An aerial photograph showing a large-scale mining operation in a tropical region. The landscape is a mix of dense green forest and cleared, brownish-red earth. A winding dirt road or path cuts through the terrain. In the distance, a small cluster of buildings is visible. The sky is overcast with soft, grey clouds. The overall tone is somber and documentary.

EXPULSIONS

*forced displacements and archaeological destruction
in the mega-mining project Mirador in the
Cordillera del Cóndor, Ecuadorian Amazonia.*

Executive Summary

The implementation of mega-mining projects in the Ecuadorian Amazon has been marked by systematic human rights violations of indigenous and peasant communities that live in these territories and oppose such projects. A series of strategies of deception, coercion and violence, including brutal evictions, are forcing communities to leave their lands where mining blocks have been allocated. Together with massive enclosures and displacements, mega-mining operations bring about the destruction of indigenous archaeological sites and large-scale environmental damage. This report investigates the relationship between these processes – community evictions, ecological impacts, and archaeological destruction – in the context of the mega-mining project Mirador in the Cordillera del Cóndor, southern Ecuadorian Amazon. Inhabited by Shuar, Andean kichwa and mestizos communities, this territory is home to unique biodiversity and millenary indigenous cultures. In order to open land for the mega-mine, the entire community that lived in the area was coerced to leave or forcibly evicted. This report maps this process of dispossession, as well as the destruction of archaeological sites and the environmental impacts caused by the construction of the mega-mine complex, providing evidences of systematic human rights violations committed by the Ecuadorian State and the mining company Ecuacorriente.

Acknowledgement

This report was produced under commission of INREDH (Fundación Regional de Asesoría en Derechos Humanos) and CASCOMI – (Comunidad Amazónica de Acción Social Cordillera del Cóndor Mirador), within the framework of a protection action filed against the Ecuadorian State (Ministry of Mining, Ministry of the Interior, Ministry of the Environment, ARCOM - Agencia de Regulación y Control Minero) and the company Ecuacorriente for the violation of collective rights of the communities of the Cordillera del Cóndor. Our research counted on the invaluable collaboration of Geografía Crítica Ecuador and Acción Ecológica. The investigation was realized with the support of LAVITS - Latin American Network of Studies in Surveillance, Technology and Society; Forensic Architecture, University of London; and the Ford Foundation.

Methodology

The methodology used in this report includes investigation of archives, government documents and reports produced or commissioned by mining companies. It also includes a set of studies of satellite images that provides original information on the case. Mappings were based on interviews with victims as well as several field visits in the affected area. The evictions were mapped through a collaborative process with members of the local organization CASCOMI - Comunidad Amazónica de Acción Social Cordillera del Cóndor Mirador, which represents the families affected.

Research Team

Project Coordinator

Paulo Tavares

Research, Mapping and Design

Adriano Belisário and Ana Altberg

Web design

Marlus Araújo (Marlus Studio)

3d Modelling

Henrique Lobo

Video

Camara Shuar

Realized by

autonoma, MediaLab.UFRJ and Forensic Architecture

Produced in partnership with

CASCOMI (Comunidad Amazónica de Acción Social Cordillera del Cóndor Mirador)

Funded by

Forensic Architecture, Ford Foundation and autonoma

Cover photo

The house of the shuar elderly Rosario Wari, who resisted to leave the area, in the middle of the devastation generated by the Mirador project.

2019

Index

Introduction	4
Part I	
Mega-mining in the Ecuadorian Amazon	5
the Mirador Project in the Cordillera del Cóndor	
Part II	
Dispossession & Displacement	11
forced evictions caused by project Mirador	
Part III	
Ecological Impacts	18
deforestation and water contamination	
Part IV	
Cultural Erasure	25
expropriation and destruction of indigenous archaeological heritage	
Conclusion	
Expulsions: Environmental Dispossession	32
and Cultural Destruction	
Bibliography	33

Introduction

There is a war going on across Amazonia. This is a conflict for appropriation and control of the forest's underground territory, which is as rich in bauxite, copper, gold, iron and other valuable mineral commodities as the forest's aboveground is rich in fauna and flora. This battle is not even. It is disproportionately fought by powerful corporations in collision with state agents against indigenous and peasant communities who stewardship the land and from the land forge their livelihoods.

Mining, illegal or state-sanctioned, is widespread throughout Amazonia, happening at both small and large scales. It is estimated that the sum area of active and inactive mining concessions distributed across different countries covers 21% of the total surface of the Amazon basin.¹ This is equivalent of imagining a territory over twice larger than Spain, predominantly formed by primary forests and innumerable freshwater streams, completely zoned for extraction, a kind of mega-mine operating on planetary scale.

Mining districts often overlap with demarcated and non-demarcated indigenous territories, communal lands and ecological reserves, generating conflicts with local communities over land and water. According to the research project Environmental Justice Atlas, it is estimated that there are around 56 water and land conflicts related to mining in the Amazon basin.²

This report examines the case of project Mirador, a mega-mine being developed by the Chinese corporation Ecuacorriente in the region of the

Cordillera del Cóndor, south of the Ecuadorian Amazon. Inhabited by Shuar, Andean-kichwa and mestizo communities, the Cordillera del Cóndor is one of the most singular regions of the Amazon basin, presenting extraordinary levels of biodiversity. In order for project Mirador to be implemented, communities have been expropriated of their lands and evicted from their homes, a process that was marked by intimidation, coercion and physical violence. In several occasions state forces were deployed to evict families and destroyed their houses so they could not return, "clearing" land for the mega-mine.

This report presents a cartographic analysis of these events of displacement, showing that evictions followed a coordinated strategy to depopulate the area where the mining project is located. The mappings presented here also show that the process of eviction of the entire community that lived in this territory must be directly associated with massive environmental impacts caused by the mega-mine, suggesting that rights violations should be seen in relation to ecological devastation. Finally, this study presents an extensive mapping of hundreds of archaeological sites that have been destroyed by project Mirador. This adds to the list of rights violations committed against local indigenous communities, who were expropriated not only of their lands and homes, but also of their cultural and historic heritage.

¹ Paul E. Little, *Mega-development Projects in Amazonia: a geopolitical and socioenvironmental primer*, ARA: Articulación Regional Amazónica, April 2014.

² Environmental Justice Atlas. Available at: <https://ejatlas.org/>.

Part I

Mega-mining in the Ecuadorian Amazon *the Mirador Project in the Cordillera del Cóndor*

Ecuador's economy is heavily dependent on oil extraction, which is responsible for almost 30% of the country's total exports. Mining was until recently limited to small-scale and artisanal production, with ore exports accounting for less than 1% of national exports.³ This has been changing rapidly due to state policies and corporate interests in exploring industrial mining activities in different regions of the country.

Currently it is estimated that mining concessions (active and non-active) cover about 11% of the Ecuadorian territory.⁴ **Map 01** shows the geography of concession blocks, which is concentrated in two main areas: along the Andean mountain range, and in the southern flank of the Amazon region.

This aggressive push in the mining frontier in Ecuador is driven by several projects of what is commonly known as “mega-mining.” Typically mega-mining consists of large-scale open-pit extraction operations that are executed with heavy machinery and consume large amounts of earth, water and energy. These operations use tons of

explosives and chemicals to extract metals from the soil, generating huge craters and large quantities of toxic waste that need to be stored in large tailing dams.

According to the National Plan of Mining Development, there exists five “strategic” projects of mega-mining distributed across the Ecuadorian territory.⁵ Three of them – projects Mirador and San Carlos-Panantza, controlled by the Chinese company Ecuacorriente; and project Frutal del Norte, controlled by the Canadian company Lundin Gold – are situated in close proximity to each other in the same region of the Cordillera del Cóndor mountain range, in the south of the Ecuadorian Amazon.

³ Observatory of Economic Complexity, Ecuador, 2019. Available at: <<https://atlas.media.mit.edu/en/profile/country/ecu/>>.

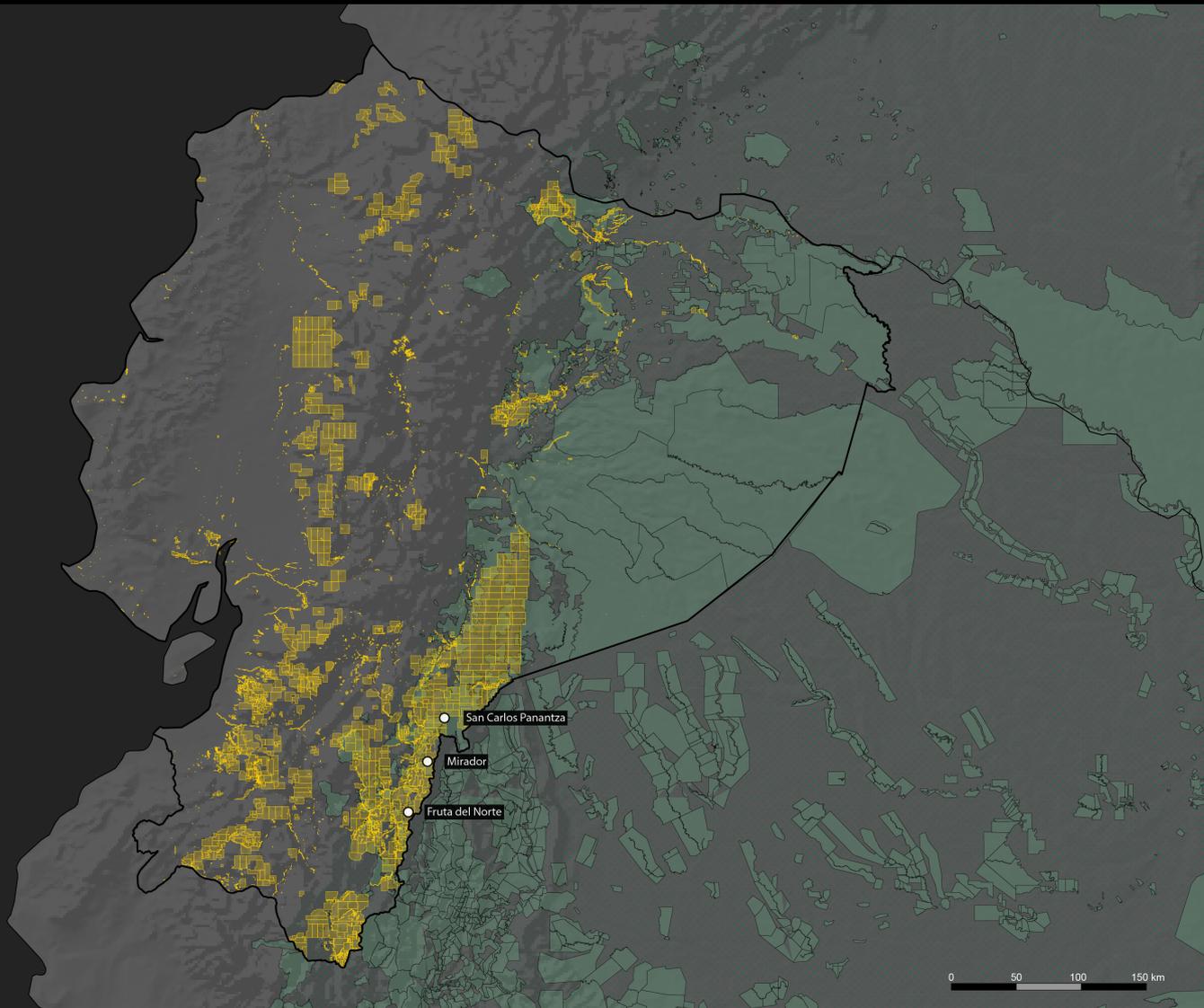
⁴ Percentage estimated by the author, based on Red Amazónica de Información Socioambiental Georreferenciada da (RAISG) website. Available at: <<https://www3.socioambiental.org/geo/RAISGMapaOnline/>>.

⁵ Agencia de Regulación y Control Minero (ARCOM) and Instituto Nacional de Investigación Geológico Minero Metalúrgico, *Plan Nacional de Desarrollo Del Sector Minero*, August 2016. Available at: <<http://extwprlegs1.fao.org/docs/pdf/ecu166602anx.pdf>>.

Img: source INABIO



Map 01



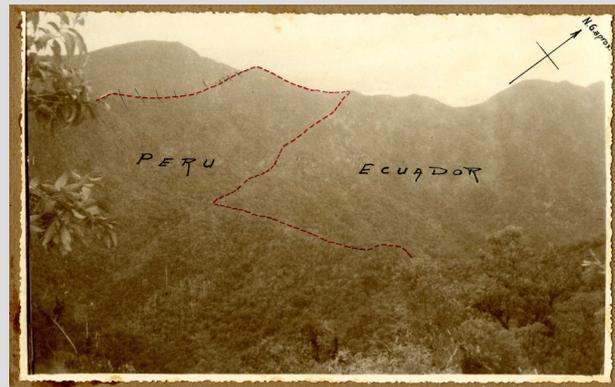
MINING CONCESSION BLOCKS
AND INDIGENOUS TERRITORIES IN ECUADOR

-  Mining Concessions
-  Indigenous Territory
-  Amazonia

Spanning over one million hectares along the border between Ecuador and Peru, the Cordillera del Cóndor is considered one of the most singular ecological and geological niches of Amazonia. Further, the Cóndor is also unique because of the millenary cultural history of this territory. These mountains sit in the middle of the ancestral land of the peoples belonging to the Jivaroan language, which is formed by Shuar, Achuar, Awajún (Aguaruna) and Wampis (Huambisa) peoples. Before colonization these indigenous nations had their own internal geopolitical organization, with different geographic borders and routes of connection and exchange.⁶ Today their territory is divided by the frontier between Ecuador and Peru, with Shuar and Achuar communities living in the Ecuadorian side, and Awajún and Wampis groups living in the Peruvian side.

Starting with the War of '41, Peru and Ecuador fought for more than fifty years over the border in the Cordillera del Cóndor region, engaging in direct hostilities on two more occasions, the Paquisha War in 1981 and the Cenepa War in 1995. Along these decades, particularly in the 1960s and 1970s when Peru and Ecuador were under military dictatorships, governments on both sides of the border sought to secure sovereignty over the disputed territory by fostering occupation through projects of migration and colonization. In Ecuador, the “pioneers” who came to settle in this remote zone – the colonos as they are called locally – were mostly poor indigenous kichwa and mestizo landless families from the Andean highlands. This led to dramatic changes in the social geography of the region as shuar territories were severely reduced; new villages, towns and roads were built; and forests were rapidly replaced by farm and pasture lands.

In the context of the neoliberal adjustments of the 1980s and 1990s, state-led projects of agricultural colonization were replaced by a different doctrine of border security that relied on corporate mining



Img: Photo documentation produced by the bi-lateral commission in charge of demarcating the border between Peru and Ecuador after the War of '41. Situated to the south of the Ecuadorian Amazon, the border along the Cordillera del Cóndor mountain range remained undefined until the 1990s.

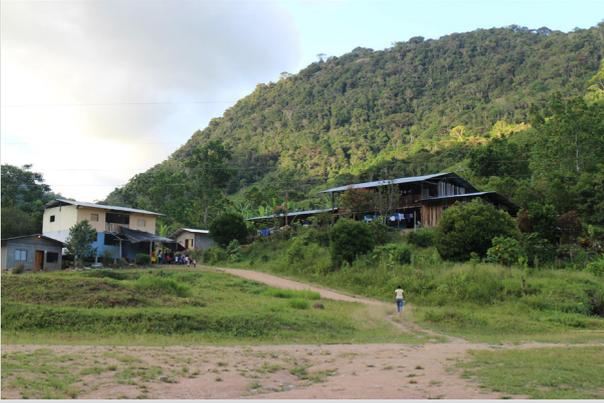
concessions as means to hold ground in the disputed territory. With the end of the conflict and the de-militarizing of the border zone after the Cenepa War in 1995, pro-mining policies were ready to be implemented and global corporations started to seek access to explore concessions in both countries.⁷

During the decades-long military conflict, the Cordillera del Cóndor region was practically inaccessible. Thus these forests remained relatively protected from the encroachment of development projects. In the context of the drafting of the peace agreements in 1998, environmental advocacy agencies and indigenous organizations pressured to include ecological protection areas over and around the border. Several reserves and parks were established in Peru and Ecuador, composing a mosaic of protected jurisdictions known as “peace parks.”⁸ Peru established the Ichigkat Muja National Park, which covers over 87.000 hectares along the frontier line, while Ecuador created a series of non-contiguous areas including the Ecological Reserve El Quimi, the Wild Life Shelter El Zarza, the Ecological Protection Zone El Cóndor, and the

⁶ Anne-Christine Taylor & Philippe Descola, *El conjunto jívaro en los comienzos de la conquista española del Alto Amazonas*, in: l'Institut français d'études Andines (IFE), 1981.

⁷ Gloria Chicaiza, *El Enclave Minero de la Cordillera del Cóndor*, Quito: Acción Ecológica, March 2010

⁸ Binding View of the Heads of State of the Guarantor Countries of the Protocol of Peace, Friendship and Boundaries of 1942, Points 7 and 8, 1998. See also: Alcalde, Martín & F. Ponce, Carlos. (2019). *Peace Parks in the Cordillera del Cóndor Mountain Range and Biodiversity Conservation Corridor*.



Img: Shuar Center of Kupiamais, cantón Gualaquiza, Cordillera del Cóndor.

Biological Reserve El Cóndor, all together covering more than 32.000 hectares of protected forests.⁹

Besides these ecological reserves, vast areas on both sides of the border have been recognized as indigenous lands. Since the establishment of the Shuar Federation in the late 1960s in Ecuador, one of the first indigenous advocacy organizations created in Latin America, the Shuar people have mobilized to recuperate communal territories and sacred sites. Moreover, in the early 1990s, Ecuador witnessed the largest indigenous uprising in its modern history, which resulted in a series of landmark territorial recognitions, including large portions of the ancestral territory of the Shuar. A parallel process happened in Peru, and likewise the Shuar in Ecuador, today the recognized lands of the Awajún and Wampis cover most of the area on the Peruvian side of the Cordillera del Cóndor region.

Mining blocks are in conflict with these protected territories. **Map 02** analyses the spatial correlation between these three jurisdictions that define the border-landscape of the Cordillera de Cóndor region: recognized indigenous territories, ecological protected zones, and mining concessions. Practically the entire area at the Ecuadorian side of the border is blocked to mining, and many of these concessions overlap with shuar territories and ecological reserves.

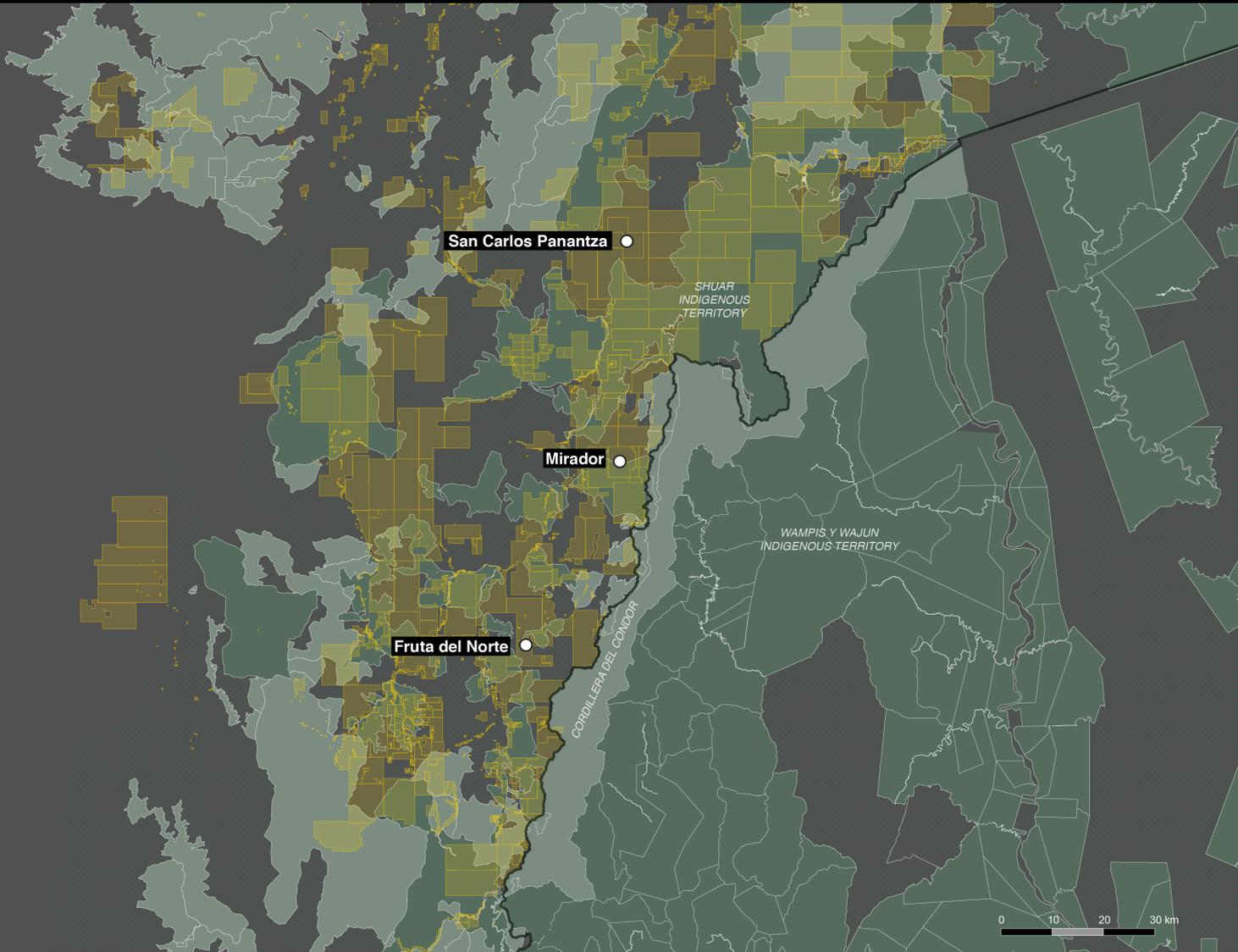
Mining projects advanced in Ecuador since the early 2000s, chiefly during the ten-year long government of Rafael Correa (2006-2017). Financed by the increasing demands for natural resources of China's growing economy, the Correa government sought to make mega-mining – thus far inexistent in Ecuador – a stronghold of the national economy alongside oil extraction. To that end several “strategic” projects were devised, especially in the Cordillera del Cóndor, which is known to be rich in valuable metals since colonial times.

The project Mirador is in charge of a concession of 2.994 hectares, which occupies the entire area between the Tundayme and the Wawayme rivers. Developed by the subsidiary company Ecuacorriente, the project was previously owned by the Canadian company Corriente Resources, and in 2010 it was acquired by a consortium formed by the Chinese corporations Tongling Nonferrous Metals Group and China Railway Construction Corporation Limited (CRCC). The Ecuacorriente/Tongling-CRCC consortium also acquired rights to explore all other adjacent concessions to Mirador, being effectively in control of nearly 13.000 hectares of land, a territory larger than the urban area of the city of Barcelona. As **Map 03** shows, these concessions superimpose shuar territories and the Ecological Protection Zone El Cóndor.

Mega-mining operations like project Mirador require the exploration of vast extensions of land to be economically viable and profitable. This is only possible through the formation large-scale territorial enclosures, separating entire communities from land and water resources. Typically, as the history of the implementation of project Mirador shows, this process of enclosure is conducted by means of various strategies of deception and rights violations, but not without resistance.

⁹ According to data provided by RAISG – Rede Amazônica de Informação Socioambiental (<https://www.amazoniasocioambiental.org/en/>): Ichigkat Muja National Park = 87.136,81 ha; Ecological Reserve El Quimi = 8.245,54 ha; Wild Life Shelter El Zarza = 3.708,77 ha; the Ecological Protection Zone El Cóndor = 17,953 ha; Biological Reserve El Cóndor = 2.736,07 ha.

Map 02



MINING CONCESSIONS, INDIGENOUS TERRITORIES AND ECOLOGICAL PROTECTION AREAS IN THE CORDILLERA DEL CÓNDOR

- Mega-mining Projects
- Mining Concessions
- Ecological Reserves
- Indigenous Territory

Part II

Dispossession & Displacement *forced evictions caused by project Mirador*

In order to acquire control over the mining concession in the Cordillera del Cóndor, Ecuacorriente used obscure procedures and intimidating tactics to divide communities and force them to leave their lands. This occurred with the knowledge, connivance, and direct support of the Ecuadorian State, which was instrumental to remove the population in two main ways: on the legal front, by making use of juridical mechanisms to expropriate land and persecute land and nature rights defenders that fought against the mine; on the territory, by deploying security forces to evict families that refused to abandon their homes.

Throughout the implementation of the Mirador project, the Ecuadorian government made frequent

use of a legal mechanism called *servidumbre*, which allows land expropriation in case of projects defined as “public utility” or “national interest.” Under the *servidumbre* mechanism, the affected party receives certain financial compensation for the expropriated property, but has no choice to remain, being obliged to leave the land.

Testimony of victims collected by human rights organizations show that land acquisitions conducted by Ecuacorriente and its intermediaries, as well as negotiations of *servidumbre* with state representatives, were often realized under forms social, psychological, and physical coercion of families who were unwilling to give up their

Img: A sign reading “private property” demarcating the concession area of project Mirador





IMG: The little church at the center of the San Marcos village and one of the remaining houses before destruction on May 2014.

properties. Moreover, similar to other areas of the Ecuadorian Amazon, many shuar and migrant kichwa and mestizo families in the Cordillera del Cóndor did not have official land titles, which made them more vulnerable to dispossession and displacement.¹⁰

These “forcibly land sales” began in the early 2000s, when the Mirador concession was under control of the Canadian corporation Corriente Resources. By 2010, when the concession was acquired by the Chinese consortium Ecuacorriente, nearly all families that lived in San Marcos, one of the main villages of the parish, had already left the area. Their houses were subsequently destroyed.

Formed in the late 1960s as a result of colonization policies, the village of San Marcos was situated in one of the few flat terrains that exists within the Mirador concession. The even topography of this area made it a perfect site to accommodate the main infrastructure of the mining complex, cheapening construction. San Marcos was then designated as a key site in the plan of the mine infrastructure. Hence it was also the first area that the company sought to empty out.

Approximately 19 families lived in the village, which functioned as a sub-center for the community after the town of Tundayme, being equipped with various social services such as a school, a church, a football square, a recreational park and water and electric infrastructures.¹¹

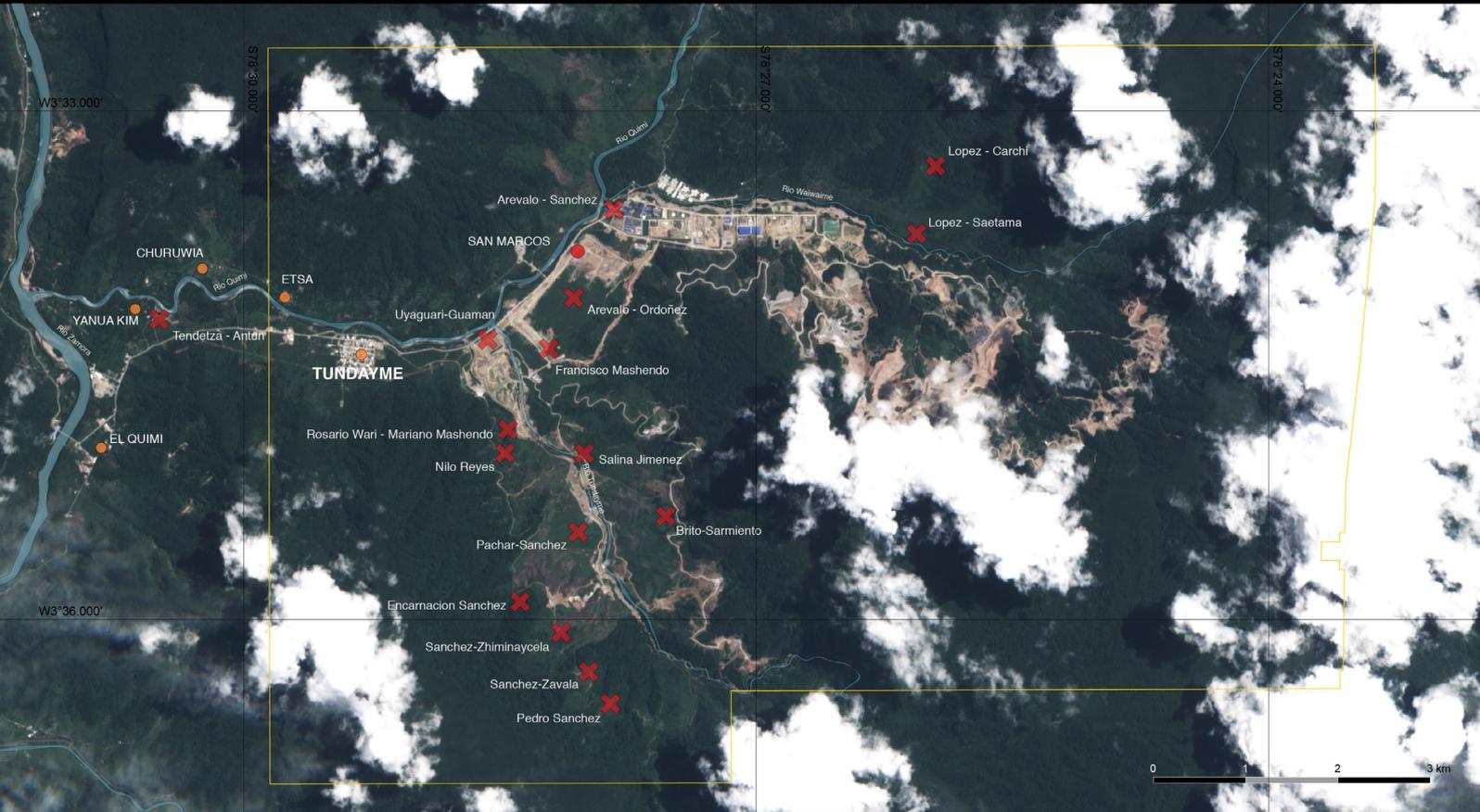
The case of San Marcos is also significant because the village eventually became the epicenter of local resistance against the Mirador mega-mine. At least two families refused to leave the site, and in doing so protected the village from complete destruction, salvaging the church, the school and other smaller common infrastructures. On 12 May 2014, without warning or judicial order, police forces and security guards of Ecuacorriente occupied the village with heavy machinery and evicted the families, razing their houses, the church and the school to the ground.

In reaction to this brutal event, some of the families who were forced to leave San Marcos formed the advocacy organization CASCOMI – the Cordillera del Cóndor Amazonian Community for Social Action, and initiated a series of legal measures to claim reparations. In early 2015 a farmer transferred to

¹⁰The chronology and narrative of the evictions presented in this section is based on interviews with victims and data collected in various human rights reports and studies, including: Francisco Xavier Hurtado Caicedo, *La minería a gran escala como factor de desplazamiento*, 2010; William Sacher et al, *Entretelones de la Megaminería en el Ecuador*, Acción Ecológica, Quito, Septiembre de 2015; William Sacher, *Ofensiva megaminería china en los Andes: acumulación por desposesión en el Ecuador de la “Revolución Ciudadana*, Quito, Ecuador : Abya Yala, 2017; Colectivo de Investigación y Acción Psicosocial, *La Herida Abierta del Cóndor*, 2017; Comisión Ecuaménica de Derechos Humanos (CED-HU) and Federación Internacional de Derechos Humanos, *Intervención Minera a Gran Escala en Ecuador y Vulneración de Derechos Humanos*, December 2010; Gloria Chicaiza, *el Enclave Minero de LA Cordillera del Cóndor*, 2010. Available at: <http://191.98.188.189/Fulltext/12509.pdf>.

¹¹ Hurtado, *op cit*.

Map 04.1



FORCED EVICTIONS IN THE AREA OF PROJECT MIRADOR BETWEEN 2014-2017 WITH IMPACTS OF MINING DEVELOPMENTS

- ✕ Evicted houses
 - Community
 - Evicted community
 - Ecuacuriente Mining Concessions
- Image: Sentinel - 24/10/2018

Map 04.2



THE DESTRUCTION OF SAN MARCOS

Structures destroyed

Images: Bing Maps - 2013
Planet - 28/07/2018



Img: A sign held by the advocacy agency CASCOMI at the house of the Rosario Wari warning the employees of Ecuacorriente to stay out of the area.

CASCOMI the communal ownership of the last plot of land in San Marcos that was not controlled by the company, so families began to return and built a new village center in there.¹²

The re-occupation of San Marcos marked a turning-point in the social mobilization against the Mirador mine, therefore it was not allowed to last long. Months later, on September 2015, state forces evicted the families and the new village was destroyed. Today, as **Map 05** shows, the tailing pools are located at the site of San Marcos.

The destruction of San Marcos was the first of a series of violent evictions conducted by state and private forces between 2014 and 2017, which affected at least 27 families between shuar, kichwa and mestizos throughout the region. Large part of the community lived outside San Marcos, occupying small farms along the Wawayme, Tundayme and Quimi rivers. After the eviction of San Marcos, most refused to leave. The displacements then became much more violent.

List of families forcibly evicted in state-led operations between 2014-2016:

(This list excludes cases of displacement by servidumbre)

Arevalo – Sanchez; Arevalo – Ordoñez; Brito – Sarmiento; Encarnacion Sanchez; Francisco Mashendo; Lopez – Saetama; Lopez – Carchi; Nilo Reyes; Pachar – Sanchez; Pedro Sanchez; Rosario Wari - Mariano Mashendo; Salinas Jimenez; Sanchez – Zavala; Sanchez – Zhiminaycela; Tendetza – Antun; Uyaguari - Guaman

San Marcos Town Center

Carlos Brito Sarmiento - Blanca Quiroga; Borja – Gualan; Franklin Salinas - Heidi Alvarez Ordoñez; Edison Salinas - Jenny Alvarez Ordoñez; Jose Borja Cudi and Carmen Gualan Andrade; Leon-Guaman (Julia Ordoñez); Segundo López Saetama - María Carchi Yari; Rosa Doralisa Ordoñez; Segundo Leon Ordoñez; Hermenegildo Yari Mora - Mercy Cajamarca Zhungo; Tukup – Cajamarca.

¹² Sacher, *op cit*



Img: Raúl Sanchez shows the site of the former house of his parents along the Cóndor road, which was demolished by state forces in December 2015.

On 30 September 2015, at dawn and without prior notice, over fifty police officers and several security guards of the company Ecuacorriente carried out an eviction against 13 families in San Marcos and on the El Cóndor road, at the margins of the Tundayme River. Equipped with guns and bulldozers, they destroyed their homes, edible gardens and hen houses, forcing elderly, women and youth to flee without place to go. On this same occasion the new village of San Marcos that was being built by returnee families was also completely destroyed.

Weeks later, on 16 December 2015, another violent land-clearing operation was conducted across the area. Once again at dawn and without prior notice and judicial order, state forces and private security guards of Ecuacorriente evicted more 14 families. Similar to the displacements of September, all the houses were destroyed in front of the families as a way of terrorizing them and preventing their return. The rubble of the house structures, together with personal belongings that were inside them, were buried on the same plot of land.

Even after the brutal evictions of September and December 2015, the shuar elder Rosario Wari and her son Mariano Mashendo refused to abandon the area. The company sought to intimidate them by carving roads around their little plot of land, “besieging” their house and destroying their garden. Still they resisted and remained. On 4 January 2016 they were evicted, only to return weeks later.

The last evictions took place on 13 May 2016 against the shuar family Tendetza-Antún in the community of Yanua Kim, and latter on 04 February 2017 against Rosario Wari and her son, by that time the last residents of the area.

Map 04 shows the geography of evictions carried out between 2014 and 2017, excluding displacements caused by coerced forms of land sale and servidumbre, which are much more numerous and started earlier. These evictions were executed according to a similar pattern in that all of them were conducted by the conjoined forces of state and private security forces; none of them presented



Img: The house and garden of the elderly shuar Rosario Wari surrounded by two roads carved by the company Ecuacorriente.

prior notice or judicial order to be realized; and all of them incurred in violations against the physical and psychological integrity of the families.

They were also similar in the employment of disproportional force. All the evictions involved the destruction of houses in front of the families, who in many cases lost other properties and personal belongings such as herds, crops, working tools, domestic utensils and cash savings. Testimonies of victims are unanimous in claiming that evictions were conducted without any plan for re-location or sheltering, leaving families in vulnerable situation without housing.¹³

The systematic destruction of property shows that evictions had the intent of not only removing families from the area, but also terrorizing them, thereby preventing their return and eliminating social opposition against the mine. In that sense they were not only means of human rights violations, but also instruments of political repression.¹³

The eviction of the Tendetza-Antún family in 2016 must be noted in that respect, because they are relatives of José Isidro Tendetza Antún, a prominent activist who was brutally murdered on 28 November 2015. On that day José Tendetza was forcibly disappeared, tortured and killed on his way to an anti-mining meeting. Because of his fierce opposition to the mine, he and his family were reportedly subjected to a campaign of intimidations, harassments and death threats for years. In 2012 their house and crops were burned in an apparent retaliation carried out by a group of men working undercover for Ecuacorriente.¹⁴ This background leads to the conclusion that the eviction of the Tendetza-Antún family in 2016, likewise the murder of José Tendetza, was politically motivated.

¹³ Colectivo de Investigación y Acción Psicosocial, *La Herida Abierta del Cóndor*, 2017.

¹⁴ Dan Collyns, *Was this indigenous leader killed because he fought to save Ecuador's land?*, in *The Guardian*, 02 June 2015, available at: <<https://www.theguardian.com/world/2015/jun/02/ecuador-murder-jose-tendetza-el-mirador-mine-project>>.

Part III

Ecological Impacts *deforestation and water contamination*

Sitting at the frontiers between the Andes and Amazonia, the Cordillera del Cóndor region functions as an “ecological bridge” between different highland and lowland climatic ecosystems. This condition gives these montane forests a high degree of species diversity and endemism, so much so that the Cordillera del Cóndor is considered one of the planet’s most important yet least-known biological refuges.

Environmental studies point to the uniqueness of this territory, especially in terms of its fauna and flora, as well as in terms of its importance to the larger hydrological cycle of the Amazon basin.¹⁵ According to botanist David Neil, who investigates the Cordillera del Cóndor region since the 1990s, this territory may harbor “the richest flora of any similar-sized area anywhere... and it almost certainly has one of the highest concentrations of vascular plant species yet unknown to science of any place on Earth.”¹⁶

The Cordillera del Cóndor is home to various endemic species, that is, animals and plants that are native to this territory and most probably only exist here. Most of them have not yet been inventoried by science. Moreover, this region constitutes an important refuge for non-endemic species in risk of extinction across the continent, including mammals like the jaguar, the spider monkey, and the Andean bear.¹⁷

Beginning in 2019, the mega-mine Mirador will be explored for 30 years, producing annual averages of 137 million pounds of copper, 34.000 ounces of gold, and 394.000 ounces of silver.¹⁸ Geologically speaking, the Cordillera’s underground holds a giant mining belt, hence it was designated as the “strategic site” of three mega-mining projects in Ecuador (Mirador, San Carlos-Panantza, and Fruta del Norte). But studies also show that, in terms of density, the soil has rather low concentrations of metals. This means that for lucrative levels of production to be achieved, the extraction crater has to be very large and deep, processing huge quantities of earth on a daily basis. According to the plans presented by Ecuacorriente, the Mirador mine will process up to 60.000 tons of stone per day, the equivalent to 3.000 load trucks, consuming more than 200 liters of fresh water per second.¹⁹

¹⁵ Juan M. Guayasamin y Elisa Bonaccorso, *Evaluación Ecológica Rápida de la Biodiversidad de los Tepuyes de la Cuenca Alta del Río Nangaritza, Cordillera del Cóndor, Ecuador*, Conservation International, 2011.

¹⁶ Personal Interview with David Neil, December 2012.

¹⁷ Gloria Chicaiza, *el Enclave Minero de La Cordillera del Cóndor*, 2010. Available at: <http://191.98.188.189/Fulltext/12509.pdf>.

¹⁸ Latinomineria, Los principales proyectos mineros en Ecuador, 9 March 2018. Available at: <http://www.latinomineria.cl/reportajes/los-principales-proyectos-mineros-ecuador/>.

¹⁹ Action for Injunctive Relief for Rights of Nature, Open Pit Copper Mining Project Mirador. Available at: <https://therightsofnature.org/the-case-for-rights-of-nature-in-face-of-the-mirador-open-pit-copper-mining-project/>.

Img: Deforestation at an early stage in the site of project Mirador. The implementation of the mega-mine required the destruction of vast swaths of pristine forestlands.





Img: Construction of the tailing dams in the former site of the San Marcos village, January 2016

The extraction area of the Mirador mine and its adjacent infrastructures – processing facilities, tailing dams, spoil tips, energy infrastructure, roads, dikes, workers camps etc. – occupy the entire territory between the Tundayme and the Wawayme rivers. Because of the scale of extraction and the remote location of the mine, the Mirador project also required the construction of several large-scale transport and energy infrastructures outside the concession, including a power plant.

Given its “mega” dimensions, the Mirador mine will have equally “mega” environmental impacts on the impressively rich and fragile ecological systems of the Cordillera del Cóndor region as a whole. Open-pit extraction is an activity extremely harmful to the environment. Industrial scale mining operations require not only the exploration of vast tracts of land to become technically viable and economically profitable, but also high-levels of consumption of water, energy and chemicals. Further, the extraction process generates enormous quantities of waste products that are highly toxic for land and rivers, and thereby also for local communities.

Map 05 shows the evolution of the implementation of Mirador project captured by satellite images in two stages:

- 1) In 2013, after the first destruction of the village of San Marcos and prior to the forced evictions of 2014-2017. At this moment the company Ecuacorriente was initiating the construction of the extraction complex, and few infrastructural works are visible in this image. Most of the families alongside the Tundayme and Wawayme rivers still lived in the area.
- 2) In 2018, after the violent evictions of 2014-2017, when the area was totally depopulated. The territory changed dramatically as vast tracts of pristine forests between the Tundayme and Wawayme rivers were completely destroyed. The mine infrastructure occupies a much larger space, the tailing dams and the crater are in advanced stages of construction.

Map 05



DEFORESTATION CAUSED BY
THE MEGA-MINE PROJECT MIRADOR (2013-2019)

Ecuacorriente Mining Concessions

Images: Landsat - 2013
Sentinel - 13/12/2019

It is difficult to visualize the large-scale, widespread and long-term environmental impacts of the Mirador project as a whole when looking from the ground. Satellite images provide another perspective on the scale of the damage caused thus far, showing the extension of deforestation and sites of contamination of water streams. **Map 06** shows the before-after condition of the Quimi River during the opening of the Mirador mine (2014-2018). Streams and ground water sources in this region can no longer be used by villagers and farmers because they are contaminated with sediments from erosions as well as chemicals used by the mine.

The waste products of mining extraction, a kind of highly-toxic mud, are stored in huge tailing dams that are much larger than the crater itself. This mud contains heavy metals that contaminate

freshwater sources through various ways, such as underground infiltration, rain acidification, or through direct discharges into the environment that might be necessary to contain overflows or dam collapse. Thus the scale of the Mirador infrastructure involves risk of accidents that can have devastating impacts over the entire region beyond the mining concession area.

As the 3D modeling of the mine project presented below shows, Mirador includes two large tailing dams. The smaller is under construction and is situated in the former site of the village of San Marcos, in a lowland area next to the confluence between the Tundayme and the Quimi rivers. The second tailing pool, which has ten times the capacity, is situated above stream on the Tundayme River.



Img: Cordillera del Cóndor Mega-mine satellite image (2018) / topographic model

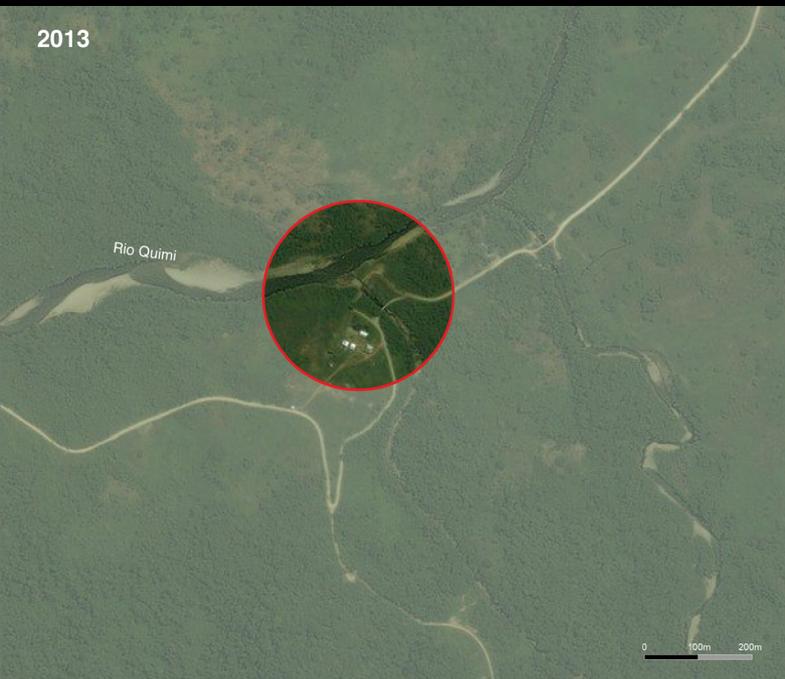


Img: Cordillera del Cóndor Mega-mine satellite image (2018) / topographic model - detail

The recent catastrophic collapses of the tailing dams in Mariana and Brumadinho in Brazil, which released a deadly flow of toxic mud destroying communities and environments downstream, demonstrate the scale of the potential impact involved in mega-mining operations such as the Mirador project. The modeling of the mining infrastructural complex shows that communities situated downstream the

tailing pools – which include the Shuar centers of Etsa, Churubia, and Quimi; communities that live in Valle del Quimi; and the town center of Tundayme – are under threat of facing a similar devastating “disaster.” Furthermore, in a region so ecologically sensitive and important to global climate balance as Amazonia, such risk is not only local, but potentially planetary.

Map 06.1



RIVER CONTAMINATION CAUSED BY THE MEGA-MINE PROJECT MIRADOR (2013-2018)

Images: Landsat - 2013
Planet - 28/07/2018

Map 06.2



RIVER CONTAMINATION CAUSED BY THE MEGA-MINE PROJECT MIRADOR (2013-2018)

Images: Bing Maps - 2013
Planet - 28/07/2018

Part IV

Cultural Erasure

expropriation and destruction of indigenous archaeological heritage

In addition to the expulsion of local communities; deforestation of vast areas of pristine forests; and the contamination of water sources; mega-mining operations are also destroying numerous indigenous archaeological sites in the Cordillera del Cóndor region.

Studies conducted as part of mining prospecting activities and environmental impact assessments demonstrate the existence of hundreds of archaeological sites distributed throughout the concession area. Map 07 presents the geographic location of these sites as identified in several

studies produced for project Mirador between 2016 and 2017.

A total of 107 sites presenting significant archaeological evidence were located, most of them characterized by anthropogenic earth-movements known as terraces. A terrace is defined by a flat area cut on a slope that was used as platform for crop cultivation. There are at least 900 terraces in the region, most of which are associated with the occurrence of ceramic and lithic fragments, and often with impressive pottery works such as funeral urns and sculpted objects that may have

Img: Carlos Tendetza-Antún and his mother, with an ancient ceramic pot encountered in their farming garden at the back of their house. The Tendetza-Antún family was displaced in early 2017.





Img: Documentation of the petroglyph found in archaeological site Z6DIII-020 before its destruction.



Img: Sampling of material goods through shovel tests.

had ritual functions. This indicates that in the past this region was inhabited by settled cultures that produced substantial transformations in the regional landscape and nurtured sophisticated arts and crafts.

The mapping of the geographic distribution of these sites shows that they form a very large and dense archaeological complex that extends throughout valleys of the Wawayme, Tundayme and Quimi rivers. Given that scientific studies were not exhaustive neither systematic, but rather circumscribed to the specific context and interests of environmental impact assessments for mining operations, it is likely that this archaeological complex includes a much larger number of sites than already identified, extending over a much wider territory.

The few sites that went through carbon tests show a concentration of dates between 800 and 1300 AD. According to one archaeological study, this allows to infer “a period of greater occupation” in this interval, just prior to the invasion of European colonizers.²⁰ The communities that lived in this region were therefore the near ancestors of the Jivaroan peoples.

As shown in **Map 07**, several archaeological sites are located inside the concession area where mining activities are developing. At the time of this writing, probably most if not all them have been completely destroyed.

This is the case of sites Z6DIII-020 and Z6DIII-021, where an investigation commissioned by Ecuacorriente in 2006 identified a large petroglyph. This study concludes by recommending a modification in the original project of the mine to “avoid the destruction” of the petroglyph and its adjacent archaeological structures, which included more than 30 terraced structures.

²⁰ Fabian Villalba Sevilla, . *Informe Del Proyecto Investigación Arqueológica En El Valle Del Río Quimi 2010 Excavación En Los Sitios Z6d3-020, Z6d3-043 y Z6d3-044, Prospección En El Río Tundayme. Parroquia Tundayme, Cantón El Pangui, Provincia de Zamora Chinchipe - Ecuador, 2010, pg. 210.*

“For the specific case of sites Z6DIII-020 [petroglyph] and 021, which are related to each other, given their great historical importance, it is recommended that these findings are protected, and that they should not be affected in any way by the work carried by the company. It should be emphasized that the petroglyph should not be removed, relocated or modified, and in the best case the company should reconceive the planning of the mine to prevent the destruction of these sites.”²¹



Img: Anthropomorphic object rescued during the excavation of terrace structures in archaeological site Z6DIII-04T.

These recommendations were ignored. In a field inspection conducted by the Ecuadorian National Institute of Cultural Heritage (INPC) in 2017, it was observed that the petroglyph had been drilled with several deep holes, demonstrating “the intention to fragment the rock by blasting.”²² Months later, on 3rd April 2018, another field inspection conducted by the INPC found the petroglyph “partially destroyed.”²³ Other sites, as for example site Z6D3-004, a complex of 11 terraces located next to San Marcos, have also been reportedly destroyed.

The studies and reports that we analyzed also show that some sites have gone through “archaeological rescuing,” and that all material collected remain in possession of Ecuacorriente or the Ecuadorian State. According to the INPC report mentioned above, these archaeological materials are stored in precarious conditions, “without technical standards,” in a deposit at the Socialization and Training Room of the Mirador project. As such they are under risk of being irreparably damaged and lost. Further, indigenous communities that inhabit the area, the original owners of these cultural heritage, have not been consulted regarding these archaeological sites nor do they have information about the destination of the rescued objects.

²¹ Fernando Mejía and Rosalba Chacón. *Informe Final Del Proyecto Arqueológico Mirador Excavación Arqueológica de Los Sitios Z6d3-017 y Z6d3-019, Parroquia Tundayme, Cantón Panguí, Provincia de Zamora-Chinchiipe*, November 2006, pg. 34

²² Mercedes Cecivel and Beatriz Ayabaca. *Memorando No. 001-CAM-UBM-ARQUEOLOGIA-2017*. INPC, December 6, 2017, p. 8

²³ Beatriz Ayabaca, Joe Espinosa, and Cecivel Moran Abril. *Inspección del impacto de Proyectos Minero Mirador y Hidroeléctrico Hidrocruz*, April 5, 2018, pg. 09

archaeological sites



Img: Cultural terrace structures present in one of the archaeological sites identified within the Mirador Project in archaeological site Z6DIII-04T.



Img: Sequence of cultural terrace structures present in archaeological in archaeological site Z6DIII-063.



Img: Sequence of cultural terrace structures present in archaeological in archaeological site Z6DIII-063.

archaeological sites



Img: Documentation of objects found during the excavation of a terrace structures in archaeological site Z6DIII-04T.



Img: Excavation works in archaeological site Z6C4-010.



Img: Trench 2 excavation, Terrace 7, in archaeological site Z6DIII-04T.



Imag: Unity 3, archaeological site Z6DIII-04R.

archaeological sites



Img: Funeral urn composed of Two Superimposed Vessels in archaeological site Z6D3-098.



Img: Funerary urn vessel in archaeological site Z6D3-098.



Img: Documentation of funerary urn found during the excavation of terra structure in archaeological site Z6C4-010.

Conclusion

Expulsions *Environmental Dispossession* *and Cultural Destruction*

The implementation of the mega-mining project Mirador in the Cordillera del Cóndor region, at the southern flanks of the Ecuadorian Amazon, has been marked by systematic land and human rights violations of indigenous and peasant communities that lived in these territories. Since its early stages, project Mirador was conducted without prior, free and informed consultation of local communities, violating basic right principles and protocols of which Ecuador is signatory.²⁴ Latter, as local communities organized and refused to leave their lands, the Ecuadorian state and the mining company Ecuacorriente joined forces to forcibly evict the population to open the area for the megamine.

The implementation of project Mirador was based on the removal of the entire community that lived in the valleys of the Wawayme, Quimi and Tundayme rivers. This report shows that, in order to do so, there existed a coordinated strategy of “land clearing” executed by state and private security forces aimed at depopulating the region. All of the mapped evictions were conducted through the destruction of houses, gardens and communal buildings. As such they consist in grave human rights violations that are not isolated cases, revealing a pattern of violence directed against the entire community.

This report also provides insight on the massive scale of environmental destruction caused by project Mirador. Satellite images show that mining operations accelerated exponentially after the evictions of 2014-2017. Without the presence (and resistance) of the local community, deforestation spread massively throughout the region. Further, earth movements and erosions caused by the construction of the mining complex led to severe contamination of water streams, directly affecting villagers and farmers. This situation tends to become much worst with the beginning of extraction operations scheduled to start this year.

Finally, this study also provides evidence that numerous indigenous archaeological sites have been destroyed by project Mirador. Ignoring protocols of consultancy, archaeological rescue operations have been carried out without informing local indigenous communities and official indigenous agencies in Ecuador, configuring a continuous act of cultural dispossession.

Observed in relation to each other, the processes of expulsion and expropriation narrated in this mapping report constitute multiple forms of displacement – of land, resources, and culture. As such they should be repaired and remedied in multiple dimensions: social-economic, environmental and cultural.

²⁴ Notably the ILO 169, Indigenous and Tribal Peoples Convention, , signed by Ecuador in 1989.

Bibliography

Colectivo de Investigación y Acción Psicosocial. Ecuador: *La herida abierta del Cóndor Vulneración de derechos, impactos socio-ecológicos y afectaciones psicosociales provocados por la empresa minera china Ecuacorriente S.A. y el Estado ecuatoriano en el Proyecto Mirador*. Quito: El Chasqui Ediciones, 2017.

CEDHU (Comisión Ecuménica de Derechos Humanos) and FIDH (Federación Internacional de Derechos Humanos). *Intervención Minera a Gran Escala en Ecuador y Vulneración de Derechos Humanos*. Quito: 2010.

Sacher, William and Báez, Michelle et al. *ENTRETELONES DE LA MEGAMINERÍA EN EL ECUADOR*. Quito: Acción Ecológica and Instituto Superior de Investigación y Posgrado (ISIP)/UCE, 2015.

Little, Paul E. *Mega-development Projects in Amazonia: a geopolitical and socioenvironmental primer*. Lima: Articulación Regional Amazónica - ARA, 2014.

Taylor, Anne-Christine and Descola, Philippe. *El conjunto jívaro en los comienzos de la conquista española del Alto Amazonas*. Paris: l'Institut français d'études Andines (IFE), 1981.

Chicaiza, Gloria. *El Enclave Minero de la Cordillera del Cóndor*. Quito: Acción Ecológica, 2010.

Guayasamin, Juan M. and Bonaccorso, Elisa. *Evaluación Ecológica Rápida de la Biodiversidad de los Tepuyes de la Cuenca Alta del Río Nangaritza, Cordillera del Cóndor, Ecuador*. Arlington: Conservation International, 2011.