

# The Risks of Investing in Solaris Resources

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## INTRODUCTION

The Republic of Ecuador is known worldwide for its unique bioregions – Amazon, Andes, Pacific Coast, and the Galapagos islands. The megadiverse country holds some of the highest rates of biodiversity and endemism on the planet. It is also home to immense cultural diversity, with dozens of Indigenous nationalities who speak more than 14 maternal languages and steward hundreds of millions of acres of territory throughout the country.<sup>1</sup>

Ecuador is also estimated to hold significant reserves of copper, gold, aluminum, and other metals. With the exception of the Galapagos islands, mining projects are underway in all of these unique bioregions. The country has two large-scale open pit mines currently operating, Mirador and Fruta del Norte in the southeastern Amazon. But there are several other projects in the exploratory phase, and [hundreds of concessions](#) have been awarded for future exploration.

Ecuador exported an estimated \$1.6 billion in mineral resources in 2021.<sup>2</sup> Lasso seeks to boost the country's mining export revenue from \$2 billion in 2021 to \$4 billion by 2025<sup>3</sup> and achieved a 33% rise in exports in 2022.<sup>4</sup> Currently, Ecuador's mining sector is currently less than 1% of GDP but Lasso stated his ambition to expand the mining sector to a level on par with other regional exporters like Peru and Chile, where it accounts for between 10-12% of GDP.<sup>5</sup> If realized, mining would surpass oil as the number one export earner, a sea change for the former OPEC member hoping to position itself as the world's next destination for mining activity to fuel the energy transition.<sup>6</sup>

But the mining industry in Ecuador is facing significant opposition from Indigenous peoples, local communities, and environmental organizations. Flagship projects face delays, suspensions, and cancellations over environmental concerns and rights violations; local

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<sup>1</sup>Republic of Ecuador. 2022, May 18. Biodiversidad, Pueblos y Nacionalidades.

<http://www.pueblosynacionalidades.gob.ec/wp-content/uploads/2022/05/Boletin-18may22.docx.pdf>

<sup>2</sup>Ecuador expects 4 major mining projects to start up by 2025. 2021, September 17. *Reuters*.

<https://www.reuters.com/business/energy/ecuador-expects-4-major-mining-projects-start-up-by-2025-2021-09-17/>

<sup>3</sup>O'Farrell, S. 2022, December 14. Ecuador's golden age of oil has passed. *FDI Intelligence*.

[https://www.google.com/url?q=https://www.fdiintelligence.com/content/interview/ecuadors-golden-age-of-oil-has-passed-81769&sa=D&source=docs&ust=1677934477377303&usg=AOvVaw2qtl-Upsv6BC6ViyU\\_LKvI](https://www.google.com/url?q=https://www.fdiintelligence.com/content/interview/ecuadors-golden-age-of-oil-has-passed-81769&sa=D&source=docs&ust=1677934477377303&usg=AOvVaw2qtl-Upsv6BC6ViyU_LKvI)

<sup>4</sup>Ecuador mining export revenues jump nearly 33% in 2022. 2023, February 23, *Reuters*.

<https://www.xm.com/es/research/markets/allNews/reuters/ecuador-mining-export-revenues-jump-nearly-33-in-2022-53251471>

<sup>5</sup>Melendez, Angela. 2022, January 11. Ecuador Has 'World Class' Deposits, But Mining Sector Faces Challenges to Growth. *Bloomberg*.

<https://www.bloomberglinea.com/2022/01/11/ecuador-has-world-class-deposits-but-mining-sector-faces-challenges-to-growth/>

<sup>6</sup>Ministerio de Energía y Minas, Republica del Ecuador. 2023, January 23. Ministro de Energía y Minas afianza relaciones con embajadores de países mineros.

<https://www.recursosyenergia.gob.ec/ministro-de-energia-y-minas-afianza-relaciones-con-embajadores-de-paises-mineros/>

referenda in mineral-rich provinces are restricting mining activity; and a moratorium on all new mining concessions in the country is currently in effect.<sup>7</sup>

This risk assessment focuses on Canada-based Solaris Resources and its flagship Warintza Project, which is representative of many of the structural challenges and risks related to the expansion of mining in the Ecuadorian Amazon. As detailed herein, the Warintza Project threatens a critical ecosystem and violates the collective and territorial rights of the Shuar Arutam (PSHA) people. This assessment exposes the social, cultural, and human rights impacts related to the project, and the consequential environmental, business, and political risks faced by the company, its investors, and the mining sector writ large. These impacts and conflicts make the Warintza mine a high-risk project, demonstrating that large-scale mining in the Amazon is not feasible in times of climate and environmental crisis, nor at the expense of the rights of local communities.



*PSHA leaders March in Quito, Ecuador at Women's March, 2022, Credit: Amazon Watch*

## **SOLARIS RESOURCES COMPANY OVERVIEW (SLS.TO / SLSSF)**

Solaris Resources Inc. (SLS.TO) is a Vancouver, BC-based junior mining company with multiple assets across the Americas. Solaris is part of the Augusta Group, a mining sector-focused management group based in Canada and the United States, along with Titan Mining

<sup>7</sup>It's worth betting on Ecuador mining, despite the uncertainty and risks. 2023, January 20. *Bnamerica*s. <https://www.bnamerica.com/en/interviews/its-worth-betting-on-ecuador-mining-despite-the-uncertainty-and-risks>

Corporation. It engages in the acquisition, exploration, and development of mineral properties focused on copper, molybdenum, gold, lead, zinc, and silver. Its flagship project is the Warintza Project in the Cordillera del Cóndor mountain range in southeastern Ecuador.<sup>8</sup> The project features a broad cluster of outcropping copper porphyry deposits anchored by a large-scale, high-grade open pit resource inventory at Warintza Central.<sup>9</sup>

Key Officers	Financials <sup>10</sup>
President & Chief Executive Officer: Daniel Earle Executive Chairman: Richard Warke Chief Financial Officer: Sunny Lowe President, Latin America: Federico G. Velásquez	Share Price: US\$4.41 Market Capitalization: US\$535,830 million Average Vol: 343,771

Solaris Resources Inc. (SLS.TO) Top Institutional Holders				
Holder	Shares	Date Reported	% Out	Value
Invesco Gold & Special Minerals Fund	1,291,200	10/30/22	1.05%	7,747,200
Global X Fds-Global X Copper Miners ETF	1,176,108	12/20/22	.96%	7,056,648
BlackRock Commodity Strategy Fd	206,903	11/29/22	0.17%	1,241,418
TIAA-CREF Funds-Quant International Small Cap Equity Fund	150,748	10/30/22	0.12%	904,488
Janus Henderson Emerging Markets Fund	134,989	12/30/22	.11%	809,934
College Retirement Equities Fund-Stock Account	124,787	9/29/2022	0.10%	748,722
Janus Detroit St Tr-Janus Henderson Net Zero Transition Resources ETF	109,936	10/30/22	0.09%	659,616
TIFF Multi-Asset Fund	79,100	9/29/22	0.06%	474,600
IShares MSCI Global Metals & Mining Producers EFT	65,856	12/30/22	0.05%	395,136
Fidelity Total International index Fund	22,786	11/29/22	0.02%	136,716

Source: [Yahoo Finance Listing of Top Institutional Holders 3/2/23](#)

<sup>8</sup> Yahoo Finance, Solaris Resources profile. <https://finance.yahoo.com/quote/SLS.TO/profile?p=SLS.TO> Accessed on 3/2/2023.

<sup>9</sup> Solaris Resources. "Warintza." <https://solarisresources.com/projects/warintza/> Accessed on 2/28/2023

<sup>10</sup> As of 3/2/2023.

# PROJECT SNAPSHOT OF SOLARIS ECUADOR OPERATIONS

**Project Name:** Warintza

**Location:** Moronga Santiago province, Ecuador

**Resource:** Large-scale copper, gold, and molybdenum

**Project status:** Advanced exploration

**Communities affected:** Shuar Arutam Indigenous Nation (Pueblo Shuar Arutam-PSHA)

**Ecosystem Affected:** Eastern Andes, Cordillera del Cóndor range, western Amazon Basin

**Human rights violations reported:** Right to Free, Prior, and Informed Consent, right to association and participation, right to personal integrity of human rights defenders, right to territory, right to culture and self-determination, and right to a healthy environment, guaranteed by Ecuador's constitution and jurisprudence, ILO 169, and UNDRIP

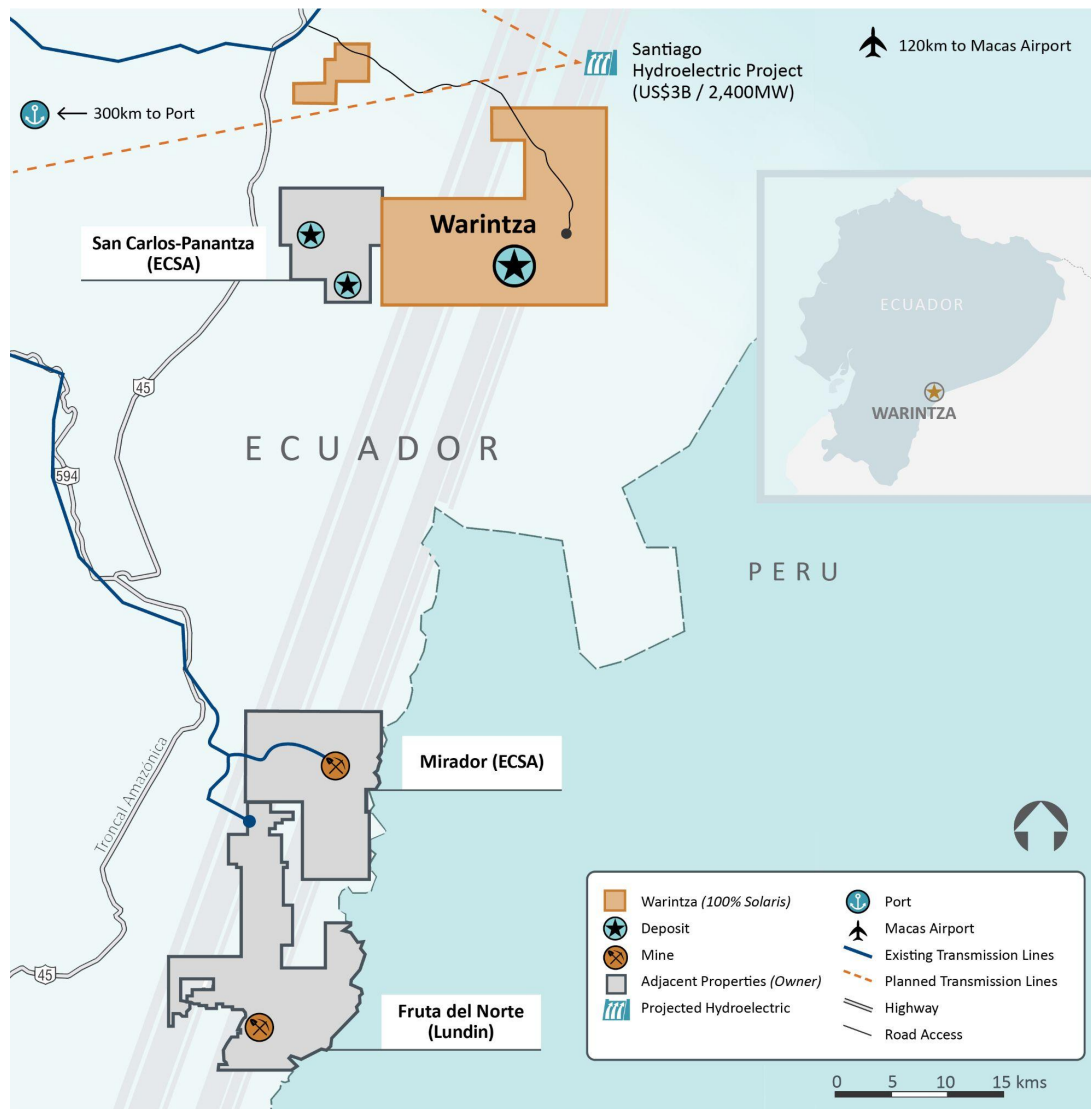


Figure 1. [Solaris mining concession](#) in southeastern Ecuador, 2022. Source: Solaris Resources Inc.



The Warintza deposit was first discovered in 2000 and remained mostly undeveloped for almost two decades due to community opposition.<sup>11</sup> Early exploration was conducted by Lowell Mineral Exploration, which along with the Warintza Project, was acquired by Solaris Resources in 2019. Warintza is a copper-gold-molybdenum project located in southeastern Ecuador, in the province of Morona Santiago, canton Limón Indanza. It consists of three metallic mineral concessions (“the Warintza Concessions”) that cover a total of 10,000 hectares.<sup>12</sup>

The concession falls on the ancestral and titled territory of the Shuar Arutam people, who number roughly 12,000. They are organized into 47 communities and hold collective land title to 232,533 hectares of rainforest. They are represented by their autonomous traditional government structure recognized by the Ecuadorian government, and known by the acronym PSHA (Pueblo Shuar Arutam). Their own development plan, crafted in 2019, declares their territory free of mining.<sup>13</sup> Based on this mandate, the PSHA have repeatedly rejected mining operations on their territory, and Solaris’ controversial efforts to move the project forward without consultation or consent have set the stage for conflict that puts the company’s signature project at risk.

## **SOLARIS IN THE CORDILLERA DEL CÓNDOR: A HISTORY OF SOCIAL, CULTURAL, AND HUMAN RIGHTS IMPACTS**

The Shuar Arutam Indigenous Nation has inhabited the mountainous regions of the Cordillera del Cóndor at the intersection of the Andes range and Amazon Basin for thousands of years. The Shuar Arutam organization was formed in 2003 with a mandate in its general assembly – the highest representative and decision-making body of the federation – to protect the environment and biodiversity of these ancestral Indigenous people and their natural resources from any threat that puts their cultural integrity at risk.

In 2019, shortly after Solaris Resources Inc. purchased Lowell Mineral Exploration and the Warintza Project, the Shuar Arutam conducted an internal consultation among its 47 base communities regarding mining projects on their collectively-held territory. The process, an exercise of their right to autonomy and self-determination, resulted in a collective decision to reject mining activities. At the XVI PSHA General Assembly at the organization’s headquarters in the community of Maikiuants, the Shuar Arutam declared their lands a “territory for life” free of mining extraction. They began a nationwide campaign to inform the government and Solaris that they do not want to engage in a process of consultation. PSHA has deemed any extractive activity incompatible with their sustainable development plans for their territory and do not want to be consulted, because they have already exerted their right and said no.<sup>14</sup>

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<sup>11</sup> Ronning, Peter P, and Steven Ristorcelli. 2018. “Technical Report: Warintza Project, Ecuador.” Technical Report, Warintza Project, Ecuador. Mine Development Associates. June 26. [https://www.solarisresources.com/\\_resources/reports/WarintzaTechReport.pdf](https://www.solarisresources.com/_resources/reports/WarintzaTechReport.pdf).

<sup>12</sup> *Ibid.*

<sup>13</sup> ICCA Consortium, October 13, 2022. <https://www.iccaconsortium.org/>.

<sup>14</sup> PSHA has officially rejected mining activities in formal assemblies and resolutions: IV Asamblea del PSHA en Maikiuants, April de 2007; Asamblea General de la CONAIE in Cuenca, 2008; II Asamblea Binacional Shuar-Wampis en Jempekat, 2008; III Asamblea Binacional Shuar-Wampis in Mayaik en



XVI Assembly of the PSHA, Maikiuants, 2019 Credit: Lluvia Communications

### ***The Failure of the “Warintza Model”***

In 2019, faced with this united opposition, Solaris began a divide-and-conquer campaign to subvert the PSHA democratic decision-making structure and manufacture the illusion of consent for the project. It focused on two communities closest to where the company sought to establish a workers' camp and conduct exploratory activities—Warints and Yawi.

It established the “Strategic Alliance,” a for-profit organization to provide funds to leaders and limited health and education “benefits” to both communities. The “Strategic Alliance” is operated by a board of two community individuals along with company representatives, and in effect acts as a parallel structure to the traditional decision-making structure of the PSHA.

*“This ‘Strategic Alliance’ is not an ‘innovative relationship’ as Solaris portrays it. It is the same strategy that many mining and oil companies have used to advance their projects, while side-stepping and disrespecting the legitimate and traditional Indigenous organizational structures... We demand that Solaris Resources, Inc. abstain from continuing to manipulate our communities since we see that their activities are causing social impacts in our communities like provoking tension, conflict, and rupturing our social fabric. We demand that the company*

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2009; Asamblea del PSHA on mining in Mayaik, 2016; XV Asamblea del PSHA in Tiink, March 2018, XVI Asamblea del PSHA in Maikiuants, 2019; XVII Asamblea General del PSHA, October, 2020.

*immediately leave our territories.*" - Open Letter from the PSHA to Solaris Resources  
9/23/2020<sup>15</sup>

Solaris points to the "Strategic Alliance" and the so-called "Warintza Model" as a supposed example of successful community relations that demonstrates community support for the project, but this masks the processes of division and the company's effort to destabilize the PSHA organization.<sup>16</sup> But while the Warints and Yawi communities are closest to where Solaris has established exploration activities and have expressed support for the project after Solaris' efforts, PSHA holds the collective land title, and therefore their consent and license to operate must be obtained.

### ***Free, Prior, and Informed Consultation vs. Consent***

Ecuador's 2008 constitution enshrines the right to Free, Prior, and Informed *Consultation*, making it mandatory for the government to consult Indigenous Peoples for projects or policies that affect their rights or territories.<sup>17</sup> But the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which Ecuador adopted in 2007, is the widely accepted standard and guarantees the right to *self-determination* and to *Free, Prior, and Informed Consent*. Recent Ecuadorian jurisprudence has determined that the consultation process must lead to consent. It also establishes that the territories of Indigenous peoples must be respected based on the principle of integrality, indivisibility, and guaranteeing their processes of self-determination.<sup>18</sup> However, Solaris has ignored these principles and advanced the project without Free, Prior and Informed Consent (FPIC) from the PSHA organization, who hold collective title to the territories affected, and in effect runs the risk of operating illegally.

*"Who did Guillermo Lasso consult, with whom did he disclose the positive and negative impacts of mining? With nobody, because we were not consulted. Likewise, a mining concession has been granted without respecting the right we have to say no to these activities."* - Josefina Tunki, President of the PSHA.

To that end, the Shuar Arutam people filed a complaint before the International Labor Organization (ILO) in February 2021 for the Ecuadorian government's failure to properly carry out a process of consultation leading to consent on both the Warintza and the adjacent Panantza-San Carlos mining concession, also on PSHA territory, which violated Convention 169 – a binding treaty that guarantees the right to Free, Prior, and Informed Consent. The complaint

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<sup>15</sup>"Open Letter to Solaris Resources Inc from the Government Council of the Shuar Arutam Peoples." Business & Human Rights Resource Centre, 2022. Accessed January 22, 2023.  
<https://www.business-humanrights.org/en/latest-news/open-letter-to-solaris-resources-inc-from-the-government-council-of-the-shuar-arutam-peoples/>

<sup>16</sup> Solaris Resources: home. "Warintza". <https://solarisresources.com/projects/warintza/>. Accessed on February 6, 2023.

<sup>17</sup>"Ecuador 2008 (Rev. 2021) Constitution." Constitute. February 8, 2023.  
[https://www.constituteproject.org/constitution/Ecuador\\_2021?lang=en](https://www.constituteproject.org/constitution/Ecuador_2021?lang=en).

<sup>18</sup>Ecuador court recognizes Indigenous Right to Consent Over Oil and Mining. 2022, February. *Amazon Frontlines*.  
<https://amazonfrontlines.org/chronicles/ecuador-supreme-court-recognizes-indigenous-right-to-consent-over-oil-and-mining/>



also asserted that this was a violation of their collective rights.<sup>19</sup> A favorable decision could cancel both concessions and set a major precedent around the right to consultation leading to consent. A decision is expected in 2023.

In addition to not conducting a consultation or obtaining consent from the PSHA over a mining project in their legally recognized collective territory, even the company's "consultation" with the Yawi community fell short of Ecuadorian and international standards. According to Augustin Wachapa, the President of Yawi, "They didn't carry out a process of consultation in accordance with the Constitution. There wasn't Free, Prior, and Informed Consultation. They only did a process of sharing information with the Yawi and Warints communities. They had a few meetings and from there, the company began to work."<sup>20</sup> Wachapa affirmed that the company never explained any negative impacts from the projects, only the possible benefits.<sup>21</sup> The Inter-American Commission on Human Rights has already stated that sharing information does not comply with international standards of FPIC, since it "is not a singular act, but a process of dialogue and negotiation that implies good faith."<sup>22</sup>

### ***Human rights impacts and threats to earth defenders***

Due to their resistance to mining, the PSHA leaders have faced persecution, intimidation, discrimination, and death threats. On November 6, 2020, Josefina Tunki, the president of the PSHA and the first woman to ever lead the organization or any Shuar government, received a phone call from Federico Velásquez, vice president of operations at Solaris Resources Inc. Velasquez stated, in reference to actions by the PSHA in opposition to the project, and including plans to file their case before the ILO, "If they continue bothering me with national and international complaints, one of these heads will have to be cut off."<sup>23</sup>

Tunki filed a complaint against Velásquez and Solaris denouncing the death threat with Ecuador's Prosecutor's Office in December. More than two years later, there has yet to be any investigation or resolution of the case. "I am a woman who for the first time is leading the PSHA government," declared Tunki. "If an 'accident' happens, Solaris and Federico Velásquez will be directly responsible." The threat left Tunki intimidated, fearing for her life and the safety of her family and allies. Shortly after, the PSHA territory around the Warintza site was militarized by the

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<sup>19</sup>International Labour Organization (ILO), Indigenous and Tribal Peoples Convention, C169, 27 June 1989, C169, available at: <https://www.refworld.org/docid/3ddb6d514.html> [accessed 4 March 2023]

<sup>20</sup>Alvarado, Ana Cristina. 2022, June 28. La minera canadiense Solaris Resources exporta 'reconciliación' con pueblos indígenas de Ecuador. *La Barra Espaciadora*. <https://www.labarraespaciadora.com/ddhh/la-minera-canadiense-solaris-resources-exporta-reconciliacion-con-pueblos-indigenas-de-ecuador/>

<sup>21</sup>*Ibid.*

<sup>22</sup>Derechos de los Pueblos Indígenas y Tribales Sobre Sus Tierras Ancestrales y Recursos Naturales, 2009. 2009, December 30. *Inter American Commission on Human Rights*. Organization of American States. <https://www.oas.org/es/cidh/indigenas/docs/pdf/tierras-ancestrales.esp.pdf>

<sup>23</sup>Moran, Susana. 2021, June 22. Josefina Tunki and Women Human Rights Defenders Attacked By Mining Companies and the Ecuadorian State. *Plan V*. <https://www.planv.com.ec/josefina-tunki-and-women-human-rights-defenders-attacked-mining-companies-and-ecuadorian-state>

government, and the personal Facebook accounts of Tunki and other leaders were hacked and content leaked in an apparent attempt to discredit the leaders and the PSHA.<sup>24</sup>

Tunki also brought the death threat against her to the attention of the Canadian government, through the Voices at Risk: Canadian Guidelines for Supporting Human Rights Defenders program, created in 2016 after international pressure over rights violations associated with projects of Canadian companies operating abroad. This program specifies how Canadian embassies and other officials should support human rights defenders and promote responsible conduct by Canadian companies operating abroad. Solaris, as a Canadian company, has a due diligence obligation to abide by the policies and guidelines issued by its home government, particularly regarding policies that refer to the protection of defenders and Indigenous peoples.<sup>25</sup>

The threat against Tunki is part of a larger pattern of persecution against earth defenders by the mining industry and the Ecuadorian government. There are currently 44 people facing charges filed by mining companies and/or the Ecuadorian government, for alleged acts of intimidation, extortion, theft, stoppage of public services, and damage to private property in response to resistance, confrontation, forced evictions, and territorial control.<sup>26</sup>

### ***Social and cultural impacts***

Solaris' effort to divide the PSHA, splinter off communities, and flip their position to favor mining activities is taking its toll. It has pitted communities and families against one another and fostered the creation of 'self-defense' groups that work to protect the mining project and the company's interests. It is eroding the social and organizational fabric of the Shuar Arutam, undermining its democratic and traditional decision-making processes and structures, and leading to a loss of traditional knowledge. The divisions also affect the long-term vision of the PSHA to plan and manage their territory in a way that is economically, environmentally, socially, and culturally sustainable in the future.

In March 2020, Solaris' efforts to promote the manufactured consent for the Warintza Project put Shuar Arutam communities at grave risk of contagion from COVID-19. Eager to tout the "Strategic Alliance" to industry, investors, and press, Solaris brought members of the Yawi and Warints communities – none of them elected representatives of the PSHA – to Canada to participate in the annual Prospectors and Developers Association of Canada (PDAC) convention. Solaris' delegation then returned to the communities, failing to follow epidemiological protocols or quarantining, and likely caused a COVID-19 outbreak that

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<sup>24</sup> Alvarado, Ana Cristina. 2021, November 23. Josefina Tunki: "Si hay que morir en la defensa del territorio, hemos de morir." *Mongabay*.

<https://es.mongabay.com/2021/11/josefina-tunki-ecuador-defensora-indigena-amenazas/>

<sup>25</sup> "Voces en Riesgo: Directrices Canadienses para el Apoyo a los Defensores de Derechos Humanos." Government of Canada: Global Affairs. Accessed 2/18/2023.

[https://www.international.gc.ca/world-monde/assets/pdfs/issues\\_development-enjeux\\_developpement/human\\_rights-droits\\_homme/rights\\_defenders-guide-defenseurs\\_droits\\_sp.pdf](https://www.international.gc.ca/world-monde/assets/pdfs/issues_development-enjeux_developpement/human_rights-droits_homme/rights_defenders-guide-defenseurs_droits_sp.pdf)

<sup>26</sup> Alianza por los Derechos Humanos en Ecuador. 2021, June 15th. Situación de Personas Defensoras de Derechos Humanos, Colectivos y de la Naturaleza en Ecuador.

<https://amazonwatch.org/es/news/2021/0615-report-by-human-rights-coalition-in-ecuador-exposes-mounting-threats>

followed. Shortly thereafter, the mother of one of the delegates died due to COVID-19. As UN Special Rapporteur Francisco Calí Tzay affirms in the July 2020 report on COVID-19 and Indigenous Peoples, the pandemic was having an irreparable impact on Indigenous peoples, in particular, because elders, who experience the highest mortality rates and are the most vulnerable to the virus, are also the guardians of culture, traditions, spirituality, and language.<sup>27</sup>

By October 2020, there were 126 confirmed cases of COVID-19 in Yawi and Warints.<sup>28</sup> The Ecuadorian government failed to provide adequate healthcare support to the PSHA during the COVID-19 pandemic. Solaris stepped in to provide health kits to the Yawi and Warintaza communities – an action denounced by the PSHA organization as yet another *quid pro quo* company tactic to garner support for the project in exchange for access to essential medical supplies during the global pandemic.

## ENVIRONMENTAL RISKS

*“Here we have waterfalls, rivers, medicine. Here we have meat. For us [mining] isn’t development. For us, the forest is life, it is our market.” - Josefina Tunki, President of the PSHA.*

The Cordillera del Cóndor, the ecological region that Solaris’ Warintza Project overlaps, is an isolated mountain range over 160 km long that straddles the Ecuadorian and Peruvian border. The range is at the intersection of the Andes and the Amazon and is a subtropical Andes hotspot for extraordinary biodiversity and endemic species. The area is a unique biological corridor between two ecosystems and plays a key role in linking the Andes-Amazon hydrological cycle.<sup>29</sup> It’s home to some of the most diverse flora in the world – many of which are new to science, including a rare carnivorous plant (*Drosera* species), and unique fauna such as the spectacled bear and the endemic marsupial—*Caenolestes Cóndorensis*.<sup>30</sup> This is due in large part to the abundance of water throughout the year, from direct rainfall precipitation to condensing moisture of cloud forests that feed rivers in southern Ecuador – the Zamora, Santiago, and Namangoza – forming the Upper Marañón River Basin, a major headwater of the

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<sup>27</sup>Report of the Special Rapporteur on the rights of indigenous peoples A/HRC/48/54. 2021, August 6. Indigenous peoples and coronavirus disease (COVID-19) recovery.

<https://www.ohchr.org/en/documents/thematic-reports/ahrc4854-indigenous-peoples-and-coronavirus-disease-covid-19-recovery>

<sup>28</sup> Pueblo Shuar Arutam. Informe del Pueblo Shuar Arutam Sobre el trabajo realizado en defensa territorial en la Cordillera del Cóndor “Maka Naint”, los días 20, 21 y 22 de agosto de 2020 en las comunidades de Yawi y Warints, de la asociación Shuar Nunkui. 24/08/2020 P. 3. Anexo 11

<sup>29</sup> Alcalde, Martín, Ponce, Carlos F., and Curonisy, Yanitza. Peace Parks in the Cordillera del Cóndor. <https://www.wilsoncenter.org/sites/default/files/media/documents/event/ponce.pdf>

<sup>30</sup>Gonella, Paulo & Fleischmann, Andreas & Rivadavia, Fernando & Neill, David & Sano, Paulo. (2016). A revision of *Drosera* (Droseraceae) from the central and northern Andes, including a new species from the Cordillera del Cóndor (Peru and Ecuador). *Plant Systematics and Evolution*. 302. 10.1007/s00606-016-1341-3.

[https://www.researchgate.net/publication/307477702\\_A\\_revision\\_of\\_Drosera\\_Droseraceae\\_from\\_the\\_central\\_and\\_northern\\_Andes\\_including\\_a\\_new\\_species\\_from\\_the\\_Cordillera\\_del\\_Condor\\_Peru\\_and\\_Ecuador](https://www.researchgate.net/publication/307477702_A_revision_of_Drosera_Droseraceae_from_the_central_and_northern_Andes_including_a_new_species_from_the_Cordillera_del_Condor_Peru_and_Ecuador)

Amazon River. But this unique ecosystem is at risk, as unfettered mining concessions now cover a vast extension of the C ndor range.

The Warintza mine is currently in the exploration phase. No studies have been conducted that address the suitability of sites for infrastructure (e.g. tailings, processing plant sites) or the availability of resources (e.g. water, power, personnel) at Warintza for a production phase. But the impacts of mining in the Amazon are well documented and bring devastating and irreversible environmental and climate impacts to one of the world's most important ecosystems:

- *Deforestation:*
  - The mining industry is a major driver of deforestation. In a comparable area, between 2005 and 2015, some 10% of deforestation in the Brazilian Amazon was a result of mining activities, which causes deforestation up to 70 kilometers away from mines when including ancillary infrastructure and related hydroelectric dams.<sup>31</sup> Felling standing forests – crucial for mitigating climate change – directly contributes to increasing CO2 emissions and results in biodiversity loss. But the associated deforestation from mining operations is equally as devastating. New road construction to service the mines and the creation of export corridors exacerbate deforestation and create permanent “arteries” into what were often previously inaccessible areas, which are then utilized by other extractive and agribusiness activities.
  - For Shuar Arutam communities, the forest provides food, medicine, and building materials, and holds many of their sacred sites. The Warintza communities are already reporting the effects of direct and indirect deforestation from the workers' camp and exploration activities.
- *Contamination:*
  - Soil, water, and air contamination is inherent to the mining industry. Gold and copper mines need high levels of mercury and arsenic that then leach from soil and tailings ponds into surface water and groundwater from acid mine drainage, which would be exacerbated by the high rainfall levels in the Cordillera del C ndor. There is also a risk of contamination from acid formation and potential ruptures of tailings dams, all of which present serious risks to the health and food supply of local communities, and the region's unique biodiversity.
  - Waterway contamination has been one of the main concerns of the Shuar Arutam, who rely on the rivers for drinking water. Multiple communities have complained about the unsanitary conditions of the river since the mining project began. According to Carlos Cajamarca – a PSHA farmer who lives roughly one kilometer upriver from the mine – says it has already contaminated the area's water supply and that people who bathe in the local river emerge with rashes and lesions on their skin. “The contamination is everywhere, in plants, people, and

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<sup>31</sup>Sullivan, Zoe. 2017, November 2. Mining activity causing nearly 10 percent of Amazon deforestation *Mongabay*.  
<https://news.mongabay.com/2017/11/mining-activity-causing-nearly-10-percent-of-amazon-deforestation>



animals,” Cajamarca shared.<sup>32</sup> Individuals in the community were told by a Solaris environmental engineer that the water in the polluted rivers wasn't safe to consume.<sup>33</sup>

- *Water usage:*
  - Mining relies heavily on access to water to transport and process ore. A conventional copper processing plant uses between 0.45 and 0.6 cubic meters of water per dry tonne of ore.<sup>34</sup> Thus, a 50,000 t/d ore copper mine will consume around 30,000 cubic meters of fresh water a day.<sup>35</sup> The abundance of water in the Cordillera de Cóndor is an obvious draw for mining projects in the region. But the risks for local communities who depend on clean potable water for drinking, fishing, bathing, and washing clothes – a fundamental human right – are high.
  - Mining operations often need dewatering, which involves extracting groundwater with toxic elements from the mines and discharging it in the environment, polluting soil and rivers. It can also cause acid mine drainage from the rocks that are no longer in contact with the water. This causes the rocks which contain sulfites, minerals, and acids to start draining into the environment.
- *Climate risk:*
  - The Amazon is at a tipping point. Scientists agree that 80% of the Amazon must remain intact to avoid the irreversible collapse of the biome from a mega-biodiverse carbon sink to a degraded savanna ecosystem and net carbon source. Deforestation and high degradation combined have already reached 26%, meaning that new large-scale industrial activity is incompatible with the survival of the Amazon Basin biome.<sup>36</sup> In addition to the environmental impacts of large-scale mining, including its construction and use of emission-causing hydroelectric dams and related deforestation, mining activity is also associated with the forced eviction and displacement of Indigenous peoples from their territories, which not only involves rights violations but removes the people who best protect standing forests and biodiversity from their lands.

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<sup>32</sup> Brown, Kimberley. “‘The Forest Is Life’: Indigenous Ecuadorians Fight Gold Miners.” The Christian Science Monitor, June 24, 2022.

<sup>33</sup> McQuade, Kate. “Exporting ‘Reconciliation’ ★ the Breach.” The Breach. August 15, 2022. <https://breachmedia.ca/exporting-reconciliation/>.

<sup>34</sup> How less water can help fill the copper supply gap. 2021, November 24. *Mining Technology*. <https://www.mining-technology.com/sponsored/how-less-water-can-help-fill-the-copper-supply-gap/>

<sup>35</sup> *Ibid*,

<sup>36</sup> Quintanilla, Marlene, Alicia Guzmán León, Carmen Josse. 2022. The Amazon against the clock: a Regional Assessment on Where and How to protect 80% by 2025 <https://amazonwatch.org/assets/files/2022-amazonia-against-the-clock-executive-summary.pdf>

# BUSINESS RISKS OF SOLARIS' MINING PROJECT IN THE ECUADORIAN AMAZON

## *Political risks*

Ecuador has a long history of Indigenous uprisings that have secured important rights to territory, culture, and autonomy. The Indigenous movement, led by the National Confederation of Indigenous Peoples of Ecuador (CONAIE), is widely considered to be the region's most powerful and well-organized Indigenous organization. Their national mobilizations have stopped free trade agreements and ousted multiple presidents. Recent Indigenous strikes occurred in 2018, 2019, and most recently in June of 2022.<sup>37</sup> The protests paralyzed the country for weeks and shut down extractive projects and exports, and the government's failure to deescalate the violence resulted in the deaths of several Indigenous community leaders.<sup>38</sup>

At the center of the Indigenous movement's demands in the June 2022 strike were its calls for no expansion of mining and oil activity, an environmental audit and associated remediation of social-environmental impacts, and rescindment of executive decrees for both sectors that fast-tracked environmental permitting and other business-friendly reforms.<sup>39</sup> After the three-week strike, dialogue was established between CONAIE and the government to hammer out details. Parties reached an agreement establishing a temporary moratorium in September 2022 on new mining concessions for at least a year, or until a law on Free, Prior, and Informed Consent is adopted.<sup>40</sup>

In January, CONAIE held an anti-mining summit together with a new coalition comprised of 78 social movement organizations across the country and discussed the possibility of a "preventative strike" against mining projects.<sup>41</sup> At the summit, CONAIE President Leonidas Iza declared, "We are going to radicalize the struggle to defend the life of Indigenous territories. What they [mining companies] have invested in our lands, they will lose, because we're going to defend the land with our lives, and we're not going to let them enter the territories where there's conflict with mining companies," he added.<sup>42</sup>

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<sup>37</sup>Ecuador's Recurrent Cycle of Violence over Indigenous Rights. 2022, August 13th. *Human Rights Watch*. <https://www.hrw.org/news/2022/08/13/ecuadors-recurrent-cycle-violence-over-indigenous-rights>

<sup>38</sup>Indigenous protester dies in Ecuador as violence increases. 2022, June 22. *Al Jazeera*. <https://www.aljazeera.com/news/2022/6/22/indigenous-protester-dies-in-ecuador-as-violence-increases>

<sup>39</sup> DEMANDAS DE LA MOVILIZACIÓN NACIONAL, POPULAR Y PLURINACIONAL, 2022, June. CONAIE. <https://conaie.org/2022/06/20/demandas-de-la-movilizacion-nacional-popular-y-plurinacional/>

<sup>40</sup>Valencia, Alexandra. 2022, September 9. Ecuador inks temporary oil moratorium deal with indigenous groups. *Reuters*. <https://www.reuters.com/world/americas/ecuador-inks-temporary-oil-moratorium-deal-with-indigenous-groups-2022-09-09/>

<sup>41</sup>Un 'paro preventivo' en contra de los proyectos mineros alistan la Conaie y el Frente Antiminero en sus territorios. 2023, January 5th. *El Universo*. <https://www.eluniverso.com/noticias/politica/un-paro-preventivo-en-contra-de-los-proyectos-mineros-alista-n-la-conaie-y-el-frente-antiminero-en-sus-territorios-nota/>

<sup>42</sup> Ecuadoran indigenous groups threaten to halt mining operations. 2023, January 5. *Bnamericas*. <https://www.bnamericas.com/en/news/ecuadoran-indigenous-groups-threaten-to-halt-mining-operations>

The organizations announced plans to mobilize an Indigenous guard to protect their territories from ongoing incursions from mining companies where the consent of communities has not been obtained, as well as to protect their lands and rivers from a growing invasion of illegal mining. In response, Ecuador has announced plans to deploy armed forces and police to “provide security” at mining sites, beginning with 11 assets currently in exploration.<sup>43</sup>

As of the publication of this document, CONAIE has since broken off dialogue with the Lasso administration, citing the government’s failure to comply with 218 agreements. A recent clash between police and community members at the Fierro Urko mine,<sup>44</sup> and the assassination of Indigenous leader and head of International Relations for CONAIE Eduardo Mendúa has exacerbated tensions. CONAIE is calling for Lasso’s resignation and has announced new mobilizations in early March 2023.<sup>45</sup>

Civil society-led efforts to restrict mining activity on the local and provincial level by referendum are also gaining traction. Voters banned any new large-scale mining over 3100 km<sup>2</sup> around Cuenca – the country’s third largest city – and five surrounding watersheds.<sup>46</sup> Cuenca is located in the Azuay province, an area known for its gold, silver, and copper reserves. In the province of Pichincha, home to Ecuador’s capital city of Quito, civil society organizations announced they had obtained enough signatures to qualify a ballot measure that would prohibit all new mining within the province, which has seen recent interest from the mining industry for its gold potential in the Chocó-Andean mountain range that surrounds the city.

In the face of rising insecurity in the country and much of his agenda stalled, Lasso had hoped for a vote of confidence during Ecuador’s midterm elections. But a national vote in February clearly rejected his candidates as well a referendum on eight questions on political, criminal, and environmental reforms. Lasso and his party lost mayorships in all three of the country’s major cities – Quito, Cuenca, Guayaquil – as well as prefectures in those provinces. The country’s voters also resoundingly rejected his ballot measures. The results were a major indictment of his administration and raise the risk of governability challenges, possible social unrest, and political instability according to Fitch Investment Ratings.<sup>47</sup> The results show a major

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<sup>43</sup> *Ibid.*

<sup>44</sup> Alvarado, Ana Cristina. 2022, August 22. La minería amenaza el páramo de Fierro Urku: la estrella hídrica del sur de Ecuador. *Mongabay*.

<https://es.mongabay.com/2022/08/mineria-amenaza-el-paramo-de-fierro-urku-en-ecuador/>

<sup>45</sup> Conaie exige al presidente Guillermo Lasso renunciar y anuncia movilización para el 8 de marzo. 2023, February 24. *El Universo*.

<https://www.eluniverso.com/noticias/politica/conaie-exige-al-presidente-guillermo-lasso-renunciar-y-anuncia-movilizacion-para-el-8-de-marzo-nota/>

<sup>46</sup> Ricci, Vicente. 2021, February 16. Ecuador’s Cuenca votes to ban future mining projects. *Al Jazeera*.

<https://www.aljazeera.com/news/2021/2/16/ecuador-cuenca-votes-to-ban-future-mining-projects>

<sup>47</sup> Ecuador Referendum Compounds Challenges to Lasso Reform Agenda. 2023, February 7. *Fitch Ratings*.

<https://www.fitchratings.com/research/sovereigns/ecuador-referendum-compounds-challenges-to-lasso-reform-agenda-07-02-2023>

erosion in public support for Lasso, whose approval rating was 12% before the vote.<sup>48</sup> He also has little support in Congress, where he failed to pass investment reforms on three occasions before the February 5 election and faces eroding confidence from his own party.

All of these challenges are raising alarm among investors. A post-election report from JPMorgan concluded that "the overlap of regional elections with the referendum posed a high-risk political test for Lasso, and the failure of the referendum is expected to further weaken his already eroded political capital... and risk of an early termination of Lasso's tenure have increased."<sup>49</sup> Ecuador's country risk rating rose 295 points to 1,415 after the election results, closing in on the second highest in the region.<sup>50</sup> It has now crossed 1,700, as CONAIE considers possible new mobilizations threatening stability and anti-mining sentiment rises.<sup>51</sup>

### El riesgo país de Ecuador

Deslice el cursor sobre el gráfico para visualizar las cifras



Fuente: BCE , Ámbito.com  
Gráfico: Daniela Castillo / Primicias

PRIMICIAS

<sup>48</sup>Aprobación de Guillermo Lasso es de apenas el 12.62%, según Perfiles de Opinión. 2022, November 22. *Radio Pichincha*.

<https://www.radiopichincha.com/aprobacion-de-guillermo-lasso-es-de- apenas-el-12-62-segun-perfiles-de-opinion/>

<sup>49</sup>El riesgo de maniobra de Guillermo Lasso bajó por los resultados electorales, según JP Morgan. 2023, February 6. *El Comercio*.

<https://www.elcomercio.com/actualidad/negocios/riesgo-maniobra-guillermo-lasso-bajo-resultados-electorales-segun-jp-morgan.html>

<sup>50</sup>El riesgo país de Ecuador sigue subiendo y estos son los efectos. 2023, February 8. *Primicias*.

<https://www.primicias.ec/noticias/economia/efectos-riesgo-pais-alza-ecuador>

<sup>51</sup>Riesgo país podría seguir incrementando con el anuncio de nuevas movilizaciones, según analista económico. 2023, February 23. *Notimundo*.

<https://notimundo.com.ec/riesgo-pais-podria-seguir-incrementando-con-el-anuncio-de-nuevas-movilizaciones-segun-analista-economico/>



## Legal risks

Ecuador has some of the most ambitious rights and environmental standards in the region established both in the constitution and constitutional jurisprudence. However, the government does not provide guarantees, mechanisms, or guidance for their application. The lack of laws and regulations has left both companies and communities vulnerable and led to litigation that has paralyzed projects or canceled them outright. Mining companies operating in Ecuador face legal insecurity and risk from the lack of a national law on Free, Prior, and Informed Consent, recent jurisprudence affirming the right to consent and the rights of nature, project-specific litigation, and contract risk.

While the government advertises a business-friendly environment for investors and celebrates concession contract signings, it often misrepresents the outcome of a consultation or the legitimacy of the process, thereby minimizing opposition and exaggerating or misleading the level of support for a project. This leaves companies who have already invested and signed contracts to face unexpected community opposition and exposure to litigation over the lack of consultation and failure to obtain consent, putting a project and the rights of communities at risk. Companies are not exempt from being subjected to Ecuadorian justice for contributing to the violation of rights that are not sufficiently regulated, as other cases clearly show:

- The A'I Cofan community of Sinangoe brought forth a case over the failure of the government to obtain their consent over multiple mining concessions in their territory. In 2022, the Constitutional Court upheld their right not only to consultation but to consent and put the burden on the government to provide objective, reasonable, and proportionate reasons why it is not possible to modify the project. The decision effectively canceled 52 mining concessions on their lands.<sup>53</sup>
- The Constitutional Court also handed down a decision that revoked the environmental license for the Rio Magdalena mining project in the Los Cedros forest based on the government's failure to consult local communities and take into account their access to clean water and a healthy environment, as well as the precautionary principle for the Rights of Nature enshrined in the constitution. The decision requires the mining companies involved to remove all infrastructure and machinery.<sup>54</sup>

In another case brought by the PSHA that has implications for Solaris and the Warintza Project, the Constitutional Court canceled the environmental license of the neighboring Panantza-San Carlos project due to the "violation of the collective right to Free, Prior and Informed consultation

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<sup>52</sup> El riesgo país de Ecuador sigue subiendo y estos son los efectos. 2023, February 8. *Primicias*. <https://www.primicias.ec/noticias/economia/efectos-riesgo-pais-alza-ecuador>

<sup>53</sup> Alvarez, Alejandro. 2022, April 8. How Recent Legal Decisions Could Affect Mining Risk in Ecuador. *Americas Market Intelligence*.

<https://americasmi.com/insights/how-recent-legal-decisions-could-affect-mining-risk-in-ecuador/>

<sup>54</sup> *Ibid.*

of the Shuar Indigenous people,” according to a press release from the court.<sup>55</sup> It further stated that the project, operated by Chinese state-run firm EXSA, “violated their legally-guaranteed rights as Indigenous peoples to have their voices heard by authorities in any projects that could affect them environmentally and culturally.”<sup>56</sup> Particularly relevant for Solaris was the court’s finding that the techniques of EXSA to “socialize” the project with the PSHA communities – using similar tactics deployed by Solaris – were not equivalent to prior consultation.<sup>57</sup>

CONAIE along with other Indigenous and civil society organizations are also challenging Executive Decree 151, Lasso’s flagship mining decree, before the Constitutional Court. The order ushered in policies to ease environmental controls and fast-track permitting for mining activities in response to industry demands and in hopes of attracting new investment.<sup>58</sup> But a defeat before the court would undo most of the reforms and create greater permitting uncertainty.

According to industry analysts, these recent decisions “could open the country up to more litigation in the future as companies with projects in protected lands that have worked to protect those regions while maintaining operations are shut down or have their licenses revoked... Miners may also consider the risk of doing business in Ecuador to be too high if the constitutional court continues to hand down rulings in this way.”<sup>59</sup>

In an effort to diminish its legal exposure and risk on the project, Solaris announced an investment agreement with the Ecuadorian government on December 22, 2022. The contract ratifies an Investment Protection Agreement announced in June and according to company CEO Daniel Earle, “significantly de-risks the Warintza Project by securing a stable regulatory and fiscal framework with international legal protections for the project while also enhancing its returns through permanent new tax incentives.”<sup>60</sup>

While the contract may stabilize tax rates for Solaris and establish dispute resolution and arbitration with the government, it does nothing to reduce the risk from the company’s lack of a social license to operate, the potential for conflict with local communities, or exposure to litigation. And while any international tribunal or arbitration is between the government and the

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<sup>55</sup>Win for indigenous rights: Ecuador court halts mining project in Amazon. 2022, November 23. *Down to Earth*.  
<https://www.downtoearth.org.in/news/environment/win-for-indigenous-rights-ecuador-court-halts-mining-project-in-amazon-86149>

<sup>56</sup>*Ibid.*

<sup>57</sup>*Ibid.*

<sup>58</sup> Herrera, Koryna. 2021, December 30. Organizaciones indígenas presentan acción de inconstitucionalidad contra decreto minero.

<https://gk.city/2021/12/30/accion-contra-politica-minera-ecuador/>

<sup>59</sup>Evanoff, Matthew. 2021, December 6. Solaris Resources (TSX:SLS) Unaffected by Rainforest Mining Ruling in Ecuadorian Courts. *Mining Feed*.

<https://www.miningfeeds.com/solaris-resources-tsxsls-unaffected-by-rainforest-mining-ruling-in-ecuadorian-courts/>

<sup>60</sup> Ecuador signs investment contract with Solaris on Warintza project. 2022, December 23. *Mining.com*  
<https://www.mining.com/ecuador-signs-investment-contract-with-solaris-on-warintza-project/>

company, such a process doesn't protect Solaris from third-party claims in Ecuador from citizens whose rights have been violated.

### ***Operational risks***

A major operational risk faced by the extractive industry in Ecuador is the risk of loss from business disruption resulting from social conflict with local communities due to consultation processes – or lack thereof – where consent is not obtained, and/or is illegitimate. Failing to obtain this social license to operate can lead to unexpected protests, production delays or shut-ins, work slippages, cost overruns, and more. And rather than a singular event, attempting to operate without genuine buy-in from all stakeholders can lead to ongoing conflicts that tarnish the company's reputation, and ultimately threaten a project's viability and return on investment.<sup>61</sup>

According to KPMG's 2022 Mining Outlook risk ranking, community relations and social license to operate are the third-biggest industry risk. "Community relations and social licensing are taking on greater importance. In the last few years, various incidents have shown that social license to operate is hard won and easily lost – and in a social media age, the repercussions can spread globally at lightning speed... it is anticipated that continued and increased engagement with communities – understanding and responding to concerns and delivering investment programs that enhance the quality of community life – will be key."<sup>62</sup>

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<sup>61</sup>Risks and challenges in the mining and energy sectors: failure to obtain a 'social licence to operate' can threaten a project's viability. 2019, October. *Financier Worldwide*.  
<https://www.financierworldwide.com/risks-and-challenges-in-the-mining-and-energy-sectors-failure-to-obtain-a-social-licence-to-operate-can-threaten-a-projects-viability#.Y-7TtezMJDM>

<sup>62</sup> Ellis, Dominic. 2022, May 4. Top 10 risks for the mining industry. *Mining Digital*.  
<https://miningdigital.com/top10/top-10-risks-for-the-mining-industry>



*Outside of the Makuints community inside Shuar Arutam territory, 2019 Credit Lluvia communications*

Mining projects in nearby concessions are a case in point:

- The Rio Blanco project in the Azuay province operated by Ecuagoldmining South America S.A (a consortium between Chinese firms Junefield Mineral Resources Holding Limited and Hunan Gold Group) was suspended in 2018 by an Ecuadorian court for the violation of FPIC of local communities, with legal efforts continuing to permanently halt the project.<sup>63</sup> The project remains shuttered.
- Prior to the Constitutional Court's ruling that suspended the environmental license of the Panantza-San Carlos mine, the project was the site of violence that left two people killed and provoked a three-month state of emergency. In 2016, police and military arrived at the PSHA community of Nankits, and violently evicted 32 families, using force and tear gas and setting the grass ablaze to make way for a workers' camp for the Panantza-San Carlos mine.<sup>64</sup> The displaced residents were forced to flee into the forest. The eviction sparked outrage and protests that continued for months, at times turning violent due to police and military escalation. The camp, in process of construction, was burned to the ground, and a Shuar leader and police officer were killed.<sup>65</sup> A state of emergency was

<sup>63</sup> Latinoamerica Sustentable (LAS). 2020, November 3. Rio Blanco Mining Project. *The People's Map of Global China*. <https://thepeoplesmap.net/project/rio-blanco-mining-project/>

<sup>64</sup> Watts, Jonathon. 2017, March 19. Amazon land battle pits indigenous villagers against might of Ecuador state. *The Guardian*. <https://www.theguardian.com/world/2017/mar/19/ecuador-indigenous-shuar-el-tink-mining-land-dispute>

<sup>65</sup> *Ibid.*



declared in the Morona Santiago and Zamora provinces, and the region was militarized for over three months.

Solaris' end run of Indigenous government decision-making and advancing the Warintza Project without obtaining the consent of all stakeholders may not hold up in court, or the court of public opinion. The company's tactics are exacerbating tensions and conflicts between communities, which recently culminated in the burning of a Solaris workers' camp during the June 2022 protests.

The territory of the Shuar Arutam people and their relationship with mining industries have been plagued by conflicts that have escalated into situations of violence, forced eviction, and displacement of entire communities, along with the militarization of their vital spaces, destroying the balance and social peace of these Indigenous people. In defense of their territories and exercising their legitimate right to protest and resistance, in processes of social mobilization, these conflicts have even escalated to the seizure of camps and violent confrontations between the communities and public forces.

### ***Reputational risks***

The reputational risks to the mining industry in Ecuador are substantial. The country's unique and fragile ecosystems make it a perilous place to be extracting minerals underneath forests with some of the highest levels of biodiversity on the planet. In addition, a strong and savvy Indigenous movement is using multiple strategies to exert their rights and hold companies to account. Drilling and mining in a fragile Amazonian ecosystem against the will of Indigenous peoples who live there is risky business. Legacy contamination issues and lack of accountability from the extractive industry have long plagued Ecuador and raised the reputational stakes for any company operating there.

A 2022 report from Moody's Investor Services on nature-related financial risk put a \$1.9 trillion price tag on biodiversity loss. "High-risk sectors such as coal and metals mining, as well as oil and gas exploration and production, will likely face greater regulatory and investor scrutiny as every day passes. Companies that lack credible management strategies in this arena face the prospect of not only reputational damage but also serious financial repercussions."<sup>66</sup>

However, the reputational risk doesn't only apply to the companies carrying out mining activity. The financial institutions backing the industry – providing corporate, project, or trade and commodity finance – are also concerned about their reputation, and are increasingly adopting ESG measures that restrict financing to problematic companies, commodities, or projects in controversial places of origin. In 2021, six major EU banks committed to restricting the financing of the trade of crude coming from Ecuador's Amazon due to environmental, Indigenous, and

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<sup>66</sup>Quinson, Tim. 2022, September 28. Moody's Has A \$1.9 Trillion Warning Over Biodiversity. BQ Prime . <https://www.bqprime.com/global-economics/moody-s-1-9-trillion-warning-over-biodiversity-green-insight>

climate issues.<sup>67</sup> Campaigns focusing on commodity chain responsibility and targeting consumers are increasingly visible, raising the risk that the stigma of a commodity like Amazonian gold and copper could affect product purchasing.<sup>68</sup>

Understanding these risks to its reputation and the growing importance of ESG, Solaris has been eager to tout its “Warintza Model” and its alleged adherence to the United Nations Global Compact initiative in Ecuador as part of its Corporate Social Responsibility program – which was thoroughly disputed by the PSHA in a letter to the UN.<sup>69</sup> But using environmental and social greenwashing or hiding behind weak or ambiguous host country standards will not insulate a company from the reputational risk and potential brand damage from environmental and rights violations.

## CONCLUSION

Mining is inherently a high-risk business, but not just because of prospecting gambles and discovery uncertainty. Today, ESG standards are the number one risk faced by the sector, followed by geopolitics, climate change, and social license to operate that threaten to strand assets.<sup>70</sup> The industry has been quick to point out the use of copper, gold, and other alleged “critical” minerals as part of the transition to green technology and clean energy, and is actively promoting the industry as climate-friendly and making net zero pledges to investors. But Amazonian mining is a dangerous gambit – for prospectors, investors, countries, communities, and climate.

In Ecuador, the industry’s expansion into some of the most biodiverse places on the planet without the consent of Indigenous peoples who have lived there for centuries represents extreme risk. Additionally, mining sector analysts have identified Ecuador’s lack of efficient public management; lack of legal security; lack of specific, defined and clear regulations; and lack of trust and transparency among other issues as challenges to obtaining future investment in the sector.<sup>71</sup>

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<sup>67</sup>Basquil, John. 2021, January 26. Major European banks vow to halt finance for Amazon oil trade. *Global Trade Review*. <https://www.gtreview.com/news/sustainability/major-european-banks-vow-to-halt-finance-for-amazon-oil-trade/>

<sup>68</sup>Amazon Watch, APIB. 2022. Complicity in Destruction V: Blood Gold. <https://amazonwatch.org/news/2022/0919-blood-gold-expose-details-how-leading-electronics-and-automotive-companies-could-be-sourcing-illegal-amazonian-gold>

<sup>69</sup>Open Letter to United Nations Global Compact Ecuador from the Government Council of the Shuar Arutam Peoples. 2021, February 19. <https://miningwatch.ca/news/2021/2/19/open-letter-united-nations-global-compact-ecuador-government-council-shuar-arutam>

<sup>70</sup>[https://assets.ey.com/content/dam/ey-sites/ey-com/en\\_gl/topics/mining-metals/ey-top-10-business-risks-and-opportunities-for-mining-and-metals-in-2023.pdf](https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/mining-metals/ey-top-10-business-risks-and-opportunities-for-mining-and-metals-in-2023.pdf)

<sup>71</sup> Illescas, Rebeca. 2023, January 27. Cinco puntos críticos para la inversión en minería en Ecuador. *Primicias*. <https://www.primicias.ec/noticias/firmas/puntos-criticos-inversiones-mineria-ecuador/>

Ecuador is actively promoting the country as the world's next mining destination and seeks to become a major player in Latin America on par with its neighbors. But this is incompatible with its international climate and biodiversity commitments. It's a signatory to the Paris Agreement and the COP15 landmark agreement on biodiversity, as well as a supporter of IUCN motion 192 to protect 80% of the Amazon by 2025. Approving new large-scale mines and concessions in the face of the climate emergency is an unacceptable risk for the planet and undercuts Ecuador's credibility as a country working to protect its megadiverse and unique ecosystems.

The Warintza Project is a perfect example of what the mining sector should not be doing. The project affects the Andes-Amazon corridor, an ecosystem of extremely high biodiversity and endemism that the Shuar Arutam people rely on to sustain their daily life and culture. Their collective rights to autonomy, self-determination, territory, association, and FPIC are protected in Ecuador's constitution, laws, and jurisprudence. Solaris is advancing in violations of these rights, and at great risk to environmental defenders like the PSHA President Josefina Tunki.

Solaris and the mining industry as a whole in Ecuador face numerous challenges: Surging Indigenous movement and growing anti-mining sentiment across the country calling to end large-scale mining and expansion, national-level legal challenges, a rising probability that President Lasso will not finish his term, and a lack of consent and stakeholder buy-in from affected communities. The political, legal, operational, and reputation risks are daunting and should give pause to current Solaris investors and any future financiers or companies who might join any potential production phase in the future.