The Mining Industry in Latin America*

[English Version]

La industria minera en Latinoamérica

A indústria de mineração na América Latina

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Abstract

Objective: at the end of the last decade of the 20th century, Latin America witnessed the arrival of an intense flow of foreign investment for exploration and mining activities. This article covers the impact of extractivism on some of the conflicts in Latin America. **Methodology:** the research used the political science comparative method to analyze quantitative and qualitative data, both governmental and non-governmental, to understand the socio-environmental conflicts caused by mining, especially gold mining in Latin America. The results are geo-

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referenced as a way to represent the intensity of conflicts in the geographic space. **Results:** the race of corporate, state and hegemonic actors to be lords and masters of natural biomass and mineral reserves has revealed interests in controlling not only how states manage, but also nature itself. **Conclusions:** it is found that large multinationals are negatively impacting social, economic, and political conflicts in South America and the Caribbean. The social license to operate granted to multinationals fails to reduce conflicts in the territories. Governmental policies, despite recognizing social and environmental rights, continue to give free rein to the exploitation of nature: ignoring the objectives of sustainable development, favoring the accumulation of capital of northern countries by dispossessing the environmental and social wealth of the countries of South America and the Caribbean.

Keywords: Extractivism; Mining; State; Latin America.

Resumen

Objetivos: a fines de la última década del siglo XX, América Latina fue testigo de la llegada de un intenso flujo de inversión extranjera para actividades de exploración y minería. Este artículo comprende el impacto de los extractivismos en algunos de los conflictos de América Latina. **Metodología:** la investigación utilizó el método comparativo de la ciencia política para analizar datos cuantitativos y cualitativos, gubernamentales y no gubernamentales, para la comprensión de los conflictos socio ambientales producidos por la minería; especialmente aurífera en América Latina. Los resultados son geo-referenciados como una manera de representar la intensidad de los conflictos en el espacio geográfico. **Resultados:** la carrera de los actores empresariales, estatales y hegemónicos por ser dueños y señores de la biomasa natural y las reservas minerales ha revelado los intereses de controlar no solo la forma en que los Estados administran, sino también la naturaleza misma. **Conclusiones:** se encuentra que grandes multinacionales están impactando negativamente en los conflictos sociales, económicos y políticos de América del Sur y del Caribe. La licencia social de operación entregada a las multinacionales no logra reducir los conflictos en los territorios. Las políticas gubernamentales, pese a reconocer los derechos sociales y ambientales, siguen dando vía libre a la explotación de la naturaleza: desconociendo los objetivos de desarrollo sostenible, favoreciendo la acumulación de capitales de países del norte mediante la desposesión de la riqueza ambiental y social de los países del sur de América y del Caribe.

Palabras-clave: Extractivismos; Minería; Estado; Latinoamérica.

Resumo

Objetivo: no final da última década do século XX, a América Latina testemunhou a chegada de um intenso fluxo de investimentos estrangeiros para atividades de exploração e mineração. Este artigo examina o impacto do extrativismo em alguns dos conflitos na América Latina. **Metodologia:** a pesquisa utilizou o método comparativo da ciência política para analisar dados quantitativos e qualitativos governamentais e não governamentais para entender os conflitos socioambientais produzidos pela mineração, especialmente a mineração de ouro na América Latina. Os resultados são geo-referenciados como uma forma de representar a intensidade dos conflitos no espaço geográfico. **Resultados:** a corrida de atores corporativos, estatais e hegemônicos para possuir e controlar a biomassa natural e as reservas minerais revelou interesses em controlar não apenas a forma como os estados administram, mas também a própria natureza. **Conclusões:** verifica-se que as grandes multinacionais têm um impacto negativo nos conflitos sociais, econômicos e políticos na América do Sul e no Caribe. A licença social para operar concedida às multinacionais não consegue reduzir os conflitos nos territórios. As políticas governamentais, apesar de reconhecerem os direitos sociais e ambientais, continuam a dar livre curso à exploração da natureza: ignorando os objetivos do desenvolvimento sustentável, favorecendo a acumulação de capital nos países do norte, desapossando a riqueza ambiental e social dos países da América do Sul e do Caribe.

Palavras-chave: Extrativismo; Mineração; Estado; América Latina.

Introduction

At the end of the last decade of the 20th century, Latin America witnessed the arrival of an intense flow of foreign investment for mining exploration and exploitation activities. The governments of the southern part of the continent were so captivated by the processes of trade liberalization and economic development that they saw in this dawn the solution to the phenomenon of poverty and very elusive foreign investment. Although Colombia had already been an attractive destination for gold mining companies in the mid-19th century, with the reform of the mining code in 2001 (Law 685 of 2001), Canadian, Peruvian and African capital companies began to explore and mine again. Some of these include: B2Gold, Barrik, Continental Gold, Iam Gold, Anglogold Ashanti (AGA). In addition to the above, the increase in international prices of the main mining export products, especially gold, also had an impact (Toro, Fierro, Coronado, Roa, 2012).

The environment has been utilized by the globalizing model as a means for instrumentalization and exploitation, as Hector Alimonda (2011) refers, both in its biophysical reality and in its territorial configuration. Thus nature appears in the global context as a subaltern space that can be exploited and devastated according to the need for hegemonic accumulation. As one of its objectives, research aims to show the genesis of extractivism in the Latin American context, and how it has permeated state gambles, seeing in this phenomenon the possibility of overcoming poverty and social inequality in the country through economic growth.

According to Eduardo Gudynas (2018):

> Extractivism is the appropriation of natural resources in large volumes, and is mainly associated with the exploitation of oil, and minerals such as iron, coal, copper, and gold, among others; it also includes activities of trajectory in the economic development policy of the State. (p.61)

> This extractive phenomenon has been present in South American territories since colonial times, when during conquest "precious metals were shipped to the European metropolis. Since then, the exploitation of natural resources has accompanied the Latin American history". (Gudynas, 2015, p. 23).

The definition makes very clear the dependence of extractivism on globalization. Today, the world market is intensifying this approach, encouraging a mercantile euphoria based on the high prices of raw materials and persistent international demand. Eduardo Gudynas (2018) explains that extractivisms

have diversified and continue to be the central pillars of the development strategies defended by Latin American governments from different political options, and evidence that it is not a new market strategy.

The term extractivism became popular in Latin America because it was associated with the term industry. Indeed, the Extractive Industry label has appeared in some publications since the beginning of the 20th century, and was used by several economists at least since the 1950s, but it became popular after the push from several developed countries, agencies and international banks. Under this perspective, mining or oil extractivism was conceived as just another industry, such as automobile manufacturing (Gudynas, 2015, p. 15).

Under this scenario, international organizations also appear as managers of this model. The World Bank (WB), for example, has had an area of work specialized in "extractive industries" focused specifically on oil, gas, and minerals. They have been credited with enormous potential to overcome poverty, generate jobs, provide tax revenues, and contribute to "sustainable" development (WB, 2014). In addition, the WB facilitates loans for specific projects in different countries, and at the same time evaluates aspects of governance, transparency and environmental management. So far, the United Nations (UN) system continues to launch initiatives that also use the extractive industry label to promote programs such as the Extractive Industries Sustainability and Equity Strategy. (United Nations Environment Programme, 2013).

At the same time, businessmen and governments have been adopting the discourses of international organizations such as the World Bank (2014) for various reasons, including the ability to defend extractivism as an industry that generates development and enables countries to improve their quality of life indexes. Furthermore, they base their argument on the fact that such ventures make essential contributions to overcoming poverty, securing jobs, and generating economic growth.

Currently, the logic of the extractive export model in Latin America sets the tone by consolidating its role as a supplier of raw materials to the global market, with the beginning and development of a new cycle of extractive expansion. This phenomenon refers not only to the system of extraction of natural resources and the essential components for the balance of nature – water, soil nutrients, hydrocarbons, energy, biomass – but also to the implementation of structural reforms that liberalized national markets, opening the doors to large foreign capital that enters with the purpose of dynamizing the sector in several countries of the region (Damonte, 2014). According to the Observatory of Mining Conflicts in Latin America (OCMAL, n.d.) in Latin America there are 266 conflicts and five transboundary conflicts in 283 mining projects involved in the region.

This article analyzes Latin America's extractive economy based on comparative policy research that, through official documents and public policy analysis, traces the exploitation by invitation of multinationals under the auspices of the Latin American state. The research conducted shows a panorama of territorial conflicts produced by the power relations that are unleashed around extractivism in the Latin American territory and its impacts on the loss of biodiversity and contamination of soil, air, and water.

Methodology

How can the understanding of the large-scale structures and processes that transformed the world in the 19th century be improved, along with those processes that are transforming the world today? (Tilly, 1991).

Based on this aspect, the research of which this article is a product enables the hermeneutic analysis of the commodification of nature in Latin America. To address this issue, resorting to comparative politics was necessary using quantitative and qualitative data, to read the similarities and differences between the States that have promoted extractivist policies in Latin America and the Caribbean stimulated by international organizations and multinational companies. The case of gold mining and its socio-environmental impact is particularly well understood. As Monica Ramirez (2012) points out, "Latin America today is of great interest to transnational gold mining."

The theoretical contributions of Hector Alimonda (2011, 2018), Arturo Escobar (2007), Horacio Machado (2010), Eduardo Gudynas (2009, 2015), Stephen Bunker (1996), Maristella Svampa (2012), and David Harvey (2005) are important for the realization of this article. Their work reveals the long duration of the history of the colonization of nature, which has generated a process of accumulation by dispossession that can be seen in what has been known as Dutch disease or Chola disease, and the long duration of the relationship between the State and the market, which is the producer of a territory: "The Third World."

To understand mining practices in Latin America and the Caribbean, primary governmental and non-governmental sources are used, namely: reports from international organizations such as the World Bank, the International Monetary Fund, the Economic Commission for Latin America and the Caribbean (ECLAC), and databases constructed by the Observatory of Mining Conflicts in Latin America (OCMAL).

Finally, the comparative and geo-referenced problem is presented to make a graphic representation of mining extractivisms, comparing many countries in the Latin American and Caribbean region, especially when addressing conflicts over water in mining territories, and comparing the impact of the presence of multinationals on accumulation by dispossession in mining territories.

Results

Development Policies and Extractivisms

During the 1990s, conditions were created in Latin America for the application of policies that would regain the rhythm of economic growth, and that would reverse the fall in the Gross Domestic Product (GDP) and initiate a cycle of positive rates. The strategy to achieve this was to resort to the privatization of state companies, which drastically reduced the public sector. Furthermore, the economy was deregulated, by generating incentives for investment and by applying openness policies to global financial trade flows.

All these measures, as indicated by Horacio Machado (2010), are in coherence with the policies promoted by multilateral credit organizations such as the International Monetary Fund (IMF), the World Bank (WB) and the Inter-American Development Bank (IDB) and endorsed by the official and academic centers in charge of formulating the public policies that were adopted as their own by the governments of the different countries.

Within this context, the case of mining stands out as destined to become the "development engine" assumed by the governments of Latin America (Machado, 2010). The World Bank assumed the role of manager and promoter of a new regulatory framework for the sector, offering countries advice and loans to undertake what was understood as a necessary modernization. This sought to promote and encourage investment in mining and gave rise to the "Boom" of mineral exploration. Through the conditional credits of the World Bank, countries such as Peru (1991), Bolivia (1991), Argentina (1993), Ecuador (1991), Mexico (1992), and Colombia (2001) introduced modifications in their mining laws. Hence, the reforms were aimed at removing the obstacles that in the past had not made it possible to promote mining as an important line of the economy, and, in this way, allow the region to be channeled into the "natural course of development" as phrased by Eduardo Gudynas (2015).

In addition to the modification of the legislation and the credit guarantees of international organizations, the World Bank (2018) maintains that the model

of exploitation of non-renewable resources or the concentration of large areas of land by dominant capital are qualities that allow economic development[1]. In the same perspective, in 2017, the president of Ecuador, Rafael Correa, was proud of the Latin American economic boom of his decade of government, 2007 to 2017. Beliefs that rest on an economic perspective focused on the economic role of extractivisms, such as exports of raw materials, government tax collection, or investment income. Despite the fact that the 2008 Constitution, in Articles 14 and 71, enshrined the rights of the population to live in an ecologically balanced environment and the right of nature to have its existence respected, Ecuador has been threatened by the beginning of one of the most polluting activities on the planet, due to extractivisms.

Putting Latin America in the focus of extractivisms is the strategy of the economic development model, which uses the extraction of natural resources as a defense with the idea of comparing the region to countries such as Canada, Australia, Norway, Finland, and New Zealand, countries with important extractive sectors, but with diversified exports and high quality of life standards. Most of these extractive companies are present in countries with weak environmental laws, which invite people to pay for polluting. These laws do not focus on enforcing real control of the impacts generated by large operations, but on being flexible in the sanctions.

The defense argument used by the extractive economy, at times, is similar to the old ideas of promoting progress through exports of primary goods, but it is clear that Latin American countries are very different from countries like Canada, Norway, and Australia. As Gudynas says, "what is being presented today as an export blessing actually expresses an internal production simplification that generates various economic problems" (2015, p. 45). This is what was termed as the Dutch disease: a consequence of the oil boom in the Netherlands in the 1970s, in which the economic expansion, motivated by the exploitation of a natural resource, had effects on the economy such as the massive inflow of capital, the valuation of the national currency, the loss of export competitiveness, and cheaper imports of consumer goods.

This same pattern is repeated in Latin America, given that the economy has grown due to extractivism, the inflow of foreign exchange due to massive exports of natural resources, and the strengthening of the currency. This has been experienced at different levels in Brazil, Ecuador, Peru, Uruguay, Colombia, and Venezuela. In the Peruvian case, a sub-variety of its own has even been described under the name of "Chola disease."

1. The World Bank report (2018) concluded that, during the last two decades, more than 20 low-income countries became median income countries, partly by investing gains from natural capital, where in 1995 natural capital was the predominant component of general wealth.

This shows that extractivisms, beyond their export successes, can unleash negative effects within national economies. With different nuances, "a distorted and disjointed pattern of national economies emerges, with sectors such as extractivists that have strong global ties, and others focused on the internal market that are articulated among themselves and that sometimes oppose each other" (Gudynas, Alaiza , 2012, p. 53).

To better understand the extractive model, special emphasis must be placed on the different stages of mineral extraction. This begins with an exploratory stage where studies and necessary work are carried out to establish and determine the existence and location of the mineral or minerals. Next, the geometry of the deposit, in economically exploitable quantity and quality, the technical feasibility of extracting the minerals, and the impact that the process may cause the physical and social environments. These initial phases seek to establish and technically calculate the mineral reserves, the location, and characteristics of the deposits. In these phases the development of the mining plan, the means and methods of exploitation, and the scale are defined, along with the feasible duration of expected production in the area that has been identified and allocated. In Colombia, Law 1333 of 2009 establishes the environmental sanctioning procedure to regulate the extraction of minerals in the country, recognizing the State as the holder of the sanctioning power in environmental matters.

For this reason, at the end of the exploration period, the definitive delimitation of the area in the contracted area is presented to the mining authority, which is then linked to the operation, plus the activities necessary for processing, internal transport, support services and the elements of the operation related to the environment. Likewise, the type of mining exploitation that will be carried out at the location is determined, and for the purposes of this research, are categorized as follows: underground exploitation, open pit, and alluvial. According to the Technical Mining Glossary of Colombia (GTMC) (Ministry of Mines and Energy, 2003) and in the National Mining Census (2012) they are understood as follows:

- **Underground Mining:** Refers to mining activities and operations carried out underground (Ministry of Mines and Energy, 2003, p. 108).

- **Open Pit Mining:** Refers to mining activities and operations carried out on the surface (Ministry of Mines and Energy, 2003, p. 108).

- **Alluvial Mining:** Refers to mining activities and operations carried out on river banks or river beds. The extraction of minerals in alluvial

terraces is also being advanced (Ministry of Mines and Energy, 2003, p. 108).

It is important to note that these types of mineral extractions are followed by what in mining jargon is defined as "scales" which, according to (FEDESARROLLO, 2012), depend on those who make use of the resources and their levels of environmental and social impact, and required technification, as well as the working capital and the safety standards in which such work is carried out, and finally, the characteristics that vary depending on the type of mining. In this way, artisanal/ancestral, small/medium and large-scale mining is defined as follows:

Artisanal Mining: In general terms, artisanal mining is related to subsistence mining, which "is developed by individuals who dedicate their efforts to the extraction of a mineral through basic extraction methods and who in association with a family member or other individuals generate subsistence income" (Ministry of Mines and Energy, 2003). It is characterized by extraction with tools such as trays, shovel picks, sieves – that is, non-mechanized equipment. This type of mining exercise is classified as traditional (and is referred to in Law 1382 of 2010, amending the Mining Code of 2001 and enforced by ruling C-366 until May 2013).

Small and Medium Scale Mining: According to Decree 1666 (2016), small and medium scale mining is defined based on the number of hectares granted in the mining title or concession, it must take into account a level of exploitation less than or equal to 150 hectares, and it is also established based on the maximum annual mining production volume (Table 1).

Table 1. Annual Mineral Production

	Small		Medium		Large scale	
Mineral	**Under-ground**	**Open pit**	**Under-ground**	**Open pit**	**Under-ground**	**Open pit**
Coal Tons/ Annual	<60,000	>45000	>60000-650000	>45000-850000	650000	>850000
Cons-truction material M3/Year	N/A	<30,000	N/A	30,000-350,000	N/A	>350,000
Metallic (Ton/Year)	<25,000	<50,000	25,000-450,000	50,000-750,000	>400,000	>750,000
Non me-tallic (Ton/ Year)	<20,000		>20000-300000	>50000-1050000	>300000	>1050000
Precious metals (gold, silver, platinum) (Ton/year) or (M3/ year)	<15000 Ton/ Year	<250000	15,000-300,000	250,000-1,300,000	>300,000	>1,300,000
Precious and se-mi-precious stones (Ton/year)	Up to 20,000	N/A	20,000-50,000	N/A	>50,000	N/A

This type of mining has operations of some degree of technology and personnel training, as well as some standards in labor processes, average productivity, and efficiency in the exploitation and processing of the mineral. It presents a low level of industrial safety and social security for workers and a high environmental impact.

Large Scale Mining: This type of mining, given the size of its operations, has the highest level of formalization and legality. In addition, its productive process is the most technical and demands higher standards of industrial security. It necessitates a skilled workforce, working capital and sources of financing that allow it to function more competitively than mining on smaller scales. It is also characterized by the industrialization of the productive process,

exploitation of mines of relevant size, a skilled workforce, high productivity and greater efficiency in the exploitation and processing of the mineral, formalization of wages and income and social security for workers, its exploitation is contingent on mining titles and the regulation of the environmental authority for the prevention and mitigation of environmental impact. It requires more working capital. Receiving financial investment is easier (FEDESARROLLO 2012).

It is remarkable that from the 141,887 jobs generated by mining in Colombia, the mines without mining titles employ 74,906 people. This means that 53% of the employment provided by mining in Colombia is from illegal mining. The small illegal mining provides 28,992 jobs, which means that 20% of the country's miners are small illegal miners (Güiza, 2013). "Fifty-six percent of the Mining Production Unit (MPU) declare that they do not have any type of mining title, which contrasts with the identification in the field of MPU without a mining title" (Ministry of Mines and Energy, 2012, p. 23).

Mónica Ramírez (2012) states that:

> Gold mining can range from artisanal and small-scale exploitation (as happens in towns whose history and social and economic dynamics are linked to this activity), to open-pit mining megaprojects. Both types of mining have severe impacts on the environment and territory, but the magnitude of large-scale open-pit mining generates higher risks of devastation. (p.95)

Mining restructures the territories according to the needs of the existing accumulation regimes, in which the privatization of some natural assets prevails. Thus a territorial fragmentation and restructure of particular ways of understanding nature due to political and cultural conditions develops. In this way, the conditions of support and legitimization of extractivism are constituted. The following section will show how these extractivisms are part of the commitment of Latin American States to an extractive economy that responds to economic growth and, thus, promotes the long-awaited progress to achieve the development goals as ECLAC has proposed in several of its publications.

Stephen Bunker (1996) in his article "Raw Materials and the Global Economy," points out the forgetfulness and distortions of industrial ecology and criticizes the conceptual frameworks for analyzing production, especially in industrialized countries, as production cannot be explained from the internal dynamics of extractive economies for various reasons, such as pointing out that the relevance of the appropriation of natural resources cannot be ignored, or that in that action matter and energy are used or destroyed, the values of which cannot be determined in labor or capital.

Bunker (1996) warns that the economies that provide raw materials differ significantly from industrialized economies in the effects on their natural environment, and in how human populations are distributed for the expansion of infrastructure and in their powers for subsequent developments. In this sense, Bunker proposes to develop the concept of *extraction mode* making it different from the idea of *production mode*, although it inspired the latter idea.

When the extractive economy is examined, the need for categories to analyze the role of mining or oil companies in a context of social relations and institutional frameworks is evident. Thus, it is necessary to assume a valid position and an open approach with respect to the relationships that are generated and reproduced, to focus on how the performance of an economic sector can be considered the appropriation of value with the relationships and social structures that make it possible.

The same author analyzes a category different from the mode of production, this category is that of *modes of appropriation*, thus the author explains the way in which natural resources are extracted and used. These modes are conceived in such a way that they are not trapped within purely economic descriptions, and therefore they include materials, capital flows, labor power, as well as social relations and normative frameworks. Modes of appropriation, as the author explains, describe different ways of organizing the appropriation of different natural resources (such as matter, energy or ecological processes), to be used in human ends in their social and environmental contexts. That is, it includes material actions that take something from the environment, as well as the consensus on what is a resource is or is not, its various valuations, access, and the norms that support that appropriation.

Thus, the key difference in this sense is that the modes of production conflict with human processes, but in the modes of appropriation the key interaction is with nature and its dynamics are not under social regulation. "The rate of photosynthesis of plants cannot be decided collectively, for example, nor does a political consensus allow for the recovery of natural resources depletion" (Alimonda, 2011, p. 245). Hector Alimonda (2011) warns that extractivist modes of appropriation are organized economically and socially to externalize these effects by exercising all their economic and political power in order to hide these impacts and avoid the integration of those costs into their accounts.

The modes of extractivist appropriation are framed in terms of the frontier of the advance of the commodification of the environment, in which market and the economy ideas are imposed on the natural world. Eduardo Gudynas (2015) assures that economic value is a determining factor in the pace of the advance of that border, since, where there are clues about a large exploitable deposit,

the price of that element increases, incentives increase and it is presented as a commodity, it is extracted and dispersed in the production and trade networks.

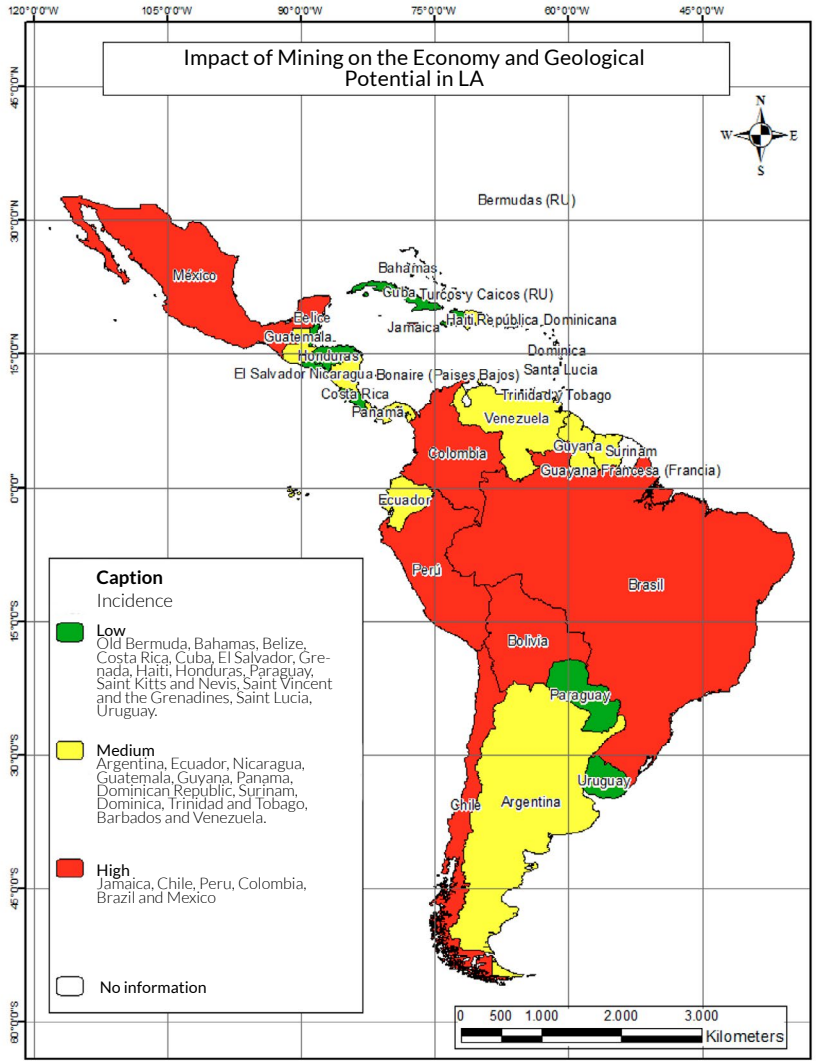
By becoming product, these elements of nature become known as "*commodities*." Even the category of natural resource "self-expresses its position of understanding the components of the environment as resources for human purposes" (Svampa, 2012, p. 87). It is in this sense where the conventional formulations of prices rest. The economic valuation is anchored on them as the main way of understanding the environment, but at the same time, it serves to exclude or make invisible the other forms of valuation (Svampa, 2012, p. 89).

Mining Conflicts in Latin America

The extractive economy causes the environment to be fragmented and commodified, as economic valuation displaces other valuations such as culture, tradition or local ideologies, and ecology. Thus, rationality that seeks profitability, efficiency, and competitiveness is imposed. Next, an explanation will be presented as to how extractivism referred to the extraction of mineral resources and market economy, becomes an economic reductionism of nature by presenting the payment of royalties, the payment of taxes and taxes as its great contribution to the development of the territories. In addition, how States justify the extractive apparatus as necessary for "progress" will be explained. Gudynas (2015) has called it the "commodity consensus," characterized by the expansion of borders toward territories previously considered unproductive, and which are now at the service of foreign capital under the figure of mining concessions.

Figure 1 shows the comparative geological potential of South American and Caribbean countries. Jamaica, Chile, Peru, Bolivia, Colombia, Brazil, and Mexico are the countries with the greatest potential. The expansionist process of the mineral extractive industry around the world has made it such that the economic development policy of the States moves around the promotion of the arrival of foreign capital to Latin American territories. According to a report by ECLAC-Economic Commission for Latin America and the Caribbean, between 1994 and 1997 annual exploration budgets in Latin America increased from $564 million to $1.17 billion. In 1997, Latin America captured 29% of the exploration expenses incurred by the main mining companies, out of a global sum estimated at 4,030 million dollars (Sánchez, R; Lardé, J; Chauvet, P; Jaimurzina, A, 1999, p.60).

Figure 1. Map of Categorization Latin American and Caribbean (LAC) Countries, Based on the Impact of Mining on the Economy and Geological Potential



Note. Taken from *Minería en América Latina y el Caribe, un enfoque socioambiental* (p.620), por R.V. Ríos, 2018, Actualidad y Divulgación Científica.

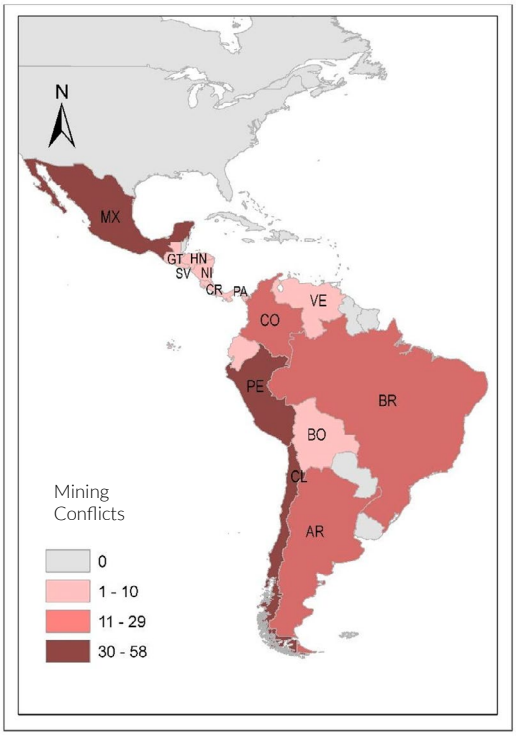
The increase in the price of an ounce of gold from US $200 to US $1,200 between 2000 and 2008 fostered the incentive of interest in the extraction and speculation of this metal. Deposits that had once been discarded were reactivated, due to the high cost of their extraction which affected the expected level of profits (Toro, Fierro, Coronado, Roa, 2012).

According to Lina Muñoz (2016) for Latin America and the Caribbean, by 2012 the extractive sector reached a level of profitability higher than that of other economic activities in the continent with a 25% profitability, so she called attention to diversifying their economies. Foreign capital has expanded throughout Latin America and marks a familiar scenario for these regions, in which they are immersed in global relations of extractive economic interest. This phenomenon, oriented to capitalist depredation, continues to benefit supranational states with strong economic developments, "the State becomes one more entity of the global economy that articulates national economies with global interests, by facilitating and creating conditions to access the natural, environmental, intellectual and cultural resources of their territories" (Toro, Fierro, Coronado, Roa, 2012, p. 111).

The desire for development has made Latin America open the door to foreign capital which arrives with the expectation of economic growth. States have made the corresponding legislative adjustments to continue feeding the expansionary cycle of foreign investment by sacrificing territories from the allocation of mining titles and re-victimizing regions that have been hit with waves of violence. In addition, with the argument of employment creation, companies enter the territories with promises of more and better working conditions, which in effect materialize in labor outsourcing (López-Sánchez, López-Sánchez, Medina, 2017, p. 66). For all the above, the efforts for the expansion of mining in Latin America are questioned.

As previously indicated, the greatest geological potential for mining is found in Jamaica, Chile, Peru, Bolivia, Colombia, Brazil, and Mexico (Figure 1). Regarding these indicators, Mexico, Peru, and Chile were established as the countries with the greatest mining conflict, while Colombia, Brazil, and Argentina have an average conflictivity in terms of the number of territorial conflicts. A lower mining conflict is evidenced in countries such as Venezuela, Bolivia, Ecuador, Guatemala, Nicaragua, Honduras, Costa Rica, and Panama (Figure 2). A large part of these conflicts occur because mining causes environmental damage, health problems, destruction of biodiversity and coffee landscapes, pollution of rivers, and society especially criticizes large-scale exploitation. Today, companies are concerned with obtaining a social license for their operations in the territory, assuming social license as an essential attribute for success; however, according to the International Council on Mining and Metals (2012) the actions do not offer sustainability for territorial development.

Figure 2. Map of Mining Conflicts over Gold in Latin America and the Caribbean



Note. Map created in the ArGis mapping software, based on the information of the Observatory of Mining Conflicts in Latin America (OCMAL, n.d.) https://www.ocmal.org/

Who is responsible for this level of conflict in the Caribbean region and Latin American? The mining projects of multinational companies, especially of Canadian origin, are protagonists of what David Harvey (2005) calls accumulation by dispossession. This is a process in which a strategic alliance between the State and foreign capital emerges, in order to trans-nationalize the territories by depriving the rural population of private property and depriving indigenous

and Afro-descendant populations of collective territories. Table 2 shows the multinational companies responsible for accumulation by dispossession, a new form of colonization by companies from northern countries such as Canada, United States, England, and now, China.

Table 2. Multinational Companies Responsible for Accumulation by Dispossession

Country	Multinationals Involved in Gold Mining
Argentina	Andacollo Gold Chilean-Canadian mining company
	FMC Lithium Corp from North America
	La canadiense Northern Orion
	Barrick Gold Corporation
	Liex S.A company subsidiary of Neo Lithium from Canada
	Orocobre limitet Australian mining group
	Toyota Tsusho Corporation (TTC) from Japan
Chile	BHP Billiton Company
	Barrick Gold from Canada
Costa Rica	Norwegian capital practices illicit mining
Bolivia	Transnational Korea Resources Corporation (KORES)
	Inti Raymi
Perú	Bear Creek mining company from Canada
	Moterricometals mining company of English origin
	Zijin mining company from China
Ecuador	Junefield Mineral Resources from China It adopted the name Ecuagoldmining S. A.
Brasil	Belo Sun mining project. Belo Sun company from Canada.

Country	Multinationals Involved in Gold Mining
Colombia	Anglo Gold Ashanti
	Drummond Company
	Murray Energy Corp
	BHP Billiton
	Glencore
	Anglo American
	Brazilian multinational MPX
	World Bank. Angostura Project: threatens the biodiversity of the Páramo de Santurbán
México	Almaden Minerals from Canada.
	Teck Cominco company from Canada.
	JDC Minerales S.A. from China.
	Gold Group Canada company
	New Gold company. Canada.
	BRigus Gold Corp (formerly Linear Gold)
	Southern Peru Copper Corporation
	Alamos Gold Inc.
	GanBo International Mining Co., Ltd.
	Oddisey Marine Exploration
	Cambior Inc
	Great Panther Resourses Limited. Canada
	First Majestic Silver Corp. Canada
	BlackFire Exploration Ltd.
	Minefinders Corporation of Vancouver
	Us antimony United States
	Arcelor Mittal Corp. United Kingdom.
	Minera Real de Angeles SA de CV
	Continuum Resources. Canada.
	Fortuna Silver Mines Inc. Canada.

Country	Multinationals Involved in Gold Mining
México	Southern Peru Copper Corporation. United States
	Teck Cominco Limited. Canada.
	Campbell Resources Inc Canada
	Exall Resources Ltd
	Britannia Gold Corporation
	Dowa Mining Co. Ltd Japan
	Campbell Resources Inc
	Exall Resources Ltd Canada
	Britannia Gold Corporation
	Continuum Resources
Guatemala	Oracle Energy company from Canada
El Salvador	
Honduras	
Nicaragua	B2Gold multinational company from Canada
Venezuela	Canadian Transnational Gold Reserve (Company that the Venezuelan State had to compensate with 740.3 million dollars when it was expropriated)
Panamá	La Oro Gold from Canada

Note. Comparative table elaborated based on filters by countries with information from the Observatory of Mining Conflicts, OCMAL (n.d.)https://www.ocmal.org

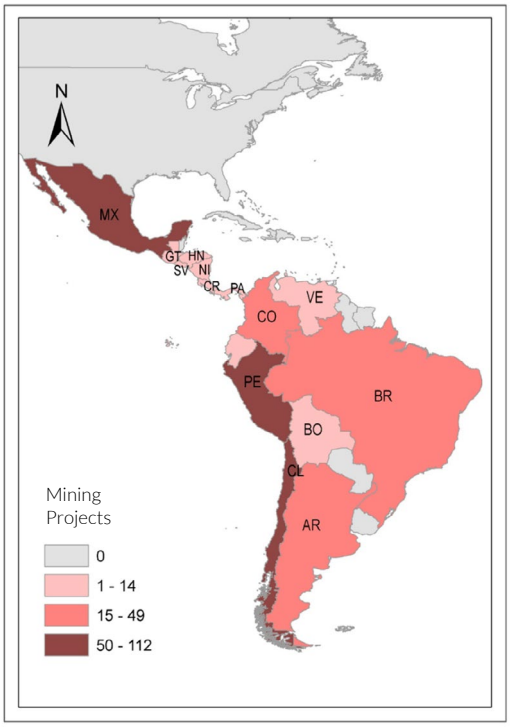
The presence of multinationals in Latin American countries shows a common ground: the negative impact on the sustainable development goals. Poverty and inequality are increasing in Latin America and the Caribbean due to the economic development model that depends on the exploitation of natural resources, where property is privatized and indigenous and Afro-descendant ethnic communities are deprived of land, eliminating their cultural heritage in the long term.

A general view of the mining-energy sector in America and the Caribbean region reflects the pollution and lack of water resulting from mining exploitation, which generates impoverishment of the population and multiple diseases. It also threatens their right to health and life in countries dependent

on a natural resource such as gold. Although we are in the 21st century, a large proportion of Latin American and Caribbean society does not have access to drinking water and energy. Currently, the sea is being privatized. There are more and more advances of multinationals that want to extract mining resources from the bottom of the sea to be used in the production of new technologies. This threatens underwater life as well as terrestrial ecosystems life.

Figure 3 shows the presence of multinationals in the region. The territories with the highest threat due to the presence of mining projects led by companies from the United States, Canada, England, and China are: Mexico, Peru, and Chile. An intermediate range, where countries such as Brazil, Colombia, and Argentina are located, could also be observed. A lower range of foreign presence can be noticed in the national territories of Venezuela, Bolivia, Ecuador, Guatemala, Nicaragua, Honduras, El Salvador, Costa Rica, and Panama. The presence of these mining projects depends on government policies. Brazil has one of the strongest geological potentials in the region, but social movements have limited the presence of multinationals in the territory for several decades. Governments have also sought the nationalization of the exploitation of natural resources. However, there is concern over the growing trend of mining-energy exploitation in Brazil from the government of former President Michel Temer to the present day with President Jair Bolsonaro. Such exploitation is promoted by the current president in the National Energy Plan 2050 that projects the development of nuclear energy (Ministry of Mines and Energy, 2020).

Figure 3. Mining Projects in Latin America and the Caribbean



Note. Map created in the ArGis mapping software, based on the information of the Observatory of Mining Conflicts in Latin America (OCMAL, n.d.) https://www.ocmal.org

The case of Colombia is also notorious, given the intensity of territorial conflicts. It is a fact that the presence of extractivism has increased the intensity of the armed conflict. It also hindered the implementation of the peace agreement signed in 2016 between the government and the Revolutionary Armed Forces of Colombia and affected the legitimacy of the State. International organizations have documented links between Anglogold Ashanti's (AGA) and paramilitary structures. During the period 1988-2006, 5,438 people were victims of crimes against humanity and 610,110 people were expelled and deprived of their territories by paramilitaries in places where AGA carries out operations

or intends to do so. The expulsions have intensified between 1999 and 2002 (the year in which AGA enters the country) and between 2004 and 2007. This is reported by the Observatory of Mining Conflicts in Latin America (OCMAL, n.d.).

In the regions of Colombia where AGA has developed or intends to initiate exploration and exploitation work, militarization processes have intensified. The most critical cases have occurred in Tierradentro (Cauca), Remedios and Segovia (Antioquia), Quinchía (Risaralda) and Southern Bolivar. The militarization of these regions as a counterinsurgency strategy has also served to banish natives, small miners and peasants who become a nuisance when the multinationals' looting is privileged. These processes of militarization have been accompanied by food, medicinal and work supplies blockades for the development of agricultural activities (OCMAL, n.d.).

In 2005, the conflict in Marmato (Caldas) was announced; the Minera de Caldas S.A. Company, a subsidiary of the Colombia Goldfields Limited (Canadian multinational), has proceeded with the Marmato Mountain Development Project, which seeks to conduct an open-pit exploitation of the deposit that is located just below the municipality, and whose royalties for the Nation would be only 1%. In addition to reducing costs, this type of exploitation involves the transfer of the town to another sector. The Colombian government has favored this project through new legislative strategies to strengthen large mining by allowing preferential rights for exploitation and expropriation based on the mining businesses of transnational corporations (OCMAL, n.d.).

According to Mónica Ramírez (2012):

> Marmato, a population whose history and identity are deeply rooted in small-scale mining, is a unique example of the strained relationships that weave through the implications of an open-pit mining megaproject. (p. 110)

In accordance with Ruth Zarate, Claudia Vélez and José Caballero (2020):

> The database of mining conflicts of the OCMAL (n.d.) highlights the negative environmental impacts as the main triggers of socio-environmental conflicts in Latin America, because this world region supports the extractive activities responsible for the pollution of water bodies, land, and air, especially due to the mining industry. This is the result of inappropriate waste and tailing dams management, because companies usually return contaminated water to the original sources without any treatment, thus causing these bodies to be polluted by heavy metals such as lead or mercury and therefore present detrimental consequences for human health. Additionally, there is also the limitation of water

> use for agricultural activities and unproductive land increases that directly affects the community's traditional work. (p. 161)

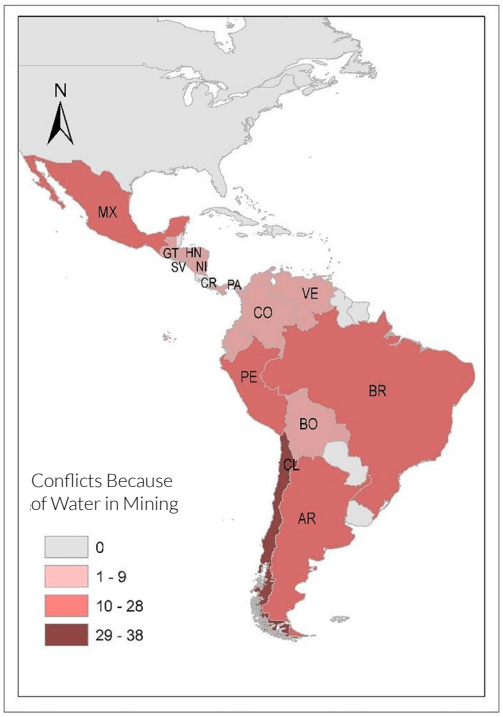
The "extractive industries" concept must be overcome because it does not encompass industrial transformation. Manufacturing is not promoted and raw material is exported. According to Eduardo Gudynas (2018):

> The "extractive industries" emphasis is not naïve because of the cultural connotations that appeal to the imagery of factories with many workers in order to gain public support. This denomination must be abandoned not only because of its conceptual rigor but also because of its political implications. (p. 63)

León Valencia and Alexander Riaño (2014) point out that the communities of those territories are greatly concerned about the impact that mining activity has on their right to water and, therefore, to life, due to its impact on ecosystems and protected areas. Most mining titles are granted to companies in Colombia's protected areas with important fauna and flora ecosystems.

Figure 4 shows the water conflicts resulting from mining. The countries on red alert for water quality deterioration are: Chile, Argentina, Brazil, Perú, and México. In a middle range are Colombia, Venezuela, Bolivia, Guatemala, Nicaragua, Honduras, El Salvador, Costa Rica, and Panamá.

Figure 4. Conflicts Because of Water in Mining



Note. Map created in the ArGis mapping software, based on the information from the Observatory of Mining Conflicts in Latin America (OCMAL, n.d.) https://www.ocmal.org

The presence of transnationals in gold mining has dispossessed the population from their ancestral territories. In Peru, the case of Yanacocha, the largest mine in Latin America, owned by the multinational company Newmont Mining, which arrived in Peru in 1999 with the promise of the long-awaited development, is well known. The contamination of water and the effects on agricultural communities have been the greatest impacts of this mining project. Gold Fields-La Cima C.A.A. was also accused of extensive damage to homes and the loss of water and energy services for the population of Hualgayoc in Peru. Argentina, Chile, Perú, and the Dominican Republic also report environmental conflicts. The communities have denounced the damage caused to the rivers by the Canadian company Barrick Gold since 2010. Likewise, in Bolivia and Perú, the gold mining industry is present with the transnational company

Newmont, where social conflicts also arise due to the contamination of rivers (Arana, 2009).

According to, Claudia Vélez and José Caballero (2020):

> Bolivia is one of the countries most affected by the impacts of climate on the water resource. 2016 was a critical year to guarantee the right to water due to the lack of such resource. Although the civil society organizations and movements proposed to establish a Water Law (to protect water sources and plan its appropriate use), the State has been indifferent in allowing mining activities in the headwaters of watersheds, rivers, and lakes. (p. 161)

The multinational Glamis Gold is present in Guatemala and New Gold in México. The population's resistance to these companies is mainly due to the water contamination, the damage to health and the difficulty in developing other sectors of the economy such as agriculture and fishing.

In Honduras, the Canadian mining companies Yamana and Aura Gold are responsible for the ecological and environmental damage. In El Salvador, from 2004, the mining company Pacific Rim from Vancouver, drilled in the territory and damaged the populations' environment and quality of life because the water disappeared from the territory with the gold mining industry. In 2013, the Australian-Canadian firm OceanaGold obtained the exploitation rights of the Pacific Rim.

Conclusions

Poor governance in the implementation and enforcement of national mining legislation in Latin American countries has a strong environmental impact on ecosystems and hinders the achievement of sustainable development objectives. Alternatively, conflicts related to the defense of territories and the human rights violation show the conditions and restrictions on social participation for the protection of land and natural resources, which leads to the criminalization of peasant, mining, farming and indigenous communities. Legislation in Latin American countries benefits large companies and reduces the intervention of community collectives, which, under this approach, produce a narrative on economic development.

Against this backdrop, the gold mining sector faces the challenge of reinventing itself and submitting its employability and development gambles for debate, recognizing the complex economic, socio-cultural and environmental realities where it operates and, finally, passing the test of the global economy.

Gold prices have shown a considerable increase over the last decade due to its value as a safe-haven asset in the world economy. This was evident after the 2008 crisis, which exposed the fragility of the economy in relation to raw materials; thus, precious metals such as gold became a safer investment in the face of uncertainty, stock market volatility and fluctuations of the main currencies, and placed as the best commodity for the performance of the economy.

The resource extraction has been an economic practice even before colonization. This has led to socio-spatial transformations from which social and commercial relationships were built and are still in force, such as: bartering, family relationships by castes, and gold as currency. The discovery of gold and silver deposits and the exploitation of the labor force were the main drivers of capitalist labor practices throughout Latin America.

This article has referred to large-scale mining projects as a sector of the global economy that, under the so-called "commodities," has been expanding and controlling natural goods. Maristella Svampa (2012) has stated it as a new order "sustained by the boom in the international prices of raw materials and consumer goods increasingly demanded by the central countries and emerging powers" (p.31). This expansive dynamic has a determining characteristic in the sense of large scale that refers to the tendency of a productivist and efficiency-based view of development, and in terms of "monoproduction or scarce economic diversification is a clearly destructive logic of occupation of territories" (Svampa, 2012, p. 32). Moreover, the scale of these global ventures warns about the size of the investments, i.e., "these are capital-intensive rather than labor-intensive activities, as well as the nature of the actors involved and the economic concentration of large transnational corporations" (Svampa, 2012, p. 35).

The States in Latin America have been the guarantors of an extractivisim wager that has allowed important countries the use and joy of mineral wealth. In countries such as Ecuador, Chile, Colombia, Brazil, Bolivia, Uruguay, and Argentina, governments have promoted mega-mining as a development engine. In this sense, in 2020 the convulsive interactions of the global system have made States accept a dominant ideology of favoring foreign markets and capital even with the existing environmental crisis from climate change, peak anthropogenic extinction, water scarcity and peak extraction of oil and metals. Joám Evans Pim and Ann Dom (2021, p 17) have stated: "The main driver of environmental destruction, biodiversity extinction and dramatic climate events is overconsumption fueling an extractive economy." In 2020, António Guterres, the UN Secretary General, declared that "We are waging a suicidal war against nature" (UN, 2020).

Thus, Latin America has lived under the influence of the maximization of resources, including the existing biomass in the continent, which materialized in 1991 with the creation of the World Trade Organization (WTO). Gradually, elements that had not been considered commodities became "goods and services" therefore they had to be "managed," "profitable," and "competitive" and traded within the legal frameworks of commerce. New items entering the market had to have owners and express an economic value:

> This commodification reached its extreme expansion in relation to nature. For example, methods of economic valuation of biodiversity were devised: a hectare of Amazon rainforest could be worth from a few cents to a few hundred dollars. The concept of "natural capital" was proposed; bioprospecting (a term derived from geological or oil prospecting) was advocated; conservation began to be considered a form of investment; and trade in environmental goods and services even began to be discussed at the WTO. (Gudynas, 2009, p. 56)

This whole panorama serves to conclude that considering the mining-energy sector link as the main engine of development not only ignores the existing society-environment relationships within the territories, but also that the State generates regulatory conditions so that the model can be established.

In this regard, the idea of development currently followed by the States is based on a hegemonic project that prioritizes economic growth. (Escobar, 2007).

To stop this globalizing process that threatens the environment, a cultural and epistemic transformation is required to resolve conflicts over access and control of natural resources, as Arturo Escobar points out and calls them "ecological distribution conflicts" (2011).

"We must stop the wheel of progress; there is no desire to implement a single project as an alternative to the existing model. What is desired is to consolidate a multiplicity of models in which globalized modernity will be questioned" (Escobar, 2010, p. 321). Joam Evans Pim and Ann Dom (2021, p. 62) state: "Things never change by fighting against the existing reality. To change something, build a new model that renders the existing model obsolete." This demands an institutional social, economic, and political design that stops the ideologies of growth and extractivism.

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