H5N1 Bird flu, climate change, and the social rights of the working class

Benjamin Mateus, Bryan Dyne
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We are publishing here the report to the Eighth Congress of the Socialist Equality Party (US) given by Benjamin Mateus and Bryan Dyne. The congress was held from August 4 to August 9, 2024. It unanimously adopted two resolutions, "The 2024 US elections and the tasks of the Socialist Equality Party" and "Free Bogdan Syrotiuk!"

Introduction

The COVID-19 pandemic was not a surprise event striking the world like a bolt of lightning out of the blue. It was foreseen and foretold; many warnings about the dangers of such an occurrence had been made by numerous scientists before the outbreak in Wuhan nearly five years ago.

Pandemics have been part of the history of human civilization since antiquity. They continue to threaten populations because of the need to organize social life. Agriculture and the domestication of animals, the development of towns and cities where population density brings people close to each other for the centralization of production, travel to conduct commerce that connects distant parts and even wars bring with them the conditions where pathogens can exploit the vulnerabilities that exist in society.

By way of example and contemporary relevance to the dangers posed by the H5N1 bird flu virus, measles was brought into human populations after contact with diseased cattle where the pathogen in question mutated to adapt itself in people. However, for the virus to continue to infect it requires vulnerable hosts found in centers of high population density, otherwise it dies out for lack of people without immunity against it. These social factors are part and parcel of the history of pandemics.

The plague of Athens was one of the first major epidemics recorded in history, spreading from North Africa and entering Athens in 430 BCE, where it killed 300,000 people, or one-third of the city's population, facilitating the decline of Greek civilization.

The pandemic from the Eurasian Steppe in the sixth century wreaked havoc in the final days of the Roman Empire. The outbreak of Yersinia pestis, carried by rats infested with infected fleas, which boarded grain ships in Alexandria that sailed across the Mediterranean, spread the disease through commerce. It continued to impact Europe for the next century.

The Black Death of the 14th century killed perhaps 50 percent of Europe's population, destabilizing the feudal order and creating the conditions for the early development of capitalism.

And in the modern era, the 1918 Influenza pandemic—having emerged most likely in Kansas—was accelerated by the global conflagration of World War I, eventually killing between 50 to 100 million, more people than deaths sustained by combatants and civilians in the conflict.

These cycles of pandemic have continued well into the present period. The ongoing COVID pandemic is but the latest ongoing pandemic, which now also includes mpox (previously known as monkeypox) and the growing dangers of H5N1 bird flu. These pathogens lack consciousness or purpose. Their emergence and spread are simply a byproduct of the social and political pressures that afford them the opportunity to find new niches within human populations. In other words, they are the outcome of the interaction of social life within the natural world and function dialectically.

These pathogens are opportunistic in the sense that society, through its public health infrastructure and ongoing scientific endeavors to understand them, can guard against them. However, these require that such social activity be one of the guiding principles of governance. As public health giant Dr. George Rosen observed, Rome's fall was not because it fell prey to pandemics, but because its political and social decline made it possible for plagues to unleash their wrath. This was true for ancient civilization and remains true for our epoch.

With respect to pandemics, what is unique about the current period in history—especially the last two hundred years—is the enormous extent to which our scientific comprehension of how these pathogens infect, how they are transmitted and how they can be stopped has evolved. Superstition, magical thought and instinct have given way to inquiry, experiment and study of the ever more complex intricacies that make life possible. As such, efforts to subvert public health to the demands of capitalism's insatiable need to acquire profit at any cost is the definition of social reaction.

As Charles Kenny, a senior fellow at the Center for Global Development, noted in 2021:

> Comparative helplessness to respond to microbial threats began to abate in the nineteenth century. Sanitary advances—from sewage systems and clean water to food standards, housing codes and sterilization—began raising life expectancies in the pestilential cities of the Industrial Revolution. In the second half of the twentieth century, with a medical revolution based on a solid understanding of microbial biology, progress against premature death spread worldwide.

The elimination of measles in the last century through public health efforts, including mass vaccination campaigns, attests to this. Such feats required an international effort that saw the aim of ending disease as a social necessity, a byproduct of the achievements of the Russian Revolution. In 1960, the world had a population of three billion. Today that figure has reached eight billion with more than half living in urban regions of the world.

The same social gains that have allowed the international working class to grow in unprecedented numbers also raises the threat of pandemics and

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the need to implement broad preventive strategies for public health on an international footing to protect life and well-being. These developments require the intensification of political and social practice to address the challenges posed by globalization on a scientific and socialist basis.

H5N1 emerges in dairy cattle across the US

Given these introductory remarks, the recent outbreak of the Highly Pathogenic Avian Influenza virus (commonly referred to as H5N1 bird flu) in the US among dairy cattle is extremely problematic and concerning. Since the virus was first detected in late March of this year, there have been more than 200 outbreaks of H5N1 bird flu among dairy cow herds across 14 states, the latest being California.

Despite the assurances made by the CDC and public health agencies that every effort is being extended to safeguard milk and meat supplies and protect the public, the threat appears to be growing unimpeded.

The total number of people tested in the last five months is just over 240. A total of 14 people have been identified with bird flu infection this year, four from cattle, nine from poultry, and one without any prior contact with animals known to harbor the virus. As to the true figure of the number previously infected during the present outbreak, anecdotal reports indicate the figure from the Centers for Disease Control and Prevention (CDC) is a vast undercount given the proximity of workers with these infected animals.

The situation among poultry farms is equally concerning as with dairy herds. As of last week, more than 10,000 wild birds have been detected with H5N1. Over 100 million poultry were affected with outbreaks across 48 states, involving 527 counties.

Recently Rick Bright, influenza expert and FIND Board Member, stated at a CEPI congress in Brazil, "Historically, since 2003, H5N1 has infected about 950 people who have had direct contact with a sick animal or sick bird, and in that population of direct exposure, about 52 percent of the people have died."

He continued:

> Now we find ourselves in a very different situation because this virus has not only affected wild birds, it's infected domestic poultry, turkeys and chickens, and now it has spilled over into dairy cattle in the United States. And the problem with that situation is there are a lot of people that work daily in constant interaction with these dairy cattle.
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> So, the exposure level of people working with these infected animals has increased, meaning the chance for infection and spillover has increased and the chance for the virus to mutate is increased. In the general population the risk is somewhat low because we're not all milking cows. But in those people who work closely with these animals, the risk is very high. And the spillover risk is the more people infected, the more chance for mutations and the more chance this will change very rapidly and get out of control and be a deadly virus.

Last week, a study published in Nature on recent cow-to-cow transmission noted:

> This is one of the first times that we are seeing evidence of efficient and sustained mammalian-to-mammalian transmission of highly pathogenic avian influenza H5N1. The concern is that potential mutations could arise that could lead adaptation to … potential efficient transmission in humans in the future.

Most immediate, however, is the upcoming flu season that threatens a possible reassortment event between the seasonal respiratory flu viruses and H5N1. Reassortment means that two flu viruses can exchange various parts of their genome with each other, creating a new virus with combined characteristics.

Although not discussed in the mainstream media, the CDC said last week they will begin offering livestock workers the seasonal flu vaccine. This is not to prevent them from becoming infected with H5N1, but to reduce the risk of such a reassortment event. There are more than 250,000 livestock workers scattered across the country and a majority are undocumented workers earning poverty wages. Additionally, the flu vaccines are only 40 to 60 percent effective against severe disease. They do not prevent infections. As some have noted, it is increasingly not a question of if, but when H5N1 will begin transmitting efficiently between people as a respiratory virus.

The evolution of H5N1 and SARS

Those familiar with the emergence and development of H5N1 and SARS will note these two pathogens have dovetailed together in the last two to three decades as part of the immediate emerging pandemic threats. And as the situation evolved or changed for one, it seemingly informed the response to the other, albeit under the rapidly shifting and reactionary geopolitical responses to world events.

With respect to H5N1, it was first detected in Scotland in 1959 among poultry. It would be 40 years later that it was identified again in southern China among farmed birds. Then in 1997, an infection among 18 poultry farmers that killed six garnered world attention. After a brief hiatus, it resurged in 2003 around the same time the SARS-CoV-1 global outbreak was underway.

The 2002-2004 SARS-CoV-1 outbreak infected nearly 8,500 people and had a case fatality rate of 11 percent. Although no further cases of SARS-CoV-1 have been reported since 2004, it prompted extensive research into the origins of these viruses. By the 2010s, Chinese scientists traced the virus through the intermediary of Asian palm civets to cave dwelling horseshoe bats in Yunnan.

Meanwhile, deadly H5N1 infections among poultry workers began to accelerate between 2005 and 2008. Although researchers understood the virus was infecting people only through direct contact, they were concerned about the potential mutations H5N1 could harbor to make it easily transmit between humans.

Clearly the historical context was evident: the 1918 Influenza Pandemic (H1N1: 50 million to 100 million excess deaths), the 1957-1958 Asian flu pandemic (H2N2: one to four million excess deaths), Hong Kong flu pandemic 1968-1969 (H3N2: excess deaths one million), and the 2009 Swine flu (H1N1: estimated to have infected more than one billion people and an excess death total of about 284,000).

COVID-19 emerged in December of 2019 at the Huanan seafood market, where wildlife trade saw raccoon dogs and an assortment of other animals being traded. In parallel with COVID, in 2020 the reassortment of H5N6 and H5N8 with the H5-2.3.4.4b hemagglutinin gene and strains of avian influenza led to the emergence of the current strain of H5N1. The virus began to spread across Europe before spreading through Africa and Asia.

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By October 2021, the new clade of the H5N1 had already killed millions of birds. Over 140 million poultry (60 million in North America and 48 million in Europe) had been culled. Over the next several months, the virus spread into numerous wild bird species, commercial poultry, as well as mammals, including grizzly bears, red foxes, coyotes, seals and dolphins.

In January 2023, more than a year before the outbreak in the US, the WSWS wrote, "The first new pandemic after COVID-19, which is still continuing to infect billions of people, may well be already in plain sight, but overlooked or dismissed for the most part by most news outlets and given no political attention."

Given these developments, the surprise exhibited by the emergence of H5N1 among dairy cattle seems misplaced, as the virus has shown a wide tropism to different species of animals. Sustained transmission at mink farms and among sea lions and fur seals in South America only underscores the growing threat posed by this strain.

As the WSWS noted recently about the growing risk of allowing the virus to continue to spread among cattle and livestock:

> The implication here is that if the disease becomes endemic in these animals, their proximity to farm workers who do not routinely follow infection control practices nor use personal protective equipment poses a considerable risk for the virus's evolutionary development into new forms that could directly infect humans or even develop the capacity for airborne human-to-human transmission, as the SARS-CoV-2 virus did.

Yet, it is precisely the anti-public health and anti-science approach to the dangers posed by SARS-CoV-2 that motivates the inability to formulate a cogent international plan of action to address the growing threat posed by a far more lethal virus. The current public health policies being promulgated stand the entire discipline on its head. The Paris Olympics is an exemplary case in point, where officials say that the air is clean, and the polluted Seine river is safe to swim in.

In this regard, the recent study published in June by Airfinity, a UK-based data and analytics company that specializes in monitoring and forecasting trends in global disease and public health, showed a new surge in many infectious diseases far beyond their pre-pandemic levels. The implication of their findings was that the systematic dismantling of public health measures by capitalist governments worldwide, allowing SARS-CoV-2 unimpeded access to the world's population, has created the conditions for even greater damage to human health.

The report noted:

> The world is seeing a resurgence of at least 13 infectious diseases, with cases higher than before the pandemic in many regions. Over 40 countries or territories have reported at least one infectious disease resurgence that's 10-fold or more over their pre-pandemic baseline.

As the figure above indicates in the upper left-hand corner, these include cholera, dengue, invasive group A streptococcal disease, which can cause "strep throat" but with severe and deadly ramifications, tuberculosis, polio and influenza. Other diseases on the rise that have significant consequences for children and immunocompromised people include measles, respiratory syncytial virus, chickenpox and pertussis.

The surges in these diseases beyond their pre-pandemic levels, in some cases by many orders of magnitude, are deeply troubling. Although Long COVID is contributing to illness from many viral infections, pathogens like cholera and dengue are being given a wider field by the accelerating climate change along with the crumbling infrastructure from decline in social spending.

One must add that war and conflict can be viewed as a form of public health crisis. Although bullets and shrapnel can cause excess deaths, the destruction of sanitation, water supplies, healthcare and cutting off access to food and shelters, inevitably make the emergence of infectious diseases certain. We have seen this in Gaza, where there is now an epidemic of polio after more than a quarter century when the enclave had eliminated the virus from the region.

And as we meet today at this Congress, the WHO's Director General is weighing the decision to declare the ongoing mpox outbreak in the DRC with the deadlier variant of the virus a Public Health Emergency of International Concern. [*Since the meeting, the WHO declared the PHEIC on the growing threat posed by the clade 1b strain. One month since the declaration, vaccine nationalism and pandemic profiteering have emerged as the normal response to the ongoing threat.*]

This unprecedented outbreak of mpox with the more deadly clade of the virus which has been raging in the DRC over the last several months is now spreading beyond its border and has recently been reported in Uganda and Kenya, and the capital of DRC, Kinshasa, a city of more than two million people, in a region that has seen conflict for decades and millions have died. The region is also rich in metals and rare earth minerals worth trillions.

Climate change

Regarding climate change, which our resolution correctly identifies as among the greatest challenges confronting humanity, we state:

> Only the intervention of the international working class, in collaboration with principled scientists and engineers, can develop the technical methods and economic restructuring required to save humanity from impending global catastrophe.

As we have covered on the WSWS, climate change further raises the threat of pandemics. The rapid change in habitats caused by severe weather conditions—droughts, fires, torrential rains and storms—means mass migration of animals to cooler and higher altitudes, bringing them into collision with other animal and human populations.

But climate change does more—it makes life inhospitable to all species of life.

Every year, Earth's average surface temperature climbs, and the working class suffers from it. Every year, hundreds of thousands die, millions are displaced and billions of dollars of infrastructure are destroyed. According to a report published by the World Meteorological Organization last year, nearly a half-million people have died from heat-related causes every year for the first two decades of the 21st Century—or approximately 10 million people in total.

We are now amid the acceleration of the sixth global mass extinction event. The last such event occurred 66 million years ago when an asteroid between 10 to 15 km wide impacted in what is now the Gulf of Mexico, wiping out the dinosaurs which dominated Earth for the previous 135 million years. The current extinction event is a byproduct of unfettered capitalism.

A study commissioned by the United Nations Intergovernmental

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Science-Policy Platform on Biodiversity and Ecosystem Services published in 2019 showed that 75 percent of all land and 67 percent of marine environments have been “severely altered” by human activity. At least 85 percent of pre-industrial wetlands have been wiped out, along with one-third of the world’s forests.

Alongside the destruction of habitats, irrational planning in agriculture and fishing has degraded the ability to grow crops on a quarter of the world’s land, while a third of fish stocks are harvested beyond sustainable levels. And when areas no longer produce food, the various companies move on to find markets and profits elsewhere.

Best estimates show that the number of species that have gone extinct, defined as no confirmed sightings in the past 50 years, since the year 1500, stand at 881, a number that rises to 1,473 when one includes the number of species that are also likely extinct.

A paper from 2015, “Accelerated modern human–induced species losses: Entering the sixth mass extinction,” notes that the best estimate for the “background” extinction rate is two mammal extinctions per 10,000 species per 100 years. Using this conservative estimate, and equally conservative estimates of species extinction, the paper notes that “the average rate of vertebrate species loss over the last century is up to 100 times higher than the background rate.”

Other estimates place the current extinction rate as high as 1,000 times the background extinction rate. The paper continued, “Under the … background rate, the number of species that have gone extinct in the last century would have taken … between 800 and 10,000 years to disappear.”

Such numbers are poised to spike sharply if climate change continues unabated, from 2-300 extinctions a century, to possibly one million extinctions by the year 2100. That means that over the span of capitalist industrial civilization, around one-eighth of all existing plant and animal species are under threat of disappearing forever, their contributions to the world’s ecosystem irrevocably lost.

A chief cause of this impending mass extinction is ocean acidification, which played a major role in at least two previous mass extinction events. The ocean, like the atmosphere, is a repository for carbon dioxide. As more emissions are produced, more carbon dioxide is stored in the oceans. This produces both warmer temperatures, which contributes to the mass coral bleaching events which have been witnessed over the past decade, but also to a generally higher level of carbonic acid in the world’s oceans.

This is a direct threat to the continued existence of all marine life, including the plankton which forms the basis of the ocean and world food chain. A mass die-off of plankton, inevitable as more carbon dioxide is released and dissolves into the oceans, would herald a mass die-off of species around the world, including ourselves.

One can also mention the risk of wholesale changes to global ocean currents and the massive changes to climate that would result, particularly the collapse of the Atlantic jet stream and the ensuing devastating winters across Europe. And sea levels continue to rise, threatening 10 percent of the world’s population which live in coastal zones at low elevation with inundation, and the hundreds of millions more at risk of drowning if a land-based ice sheet from Greenland or Antarctica falls into the ocean.

Conclusion

What will happen in the next 20 years is not fully known. We do not, however, take a pessimistic view of the climate crisis or the inevitability of the next pandemic, which are global problems requiring global solutions. Nor do we adopt a Malthusian attitude that the “surplus population” of the world is the cause of the ecological crisis.

Still, decades have been wasted. Climate change stands among all the great problems of society—war, pandemics, social inequality. Pandemic preparedness must go together with ecological conservation and a broad international approach to public health, including the reversal of the processes that lead to the warming of the planet.

The resources and capacity to address these concerns exist within the working class. But these needs imply that the planet’s resources must be socialized to address them directly and immediately. This requires the working class to assert its authority and wrest power from the capitalist elites to address these dangers.

It is with these conceptions that the adoption of the resolution before this Congress assumes an important significance. As point two in the resolutions notes, it is essential to “raise the political consciousness of the working class, to develop its understanding that no solution can be found to any of the problems confronting working people except through the ending of the capitalist system and its replacement with socialism, and that this great historical task can only be achieved by adopting a global strategy aimed at the mobilization of the power of the American and international working class in a unified struggle against the world capitalist system.”

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