

Research Article

From Necro-Politics to Necro-Ecology: framing the current climate environmental politics in the Americas

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This article draws on the conceptual frameworks of Michel Foucault's biopolitics and Achille Mbembe's necro-politics to support the concept of necro-ecology as a new transdisciplinary framework for assessing the disruptive impacts of current environmental policy in the American Continent. Necro-ecology integrates concepts from philosophy, environmental studies and political ecology, critical geography among other theories and tools to describe how a combination of state authority, capitalist mechanics, corporate power, extractivist ideologies are currently characterizing the Governments climate' environmental decision-making processes and actions in the Americas. We observe a deep negative escalation of already existing climate necro-politics towards a condition of necro-ecology, where damages to the human and natural-ecosystems of the continent are becoming permanent and irreversible.

Introduction

Climate change and the global environmental crisis have become an existential threat to human beings, bringing the Earth's physical and biological systems to a critical point of collapse. (Butler, 2018). The current situation is not a product of a natural phenomenon, but it is rather originated by a set of specific human induced actions and policies adopted by governments, private sector and other social actors who are responsible for the current planetary ecological disruption. In some cases, this is done unintentionally, while in others is done deliberately.

Current deaths related to climate change, extreme weather events, diseases, environmental migration among others, can be also attributed to wrong policy decision making and executions of ill designed public policies. The failure to deliver safe environmental and protection standards to citizen in the Americas, reflect a strong weakness in the governance system of the region, where different political leaderships are charging with the burden of increased risks, vulnerabilities and deaths for many people.

In 2012, the Climate Vulnerability Monitor published by DARA, affirmed that:

“(...) climate change causes 400,000 deaths on average each year today, mainly due to hunger and communicable diseases that affect above all children in developing countries. Our present carbon-intensive energy system and related activities cause an estimated 4.5 million deaths each year linked to air pollution, hazardous occupations and cancer.” (DARA, 2012)

The World Health Organization (WHO) in 2016 also warned that risk factors such as air, water, and soil pollution, chemical exposures, climate change, and UV radiation lead to more than 100 diseases and injuries caused an estimated 12.6 million deaths.

The kaleidoscope of manners in which anthropogenic climate change will deeply impact society and be directly or indirectly associated to the death of people implies systems of *management of death* in very different modalities (Young et al., 2020). The “threat multiplier” nature of climate change and environmental effects will lead to different impacts on society that are directly or indirectly implicated with migration, conflict, social instability, health and other global concerns. Besides, deaths continue to occur despite the tremendous advancements in managing the natural environment with political and socio-technical approaches.

By presenting an interdisciplinary tool for analysing this ‘systems failure’, necro-ecology provides concrete suggestions on how deaths may be reduced if governments in the Americas would act differently. But the system failure is not only a government’s fault: the private sector is also taking necro-politics decisions and influencing the world not only to lobby the weakening of environmental regulations, but also to solve the problem under economic models of natural resources extractivism and other damaging practices.

Necro-politics linked to environmental and ecological studies is a new field of research. The interplay of the two domains, given the dramatic conditions of the American Continent in environmental, climate and ecological terms, offers the opportunity to explore the link between current destructive environmental politics applied from governments in the continent and their impacts in the human and natural ecosystems (Robbins, 2012). Understanding nature-society interaction is part of many disciplines but only some of them place a strong focus on power relations, politics and the negative dimensions of policy-driven decisions and their related impacts in the natural environment. Theoretical complexity of necro-politics and ecology, which will define in this paper as necro-ecology, can find its origins in the contemporary political ecology thinking (PET) as well as biopolitics and necro-politics intellectual roots as explained later in the article

Necro-ecology can also be seen as a “social murder” that describe the complete lack of political understanding and attention to social determinants and inequities that exacerbate current climate

conditions in the continent. (Mamot et al, 2020)

To what extent then current deaths due to the environmental global and regional climate crisis can be attributed to necro-politics? Is for example the continuing delay of action during international climate negotiations a form of necro-politics? Is the level of destruction of the ecosystems and the increased vulnerability of the human systems impacts accelerated by negative governance?

And finally: When politicians disobey scientific advice on purpose, disregarding lessons learned and avoid to take decisions because to act goes against their political strategy or ideology, is that lawful or can it be considered a negative decision or necro-policy that affect the most?

In this article we first explore the relations of necro-politics and ecology from a philosophical perspective. We then establish the necro-ecology concept as an evolution of necro-politics within the political ecology thinking and we discuss the practical meaning of necro-ecology. Some examples are used to show how the environmental political domain within the continent is shifting to a dangerous sustainable pathway by identifying four major necro-ecology dimensions. Some critical cartography is also used to visualize the intensity of extractive mining concessions in some countries of the region.

1.1. Biopolitics and necropolitics of environmental change

Foucault defines biopower as *the set of mechanisms through which the basic biological features of the human species became the object of a political strategy, of a general strategy of power* (Foucault, 2007). Biopower is also concerned with population health indicators such as birth rates, illness rates, and life expectancy, among other things. The term 'biopolitics' refers also to a situation in which the population's life is at stake in ordinary political decisions. (Swiffen, 2012)

From the notion of biopower derives the continuous exertion of power upon life, which Foucault coins also as biopolitics. *"Biopower is that power which exerts influence on life, which strives to manage it, subjecting it to precise controls and comprehensive regulations."* More specifically biopolitics are a "calculated management of life" but also a "power to expose a whole population to death" (Foucault, 1980).

This power to expose populations to death without punishment or consequences is taken up by the Italian philosopher Giorgio Agamben through the concept of "*homo sacer*". This concept alludes to a figure of Roman Law that refers to:

"A subject to whom it is possible to kill without that action being considered a crime. It is the most fragile figure whom others can violate, kill without legal consequences (...) Any person today lives in a state of defenselessness. We are all mere lives, naked lives exposed to death by

the violence that could be exercised by a sovereign and/or any other, in complicity or under the sign of indifference on the part of those who pretend to watch" (Agamben, 1998).

Drawing on Foucault's theory of power, Achille Mbembe, coined the term "necropolitics" as "the subjugation of life to the power of death" (Mbembe, 2003). Necropolitics could evolve as a result of a decision to kill entire communities in order to prioritize the economy, which Mbembe claims is at the heart of neoliberalism beliefs. People can be killed to prioritize the economy over the lives of the populace in the capitalism system, which is founded on unequal distribution of the opportunity to live and die. This entails a necropolitical decision: for example, in order to exploit natural resources, governments allow permits and mining concessions to the private sector regardless labor, human and environmental rights to population affected.

Another current example is the COVID19 pandemic, where lifting the lockdowns in a number of countries in order to open up the economy and preserving economic growth while the pandemic rages, can be seen as a necropolitical decision. In this specific case, necro politics can amplify existing inequities that emerge over disruptive conditions and exacerbated injustice, as well as a frightening possibility. (Schipper, Eriksen, Fernandez Carril, Glavovic, & Shawoo, 2020)

Thus, necropolitics can be seen in numerous situations and multiple modalities. However, there are a number of characteristics that can be pointed out, as Antonio Pele (Pele, 2020) describes. Necropolitics is the "subjugation of life to the power of death".

Three main factors contribute to the creation of "death-worlds": Necropolitics, on the one hand, is strictly linked to a necro-economy. Modern capitalism would result in an overabundance of people who could no longer be exploited and would need to be carefully managed by exposing them to deadly dangers and risks. The current climate crisis is perhaps the most illustrative example of this necro-economy, where capitalist interests, transnational corporations' technological exploitation and governments disinterest in acting globally, lead to a condition of necro-climatism (Nhemachena & Mawere, 2019).

Necropolitics, on the other hand, is based on the confinement of specific populations in specific spaces, the so called campsites. Mbembe believes that the camp-form (refugees, prisons, banlieues, suburbs, favelas) has become a common way of governing unwanted populations, based on Agamben's insights. The latter are confined to precarious and militarized spaces in order to be monitored, harassed, and possibly killed. It's a "permanent state of 'living in pain.'" (Pele, 2020)

"To produce death on a large scale" is the third and "key characteristic" of necropolitics. This characteristic can be explained by highlighting seven characteristics that appear to underpin Mbembe's account of the situation. The seven distinct characteristics of necropolitics are: 1) state terror; 2) shared use of violence; 3)

"link of enmity"; 4) War, 5) natural resource predation; 6) various modes of killing, and 7) various moral justifications. Each one of these has distinctive features summarized in the following table:

Phase:	Description:
State of terror	The state persecutes, imprisons, and exterminates certain populations in order to eliminate political and social conflict.
Use of violence	In many cases, the state lacks the monopoly of violence and willingly shares it with other private actors (militias, paramilitaries), resulting in an increase in the circulation and use of weapons in society. As a result, the latter is divided into "those who are protected (because they are armed) from those who are not."
Link of enmity	In a society where having or not having weapons determines one's social value, all social bonds are broken. As a result, the enmity link normalizes the <i>"idea that power can only be acquired and exercised at the cost of another's life."</i>
War	Coercion has become a market commodity in and of itself." War and terror have evolved into self-sustaining production modes, necessitating the creation of new military markets.
Natural resource exploitation	Populations are uprooted and eliminated (for example, indigenous peoples in the Amazon rain forest) in order to extract important natural resources through the active and covert participation of the state, public forces, transnational businesses, and criminal organizations.
Various moral justifications	Atrocities, according to Mbembe, are justified for a variety of reasons, including the elimination of corruption, various types of "therapeutic liturgy," "the desire for sacrifice," "messianic eschatologies," and even "modern discourses of utilitarianism, materialism, and consumerism."
Different moral justifications:	Atrocities are justifiable for a variety of causes, including the elimination of corruption and the prevention of various sorts of terrorism. (Pele, 2020)

Source: personal elaboration starting from Mbembe and Pele.

If we look at the environmental dimension of necro-politics, the same biopolitical and necropolitical dynamics regulate the environment. On one hand, taking up from Foucault's biopolitics, natural life is regulated, categorized and its conditions of use and existence are defined by sovereign powers. On the other hand, its conditions of destruction are also determined through "neoliberal" terms such as natural resources use, ecosystem services, emission trading systems or other tools where the environment is monetized and destroyed under the economic imperative.

Under these premises, necropolitics argue again that in climate change politics, for example, and throughout more than 25 years of international negotiations that are maintaining the status quo to privilege world capital interests, we are witnessing the exposure of large populations to death, given the increasing avoidance to take actions from government or favoring corporate interests to keep carbonizing economies. In this way, the same privileged capital interests together with no governmental action, are deciding over the entire human kind, making the global economic system a perennial necropolitical threat to the most vulnerable.

1.2. From necropolitics to necro-ecology

Having described the necro-politics context, we need to introduce the necro-ecology theoretical dimension. The American continent has a long-standing tradition of critical thinking in the field of political ecology (PE). PE is a method of socio-environmental analysis that has gained popularity in recent decades in fields such as geography, philosophy, anthropology, development studies, and environmental history, among others. Although it is difficult to characterize a specific definition of PE, it has a clear feature and a common focus related to the study of power in environmental governance as well as a wider political economy spectrum (Benjaminsen & Robbins, 2015). Therefore, the focus of PE is about power relations between actors and struggles related to natural resources, struggles over lands and environmental political decision making among others. These different perspectives try also to analyze the implications of the use of power within a specific country, region or territory for the disposition and control of natural resources.

As previously stated, PE authors are also interested in explaining power dynamics and the region's coproduction of nature and society. Political economy, deep ecology, poststructuralism, postmodernism, and peasant studies are among the sources of theoretical inspiration. Contributions look at a variety of human-nature relationships, as well as the status of strong actors (such as governments, enterprises, and conservation organizations) and their ties with the environment, primarily via the prism of exploitation. On the other hand, the location and role of ecology in politics is still being disputed. Some contributions to political ecology connect directly with natural science, while others remain within more social science-based theoretical arguments in which "ecology" refers to the environment in a broader sense. (Perrault et al. 2019)

Intellectual influences over PE in the Americas have come from inside and outside the region, featuring writing in Spanish, English and French (Delgado, 2020). An important stream of work is the one linked to CLACSO in Argentina with a working group concerned with power dynamics and nature-society relations (Alimonda, 2002) but also in Uruguay, where Eduardo Gudynas heads a social ecology research centre CLAES. Colombia and Mexico, through Universidad de los Andes and the National Autonomous University of

Mexico there is an important concern with past and present relations of coloniality and ecology, mostly through the neo-extractivism, while other groups work on development and environment with connections to other international universities and other political ecologists, including Arturo Escobar, Diana Ojeda (USA) and Rafael Domínguez from university of Cantabria, Spain. (Domínguez & Lucatello, 2018)

One of the underlying messages of many Latin American thinkers is the idea of economic and neoliberal politics and economics at the center of the poverty, vulnerability and macro destruction of public goods (necro- economy) in the region. This is possible through the intense use and exploitation of natural resources as well as gross violation of human rights of indigenous communities who are mostly keepers of those natural resources.

Within the US and Canada, the studies of PE have been little for mainly two reasons: first, many North American scholars have carried out political ecology studies in the South, by focusing their academic research in cases studies within the Latin America and the global south in general. Secondly the Anglo-American research in this topic, come from an historical link between environmental studies related to international development and the American influence in other regions. This trend emphasis has only recently begun to shift and looking “inside” the USA and Canada, particularly during the Trump administration and due to the environmental turn adopted by the US government. This dimension will be addressed further in the article.

The neologism Necro-ecology can also be found in a critical, philosophical approach to understanding human-nonhuman connections in the context of British colonialism and its aftermath, but it is also an aesthetic that emerged in the mid-nineteenth century as a direct result of the 1857 Indian Uprising. (Basu Thakur, 2016). Like the ecological thinking, necro-ecology, links the human sphere and its relation to the ecology of death, in the context of destruction of the colonial environments as well as the destruction of material cultures, like indigenous communities. In some streams of thought belonging to the Victorian studies and British literature, necro-ecology is linked to the human non-human encounters of colonizers with local communities and it unravels the idea of racial differences among imperial powers and conquered countries. The link with the environment and the ecological domain, is also identified with the trade of natural resources and merchandise from the periphery of the world (colonies) to the main imperial western economies (Harvey, 2007).

For the purposes of this article, necro-ecology can be therefore considered as the latest stage of the political ecology thinking in the region and the necro politics dimensions, given not only the dramatic impacts of decision-making policies in the conservancy and nature preservation but also in the way current governments adopt decisions that can deeply affect in negative terms human beings and their relations with the ecosystems.

The next sections will provide concrete examples to show the necro-ecology dimensions. Building from the previous section and Necro politics, we propose a definition of necro-ecology as the concept that defines the negative, poisonous, macabre and deadly conditions of bio and necro politics theoretically described by Foucault, Agamben and Mbembe, applied to current environmental practices promoted by governments in the region. It also refers to the idea that a Government may have the power to kill (necro) its natural environment by taking decisions that endorse development projects, or disruptive technologies for the exploitation of natural resources.

At the same time those decisions undermine the legal and administrative devices that order, regulate and systematize the relationship between man and nature and violate human rights of healthy environments. Necro-ecology also compromises the efforts to reach sustainable development and reverse the climate change crisis. Critical environmental thinking in Latin American studies began to speak only recently of a condition of necro-ecology, mostly in Brazil after Bolsonaro's environmental policy in the Amazon region but it is spreading quickly in the whole region.

1.3. The necro-ecology dimensions in the Americas

The American continent comprises more than 50 countries with a total population of more than 1 billion people. In the case of North America, where Canada, the US and Mexico, have almost the same population as Latin America (nearly 500 million people each), weather-related events such as hurricanes, other severe storms, floods, droughts, heat waves, and larger and more frequent wildfires are already causing severe economic damage to ecosystems in North America, as well as social and cultural disruption (CEC, 2019). Climate change is a powerful driver that exacerbates the risk, but the region is also 9 with a broader environmental crisis. The economic cost of severe weather is rapidly increasing, owing to the rising value of the infrastructure at risk. Despite the fact that the United States and Canada are wealthier economically than Mexico and other countries in the region, environmental impacts are so severe that they demonstrate the region's unpreparedness and limitations in adapting to such drastic changes. The recent case in Texas of unprecedented storms or wildfires in Canada, are a clear example of the inability to protect both the population and the ecosystems.

Latin America only has a population of nearly 600 million people, with about 80% of them living in cities, and the continent includes four megacities—Mexico City, Sao Paulo, Buenos Aires, and Rio de Janeiro—with a combined population of more than 55 million people (IADB, 2014). Furthermore, since the mid-1990s, the region has become the world's most important resource frontier, thanks to a major transformation of indigenous and rural inhabitants' natural heritage into natural wealth to benefit the global economy. (Castro H., 2015)

Therefore, from Alaska to the Land of Fire, the American continent has registered dramatic environmental deterioration over the past decade. From accelerated ice-melting in the Arctic pole to forest fires in North America. From more intense and frequent cyclones in the tropics to prolonged floods and droughts in South America; from deforestation of its natural lungs like the Amazon to air pollution due to high levels of atmospheric emissions in the major cities, the continent is currently immersed in a deep environmental and climate crisis.

The COVID19 pandemic, whatever its origin is, also constitutes a clear violation of the planet's biophysical limits and the overexploitation of associated ecosystems and it is not a case that the continent registers the highest number of global victims.

In the current necro-ecology performance of the continent, we can recognize four distinctive dimensions of the problem. Here we will describe in detail each of them.

1) Dismantling of Environmental Institutions	2) Dispossession of Indigenous Lands
3) Violation of environmental human rights	4) Neo-extractivism

Figure 1. The Four dimensions of Necro-ecology in the continent.

Source: personal elaboration.

The first dimension of necro-ecology in the continent is the progressive dismantling of environmental institutions that is taking place in different countries, based on high level political decision making. As in the case of the United States under the Trump presidency (2016–2020) or in Brazil under the current Bolsonaro mandate, together with austerity policies as played out in Mexico under President Lopez Obrador, environmental institutions are de-powered, deconstructed or simply abandoned. At the same time specialized operators who deal with environmental emergencies are left without budgets or de-classified as non-efficient or simply called “dangerous” for their scarce contribution to the overall economic goal of growth. Environmental institutions, mostly because of their regulatory power, are seen an obstacle rather than an asset to national economic growth.

Several environmental social scientists have agreed upon the idea that the decreasing capacity and powers of environmental nation state authorities is harming not only the environmental policy but also the overarching sustainability framework (Falkner, 2003) (Arnouts & Arts, 2009). Many academics also

recognize that declining environmental state capability and power has an impact on environmental protection levels, emphasizing the necessity of state institutions in delivering public goods. (Spaargaren & P.J. Mol, 2008).

According to data and research for the Harvard and Columbia Law Schools, over his four years in office, the Trump administration has rolled back more than 80 environmental rules and regulations and revoked many others in different environmental sectors.

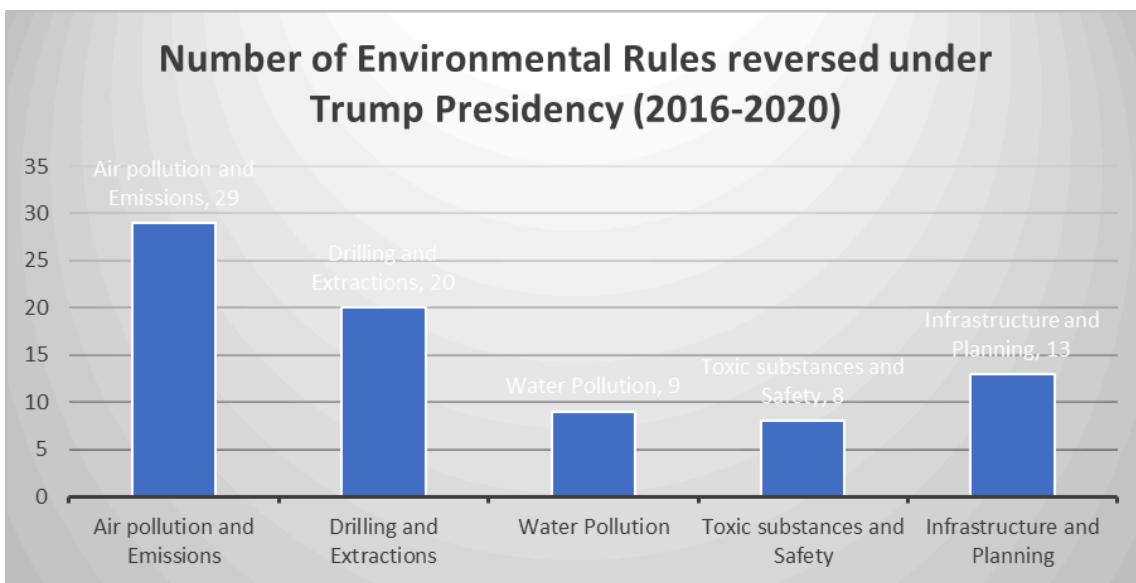


Figure 2. Rules reversed under Trump Presidency

Environmental institutions responsible for the rollbacks were the US-EPA, the Environmental Protection Agency, which fully reverted previous Obama policy on limits on planet-warming carbon dioxide emissions from the transport and energy sector (power, plants, cars among others). Among the most sensitive necro-ecology actions under the Trump Presidency was the withdrawal of the legal justification for blocking mercury emissions from power plants. Besides the US-EPA, the Interior Department has also released during 2018 and 2019 more permissions for land, oil and gas leasing by reducing wildlife protection and weakening environmental requirements for projects. (HL, 2018)

The Trump administration's environmental reversal is likely to increase greenhouse gas emissions in the coming years, as well as stifle efforts to combat climate change and contribute to more deaths in North America due to poor air and water quality control.

In the case of Brazil, the Brazilian Anthropology Association's Committee of Traditional Peoples, the Environment, and Large Development Projects (ABA, Associacao Brasileira de Antropologia, 2019) publicly

condemned representatives of the Brazilian government for dismantling the country's environmental regulatory system. The government announced changes to national environmental laws in 2019, claiming that they obstruct the use of national resources. As a result, the new regulatory framework criminalizes environmental protection as well as traditional forms of land occupation, particularly among indigenous peoples. These actions favor Brazil as a producer of agricultural and mineral commodities without imposing any binding restrictions, and they embrace long-standing free-market policies in the international political-economic system. (Rapoza, 2020)

Several Brazilian organizations have spoken of a "neocolonial economic model" that has targeted and censored environmental knowledge-producing institutions such as universities and research institutes like the Brazilian Institute of Geography and Statistics (IBGE) and the National Institute of Space Research (INPE). The National Environmental Council (CONAMA), for example, has seen a drastic reduction in its membership from 96 to 23, limiting its ability to evaluate the implementation and execution of the country's environmental policies and norms. (ABA, Associacao Brasileira de Antropologia, 2019).

In the case of Mexico, under President López Obrador and since 2018, the government has adopted an austerity program to reduce budget in all federal public spending. *Per se*, the environmental public budget has never been high in Mexico and mostly depended on international cooperation funds and multilateral funds to be implemented. However, the few federal resources available were furtherly cut down in specific areas such as forest conservation, wildfires control among others. CONANP, the National Commission for Natural Protected Areas, has had its funding cut to the bone, conservationists claim, leaving little to deter illegal loggers from taking over. Since the recent budget cuts, local CONANP offices in various parts of the country are unable to pay for electricity, water, or even gasoline for surveillance cars. Lopez Obrador's budget cuts have harmed not only natural regions, but also research, vulnerable populations including as indigenous women and crime victims. Austerity measures have reduced the country's national park service budget by 75%. (López & Murray, 2020)

A peculiar case of climate change adaptation policy under austerity measures is the one adopted by the Mexican president Lopez Obrador in November 2020, when he had to choose between allowing a large metropolis in Mexico's south-east to be inundated and diverting the extra water to poorer, sparsely inhabited Indigenous settlements in the area. Heavy rains due to a deadly sequence of tropical storms in the State of Tabasco, filled hydroelectric dams whose outflow contributed to flood the State. In order to save and avoid a major flood in the State capital Villahermosa, the capital of the Gulf coast state of Tabasco and home to over 350,000 people, the President ordered the release of water from the dam. That hurt the people of the communities of Nacajuca and the Chontal region, one of the poorest in the region and made of about 83,000 inhabitants that were to be evacuated and lost all their properties. (The Associated Press, 2020)

An interesting case study to be further explored in terms of necro-ecology is also the recent and polemical adoption of the bitcoin currency in El Salvador, where President Bukele decided to use the most famous crypto-currency as a way to leverage national economy. However, many concerns raised that the widespread adoption of bitcoin, whose transaction records are widely disseminated on the internet and outside the grasp of national authorities, will encourage money laundering and will have deep impacts in energy, technology consumption and climate change (RNZ, 2021) in a country where almost 60% of population have no internet access and where natural hazards impact heavily.

A second set of necro-ecology and politics is related to the violation of environmental human rights. Environmental rights cover a wide range of issues, including the right of a specific beetle to survive, as well as the right of an individual to enjoy an unspoiled environment, clean water, and a variety of other natural resources. (Mohammad, 2011). However, for the purposes of this article, environmental rights also include political rights such as those for indigenous peoples and other collectivities, the right to information and participation in decision-making, freedom of thought and expression, and the right to resist undesirable developments. (Boyd, 2012)

Recent important court rulings, for example from Interamerican Court of Human Rights, pointed to liability of States for violating rights to climate refugees and anyone displaced by environmental degradation. These rights have risen to prominence in recent years as a result of various governments' economic practices and development strategies, as well as the resulting environmental degradation and social disruption. Environmental rights are determined, among other things, by the quality of environmental policy and access to the surrounding environment. (UNEP, 2020)

For example, in Colombia and Peru, activists and environmental protectors who fight against the constant poisoning of the land with the uncontrolled disposal of toxic substances, are prosecuted by local authorities. Environmentalists across Latin America have clashed with loggers, petroleum workers, gem and metal miners, and organized crime groups, all of which want to control the land and extract the resources that these activists are trying to safeguard. Activists have been slain while trying to stop unlawful extractive practices, which are frequently shielded by economic and political interests. (CFR, 2020) Others have been killed as a result of standing in the way of profitable business agreements. The failure of state authorities and law enforcement to combat deforestation and unlicensed agriculture resulted in massive ecological losses and devastation, such as the destruction of the Amazon rainforest. According to a recent Global Witness report, more than 160 activists were killed in 2019 while defending land and waterways from development around the world. Latin America, primarily Central and South America, accounted for more than half of all killings. For example, the number of environmental activists killed in Guatemala and

Honduras increased fivefold from three to sixteen in 2018, making it the deadliest country per capita. (Global Witness, 2019)

In the case of Honduras, local prosecutors who arrested people in connection with the death of local activists, found out that most of them had links to government security services, including military and elite corps trained by US special forces. Other prosecutors have alleged links to companies that have strong links with the government and permissions linked to development projects in the energy, tourism and other relevant economic sectors (Yale Environment 360, 2019). Thus, weak law enforcement policies and government practices neglecting or protecting private companies interests, contribute to environmental necropolitics which often ends up also in crime and violence.

A third dimension of necro-ecology in the continent, is precisely the constant dispossession of indigenous lands to launch mega-projects for tourism, industrial and mining development in the region. According to data from the Environmental Justice Atlas, in the last three years, environmental conflicts due to the exploitation of natural resources in the region have increased by 30%, especially in relation to the mining industry. In Brazil, in particular, a catastrophic wave of environmental damage has manifested itself with the change of national environmental policies, to accelerate the growth of agricultural and food production, the felling of trees and a saturation of highly dangerous unregulated pesticides.

Recent academic works by Devine and Ojeda, using a critical spatial approach, investigate the strong links between tourism and other forms of violent dispossession. The authors argue and demonstrate how many forms of dispossession in tourism exhibit themselves in violent acts and recurring themes such as enclosure and extraction, erasure and commodification, destructive production, and (neo) colonialism. Tourism and megadevelopment projects like real estate or energy – including renewables – drive violent land privatization and dispossession, extract natural and cultural resources, erase existing histories and peoples from the landscape, and "destructively create" new socio-natures, identities, and commodities based on partial and power-laden tourism imaginaries, depending on the geographical settings. (Devine & Ojeda, 2017)

In Colombia, Mexico, and Central America, for example, tourism-related dispossession frequently results in the privatization or enclosure of commons such as water sources, beaches, and forests. It is clearly linked to the loss of autonomy of local communities. A recent instance from Mexico sheds more light on the situation: The Santa Mara Tequepexpan neighborhood is in the Guadalajara metropolitan region, in the northern state of Jalisco. This is one of the country's wealthiest regions, and recent urban development growth has prompted significant and ongoing municipal and state government efforts to "assist" real estate companies in dispossessing the community of its hills and green spaces in order to make way for new mega-urban settlements. (IDEA, 2018)

The Santa Mara community has been fighting for years to prevent being evicted. Community members have been able to acquire legal recognition of their collective property rights to their lands through its Representative of Communal Assets and other partners, putting the real estate project on hold temporarily. (IDEA, 2018) The city councils of Guadalajara and San Pedro Tlaquepaque, along with real estate developers, have claimed that the community of Santa Mara does not exist in revenge for the legal victory. The practice of refusing to recognize a community and filing counter-suits is regarded as necro-politics, because it not only results in officially criminalizing communities in order to halt progress and development, but it also encourages bad legal practices, which are frequently aided by corrupt attorneys working for the municipality. This constitutes also a clear attack against the community's autonomy-building efforts. (OXFAM 2016)

Another important dimension of necro-ecology is the political action of the governments of the region in terms of promoting neo-extractivism, that is, the voracious exploitation of natural resources in the region in the name of economic growth. Extractivism is defined as the process of extracting and commodifying natural resources on a global scale at the expense of communities, nature, and ecosystems (Muñoz, 2020).

Without any distinction between progressive or right-wing governments, current environmental policies from Canada to Chile promote and favor the intensification of the extraction of resources such as oil, water, the aforementioned mining, among others, with a "novel" increase in the role of the State in the extraction and / or appropriation of the income from the export of commodities. The continent is plenty of examples about neo-extractivism policies. The recent US example under Trump on the "war on coal" is a story the coal industry has been telling mining communities for a decade now. This has also become an icon of ethno-nationalism. Mining communities are under mortal attack by liberal models and climate change advocates who want to wipe out their way of life. This is a case where political necro-narratives have direct implications for ecology and communities in very negative terms. Under the current Biden administration, extractivism is still part of the narrative, despite pledges and international efforts to show that the US is taking a turn from the previous administration. (Shapiro & McNeish, 2021)

Despite President Biden's commitment to move the country away from fossil fuels, the Biden administration is defending a massive Trump-era oil and gas project on Alaska's North Slope that is expected to produce more than 100,000 barrels of oil per day for the next 30 years. (Wapner, 2021). The federal decision is not considering the impact that drilling would have on wildlife and that global warming consequences of burning huge amounts of oil. The project is also having direct impacts on indigenous communities in the state of Alaska.

Broadly speaking, these extractivism dimension, phases out the existence and peculiarity of "rentier" States. Canada, the US, Mexico, Bolivia, Ecuador, Perú, Argentina, Chile and many others, find a

considerable portion of national incomes from sales, rents and extraction-export of natural goods. Although all this does not represent “anything new” in the history of the region, the intensity, together with the permissiveness of the current governments, has accelerated these practices, leading to a catastrophic scenario of brutal environmental destruction, not counting the amount of emissions of greenhouse gases that derive from this extractive path and the consequent impact on climate change.

As shown for tourism, this is analogous with extractivism and, in that sense, violence is also inherent to the neo-extractivism industry. Extractive industries rely on “state orchestrated natural resource dispossession, enclosure and dispossession resulting in widespread environmental degradation and ecological insecurity for coastal communities of color” (Loperena, 2017). Deep and multi-scaled spatial inequalities emerge from the extractive enclosures, ranging from the micro-spaces of the beach and hotel to epistemic and material disparities between the “First” and “Third” worlds. Extractivism, according to Loperena, is defined by outward-oriented production, the market valuation of natural and cultural resources for (external consumption, and different kinds of expropriation. (Loperena, 2017, pág. 626).

An important case to be mentioned in the article is the Canadian mining necro-environmental policy in Latin America. The business practices of Canadian transnational corporations (TNCs) have come under increasing scrutiny for their impacts in many countries of the region. Environmental, health hazards of mining are a longstanding fight for local communities and the transnational dimensions of mining industry harms are being disregard by governments in the region. Nowhere else in the world, the global health issue linked to the Canada mining sector is more pressing: 50 to 70% of Latin American mining activity involves Canadian companies, with significant health injustice consequences (Birn, Shipton, & Schrecker, 2018).

Local protests have raised in different occasions against mines, mostly for labor, health and environmental impacts. For example, people living near the Toronto-based Barrick Gold's Pascua-Lama project, which spans the Chile-Argentina border, have long opposed the mine on environmental grounds. Incidences involving 28 Canadian mining firms in 13 Latin American nations resulted in 44 deaths, 403 injuries (mainly during protests and confrontations), and 709 cases of “criminalization,” including legal complaints, arrests, detentions, and prosecutions, between 2000 and 2015. (Imai, Gardner, & Weinberger, 2017).

Canada’s long-standing defense of Canadian mining interests in Latin America and beyond is certainly another example of fostering necro-ecology. As demonstrated by several studies, diplomatic support for the Canadian mining industry involves various formal and informal channels. Under the pretense of foreign development assistance, political and financial support for the Canadian mining industry has also involved the practice of changing mining legislation in Latin American countries. (Veltmeyer, 2013). On the other side, Latin American countries, under the mantra of growth and promoting foreign direct investments (FDI) for improving national economic conditions, favor the creation of a revolving door, where industry,

government officials at the ministries of energy and development, academia and other sectors become involved in a vicious circle that negatively affect people and communities.

An important related issue to this topic is the case of the mining permits and concession in the continent, which is mostly unregulated and not transparent. The way in which governments distribute permits and concessions is critical and where concessions are also geographically distributed is of utmost relevance. It is a huge challenge to identify the most significant obligations in every jurisdiction and regimes that depend on very often *ad hoc* negotiated contracts between governments officials and third parties. Furthermore, practises among companies are complicated by a history of secrecy that is only beginning to break down (Shapiro-McNeish 2021).

This makes very difficult to disclose obligations of companies and monitoring them. In the following maps we provide a spatial representation of how mining concessions in selected areas of Mexico, Perú, Brazil and Canada are spreading rapidly and penetrating the territories of those countries in impressive ways. Critical cartography challenges academic cartography by linking geographic knowledge with power, relations and government actions. In this case we provide a view on mining concessions in four different countries of the region to support necro-ecology. Given the huge amount of data available for visualization, only selected areas were chosen by the authors to give an idea of the drilling concentration operations in significant natural areas of the continent.

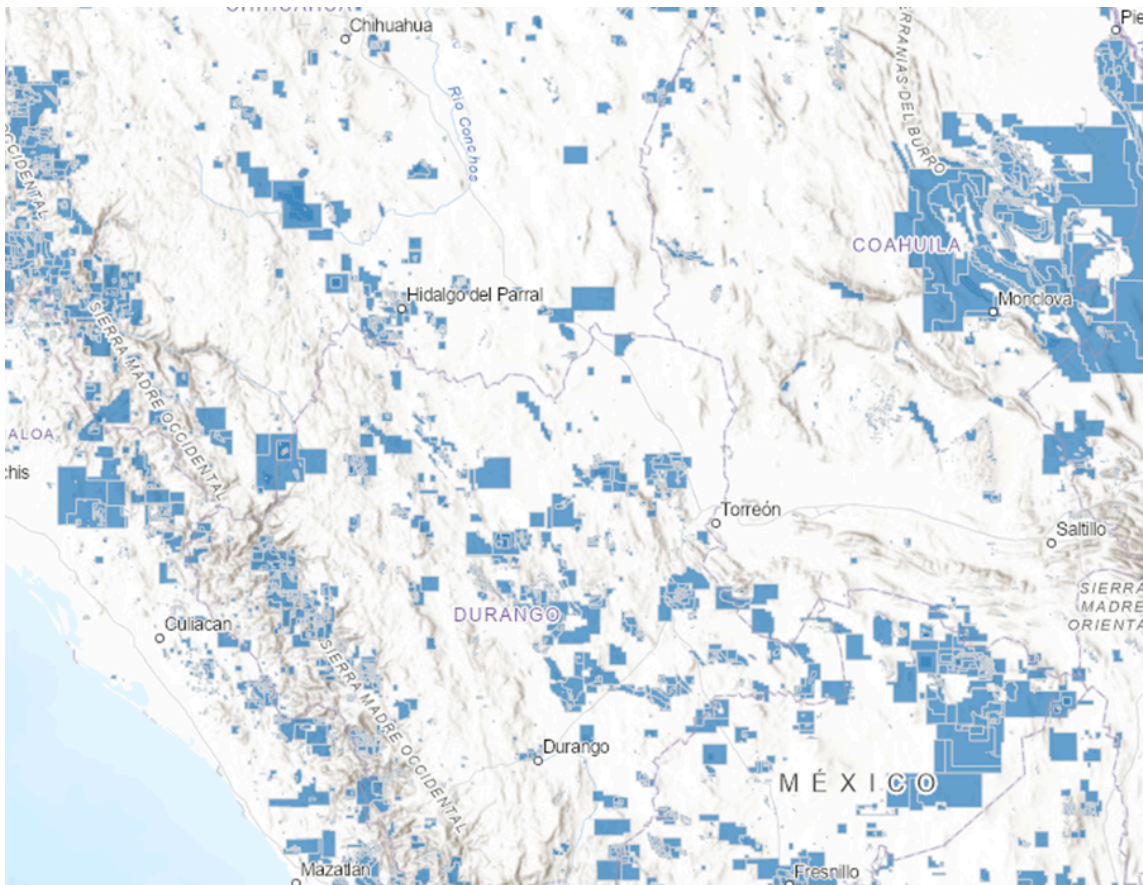


Figure 4. Mining permissions and concessions in Centre-North of Mexico.

Source: personal elaboration with dataset from Global watch open data portal and ESRI Map viewer software.

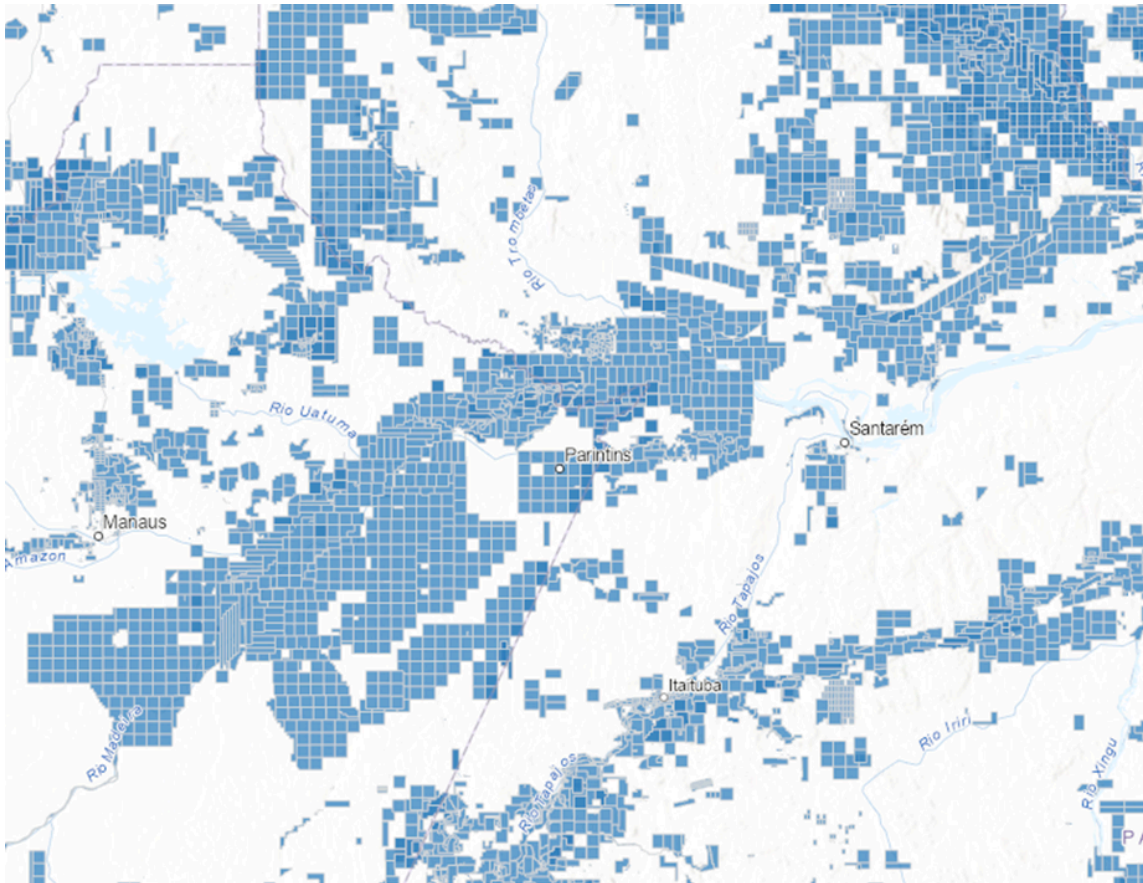


Figure 5. Density of mining concession around the Amazon basin in Central Brazil.

Source: personal elaboration with dataset from Global watch open data portal and ESRI Map viewer software.

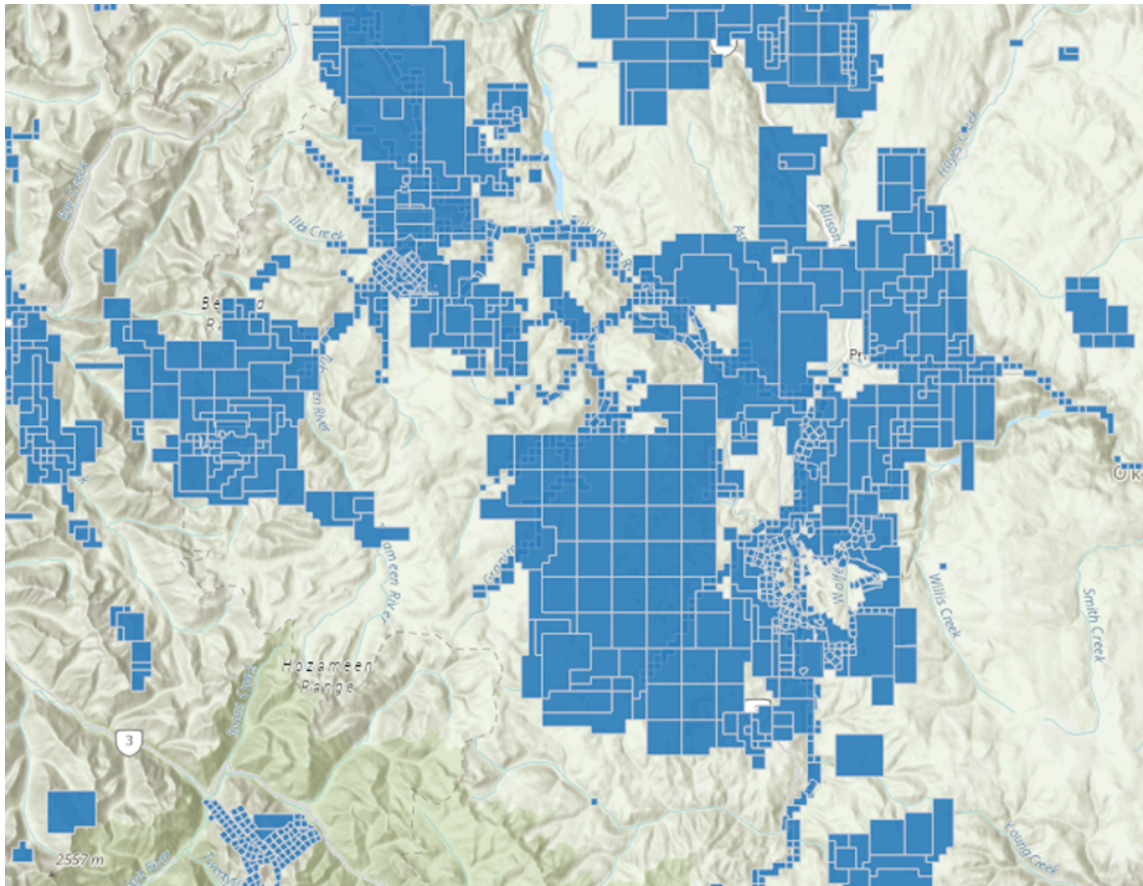


Figure 6. Mining permits in the south of Alberta Province, Canada (2018).

Source: personal elaboration with dataset from Global watch open data portal and ESRI Map viewer software.

Conclusions

In an era of severe environmental degradation, environmental decisions and actions taken by governments and corporations are biopolitical, necropolitical and paved the way for the extreme scenario of necro-ecology. Sovereign power regulates both human life and the environment and also exposes populations and natural regions to death and destruction. Likewise, not to act can also be a biopolitical and necropolitical act. In this way, the inaction or favoring of environmental policies and solutions framed in a neoliberal logic also create necro-politics that directly sentences entire human, animal populations and natural environments, and future generations to death and extinction. In this manner, deforestation, overexploitation of natural resources, ecosystem collapse, biodiversity loss and the myriad of social impacts that derive from these activities are not environmental challenges, they are necropolitical decisions to dispose of life at the discretion of the sovereign power. This particular set of necropolitical decisions and actions integrate the analytical framework of necro-ecology.

Necro-ecology reminds us once again of the need to act urgently to carry out long-term environmental programs and ecological public policies, with a vision of sustainability. In an international moment dominated by the coronavirus and in which the “official” environmental discourse based on the narrative of sustainability and climate change has become a fundamental part of the development processes of the region (Agenda 2030 and Development Goals Sustainable), the new public policies that legitimize the environmental death of the region represent a dangerous paradox for the continent. The pressure on natural resources causes territorial dispossession, social conflict, economic poverty, government intervention and control, environmental contamination, patrimonial destruction, military and paramilitary violence and violation of human rights. An extremely negative and macabre panorama that the governments of the region have the obligation to reverse.

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