes give a sense of the scale and urgency of the global melt:

'Greenland's massive ice sheet may have melted by a record amount this year, scientists have warned.'³ 'During this year alone, it lost enough ice to raise the average global sea level by more than a millimetre. Researchers say they're "astounded" by the acceleration in melting and fear for the future of cities on coasts around the world. One glacier in southern Greenland has thinned by as much as 100 metres since I last filmed on it back in 2004.'⁴

And

'Permafrost at outposts in the Canadian Arctic is thawing 70 years earlier than predicted, an expedition has discovered, in the latest sign that the global climate crisis is accelerating even faster than scientists had feared. A team from the University of Alaska Fairbanks said they were astounded by how quickly a succession of unusually hot summers had destabilised the upper layers of giant subterranean ice blocks that had been frozen solid for millennia. "What we saw was amazing," Vladimir Romanovsky, a professor of geophysics at the university, told Reuters. "It's an indication that the climate is now warmer than at any time in the last 5,000 or more years."⁵

The consequence of this is not just on polar bears and rising sea levels. It has an immediate effect in terms of intensifying the greenhouse effect. White ice reflects heat from the sun back into space. The uncovered dark ocean and land also absorb and retain this heat, so the shrinking of the ice caps further amplifies

global warming. The melting of the permafrost releases into the atmosphere immense quantities of methane (a gas also produced by ruminating cattle) which is a far more deadly greenhouse gas than CO₂. Over a 20 year period it traps 84 times more heat than CO₂ and global concentrations of methane have already risen from 722 ppb (parts per billion) to 1866 ppb; the highest ratio in 800,000 years.

Extreme Weather

Then there has been a succession of extreme weather events over the past 12 months. These include the huge fires in California; 50 °C temperatures in much of Australia; the catastrophic cyclones (Idai and Kenneth) in Madagascar, Malawi and Tanzania (which claimed over 1,000 lives); major fires in Portugal and Northern Greece; fires across Alaska and Siberia; drought in Southern India with Chennai (Madras), a city of 7 million people, running out of water; flooding in Nepal (90 dead and 1 million displaced), Mumbai, Bihar, and Assam; flooding in Japan; a heat wave across Northern China; fires across Sweden; exceptionally high temperatures in July in Europe such as 38 °C in the UK, 41.8 °C in Belgium, 40.7 °C in the Netherlands (the first time ever over 40 °C in that country) and 42.6 °C in Paris. Even now, as I write, news is pouring in of the burning of the Amazon (along with fires in the world's other great forest carbon sinks in Indonesia, Papua New Guinea and the Congo) and the utter destruction of the Bahamas by Hurricane Dorian. What is more, there was also the extraordinary cold spell in America in January/February of this year in which semi-arctic conditions swept down into the heart of the USA in what was a 'polar vortex' with temperatures as low as -30 °C. The polar vortex is linked to climate change because rising temperatures in the Arctic affect the jet stream in the upper atmosphere driving cold winds south and drawing warm wind northward.

What makes these events so important is not just the dreadful immediate suffering they produce but the fact that it is in the form of extreme weather (rather than rising sea levels) that climate change is going to have its main impact in the next five to ten to fifteen years, so they are very much the shape of things to come – this year, next year and the year after, not in 2050 or 'by the end of the century' as is so often said in the official

discourse. Taken in the round this combination of scientific predictions and actual experience is alarming in the extreme and a number of very serious climate scientists are beginning to articulate this. James Anderson, a Harvard University professor of atmospheric chemistry best known for establishing that chlorofluorocarbons (CFCs) were damaging the Ozone Layer, stated two years ago that: ‘The chance that there will be any permanent ice left in the Arctic after 2022 is essentially zero’, and argued that recovery from this will require ‘a World War Two type transformation of industry’ within ‘five years’.⁶

When considering the prospects we face, socialists also have to take into account not only the direct natural consequences of the heatwaves, droughts, fires, storms and floods that are on their way but also their likely social and political consequences.

First, it is absolutely unavoidable that those who will suffer most, by a long way, from all of these climate disasters will be the poor and deprived, above all the poor of the global south where temperatures are already high, housing is ramshackle, health and emergency services weakest and welfare provision almost nonexistent. To experience drought or flooding in India or Bangladesh, where people are already dying on the streets in ‘normal’ times, is quite different from experiencing it in Western Europe. But the same will also apply, if not to the same extent, to the poor and the working people of even the most advanced capitalist countries. All the soaring inequalities that characterise our neoliberal capitalist society will inevitably be reflected in circumstances of climate breakdown,

Second, we know from abundant experience in the past that the way our rulers respond to so-called ‘natural disasters’ is through a combination of crocodile tears (for a very short while), callous indifference and repression. This pattern has repeated itself through the Bush Administration’s response to Hurricane Katrina in New Orleans in 2005, to Superstorm Sandy in 2012 under Obama and Hurricane Maria in Puerto Rico and Domenica in 2017. In all of these cases all sorts of pledges of aid and reconstruction were made in the immediate aftermath of disaster only for them to slip away into abandonment when it came to delivery. Years later, people who lost their homes and everything in them were still unable to return. The case of Hurricane Maria was par-

ticularly atrocious. Initially, the death toll in Puerto Rico was officially claimed to be 64. A year later it was admitted to be 2,975⁷ and many critics argue that it was really much higher. Bitterness at the appalling response to the Hurricane, by both the Trump administration and the local governor, was a significant factor in the great revolt of the Puerto Rican people earlier this year. On a lesser scale, similar scenarios were played out over the Grenfell Fire and in relation to flood victims in Ireland.

Third, there is the dreadful fact that accelerating climate change is destroying food production, increasing desertification in the hotter regions of the earth and is going to render increasing areas of the planet virtually uninhabitable. If global warming exceeds 2 °C or heads towards 3 °C, for which it is on course at present, this will apply to southwest North America, North Africa, large parts of southern Africa and Australia while major expansions of semi-arid regions will occur over the north side of the Mediterranean, southern Africa, and North and South America. Climate model simulations also suggest that, alongside droughts, rainfall, when it does occur, will be more intense for almost the entire world (we are already seeing this in places) and this will increase soil erosion.⁸ The effect of all this, as night follows day, will be a huge increase in the numbers of climate refugees.

Climate refugees already exist, of course, but the fact that this is not an ‘officially’ recognised category and that an exact definition is difficult to arrive at⁹ means that estimates of numbers vary greatly and are to some extent arbitrary. Thus the ‘Climate Migration’ website tells us: ‘For example we know that last year 24 million people were displaced by weather-related disasters like floods and hurricanes’,¹⁰ while the Migration Data Portal says: ‘In 2018, 17.2 million people in 144 countries and territories were newly displaced in the context of disasters within their own country’, and that: ‘In 2018, displacement has been caused primarily by extreme weather events, especially storms (9.3 million) and cyclones, hurricanes and typhoons (7.9 million). Particularly devastating were the southwest monsoons in India and Typhoon Mangkhut in China and the Philippines’.¹¹

Accurate prediction of future numbers of climate refugees is, therefore, inherently impossible, but it is clearly going to run, at least, into the hundreds of millions. And what we do know is how existing capitalist govern-

ments, rulers and politicians have responded to this situation. We know that one wing of the political spectrum (Trump, Orban, Salvini, Bolsonaro etc) have responded by effectively saying: 'Let them drown in the Mediterranean or die in the deserts!' and by trying to legally enforce such racist inhumanity by criminalising aid to refugees and simultaneously using the crisis ideologically to grow and sustain far-right political movements. We know that the so-called 'centre' and 'mainstream' of the spectrum (Macron, Obama, May, Varadkar etc) and even many on the left, while using a less incendiary language, nonetheless, in practice, appease and capitulate to the far right in such a way as to strengthen the latter. In other words, we know that as general climate crisis escalates so too will the danger of a fascist and barbarous 'solution' to it.

In concluding this section, I will simply say that, while all predictions about the speed of the process of climate breakdown and consequent deadlines, whether they are the IPCC's 2030 or James Anderson's five years, can only be best guesses: It is an unavoidable fact that this catastrophe is hurtling towards us. It is also an unavoidable fact that neither the current global system, nor any significant component of it (for example any major government) has shown any sign of taking anything remotely close to the action necessary to avert the catastrophe.¹² Despite all the scientific reports, all the evidence of actual disasters, and all the green talk: global greenhouse emissions are still rising and in the end that is the fact that counts. In 2018 global greenhouse gas emissions reached an all-time record high of 37.1 billion tonnes with China's output up by 4.7%, the US up by 2.5% and India up by 6.3%.¹³ In 2019, the UK national weather service, the Met Office, predicts there will be a further rise by 2.75 parts per million (ppm), among the highest annual rises in the 62 years since good records began.¹⁴ Asleep or awake our rulers are walking us into the furnace.

Climate Change and Capitalism

In this article I will take for granted that 'we' – concerned citizens, activists, trade unionists, workers, young people and old, school students and college students – all of us together, should do everything we can to raise awareness about climate change and to build a movement against it. We have supported the 20 September school strike and will support future strikes; we

will back Extinction Rebellion Week and every other similar resistance round the world. We will also back every piece of progressive legislation – like bans on fracking, declarations of climate emergencies or People Before Profit TD, Brid Smith's 'Climate Emergency Measures Bill' (which seeks to compel the Irish Government to cease grant licences for further fossil-fuel exploration and extraction).¹⁵ We will fight for everything that gains us time, moves us in the right direction and pushes back the impending disaster or even sets an example to the rest of the world as to what has to be done. The only exception to this is those measures such as carbon taxes which violate the principle of just transition and, by penalising working class people, threaten to alienate them from the mass popular movement we need. We should campaign for free and expanded public transport; for retrofitting of homes; for huge afforestation programmes; for the redirection of agriculture away from cattle and beef production and for massive public investment in renewable energy (e.g. wind, solar and tidal power).

Having said all that, however, I also want to argue that in order to combat climate change, to prevent it becoming catastrophic and to deal with the effects of it that are already built into the system and will inevitably intensify in the coming years, it is essential for the anti-climate change movement to become anti-capitalist and indeed to end capitalism.

Capitalism drives and is linked to climate change at every level. There is an important historical argument that our economic dependence on fossil fuels came about not due to the availability of natural resources nor for technological reasons but because it suited the needs of capitalism. Andreas Malm in his important study *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*¹⁶ has shown that during the Industrial Revolution steam power based on coal was adopted in preference to waterpower because it facilitated capitalist exploitation. There is also the powerful argument, both scientific and political, that the origins of a new geological age, the Anthropocene, characterised by a total environmental crisis including climate change, corresponds to the immense global capitalist boom after the Second World War.¹⁷ Hence the 'hockey stick' shaped graphs for so many natural and social phenomena ranging from CO₂ in the atmosphere to ocean

acidification, urban population and international tourism.¹⁸

However, the angle from which I want to approach this issue is the simple question: why have our rulers, the world's governments and politicians left it so long to even begin seriously addressing the issue of climate change when it would have been so much easier to tackle it earlier? Here there are a number of parallels. What would happen to a doctor whose patient was diagnosed with cancer and who knowingly ignored the diagnosis, fobbing the patient off with paracetamol, until they were almost at death's door? They would certainly be struck off and probably subject to criminal prosecution. Or what about a shipping company that had an ocean liner which they knew was not seaworthy and most likely would not make the Atlantic crossing for which it was scheduled, but nonetheless gambled on sending it out at the cost of two thousand lives? That company would be guilty at the least of corporate manslaughter. These examples can be repeated for cars, planes, bridges and so on. Yet the fact is that what our rulers have done regarding climate change has been worse than any of these in terms of its consequences for humanity and animal species. They have, already, guaranteed the death of millions of people and the extinction of thousands of species.

Let's be clear about how long they have known about the problem. The possibility of the greenhouse effect was first understood in 1896, by the Swedish scientist, Svante Arrhenius, but it was not considered practically significant. The fact that some global warming was actually occurring was first measured in the 1930s, but it was assumed to be on too minute a scale to worry about. This started to change in the 1950s with the work of Guy Stewart Callender and in the 1960s David Keeling demonstrated that human-generated greenhouse emissions were large enough to cause global warming.¹⁹ By the late 1970s there was already a degree of scientific consensus on this. The simple fact that the UN Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organisation and the UN Environment Programme, and issued its first report in 1990, testifies to the fact that every serious government and political leader has known about the problem for at least thirty years. In 1992 the UN Framework Convention on Climate Change (UNFCCC),

at the Rio Earth Summit, committed states to reduce gas emissions 'based on the then scientific consensus'. Scientific evidence from Greenland ice cores meant by the end of the 1990s scientists knew they were looking not just at gradual warming but the real possibility of rapid and catastrophic warming should certain thresholds or tipping points be crossed.²⁰ In other words, our so-called 'world leaders' and governments, almost without exception, have been knowingly gambling with the lives of hundreds of millions of people for decades. Their deep guilt is undeniable, but the question is why?

One answer might be that these politicians simply don't give a damn – they care only about themselves, their careers and the pockets they can line. But even if this were true it wouldn't explain why politicians and governments would not consider it in their own interest, politically as well as for their children, to do something serious about climate change in the same way that the British ruling class decided it was in their interest to abolish the slave trade in 1833 or the US government decided it had to abolish slavery in order to win the Civil War or, a century later, to pass civil rights legislation.

An answer to that might be that there have been no votes in tackling climate change because 'people' didn't care about it. But people didn't care because they didn't understand it. This, of course, can be laid at the door of the media. The responsibility of the media is clear. For decades they colluded with corporate funded climate denial to treat climate change as just 'a theory' and invariably to 'balance' scientific testimony with climate scepticism. If they no longer do that (in Ireland and the UK, as opposed to the US and elsewhere) they still don't treat climate change as a real 'crisis', like Brexit or an economic crash, but relegate it to the inside pages, and they still refuse to link ever-increasing extreme weather events to climate change. However, the media is not a stand-alone independent force in this: a) the media is largely owned and controlled by people, like Rupert Murdoch and Denis O'Brien, who are an integral part of the ruling elites; b) the media, especially the news media, takes its cue to a huge extent from governments and leading politicians. All it would have required to get the media to change their agenda would have been a few concerted statements and appeals from 'world leaders'. So, we are back to our question as to why those leaders have refused to do this.

The compelling answer is that tackling climate change consistently clashed with the interests and priorities of capitalism, the imperative of profit. At every stage, and still today, our leaders have found that even when they “sincerely” wanted to do what was necessary to avert climate breakdown this conflicted with the immediate needs of ‘the economy’ i.e. capitalism and they invariably chose the latter over the former. This applied whether it was Enda Kenny, George Bush, Bill Clinton or Barack Obama (never mind Donald Trump) Tony Blair, David Cameron, Nicolas Sarkozy, Emmanuel Macron, Vladimir Putin or Xi Jinping.

Understanding this involves understanding not so much how climate change works as how capitalism works.²¹ For capitalist businesses the profit imperative is not just a need for a reasonable ‘return’ (as they often claim) but a drive to maximise profit. Nor is it just a matter of personal greed, an insatiable desire for more luxury cars, yachts or private jets. It is an objective pressure deriving from the very nature of the capitalist system – not just the ideology of neoliberalism – which dominates every enterprise and unit within it. This is because capitalism is based on competition in the market, ultimately the world market, and the measure of success in that competition is the amount of profit realised. This operates at every level from the local corner shop to the giant multinational corporation. To put it concretely SPAR is competing with Centra, Volkswagen is competing with Toyota and General Motors, and ExxonMobile is competing with BP and Shell, and if they do not keep up in the race, the race for profit, they will go out of business and get taken over. Crucially – for responding to climate change – this operates not just at the level of states but also internationally between capitalist states, between the USA and China; Russia and the EU; Brazil and India and so on in an endless struggle of all against all.

At a national level this relentless competition is partially mitigated by the existence of the state (not just parliament but the civil service, judiciary, police, armed forces etc). One of the functions of the capitalist state, along with repression, is to provide services and infrastructure (schools, hospitals, roads, transport etc) required by the capitalist economy as a whole, which it may not be in the interests of private businesses to maintain. But no such overarching authority exists at the international level.²² Internationally each capital-

ist state acts on behalf of its own capitalist class in the global competition. Thus, not only each business but also each state is under an iron compulsion to grow its economy at a rate that matches its rivals.

The final piece in this capitalist jigsaw is the central role played by fossil-fuel and fossil fuel related corporations in the global capitalist economy. The likes of Shell, BP, ExxonMobile, Texaco, Toyota, Volkswagen and General Motors are among the biggest in the world and they all exercise a huge influence on government. It should be remembered that US Vice President Dick Cheney, the brains behind George W Bush, was an executive of the oil company, Halliburton and that Trump’s first Secretary of State was Rex Tillerson, former CEO of ExxonMobile. But it should also be understood that the objective weight of these companies in the world economy gives them immense political leverage even without such direct personal influence.

As a result of these combined pressures the prioritisation of profit over the environment and over human life becomes second nature to both business executives and mainstream politicians and state officials. US Secretary of State, Mike Pompeo, is pleased the Arctic is melting. In May this year, with dollar-signs flashing in his eyes, he stated:

‘The Arctic is at the forefront of opportunity and abundance. It houses 13 percent of the world’s undiscovered oil, 30 percent of its undiscovered gas, an abundance of uranium, rare earth minerals, gold, diamonds, and millions of square miles of untapped resources and fisheries galore. Steady reductions in sea ice are opening new passageways and new opportunities for trade. This could potentially slash the time it takes to travel between Asia and the West by as much as 20 days. Arctic sea lanes could become the 21st century Suez and Panama Canals.’²³

The point here is not how outrageous but how normal this is. ‘They’ might not all say it so openly, but it is how the large majority of them think. It requires immense popular mobilisation, on a much greater scale than anything yet achieved by Extinction Rebellion or FridaysForFuture or anybody else to force them to even contemplate any other way of operating and when that does happen their ‘change of heart’ is only temporary, to get the threat of the popular movement to go away before returning to profit-driven business-as-usual.

This is why capitalism and pro-capitalist politicians

have done next to nothing to stop climate change; this is why they have been prepared to sacrifice millions of lives and millions of species and gamble with the future of the planet. That is what they have done for decades and, in many cases, for centuries, what they are still doing now and will continue to do in the future. And this doesn't just mean they're not doing enough; it means they are actively intervening to prevent serious action being taken, just as Leo Varadkar and Fine Gael did in Ireland by using behind-the-scenes parliamentary manoeuvres to block Brid Smith's Climate Emergency Measures Bill, and as Obama did at the Copenhagen Earth Summit in 2009 and Trump has done by pulling the US out of the 2015 Paris Accords. Trump's statement on this summed it all up in a single sentence: 'The Paris Accord will undermine our economy'.

This explanation of what has already happened in the immediate past provides us with the best guide as to what will happen in the immediate future. Even if, by some extraordinary and most unlikely miracle, substantial sections of the global business and political elite were to have a collective Damascene conversion to environmentalism, there would be no way, by their methods, they could turn around the immense oil tanker of the global economy in the very short time we have to avert disaster. This is why we need 'System change not climate change'.

The Meaning of System Change

The slogan 'System change not climate change' is popular in the movement and that is a very good thing, but it is clear that it means different things to different people.

For some, and I would cite Irish, Green Party leader, Eamonn Ryan TD, as an example here, bringing about system change is largely about changing the collective 'mind set' and developing a new 'narrative'.²⁴ According to this view, and I think that in a rather vague way this is quite widely shared in 'green' and environmentalist circles, capitalism is first and foremost a set of attitudes and beliefs; attitudes and beliefs which can be altered by education and persuasion, even if that persuasion involves a significant amount of peaceful protest. What is involved is that the 'people' should be induced to move away from their acquisitiveness and obsession with consumption. Similarly, society should be persuaded to abandon its addiction to economic growth and its use

of GDP (Gross Domestic Product) as a key measure of national success.

This approach, well intentioned as it may be, gets the relationship between mindsets and social reality upside down. CEOs and business managers are not obsessed with profit maximisation because the idea arbitrarily dropped into their heads from the sky but because it is a daily necessity imposed on them by capitalist social relations. Capitalist politicians are not focused on economic growth because they were taught it at university, but because without growth capitalism goes into a downward spiral, a 'recession', and nation states that fail to grow decline and are eventually conquered or taken over. The 'mindset' of capitalist economics which prevails from the Harvard Business School to the Economics Department at Trinity, from the Federal Reserve Bank in Washington to the ESRI, is not just a mistake; it represents a set of real material interests: the interests of the capitalist class. System change, therefore, requires not just changing attitudes but changing the material social relations which underlie them.

Another widespread view is that system change means a mix of government initiatives from above and lifestyle changes in society so that gradually a sustainable eco-friendly form of capitalism will be arrived at. This idea should, of course, be tested in practice, in particular by demanding the necessary initiatives from governments e.g. keeping fossil fuels in the ground. It is always right to test the limits of the system. But it is very doubtful that this gradualist approach can work at all and it certainly isn't going to work quickly enough to meet the challenge we face. Moreover, it leaves the basic economic dynamic of the system – competitive production for profit – in place and that dynamic is inherently anti-ecological: it creates as Karl Marx, John Bellamy Foster and others have argued, a 'metabolic rift' between society and nature so that even if some time-gaining reforms are achieved (which is helpful but not guaranteed) all the fundamental problems will reassert themselves.

Real system change means transforming the basic way in which production is organised in our society. It means public ownership, not of every corner shop and small business, but of the main industries, services, banks and financial institutions and their operation according to democratic social planning. The democratic

planning is not an afterthought or optional extra – without it public ownership gives you, as in Stalinist Russia, only state capitalism.²⁵ Only this breaks the competitive ‘accumulation for accumulation’s sake’ logic of capitalism and makes possible large scale production to meet human needs which include a sustainable relationship with nature. The word for this is socialism. Without socialism the march to ecocide and barbarism will continue.

Revolution

But how is socialism to be achieved? Unfortunately, socialism cannot be achieved by the normal methods of parliamentary democracy. I say unfortunately because it would be much simpler if it could; indeed, we would probably have many examples of socialism already since there have been many instances of the election of governments with socialist intentions. The problem is that parliament is essentially a talking shop, a facade for a fundamentally undemocratic system. The real centres of power in any capitalist society, whether it is the US, China or Ireland, lie outside parliament in the boardrooms of the banks and major industries and in the armed forces, the upper ranks of the civil service, the judiciary and the police and in the recesses of the deep state, none of which are in any way democratic. Whenever socialist or even seriously reformist governments come to power these institutions mobilize their power to frustrate, block and eventually remove the government²⁶. They would do the same with any seriously ecological government. The only way in which such a government could successfully be defended would be by mass mobilization from below, which went beyond the limits of normal parliamentary democracy to defeat the bosses and the state; in other words, by revolutionary means.

The only way, in general, that real system change, real change to an environmentally sustainable society, can be achieved is by mass revolution. That means a combination of mass street demonstrations, mass strikes and widespread workplace occupations which breaks the power of the existing state and establishes a new form of democracy based on people’s assemblies.²⁷

There is an obvious argument against this perspective: it runs ‘There is no sign of your mass socialist revolution happening and we have no time; we need a solu-

tion to climate change NOW!’ This argument was put to me when I first started to get involved in the climate issue about 18 years ago. It was a powerful argument then and remains a powerful argument today (only 18 years later and capitalism is no nearer solving the problem). I would reply with two points. First, revolution is not, and should never be, counterposed to the immediate changes that are needed now: keep it in the ground, free public transport etc. I repeat we must fight for every immediate step forward we can get. Second, it is true that there is not an immediate prospect of national, let alone international socialist revolution, but the very fact of extreme climate crisis will generate the conditions that will make revolution possible.

First, the proliferation of extreme weather events around the world, together with accumulating scientific evidence, will make the need for system change clear to increasing numbers of people globally. Second, the actual experience of those weather events will push people more and more in the direction of people power, collectivist responses to them in order to deal with them and prevent ordinary people being abandoned while the rich head for their gated communities in the hills. Third, the imminent prospect of climate catastrophe will increasingly provide a straightforward answer to what has long been a major objection to socialism and revolution: look how it ended in Russia! The truth is Marxists could produce endless explanations about what went wrong and how Stalinism was a result of material conditions not socialism as such, but most people who never read Trotsky or Tony Cliff or any of that were still turned against socialism by what happened in Russia (and China, and Eastern Europe and so on). The point about extreme change is that it is likely to override all that with the proposition that at the very least socialism would be better than extinction. Third, the very global nature of the climate crisis will make the global spread of revolution, if a national breakthrough is achieved, more likely and more obviously necessary. Lastly, and this too will become more and more obvious as the climate crisis deepens, the alternative to socialist revolution will be fascist barbarism.

Endnotes

- 1 This is to be expected because the IPCC report derived its authority from the fact that it represented the consensus of many thousands of scientists worldwide and this built a certain conservatism into its conclusions.
- 2 El Niño events are characterized by warming of the ocean waters in the Pacific Ocean and have a pronounced warming effect on the Earth's average temperature. Though there was a weak El Niño in place during the first part of 2019, it is transitioning to a more neutral phase, making the extreme July temperatures even more alarming.
- 3 https://theconversation.com/climate-strikes-greta-thunberg-calls-for-system-change-not-climate-change-heres-what-that-could-look-like-112891?fbclid=IwARogKBwVotRv_C1l16kCOL7H
- 4 David Shukman, 2019, BBC Science Editor, 'Climate change: Greenland's ice faces melting death sentence'; <https://www.bbc.com/news/science-environment-49483580>
- 5 <https://www.theguardian.com/environment/2019/jun/18/arctic-permafrost-canada-science-climate-crisis>
- 6 <https://www.forbes.com/sites/jeffmcmahon/2018/01/15/carbon-pollution-has-shoved-the-climate-backward-at-least-12-million-years-harvard-scientist-says/?fbclid=IwAR2TgKwARWsHgs6hc4>
- 7 Lynch-Baldwin, Sarah; Begnaud, David (2018): "Hurricane Maria caused an estimated 2,975 deaths in Puerto Rico, new study finds". CBS News. Retrieved August 28, 2018.
- 8 <https://www.carbonbrief.org/explainer-desertification-and-the-role-of-climate-change#targetText=Both%20natural%20variability%20in%20climate,become%20more%20prone%20to%20e>
- 9 Is someone in Africa whose livelihood as a farmer is gradually destroyed by climate change and decides to try to reach Europe to obtain a better life a climate refugee or an 'economic migrant'? Is someone who flees a local war that broke out as a result of tensions over water shortages a climate or a war refugee or both?
- 10 <http://climatemigration.org.uk/climate-refugee-statistics/>
- 11 https://migrationdataportal.org/themes/environmental_migration#recent-trends
- 12 For a critique of the Irish Government's Climate Action Plan see Eddie Conlon etc
- 13 Damian Carrington 'Brutal news': global carbon emissions jump to all-time high in 2018' *The Guardian*, 5/12/2018.
- 14 Damian Carrington, 'Worrying rise in global CO2 forecast for 2019' *The Guardian*, 25 January 2019.
- 15 This excellent Bill was actually passed by the Dáil (the Irish Parliament) but prevented from becoming law by backroom manoeuvring by the Fine Gael Government.
- 16 Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Origins of Global Warming*, Verso, London 2016.
- 17 Ian Angus, *Facing the Anthropocene*, Monthly Review Press, New York, 2016.
- 18 See above pp.44-45.
- 19 Rudy M Baum, 'Future Calculations: The First Climate Change Believer', *Distillations* 2, 2016, p.38-39.
- 20 Jonathan Neale, *Stop Global Warming- Change the World*, London 2008, pp17-18.
- 21 Many environmental activists have an excellent understanding of climate science but a poor understanding of capitalism. For some socialists – hopefully declining in number – it is the other way round.
- 22 The idea that the United Nations is such an overarching international authority is a persistent liberal illusion.
- 23 See <https://edition.cnn.com/2019/05/06/politics/pompeo-sea-ice-arctic-council/index.html>
- 24 I cite Eamonn Ryan here on the basis of having heard him speaking to this effect and using these expressions at several meetings. He clearly doesn't mean what I would argue for because he is willing, keen even, to go into coalition with Fine Gael or Fianna Fáil i.e. run capitalism.
- 25 As James Connolly put it 'Socialism properly implies above all things the co-operative control by the workers of the machinery of production; without this cooperative control the public ownership by the State is not Socialism – it is only State capitalism.' James Connolly, 'The New Evangel – state monopoly versus socialism' in *The Workers Republic*, 1901. <https://www.marxists.org/archive/connolly/1901/evangel/stmonsoc.htm>. Many other Marxists such as Engels, CLR James and Tony Cliff have argued the same point.
- 26 For a more thorough account of this experience see John Molyneux, 'Understanding Left Reformism', *Irish Marxist Review* 6, (2013). <http://www.irishmarxistreview.net>.
- 27 There is a vast literature on the nature, history and dynamics of revolution in the Marxist tradition e.g. Karl Marx, *The Civil War in France* (on the Paris Commune), V. I. Lenin, *The State and Revolution*, and L. Trotsky, *The History of the Russian Revolution*. On more recent revolutionary attempts Colin Barker ed *Revolutionary Rehearsals*, London 1987 is very useful. The democratic popular assemblies referred to here are, in the Marxist tradition, usually referred to as 'soviets' (or workers' councils) after their role in the Russian Revolutions of 1905 and 1917.