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Environment

# The biodiversity crisis and the environmentalist left

- Features -

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**In this presentation I want to advance four propositions that may be controversial:**

**â€¢ That biodiversity is the planet's most valuable resource. It is also its most abused and threatened.**

**â€¢ That the biodiversity collapse we are witnessing todayâ€"the greatest mass extinction of species for 65 million yearsâ€"is the most fundamental aspect of the whole environmental crisis.**

**â€¢ That most left environmentalistsâ€"including Marxist and socialist environmentalistsâ€"have failed to adequately recognise or address it.**

**â€¢ That this represents a serious failing in the overall approach of the left, including the Marxist left, to the environmental crisis.**

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This presentation is therefore also an appeal to Marxist and socialist environmentalists to make the biodiversity crisisâ€"which is genuinely apocalypticâ€"far more central to their analysis of the overall ecological crisis than has been the case.

They are right about the danger of climate change and global warming, the melting ice-caps rising sea levels, and they are right to oppose the capitalist drive for profit and the culture of productivism which prevails. But all to often the biodiversity crisis is either left out or underestimated.

Not that the catastrophic collapse of biodiversity we are witnessing today is disputed by most Marxist or socialist environmentalists. It is widely accepted, for example, that between 40 and 50 percent of all species on the planet could be extinct by mid-century and that a quarter of all mammal species in the world are currently at risk of extinction against a background (natural) extinction rate (over millennia) of just one every 700 years. The most disastrous situation exists amongst amphibians where the current extinction rate is a mind-boggling 45,000 times higher than the background rate!

There is agreement that the tropical rain forests (the biodiversity treasure houses of the planet) are in serious trouble. More than half of the Earth's rain forests have already been destroyed by the insatiable demand for timber and arable land.

It is agreed that marine ecosystems are in serious trouble from rising oceanic temperatures, pollution, and over fishing. Coral reefs are dying off. Marine invertebrates that rely on calcification for their shell structures face a bleak future as a result of the increasing acidification of the oceans. The oceans are now 30 times more acidic over pre-industrial levels due to carbon absorption from the atmosphere. (One third of all CO2 emissions into the atmosphere are absorbed into the oceans).

Once a species is gone it is gone. Species evolve over long stretches of geological time (the average life-span of a

 

species is well over a million years), and today, neither the biosphere of the planet, or Homo sapiens as a species, have the time or the conditions for such a process to be repeated.

It is also increasingly accepted that we are indeed witnessing the greatest extinction of species for 65 million yearsâ€"since the End Cretaceous event that destroyed two thirds of all species at a stroke, and brought an end to the era of the dinosaurs. Even that this should be characterised as the â€˜sixth extinction' in the planet's biological history in order to spell out its full significance. (The other four were the End Ordovician Extinction 450m years ago, the Late Devonian 370m years ago, the End Permian (sometimes known as the mother of all extinctions) 225m years ago and the Late Triassic 200m years ago).

# Drawing out the logic

Despite such apparent agreement on the apocalyptic nature of the biodiversity crisis, however, this is not reflected in the writings of many (even most) Marxists and socialist environmentalists on the subject, and where it is the full logic and implications of it are rarely drawn out.

In fact it is difficult to find a book by such writers that makes biodiversity collapse a central issue. It is usually (though not always) mentioned, but conclusions making it a central or pivotal issue are not always drawn. Even writers who are prepared to recognise that we are facing something on the scale of a sixth mass extinction in geological terms (i.e. the biggest extinction for 65 million years) and agree that this threatens our own existence as a species, still fail (in most cases) to draw such conclusions. (If I have missed any writings in this regard I apologise.)

JB Foster, in my view, is the most impressive Marxist writer on the ecological crisis as a whole, and indeed the best on biodiversity â€" as far as I can tell. Yet even Fosters treatment of the biodiversity crisis in his (5 or 6) principal ecological works is patchy.

His best book on the subject (by far) is The Ecological Rift published in 2010 and written jointly with Brett Clark and Richard York (Monthly Review). The introduction to it (in many ways is the best part of the book) recognises the concept of the sixth extinction and spells it out in a graphic and convincing way.

The book draws attention to the struggle by Marx for a materialist conception of nature based on the metabolic interaction between human beings and nature. It points to an important insight of Marx, when discussing the (pre-fertiliser) soil erosion crisis in the mid-19th century, in what he (Marx) terms as the metabolic rift. Foster had drawn attention to this at this at greater length in his best-known ecological work, Marx's Ecology (published in 2000 by Monthly Review). Marx saw this as a rift in the relationship between human kind and nature, which implies a concern for biodiversity but does not address it directly.

The book also draws attention to the nine planetary boundaries system of analysis advocated by John Rockstrom of the Stockholm Resilience Centre and the US climatologist James Hansen. This approach not only recognises biodiversity as one of the nine crucial planetary boundaries but as a boundary that has already been crossed.

Despite all this, however the book, fails to sustain a focus on the biodiversity throughout it 500 pages. It is not therefore central to the book's main thesis.

Other Marxist writers on the ecological crisis (as far as I can see) have less to say about biodiversity than Foster. Paul Burkett hardly mentions it in Marx and Nature (Haymarket, 1999) . Joel Kovel does mention it in The Enemy of

Nature (published in 2007 by Zed Books), but does not develop it or make it a central issue. The same can be said of The Global fight for Climate Justice (published in 2009 by Resistance Books and the IIRE ) edited by Ian Angus.

Daniel Tanuro in Green Capitalism, why it can't work (published in 2009 by Merlin with Resistance Books and the IIRE ) spells out the seriousness of the problem strongly enough, but again does not make it a central issue. In fact he identifies the rising sea level as the biggest single problem arising from the environmental crisis. (My review of it is here

Martin Empson's recently published Land and Labour, Marxism ecology and human history (2014), has virtually nothing to say on the subject. (My review of it can be found here

It should also be mentioned that the biodiversity crisis was barely mentioned in either the International Ecosocialist Manifesto (drafted by Michael Lowy and Joel Kovel in 2001) or the Belem Declaration distributed at the World Social Forum in 2009.

I participated in the preparation of both of these declarations and did not recognise this weakness at the time. Since then I have radically rethought the significance of the biodiversity crisis in relation to the ecological situation as a whole.

**Scientific and popular science writers**

Marxists and socialists (including those who rejected Stalinism) did not have a good 20th century as far as the environment is concerned. The early contributions of Marx and Engels (and indeed William Morris) were eventually lost after the soviet environmentalists were wiped out in the Stalinisation process. For over 40 years, from the late 1920s until the early1970s when Marxists in a number of countries began again to address the subject again, there was virtually nothing being written on the ecological situation as a whole let alone on biodiversity.

As a result this most of the important studies of the biodiversity crisis, published over the past 50 years, have been written by scientists â€" paleontologists, biologists, zoologists, naturalists, who were not Marxists, and by journalists specialising in such subjects. Institutions such as the World Wild Life Fund (WWF) and the UN have also made important contributionsâ€"The Earth Summit in Rio de Janeiro in 1992 for example.

Many important studies have been written since the scale of the biodiversity crisis began to be better understood in the mid-20th century.

The US marine biologist Rachel Carson published groundbreaking work in the 1950s. She published her prize-winning The Sea Around Us in 1951 (Oxford University Press) and The Edge of the Sea (latter published as a Penguin Classic) in 1955 . Her best selling Silent Spring was published in 1961 by Penguin.

The first edition of Edward O Wilson's powerful study of the subject The Diversity of Life was published in 1992 (Second edition 2002, Penguin). It was followed a year later by The Sixth Extinction by Richard Leakey and Roger Lewin, which raised the concept of the sixth extinction in a popular way for the first time (Published by Weidenfield and Nicholson in 1996. Richard Leaky is a palaeontologist and naturalist who became the Direct of the Kenyan Wildlife Conservation department.) Marine biologist John Spicer's Biodiversity – a Beginners Guide was published by Oneworld in 2006 and Ken Thompson's Do We Need Pandas? published in 2010 by Green Book. The UN has published several major reports on biodiversity, including Eco-systems at 'tipping point' published in 2010.

 

David Attenborough has produced TV documentaries on the subject and Monty Don has presented the multi-episode BBC4 series Shared Planet, which studies the subject in great detail. Al Gore has a section on it in The Future published in 2013 by W H Allen  as does Naomi Klein in This Changes Everything published in 2014 (Simon and Schuster).  The World Wildlife Fund's Living Planet Report, published in September 2014, was yet another wake-up-call on the subject. My review of it can be found here

The issue was taken a stage further by Elizabeth Kolbert's recently published (and very readable) book The Sixth Extinctionâ€"An Unnatural History (Bloomsbury 2014).  My review of it can be found at http://socialistresistance.org/6092/the-biodiversity-crisis. Kolbert points outâ€"as indeed do Richard Leakey and Roger Lewin â€" that whilst the previous five mass extinctions were brought about by naturally occurring phenomenon this one is different. This one is as a result of the impact of the activities of a single species â€" the most successful and rapacious the planet has producedâ€" modern humans, on all others.

She also arguesâ€"along with a growing body of scientific opinionâ€"that the mass extinction event we are witnessing today is so fundamental that it defines the geological epoch. That this the epoch we are living through should be defined as the epoch of the Anthropocene â€" an epoch defined by the impact of modern humans on all other species (flora and fauna) and therefore on the biosphere.

# Why has the left lagged behind on this?

So why has the left been so far behind the curve on the biodiversity crisis? One possibility is that it is because it is a subject that tends to raise issues that the left has been (and remains) reluctant to discuss â€" for example the rising population of the planet.

Most of the left (including most Marxists) hold the view that that the size of the human population, which has now topped 7bn, and is rising at the rate of 80 million a year, has no significant impact on, or implications for, the ecology of the planet. It is therefore not something that the left need address. This view is particularly difficult to sustain when discussing biodiversity collapse.

To the extent that rising population is discussed on the left, including by some of the writers mentioned above, it is more often by raising the spectre of Thomas Malthusâ€"the reactionary 18/19th century economist and cleric who famously advocated starving the poor to keep the population down and avoid famineâ€"and suggesting that it is neo-Malthusian (or worse) to suggest that rising human numbers are a problem today.

Rising population in my view, is not an issue of 18th or 19th century economics but of 20th and 21st century ecology and biodiversity. The polemics of Marx and Engels against Malthus (after Malthus's death), in which Marx and Engels were right, tell us nothing about the implications of a population of 9, 10 or 11 billion today.

For me the idea that rising population today has no impact on the ecology of the planet makes no sense. Whilst the ecological crisis cannot be reduced to the rising human population â€" absolutely not â€" it is, however, one of the major factors involved, particularly in terms of biodiversity.

EO Wilson puts it this way: "Human demographic success has brought the world to this crisis of biodiversity. Human beings â€" mammals of the 50-kilogramme weight class and members of a group, the primates, otherwise noted for scarcityâ€"have become a hundred times more numerous than any other land animal of comparable size in the history of life. By every conceivable measure, humanity is ecologically abnormal. Our species appropriates between

20 and 40 percent of all the solar energy captured in organic material and land plants. There is no way that we can draw upon the resources of the planet to such a degree without drastically reducing the state of all other species." (The Diversity of Life p260)

It is true that the issue is more complicated than Wilson presents it. The rising global population, for example, does not have a major effect on carbon emissions and climate change, because (at the moment) the highest birth rates are (mostly) in the most impoverished regions of the world with the lowest carbon footprints. When it comes to biodiversity, however, it is the ecological footprint and not the carbon footprint that is the crucial factor.

This is a very important distinction. The ecological footprint measures the total impact on the environment, and not just the carbon emissions. It therefore includes the productive land, fresh water and living space needed to sustain life. It also includes the pollution, deforestation, waste disposal, pesticide and herbicide use involved and the destructive impact this has on wildlife habitats, food sources, and breeding patterns. When it comes to the ecological footprint, therefore, total numbers matter.

It is still a disproportional impact, of course, since even the ecological footprint is greater in the rich countries than the poor. Nevertheless everyone has such a footprint with an impact on the ecology of the planet.

# What drives the ecological crisis?

Another issue the biodiversity crisis brings out sharply is the question of what are the principal driving forces behind the ecological crisisâ€"in particular what precisely is the role of capitalism.

Marxists and socialists can take credit for bring the role of capitalism into the ecological debate, which had previously been largely absent. Capitalism with its grotesque productivism and its drive for profit and growth is the biggest single factor in the ecological crisis today. Unfortunately this has been increasingly presented as if capitalism is virtually the only factor involved. Remove capitalism that's it: problem solved.

Such a view not only distorts our analysis of the ecological crisis but it disarms us when it comes to solutions.

It is true that ecological destruction increased dramatically with the industrial revolution, and the capitalist mode of production, in the latter part of the 18th century. The impact of modern humans on the biosphere, however, including species extinction, long preceded both industrialisation and capitalism.

Modern humans are the most, successful, resourceful, and effective species the planet has produced, and they had a disproportionate impact on other species from the outset. As humans migrated out from their African homelands to other parts of the globe they eliminated most of the big land animals and flightless birds, who were defenceless against their hunting skills, on the spotâ€"often going far beyond their immediate needs. A fifth of all species were eliminated in this way. This was the case in Australia, New Zealand Madagascar, Indonesia, the Americas and Europe.

More recently, with colonial expansion, sailors and colonists rampaged though isolated and vulnerable species such as the dodo, the great auk, the giant tortoise. The Steller's sea cow was hunted to extinction. Species went from abundance to extinction in very short periods of timeâ€"particularly island populations. Today, armed with chainsaws and modern technology we appear to be mopping up what is left.

And here's the thing. It is not just capitalism, but industrialisation, which is a massive challenge to the environment. It does this with or without capitalism. It is true that a socialist society would create far better conditions under which to tackle the ecological crisis but it would not resolve it. In fact it would remain a huge challenge. The absence of capitalism, therefore, is not enough.

For a large part of the 20th century, in the Soviet Union and Maoist China, capitalism, and its drive profit, did cease to exist. The impact on the environment (after an initial more positive period in both cases) was at least as severe as it had been under capitalism. Both were aggressively productivist and the result was polluted rivers and landscapes plus chemical lakes and Chernobyl. In the case of China The River Runs Black (Cornel Press 2004) by Elizabeth Economy spells out the extent of this.

Environmental destruction will continue after capitalism is gone unless the alternative to it is a sustainable alternativeâ€"which is not an automatic process. In fact the struggle for a sustainable planet has to be embedded in the revolutionary process itself. This is what ecosocialism is essentially about. It is about the struggle for a sustainable socialist society that can keep the biosphere of the planet in tact. It is about recognising that the struggle against capitalism and the struggle to defend the environment are one and the same thing (as indeed they are) but that the struggle for a sustainable way of life, which can exist in harmony with nature rather than in conflict with it, will need to continue long after capitalism has departed for the proverbial dustbin of history.

# The relationship between human beings and nature

Both the economic and the intrinsic value of biodiversity is incalculable. In fact we owe our existence to it. The more species rich an ecosystem is the higher its productivity and the greater its ability to resists pressures and survive crisis. As species are destroyed the more vulnerable becomes whole the ecosystem, including ourselves.

A large proportion of all plants (including most of those we eat) rely on insects for pollination and therefore reproduction. Plants are a rich source of pharmaceuticals and medical research.

EO Wilson spells it out thus in The Diversity of Life (page 125): "So important are insects and other land dwelling arthropods that if all were to disappear, humanity probably could not last more than a few months. Most of the amphibians, reptiles, birds, and mammals would crash to extinction about the same time. Next would go the bulk of the flowering plants and with them the physical structure of most forests and other terrestrial habitats of the world…" The land he says would return to approximately its condition in early Palaeozoic times, covered by clumps of small trees and largely devoid of life.

But it is not just self-interest. There is a more philosophical, point as well. What exactly should the relationship between human beings and the rest of nature be? When I first joined a Marxist organisation in the 1960s I was told that "mankind " advanced in conflict with nature and that our task in life should be to conquer nature in order to secure what he needed for his own way of life. This view was the stated aim of both the Stalinised USSR and of Maoist China.

This approach has to be rejected. It is crucial to insist instead that human beings are a part of nature and have both a need and an obligation to live in harmony with it. As ecosocialists we should strive for a society in which humankind can exist alongside other species without threatening their existence. We protect biodiversity not just in order to protect ourselves but because a richly bio diverse planet is the kind of planet we want to live in. The alternative is a silent spring, or a biological desert, even if we could survive such a nightmare.

Marx had insights in this regard that were reflected his view of nature as “man’s inorganic body”. William Morris also had such insights, which were reflected in his love of nature, his defence of nature, and his campaigns against industrialisation and productivism.

# Conclusion

The left cannot afford to continue with a huge blind spot in its analysis of the ecological crisis. As I argued at the beginning of this presentation biodiversity is the most valuable, but least appreciated, resource the planet has. The biodiversity crisis is the most fundamental and destructive aspect of the ecological crisis as a whole. We have to have to place the defense of it at the heart of our analysis and the solutions we propose.

The left needs to have a long hard look at where it stands on some of these issuesâ€”the biodiversity crisis, the issue of rising population (whist rejecting all forms of coercive population control), the roll industrialisation (rather than simply capitalism), and the relationship between human beings and nature.

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[1] This is an expanded version of a workshop presentation in the ecology stream at the Historical Materialism conference in London in November 2014.