



A S L O W C R I M E :

SITUATION OF VULNERABLE GROUPS IN THE FACE OF MERCURY POLLUTION IN THE VENEZUELAN AMAZON

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CLIMA21. CARACAS

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That was great! Never again would such happy times be seen as those when the famous gold fever spread over the Yuruari! How the mountains of quartz were crushed under the steel masses of drop hammers! How the boiling cauldrons of the monster's chest roared!... One hundred-and-twenty powerful mortars pulverized the rock, night and day, year after weary year. The plates of quicksilvered copper trapping the gold could not keep up with the input; the melting pots had no time to cool down; the innumerable mule droves had no rest, could not cope with the astonishing production, and gold billets were left piled up on the sandy shores.

Rómulo Gallegos, "Canaima", 1931.

Historical and oppressive violence exists for both my first corporeal territory and my historical territory, the land. If the water is contaminated by mercury, it will have repercussions on the health of women and the birth of their children. If gold mining turns the territories into enclave economies, the costs of food, fuel, and medicine will rise. This is how women voice "I cannot conceive this woman's body without a space on earth that dignifies my existence and promotes my life to the fullest."

Minerva Vitti, 2021.

How to repair accumulated toxic violence that persists and overlaps with other forms of violence and inequality?

Who will recognize and pay for the repair of their bodies and how, if it is still possible? How to address the fact that mercury toxicity will be passed on to the bodies of their sons and daughters via pregnancy and breastfeeding? In other words, what kind of peace, reconciliation, and reparation is possible in these landscapes of socio-environmental injustice and sedimented violence?

Sebastián Rubiano Galvis, 2023.

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Executive Summary



Mercury is a neurotoxin that can have serious effects on people and the environment. Globally, the main source of mercury pollution comes from its use in small and medium-scale gold mining activities. In Venezuela, this form of pollution is posing a serious risk to the populations living in the Venezuelan Amazon, especially the most vulnerable.

In this context, the purpose of this report is to describe the violations of the human rights of children, women, indigenous people and workers as a result of mercury poisoning derived from gold extraction activities in the south of the country.

One of the sources of information employed for this work was a survey conducted among key informants. Most of them consider that the use of mercury is widespread in the region, this metal is relatively easy to obtain and different sources are available to obtain it. The respondents also report having observed possible cases of mercury poisoning and consider that not enough efforts are being made to control mercury flows, educate populations at risk, and care for the affected.

On the other hand, a triangulation of the available information was carried out to determine the extent of mercury pollution. This method allowed the identification of areas with high levels of pollution, consisting of a group of 6 seriously affected areas and a group of five critical areas where information is insufficient.

There is clear evidence that this form of pollution is seriously affecting children and adolescents, women, indigenous communities and workers in the region, despite international agreements and national legislation oblige States to protect them against this type of pollution.

These results help to highlight the major issues that influence this problem:

- Major information gaps exist in all aspects related to the topic of mercury pollution in Venezuela. Part of this problem arises from the Venezuelan government's policy of opacity.
- A lack of effective responses to the serious problem posed by mercury pollution can be observed, despite the existence of a Decree prohibiting the possession and use of mercury in Venezuela. On the other hand, the Venezuelan State has yet to ratify the Minamata Convention, a global treaty to protect human health and the environment from the adverse effects of mercury.
- Even despite the scarce information, the effects of mercury pollution must be considered a form of violence against the population.

In conclusion, the Venezuelan State is committing serious violations of the human rights of the residents of the Venezuelan Amazon by allowing, concealing and in some cases promoting mercury pollution and failing to protect the population against its effects.



Introduction

Mercury is a neurotoxin that can have very serious effects on people and the environment. There is no known safe level of exposure at which adverse effects do not occur. Due to its high mobility, this substance can be found almost everywhere on the planet, even in areas distant from the places where it was originally released into the environment.

Mercury poisoning has several effects on humans, the most important being neurological disorders that range from memory and coordination problems to dementia. It can also have carcinogenic effects and cause cardiovascular and kidney diseases, damage to the digestive and immune systems or death.

In the case of women, it can affect their reproductive function, reducing fertility and increasing the risk of miscarriage.

Children are very vulnerable to mercury poisoning. Prenatal exposure affects the neurological development of the fetus, and children may later suffer from cognitive, language, memory, concentration or motor and visual abilities disorders.

The main source of mercury pollution comes from its use in small and medium-scale gold mining as an accessible and easy-to-use method. Miners who use mercury to process gold, and anyone working or living around the sites where this activity is carried out, are poisoned through inhalation of vapor released during the burning of an alloy of mercury and gold.

Additionally, the waste resulting from this procedure reaches the waterways where elemental mercury transforms into methylmercury, a much more toxic substance that is transported and magnified through food chains until it reaches human beings.

In Venezuela, mercury pollution has been a public health issue since the late 20th century, when early studies showed that workers, women, children and various environmental compartments ¹ were heavily contaminated by this toxic substance.

This problem was concentrated mainly in the eastern area of Bolívar state, in the basin of the Cuyuní River -where gold extraction has taken place since the 19th century- and the lower course of the Caroní River.

Starting in the second decade of the 21st century, a rapid expansion of small and medium-scale illegal mining activity has taken place in the form of alluvial mining. A 2022 journalistic investigation reported that 3,700 points of mining activity had been identified in the states of Bolívar and Amazonas².

¹ Elements of the environment separated by physical or biological boundaries such as water, air, soil and living beings.

² Ramírez, M.A. (2022). Las pistas ilegales que bullen en la selva venezolana. <https://elpais.com/internacional/2022-01-30/las-pistas-clandestinas-que-bullen-en-la-selva-venezolana.html>



Photography: Fritz Sánchez

This activity is carried out mainly along the extensive network of waterways that crisscross the Venezuelan Amazon. Likewise, the intensive use of mining dredges has been reported in every large river in the region³.

Under these conditions, mercury pollution can be found all across the Venezuelan Amazon, affecting people's right to life, health, food, decent work, water and a healthy environment, among others.

Venezuela has documented this reality both from an environmental point of view^{4 5} and a human rights perspective^{6 7}, but until now no attempt has been made to understand the differentiated effect of this form of chemical violence on the groups most vulnerable to mercury pollution.

This report aims to establish the violations of the human rights of children and adolescents, women, indigenous people and workers as a result of mercury poisoning derived from gold extraction activities in the Venezuelan Amazon, as well as the obligations of the Venezuelan State in the protection of these groups against this situation.

3 Clima21. (2024). Ríos entre la destrucción y el olvido: Efectos del extractivismo minero en los ríos al sur de Venezuela. <https://clima21.net/informes/rios-entre-la-destruccion-y-el-olvido-efectos-del-extractivismo-minero-en-los-rios-al-sur-de-venezuela/>

4 Red Ara. (2013). La contaminación por mercurio en la Guayana venezolana: Una propuesta de diálogo para la Acción. <https://clima21.net/referencias/investigaciones/la-contaminacion-por-mercurio-en-la-guayana-venezolana-una-propuesta-de-dialogo-para-la-accion/>

5 SOS Orinoco. (2021). El mercurio y la minería en la Guayana venezolana: Un daño incompensable. https://drive.google.com/file/d/1WiqjQdRz6Cx_v5J-5S4p3jIT72Fb-f6R/view

6 Álvarez Iragorry, A. (2015). Efectos de la minería ilegal de oro en la Amazonía venezolana: Una mirada desde los derechos humanos. Boletín de la Academia de Ciencias Físicas Matemáticas y Naturales. Vol. LXXV. Abril-junio 2015.

7 Clima21 / Todos por el Futuro. (2021). Situación de violación a los derechos humanos como consecuencia de la contaminación por mercurio utilizado en la explotación de oro en la región sur de Venezuela. Informe que se presenta para el Tercer Ciclo del Examen Periódico Universal de Venezuela. <https://clima21.net/informes/situacion-de-violacion-a-los-derechos-humanos-como-consecuencia-de-la-contaminacion-por-mercurio-utilizado-en-la-explotacion-de-oro-en-la-region-sur-de-venezuela/>

Sources of information and methodological considerations



Given that the information regarding the impact of mercury pollution on different human groups in Venezuela is scarce, outdated and fragmented, different sources of information were employed to allow a more comprehensive and synthesized picture of the situation.

For this reason, compilation was made of academic articles, technical reports and the media addressing the topic of mercury pollution in the south of the country, as well as the actions taken by the government to tackle pollution and the attention to the people affected. Human rights documents and national legislation establishing the rights of vulnerable groups in the context of environmental deterioration and mercury pollution were also compiled.

Likewise, a questionnaire about the current situation of mercury pollution was sent to thirty-two selected people, including experts in different disciplines with knowledge of different aspects of the topic in Venezuela. The study also employed interviews with key informants, including experts on several related topics, members of indigenous communities and residents of mining areas.

Significant information gaps have arisen as a result of several factors: the diminished environmental management capabilities of national institutions, the challenging accessibility to gold mining regions, and the potential influence of media censorship.



The Caura River. Photography: Nadiagmar Hernández

In addition, the violence prevailing in the mining areas of southern Venezuela makes it almost impossible to carry out research on these issues.

Finally, it was found that some of the information published by digital media is no longer available on their web pages.

Based on the exponential increase of mining activity in the last ten years, as well as the persistence of mercury in the different environmental compartments, we consider, as a working hypothesis, that mercury levels in the mining areas of southern Venezuela must be much higher today than those measured in past decades.

Results

Current situation of the use and effects of mercury in the Venezuelan Amazon

A survey was designed and sent to 32 people, with a response rate of 90.6% (29 people). The professional profile of the respondents seen in Table 1 shows a fairly uniform distribution across different areas of expertise, with a slight prevalence of mass communication and a lower number of respondents from the field of humanities and social sciences.

Table 1. Professional profile of the respondents of a questionnaire on the current situation of the use and effects of mercury in the context of gold mining in Venezuela.

Field of expertise	N°
Social communication	9
Environmental Sciences	6
Humanities and Social Sciences	2
Health Sciences	6
Human rights defenders	6
TOTAL	29

The results obtained in this study are described below.

93% of the respondents affirmed having observed the use of mercury in gold mining in Venezuela or having reliable information about it.

96% of the respondents considered that the use of mercury is widespread in gold mining, while 62.1% believe that it is easy to obtain (in contrast to 13.8% who indicated otherwise). They identified the groups that control the mines, merchants, corrupt military personnel and government agencies as the source of the mercury used in this activity.

The respondents identified a number of geographic areas where they had observed or had knowledge of the use of mercury. These areas are summarized in Table 2.

Table 2. Areas of southern Venezuela where respondents have observed or have knowledge of the use of mercury (sorted by river basins)*

Bolívar state	Amazonas state	Delta Amacuro state
Cuyuní Basin	Ventuari Basin (Including Manapiare River and the confluence with the Orinoco River)	Orinoco Basin (Orinoco Delta)
Icabarú Basin*	Sipapo Basin	
Caroní Basin (mainly along the upper and lower courses of the Caroní River)	Orinoco Basin (Upper course)	
Paragua Basin*	Río Negro Basin	
Aro Basin		
Aro Basin		

*A sub-basin of the Caroní River

The most mentioned areas are located in the Cuyuní river basin, including the towns and villages of the municipalities of El Callao, Sifontes, Piar, Roscio and Padre Chien. Regions in the basins of the Caroní and Caura rivers came in second place.

55.2% of the people surveyed considered that the government authorities were not taking measures to control or limit the distribution and sale of mercury in the country while 41.4% considered that measures were taken only occasionally (3.4% considered these measures to be effective).

On the other hand, 72.4% of the respondents affirmed knowing or having reliable information about individuals or groups affected by mercury poisoning in Venezuela.

When respondents were asked to describe the health conditions they had observed, they described a series of symptoms and signs such as dizziness, blurred vision, blindness, loss of memory or muscle strength, and hands or feet numbness. In two cases, the respondents indicated that the people affected were diagnosed and received medical treatment for mercury poisoning or other pathologies that were potentially related to exposure to mercury. Likewise, one of the informants affirmed knowing a case involving the death of the affected person⁸.

⁸ It is worth noting that some of the symptoms and signs described may be caused by other pathologies, and a professional diagnosis that includes the measurement of mercury concentrations in the patient is needed to establish the cause of the disease and possible treatment.

Only 41.4% of the interviewees believe that people involved in the use of mercury are aware of the risks associated with exposure to this metal. A similar percentage (44.8%) considered that they are unaware. Some of those consulted affirmed having observed a few miners using some type of protective equipment such as masks, gloves and artisanal retorts.

Regarding the availability of information on the use of mercury in Venezuela, 82.8% of the respondents considered that there is no information; 6.9% considered that there is little information, and 3.4% that there is information available.



Artisanal mining retort used by miners in Venezuela.
Photo: Mariam Molinari

Likewise, regarding the availability of accessible and adequate public information about the effects of mercury on human health and the ways to prevent and treat them, 69% considered that it does not exist, while 10.3% found that information is available.

Finally, respondents were asked to identify which of the following measures are being taken by the Venezuelan State:

- Providing adequate information to people in mining areas about the risks of exposure to mercury and strategies to protect themselves from it
- Conducting educational activities about mercury pollution and the strategies to protect people from it
- Establishing health services to ensure that people in risk areas have access to the diagnosis and treatment of mercury poisoning.
- None of the above

92.9% of them considered that the Venezuelan State is taking none of them (7.1% answered 'don't know').

Respondents identified the main groups vulnerable to mercury exposure. Children and adolescents came first, followed by women and members of indigenous communities.

The extent of mercury pollution in the Venezuelan Amazon⁹

To understand the geographical extent of mercury pollution, a triangulation was made of the available information on the presence of mining activity in the different territorial spaces of the Venezuelan Amazon.

Based on the information collected, the following pollution indicators were defined:

1. Presence of gold exploitation activities (IN1).
2. Areas with significant gold processing operations (IN2).
3. Reports of the use of mercury in gold exploitation activities (IN3).
4. Reports of mercury pollution not supported by field studies (IN4)
5. Availability of measurements of mercury pollution in different environmental compartments (water, air, vegetation, biota) (IN5)
6. Availability of measurements of mercury contamination in fish used for human consumption (IN6)
7. High levels of mercury measured in humans (IN7)

The review period was not delimited because mercury is a persistent pollutant that accumulates in different environmental compartments, whose effects can be felt in the long term, long after being emitted into the environment. Therefore, due to the recent increase in mining activity, the sites that have been affected for longer can be assumed to be more affected overall.

⁹ A preliminary version of this analysis was included in: *Clima21 / Todos por el Futuro* (2021) Op. Cit.

It should be emphasized that the lack of evidence of some of these indicators signifies that it was not possible to obtain information on this category or that no research has been conducted in the field.

The results of the review of these indicators are presented in Table 3.

Based on the previously defined indicators, 11 areas with high levels of pollution were established and subsequently divided into two categories:

Table 3. Mercury pollution indicators*

STATE AND BASIN	IN1	IN2	IN3	IN4	IN5	IN6	IN7
Bolívar state							
Cuyuní Basin	X	X	X	X	X	X	X
Caroní Basin (Upper course and Icabarú sub-basin)	X		X	X			X
Caroní Basin (Lower course)	X	X	X	X	X	X	X
Paragua Sub-basin	X		X			X	X
Aro Basin	X						
Caura Basin	X		X	X		X	X
Amazonas state							
Ventuari Basin	X		X		X	X	
Sipapo Basin	X		X				
Orinoco Basin (Middle course))	X		X	X			X
Orinoco Basin (Upper course	X		X	X			
Río Negro Basin and other rivers of the Yanomami Reserve	X		X			X	
Delta Amacuro State							
Orinoco Basin (Orinoco Delta)	X		X			X	

*Some basins were subdivided due to their extension



Seriously affected areas: Regions where the presence of at least five indicators was verified, including the availability of measurements of mercury contamination in people. Based on this evaluation, six areas were found:

- 1. Cuyuní Basin:** Covering part of the Sifontes, El Callao, Roscio and Padre Chien municipalities of the Bolívar state, including the Imataca Forest Reserve, a part of which lies outside the basin of the Cuyuní River.
- 2. Lower Caroní basin (including the Guri dam):** Comprising the municipalities of Piar, Angostura, Angostura del Orinoco and Caroní in Bolívar state.
- 3. Upper Caroní basin (and Icabarú sub-basin):** Mainly Canaima National Park and Icabarú River in the Gran Sabana municipality.
- 4. Paragua River sub-basin:** Covering the municipalities of Angostura and Angostura del Orinoco, Bolívar state.
- 5. Caura Basin:** Sucre municipality, Bolívar state.
- 6. Middle Orinoco Basin:** Including the Autana and Atures municipalities of Amazonas state.

Critical areas with insufficient information: Regions where at least three indicators for mercury pollution were verified, even though the presence of people affected by mercury poisoning had not been determined. Five areas were found in this category.

7. Orinoco Delta. Antonio Díaz and Casacoima municipalities of the Delta Amacuro state.

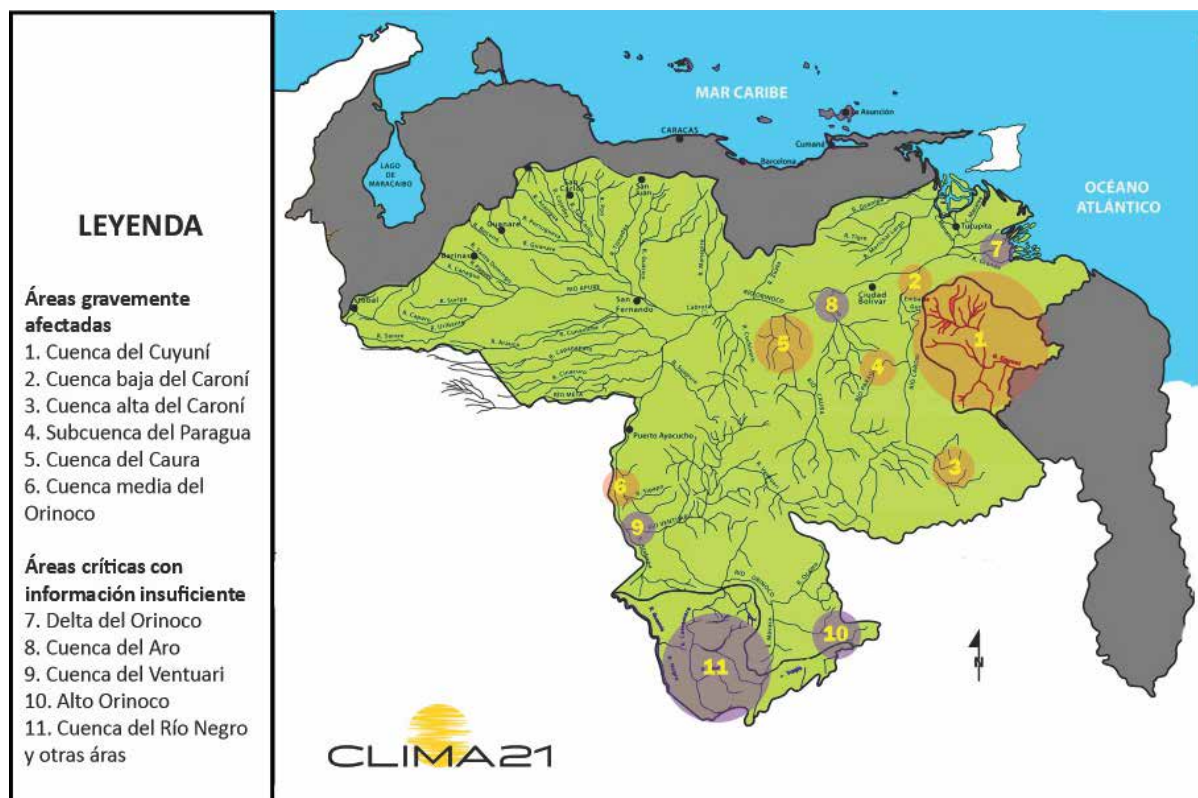
8. Aro Basin. Municipalities of Angostura and Angostura del Orinoco, Bolívar state.

9. Ventuari Basin. Manapiare Municipality, mainly at the confluence with the Orinoco River in the Yacapana National Park, Amazonas state.

10. Orinoco Basin (Upper course). Alto Orinoco Municipality, Amazonas state..

11. Río Negro Basin and other rivers of the Yanomami Reserve. In this case, several localities of the southern border of Amazonas state were merged in the absence of enough information to establish a boundary between them. Therefore, this area includes the municipalities of Maroa, Río Negro and Alto Orinoco of Amazonas state.

Map 1. Areas affected by mercury in the Venezuelan Amazon (Clima21)





Children working in a mine. Photography: Magda Gibelli. Tomada de France Press.

The situation of children and adolescents

“At 10 years old, Martin cannot read, but he is an old hand at detecting traces of the gold he and his young cousins dig for at an opencast mine in southeastern Venezuela.”¹⁰

Although gold mining is a very dangerous activity for children and adolescents, thousands of them engage in these activities around the world. In some cases, they are directly subjected to very serious risks, particularly the effects of mercury exposure^{11 12}.

This risk is not limited to those who participate in mining activities but to those who live near the places where gold is processed and even in areas far from the mines through to the consumption of fish contaminated with mercury¹³.

10 Aljazeera. (2023). Gold and mercury, not books, for Venezuela's child miners. <https://www.aljazeera.com/gallery/2023/9/20/gold-and-mercury-not-books-for-venezuelas-child-miners>

11 Consejo de Derechos Humanos. (2022.) Mercurio, extracción de oro en pequeña escala y derechos humanos Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ambientalmente racionales de las sustancias y los desechos peligrosos, Marcos Orellana. A/HRC/51/35. <https://documents.un.org/doc/undoc/gen/g22/403/66/pdf/g2240366.pdf?token=s7MXVXat0pHaKDROtH&fe=true>

12 ILO. (2006). Child labour in gold mining: The problem. https://www.ilo.org/ipecc/Informationresources/WCMS_IPEC_PUB_4146/lang-en/index.htm

13 WHO. (2010). Children's exposure to mercury compounds. https://iris.who.int/bitstream/handle/10665/44445/9789241500456_eng.pdf?sequence=1

Mercury poisoning in children can cause alterations of the central nervous system as well as damage to the lungs and kidneys.¹⁴ Infants and young children who have been exposed to high levels of mercury may experience delays in cognition, fine motor skills, language development, and visual-spatial awareness.¹⁵ Prenatal and postnatal exposure to mercury has also been associated with the development of autism spectrum disorders and attention-deficit/hyperactivity disorder (ADHD))¹⁶

^{17 18}

Unborn babies are especially vulnerable due to the brain and organic development that occurs in the womb during pregnancy. The effects of mercury exposure on the neurological development of the child in utero include intellectual disability, congenital disorders, vision and hearing impairments, developmental delay and language disorders.¹⁹

“When governments fail to protect children from exposure to hazardous substances, this constitutes a violation of their rights...”

Juliane Kippenberg, associate director in the Children’s Rights Division of Human Rights Watch²⁰

The International Covenant on Economic, Social and Cultural Rights (CESCR) recognizes the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Among the measures that States must adopt to ensure the full enjoyment of this right are those aiming at reducing infant mortality and guaranteeing the healthy development of children.

14 Counter, S. A., & Buchanan, L. H. (2004). Mercury exposure in children: a review. *Toxicology and Applied Pharmacology*, 198(2), 209–230. Doi: 10.1016/J.TAAP.2003.11.032

15 Healthline. (2022). Understanding Mercury Poisoning. <https://www.healthline.com/health/mercury-poisoning>

16 Kern, J. K., Geier, D. A., Sykes, L. K., Haley, B. E., y Geier, M. R. (2016). The relationship between mercury and autism: A comprehensive review and discussion. *Journal of Trace Elements in Medicine and Biology*, 37, 8–24. doi:10.1016/j.jtemb.2016.06.002

17 Ealo Tapia D, Torres Abad J, Madera M, y Márquez Lázaro J. (2023). Mercurio y trastornos del neurodesarrollo en niños: una revisión sistemática. *Arch Argent Pediatr* 2023;121(5): e202202838.

18 Lozano, M., Murcia, M., Soler-Blasco, R., González, L., Iriarte, G., Rebagliato, M., ... Llop, S. (2021). Exposure to mercury among 9-year-old children and neurobehavioural function. *Environment International*, 146, 106173. doi:10.1016/j.envint.2020.106173

19 Bose-O’Reilly, S., McCarty, K. M., Steckling, N., y Lettmeier, B. (2010). Mercury exposure and children’s health. *Current problems in pediatric and adolescent health care*, 40(8), 186–215.

20 Kippenberg, J. (2016). Children’s Rights and the Environment. Human Right Watch. https://www.ohchr.org/sites/default/files/Documents/HRBodies/CRC/Discussions/2016/10b.JulianeKippenberg_PresentationWG1ChildrensExposureToEnvironmentalToxicants.docx

Similarly, Article 24 of the Convention on the Rights of the Child establishes that children have the right to the highest attainable standard of health and to facilities for the treatment of illnesses and rehabilitation of health. The instrument also recognizes the dangers and risks of environmental pollution for the health of children²¹.

In Venezuela, these rights are reinforced by the Organic Law on the Protection of Children and Adolescents (LOPNNA) which establishes the rights to life, to an adequate standard of living, to a healthy and ecologically balanced environment, to the highest attainable level of physical and mental health and to be protected from any labor that may hinder their education or pose a risk or harm to their health or full development (Art. 15, 30, 31, 41 and 94²²

For its part, the ILO considers as one the worst forms of child labor any “work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children”(Art. 3 of the Worst Forms of Child Labour Convention)²³.

Both the ILO and the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes consider that child labor in mines -particularly those exposing children to mercury- constitutes one of the worst forms of child labor^{24 25}.

Similarly, a child or adolescent has the right “to an adequate standard of living for himself and his family” (Article 11 of the CESCR), including the right to adequate food and water ²⁶.

“When the mud looks like chewing gum, there is some ‘material’ coming. We put everything that looks good in a bag and wash it with water, and any gold is going to stick to the ‘quicksilver’ (mercury)” Testimony of a child miner²⁷.

In Venezuela, there is no publicly available information on the number of minors affected by mercury, nor on those at risk of being exposed to this toxic substance.

21 Organización de las Naciones Unidas [ONU]. (1989). Convención de los Derechos del Niño. <https://www.un.org/es/events/childrenday/pdf/derechos.pdf>

22 República de Venezuela. (1998). Ley Orgánica para la Protección del Niño y del Adolescente.

23 Organización Internacional del Trabajo. (OIT). (1999) Convenio sobre las peores formas de trabajo infantil (núm. 182) https://www.ilo.org/dyn/normlex/es/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182

24 Organización Internacional del Trabajo (OIT). (2005). El peso del oro El trabajo infantil en minas y canteras. Revista Trabajo, Agosto 2005. https://www.ilo.org/global/publications/world-of-work-magazine/articles/WCMS_081443/lang-es/index.htm#:~:text=En%20la%20miner%C3%ADa%20de%20oro,mismo%20trabajo%20que%20los%20adultos.

25 Consejo de Derechos Humanos. (2018). Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ecológicamente racionales de las sustancias y los desechos peligrosos. Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ecológicamente racionales de las sustancias y los desechos peligrosos. A/HRC/39/48. <https://documents.un.org/doc/undoc/gen/g18/239/73/pdf/g1823973.pdf?token=ooEVxAHucd2xUUjibK&fe=true>

26 CIEL. (2016). La contaminación por mercurio y los derechos humanos. https://www.ciel.org/wp-content/uploads/2016/06/HR_Mercury_SPA-1.pdf

27 Swissinfo. (2023). “Prefiero sacar oro que ir a la escuela”, el drama de niños mineros en Venezuela. <https://www.swissinfo.ch/spa/prefiero-sacar-oro-que-ir-a-la-escuela-el-drama-de-ni%C3%B1os-mineros-en-venezuela/48833220>

A 2016 report by CECODAP estimated that 45 percent of workers at the mining sites or gold processing mills were minors²⁸.

Furthermore, the CDH-UCAB documented the presence of more than 1,300 children living in the mines of Guasipati, El Callao, Las Claritas, El Dorado and Km 88, in eastern Bolivar state.²⁹

In a report on the situation of human rights in Venezuela, the United Nations High Commissioner affirmed having received reports that children as young as 7 years old were present in mining areas, often unaccompanied³⁰.

Likewise, a report by the United Nations Committee on the Rights of the Child mentions the participation of indigenous children in illegal gold mining, in slavery-like conditions, in the upper Orinoco and the Casiquiare and Guainía-Río Negro basins.³¹

Additionally, several testimonial sources indicate that minors are involved in mining-related activities in most of the areas under exploitation, even directly working at the mining sites.

These data do not provide a means to gauge the count of children and adolescents who might be directly exposed to mercury contamination. Additionally, this data does not encompass individuals affected by the consumption of contaminated fish, fetuses exposed via the placenta, or newborns through breast milk.

“...most children [in El Callao] suffer from headaches, migraines; But that is not normal in a child population.”³²

28 CECODAP. (2018). Informe especial: Peligros y Vulneraciones de DDHH de Niños, Niñas y Adolescentes en la Frontera y Actividades Mineras. https://drive.google.com/drive/folders/11rYosa6vwC9PqzyjHXgCb5aM_-3mPQjJ

29 CDH-UCAB. (2023) Situación de niños, niñas y adolescentes en el estado Bolívar: sobre la vulneración de derechos y formas de esclavitud moderna. <https://cdh.ucab.edu.ve/relatos-de-una-infancia-en-riesgo/>

30 OHCHR. (2020). Independencia del sistema judicial y acceso a la justicia en la República Bolivariana de Venezuela, también respecto de las violaciones de los derechos económicos y sociales, y situación de los derechos humanos en la región del Arco Minero del Orinoco Informe de la Alta Comisionada de las Naciones Unidas para los Derechos Humanos. A/HRC/44/54. <https://documents.un.org/doc/undoc/gen/g20/242/34/pdf/g2024234.pdf?token=qTrLQOYthQ13qtyin&fe=true>

31 Naciones Unidas. Comité de los Derechos del Niño. (2014). Observaciones finales sobre el informe presentado por la República Bolivariana de Venezuela en virtud del artículo 12, párrafo 1, del Protocolo Facultativo de la Convención sobre los Derechos del Niño relativo a la venta de niños, la prostitución infantil y la utilización de niños en la pornografía. CRC/C/OPSC/VEN/

32 Carrión, N. (2017). Debe atenderse a la población contaminada con mercurio. In: Por una Minería Responsable. I Jornadas Tecnológicas del Oro. Ministerio del Poder Popular para Desarrollo Minero Ecológico. https://desarrollominero.gob.ve/wp-content/uploads/2017/12/Por-una-mineria-responsable_I-Jornadas-Tecnologicas-del-Oro_web.pdf

Five studies were obtained that report results of mercury concentration measurements in children and adolescents in southern Venezuela. Most of these studies were conducted in the towns of El Callao and nearby mining areas, and published between 2004 and 2012. No further investigations on mercury contamination in children and adolescents were found after this period.

The earliest studies were carried out by a team partnering with the United Nations Industrial Development Organization (UNIDO). One of the reports of the team found that 53% of the children sampled in the El Callao area had a concentration of mercury in their urine above the high alert level; 14.5% were above the action level and almost 10% showed levels greater than 100 µg/g creatinine³³.

Bermúdez (2006) reported that 84% of the samples taken from children in mining towns near El Callao were above the action level³⁴

For his part, Matos (2010) found values below the reference limits in a sample of children living in El Callao³⁵. In contrast, a larger group of children (112) sampled by Sequera that same year found that 28% of them showed blood mercury levels above tolerable limits. Likewise, the study determined that the children with higher levels of mercury in urine had at least one of their parents working in gold processing areas or were residents of areas in the vicinity of gold processing sites (mills)³⁶.

Another investigation found that children aged 6 to 13 who attended school in different areas of El Callao were exposed to high levels of atmospheric mercury³⁷.

Other documents mention the results of studies that determined that mercury, both organic and inorganic, present in the soils around local schools exceeded the limits established by the WHO³⁸. Likewise, the majority of children in a study carried out in El Callao reported suffering from headaches or migraine³⁹.

33 Veiga, M., Bermudez, D., Pacheco-Ferreira, Heloisa, Martins, L. Gunson, A. & Berrios, G. (2004). Mercury Pollution from Artisanal Gold Mining in Block B, El Callao, Bolivar State, Venezuela: Health and Technological Assessment. UNIDO.

34 Bermúdez, D. (2006). Contaminación por mercurio en la minería artesanal en el Bloque B de El Callao: Evaluación de la salud. II Foro internacional sobre la minería en pequeña escala, Estado Bolívar Venezuela, Puerto Ordaz, Venezuela. <https://iwlearn.net/resolveuid/c0568a46880947df16aa8377f132de80>.

35 Matos, M. (2010). Determinación de los Niveles de Mercurio Orina en los Niños de la Población de El Callao, Estado Bolívar, Venezuela. Trabajo de grado. Universidad Central de Venezuela. <http://saber.ucv.ve/handle/10872/10932?mode=full>

36 Sequera, S. (2010). Determinación de los niveles de mercurio en sangre de los niños en edad escolar de la población de El callao, estado Bolívar. Trabajo de grado. Universidad Central de Venezuela. <http://saber.ucv.ve/handle/10872/10890?mode=full>

37 Cardozo, R. (2010). Evaluación de los niveles mercuriales en el aire de aulas en unidades educativas de El Callao, Estado Bolívar. Trabajo de grado. Universidad Central de Venezuela. <http://saber.ucv.ve/handle/10872/7882?mode=full>

38 Carrión, N. (2018). Impacto del uso de mercurio en la explotación del oro en los pobladores de la zona. Guayana Sustentable. (17): 32-51. <https://revistasenlinea.saber.ucab.edu.ve/index.php/guayanasustentable/issue/view/571>

39 Carrión, N. (2017). Debe atenderse a la población contaminada con mercurio. En: Por una Minería Responsable. I Jornadas Tecnológicas del Oro. Ministerio del Poder Popular para Desarrollo Minero Ecológico. https://desarrollominero.gob.ve/wp-content/uploads/2017/12/Por-una-mineria-responsable_I-Jornadas-Tecnologicas-del-Oro_web.pdf.

“My uncle forbids me to go to the river alone because it is contaminated with mercury and is dangerous for me”

(Pemón boy)⁴⁰

Regarding indigenous children, Pérez et al (2011) found high hair mercury levels in Ye'kwana and Sanema women and girls settled in the lower and upper Caura and the Erebató River (Sucre municipality, Bolívar state). Likewise, this study indicates that 36.8% of the female population studied has contamination levels that pose a significant risk of their children exhibiting neurological disorders⁴¹.

On the other hand, Yanomami people from the Sierra Parima (Amazonas state) reported that following the invasion of their territory by Brazilian miners, three children from the community died a few hours after consuming water from the river, suggesting a case of acute poisoning by mercury⁴².

Additionally, accounts exist of cases of children in the town of El Callao and other areas of the Bolívar state who have presented neurological and genetic disorders such as autism spectrum disorder (ASD), attention-deficit / hyperactivity disorder (ADHD) and Down syndrome, attributable to mercury contamination^{43 44}.

Despite the very alarming situation described in these studies, there is no information on more recent research or epidemiological studies on the mortality and morbidity generated by mercury exposure in the child population, or on the measures to assist the children and adolescents who may be affected in Venezuela's Guayana region.

40 CECODAP. (2018). Citado previamente.

41 Pérez, L., González, M., Urquía C, Perera, L., Bertsch, C. y Penna, S. (2012). Evaluación del riesgo a exposición al metilmercurio en poblaciones indígenas ribereñas del Río Caura (Estado Bolívar, Venezuela). Fundación La Salle de Ciencias Naturales, Sociedad para la Conservación de la Vida Silvestre y Universidad de Oriente. <https://clima21.net/referencias/investigaciones/evaluacion-del-riesgo-de-exposicion-al-metil-mercurio-en-poblaciones-indigenas-riberenas-del-caura-estado-bolivar-venezuela/>

42 Tillett A. y Kelly J.A. (2011). Los Yanomami en Alto Orinoco. Povos Indígenas No Brasil 2006/2010. Sao Paulo. Instituto Socioambiental. P. 291- 292.

43 Rangel, C. (2014). El autismo gana terreno en Bolívar. <https://elestimulo.com/climax/investigacion/2014-12-15/el-autismo-gana-terreno-en-bolivar/>

44 Faoro, O. (2014). Falta de divisas dificulta diagnósticos oportunos de autismo en Venezuela. Correo del Caroní (En archivo personal)



Pregnant woman working in a mine: Photography by Magda Gibelli. Tomada de OpenDemocracy

Situation of Women

“With this it’s not like one does a lot (...) The method produces two points of gold—a little less than a gram. And with that you buy flour, a pack of rice”.

(testimony of an indigenous woman miner)⁴⁵

The impact of illegal gold mining on women in southern Venezuela has mainly been studied from the point of view of the violations of their human rights resulting from violence and oppression against them.^{46 47 48}

45 Valverde, M. (2020). A orillas del Cuyuní, el mercurio brilla más que el oro. <https://mercurio.infoamazonia.org/es/venezuela/>

46 CDH UCAB. (2021). Formas contemporáneas de esclavitud en el estado Bolívar una perspectiva género sensitiva. <https://cdh.ucab.edu.ve/wp-content/uploads/2021/08/2021-05-20.-Formas-Contemporaneas-De-Esclavitud-En-El-Estado-Bolivar.-Una-Perspectiva-Genero-Sensitiva.pdf> 46

47 Moncada, A. y Pineda, E. (2018). Violencias y resistencias de las mujeres racializadas en los contextos extractivistas mineros de América Latina. Revista Observatorio Latinoamericano y Caribeño (OLAC), (2), 2-16. <https://www.academica.org/estherpinedag/18.pdf>

48 Moncada Acosta, A. (2017). Oro, sexo y poder: violencia contra las mujeres indígenas en los contextos mineros de la frontera amazónica colombo-venezolana. Textos e Debates, Boa Vista, n.31, p. 43-53, jan./jun. 2017. <https://revista.ufrb.br/textosedebates/article/viewFile/4256/pdf>

At the same time, there is very little information on the differentiated impact on women of other forms of violence generated by pollution and environmental degradation⁴⁹. Due to their characteristics and the context in which they occur, these forms of violence -particularly the violence generated by chemical pollution- remain largely unnoticed, undiagnosed, and therefore rarely recognized and tackled.

Lately, several studies, journalistic investigations and testimonies have reported the participation of women in different activities related to small and medium-scale gold mining in Venezuela^{50 51 52 53}. Despite the serious risks associated with these activities, many women perceive them as an opportunity to escape poverty or even survive⁵⁴.

The work of women at the mines can involve performing tasks in almost all phases of gold extraction, processing and trading. Additionally, they act as providers of food, drinks, utensils and services (cleaning, laundry, sex, entertainment in local nightclubs) and engage in commercial activities.⁵⁵

In these contexts, even when they do not participate directly in gold processing, women are exposed to mercury contamination by inhalation of vapors released during the burning of the alloy used for gold refining.

In mild cases of mercury poisoning, psychopathological and clinical symptoms may occur⁵⁶. Exposure at acute levels causes kidney and urinary tract dysfunction, vomiting, and potential death⁵⁷.

49 Nixon, R. (2011). *Slow violence and the environmentalism of the poor*. Cambridge: Harvard University Press.

50 Organización Mundial para la Salud (OMS). (2017). *La minería aurífera artesanal o de pequeña escala y la salud*. <https://iris.who.int/bitstream/handle/10665/259452/9789243510279-spa.pdf?sequence=1&isAllowed=y>

51 Gibelli, M. (2023). *Buscar oro en las entrañas del sur de Venezuela con 7 meses de embarazo*. <https://www.opendemocracy.net/es/buscar-oro-sur-venezuela-7-meses-embarazo/>

52 Hinton, J., Veiga, M. y Beinhoff, C. (2003). *Women and Artisanal Mining: Gender Roles and the Road Ahead*. Chapter 22. In: *The Socio-Economic Impacts of Artisanal and Small-Scale Mining in Developing Countries*, edited by Hilson, G. and A Balkema. Netherlands: Swets Publishers. <https://www.delvedatabase.org/uploads/resources/Women-and-Artisanal-Mining-Gender-Roles-and-the-Road-Ahead.pdf>

53 CDH UCAB. (2021). *Op. cit.*

54 Lahiri-Dutt, K. y Macintyre, M. (Edit). (2006). *Women Miners in Developing Countries: Pit Women and Others*. Routledge. https://crawford.anu.edu.au/pdf/staff/rmap/lahiridutt/JA2_KLD_Digging_Survive.pdf

55 Weldegiorgis, F., Lawson, L. y Verbrugge, H.. (2018). *Women in Artisanal and Small-Scale Mining: Challenges and Opportunities for Greater Participation*. Winnipeg: IISD. <https://www.iisd.org/publications/report/women-artisanal-and-small-scale-mining-challenges-and-opportunities-greater?q=publications/women-artisanal-and-small-scale-mining-challenges-and-opportunities-greater>

56 Hinton, J., Veiga, M. y Beinhoff, C. (2003). *Women and Artisanal Mining: Gender Roles and the Road Ahead*. Chapter 22. In: *The Socio-Economic Impacts of Artisanal and Small-Scale Mining in Developing Countries*, edited by Hilson, G. and A Balkema. Netherlands: Swets Publishers. <https://www.delvedatabase.org/uploads/resources/Women-and-Artisanal-Mining-Gender-Roles-and-the-Road-Ahead.pdf>

57 Hinton, J., Veiga, M. y Beinhoff, C. (2003). *Op cit.*

The effects derived from the consumption of fish contaminated with methylmercury are even more worrying. In addition to the consequences on the general health of adults, methylmercury can penetrate the placental barriers and seriously affect the development of the fetus in women of childbearing age^{58 59 60}.

“For me, it is normal to work in a mine while pregnant. I worked during my last three pregnancies in the last 4 years”

(women miner near El Callao)⁶¹

The International Covenant on Economic, Social and Cultural Rights recognizes the right of all to the enjoyment of the highest attainable standard of physical and mental health. For its part, the Convention on the Elimination of All Forms of Discrimination against Women establishes women’s right to protection of health and to safety in working conditions, including the safeguarding of their reproductive health⁶².

For his part, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, expressed in a 2018 report his concern about the exposure of women workers to toxic substances at their workplace before and during the earliest stages of pregnancy. He also called for “special care on the part of States and businesses to protect women’s reproductive health by preventing their exposure to toxic substances...”⁶³

The Minamata Convention -in this case used as a guiding document- establishes the need to devise Strategies to prevent the exposure of vulnerable populations, particularly children and women of childbearing age, especially pregnant women, to mercury used in artisanal and small-scale gold mining⁶⁴.

58 World Health Organization (WHO). (2010). Children’s Exposure to Mercury Compounds. <https://www.who.int/publications/i/item/9789241500456>

59 Human Rights Council. (2022). Mercury, small-scale gold mining and human rights. Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana. A/HRC/51/35. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/51/35&Lang=E>

60 Hinton, J., Veiga, M. y Beinhoff, C. (2003). Op. cit.

61 Gibelli, M. (2023). Buscar oro en las entrañas del sur de Venezuela con 7 meses de embarazo. <https://www.opendemocracy.net/es/buscar-oro-sur-venezuela-7-meses-embarazo/>

62 United Nations. (1979). Convention on the Elimination of All Forms of Discrimination against Women. <https://www.ohchr.org/sites/default/files/Documents/ProfessionalInterest/cedaw.pdf>

63 Human Rights Council. (2018). Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes. A/HRC/39/48. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/39/48&Lang=E>

64 UNEP. (2019). Minamata Convention on Mercury. <https://minamataconvention.org/sites/default/files/2021-06/Minamata-Convention-booklet-Sep2019-EN.pdf>

“...from now on I will be inside of my office when she burns the amalgam...” “

(Owner of a gold mill in El Callao)⁶⁵

For this report, seven research papers were obtained with measurements of mercury concentration levels in women. Most of them were conducted in the El Callao area while two others were carried out in indigenous communities located in the lower Caroní and in the middle and lower Caura. Most of these works took place in the period between 1996 and 2012. Only one study published in 2021 was conducted out of this period.

The earliest studies obtained report measurements carried out in the mining communities of Las Claritas, Santo Domingo, El Manteco, El Callao and the lower Caroní (eastern Bolívar state). The results established that only 13% of women had mercury concentrations in their bodies below a safe level⁶⁶.

This data was confirmed with investigations carried out between 2006 and 2021, which showed that women in El Callao and other mining areas had high levels of mercury in their bodies, in some cases requiring immediate medical attention.^{67 68 69} In some of these works, women were found to be the group with the highest risk of contamination due to their work in or near gold processing activities and the consumption of fish contaminated with methylmercury⁷⁰.

65 Hinton, J., Veiga, M., & Beinhoff, C. (2003). Op Cit.

66 Milano, S. (2014). Venezuela. En: Heck, C. (Ed.), La realidad de la minería ilegal en países amazónicos (220-246). SPDA. <https://spda.org.pe/wpfb-file/la-realidad-de-la-minerai-legal-en-paises-amazonicos-spda-pdf/>

67 Veiga, M., Bermúdez, D., Pacheco-Ferreira, H., Martins, L., Gunson, A. y Berríos, G. (2004). Mercury Pollution from Artisanal Gold Mining in Block B, El Callao, Bolívar State, Venezuela: Health and Technological Assessment. UNIDO. <https://iwlearn.net/resolveuid/5bc5d67aa0bbc9b19c05df5513d68169>

68 Bermúdez, D. (2006). Contaminación por mercurio en la minería artesanal en el Bloque B de El Callao: Evaluación de la salud. II Foro internacional sobre la minería en pequeña escala, Estado Bolívar Venezuela, Puerto Ordaz, Venezuela. <https://iwlearn.net/resolveuid/c0568a46880947df16aa8377f132de80>

69 IPEN. (2021). La exposición al mercurio de las mujeres en cuatro países latinoamericanos productores de oro. https://ipen.org/sites/default/files/documents/ipen-lac-hg-hair-sampling-four-countries-v1_9bw-es.pdf

70 Carrasquero Durán, A., y Adams, M. (2002). Comparación de métodos para el análisis de mercurio en suelos procedentes de El Callao, estado Bolívar, Venezuela. *Interciencia*, 27(4), 191-194. http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S0378-18442002000400007&lng=es&tyng=es.

Other studies found high concentrations of mercury in indigenous women in communities near the Guri dam in the lower Caroní, the Paragua River and the middle and lower course of the Caura River^{71 72} (estos datos serán analizados en la sección de la situación de los pueblos indígenas) En las comunidades indígenas de esta zona se encontró que las mujeres cuyo contenido de mercurio en el cuerpo superaba los 6 µg/g tenían una mayor incidencia de abortos⁷³.

No reference was found to the actions by the Venezuelan State to care for affected women or prevent others from being affected.

The situation of indigenous peoples

“We had never experienced such a difficult situation, and this has led us to the mine”⁷⁴

(Pemon man)

In Venezuela, indigenous peoples have been victims of processes of dispossession, violence and marginalization that seriously affected and continue to affect their human rights^{75 76 77}.

This situation has been aggravated by changes in the country's mining policy, particularly with the creation of the National Strategic Development Zone of the Orinoco Mining Arc (OMA) and the accelerated expansion of uncontrolled illegal mining across the region.

71 Álvarez, L y Rojas, L (2006). Presencia de mercurio total en habitantes de los asentamientos Indígenas El Casabe, municipio autónomo Raúl Leoni y El Plomo, Municipio Autónomo Manuel Carlos Piar – estado Bolívar. *Saber*, 18 (2): 161-167. <https://www.redalyc.org/articulo.oa?id=427739430008>

72 Pérez, L., González, M., Urquía C, Perera, L., Bertsch, C. y Penna, S. (2012). Evaluación del riesgo a exposición al metil-mercurio en poblaciones indígenas ribereñas del Río Caura (Estado Bolívar, Venezuela). Fundación La Salle de Ciencias Naturales, Sociedad para la Conservación de la Vida Silvestre y Universidad de Oriente. <https://clima21.net/referencias/investigaciones/evaluacion-del-riesgo-de-exposicion-al-metil-mercurio-en-poblaciones-indigenas-riberenas-del-caura-estado-bolivar-venezuela/>

73 Álvarez, L y Rojas, L (2006). Op. cit

74 Olmo, G. (2019). Quiénes son los pemones y cómo viven en rebeldía contra el gobierno de Nicolás Maduro en una de las zonas más remotas de Venezuela. <https://www.bbc.com/mundo/noticias-america-latina-46690716>

75 Monsonyi, E. y Jackson, G. (1990) Violencia antiindígena en la Venezuela contemporánea. *Nueva Sociedad* Nro.105. Enero- febrero 1990, pp. 130-140. *Revista Cadernos do Lepaarq* V. 7, N. 13/14. <https://nuso.org/articulo/violencia-antiindigena-en-la-venezuela->

76 Clarac, G. (2003) Derechos de los pueblos indígenas. *Boletín Antropológico*. Año 21, N° 59, Septiembre-Diciembre 2003, pp. 253-281. <https://www.redalyc.org/pdf/712/71205902.pdf>

77 Bello, L.J. (1999) Los derechos de los pueblos indígenas en Venezuela. IWGIA Documento No 26 Copenhague. https://www.iwgia.org/images/publications/0352_derechos_venezuela.pdf



Indigenous working in a river in La Gran Sabana. Photograph of: María de los Ángeles Ramírez. Tomado de Prodavinci

In this context, indigenous peoples have suffered from a serious increase in violence, both in the traditional form of murders, harassment, stigmatization, modern slavery and human trafficking, as well as in the form of environmental violence through the degradation and pollution of their territories, the latter due to different agents but particularly the use of mercury in the exploitation of gold.^{78 79 80 81}

Other elements have recently added up to this reality: The emergence of armed groups of all kinds that control mining areas through violence⁸², together with the precarization of the lives of indigenous people as a result of the perverse economic forms that prevail in mining areas and the abandonment of public social programs⁸³.

78 Derechos de pueblos y comunidades indígenas. Hoja Informativa EPU – Venezuela. Contribuciones de la sociedad civil venezolana al 3er ciclo del EPU. (2022) https://drive.google.com/file/d/1Hh76VPKaiRX_buRrRjiPJOVt1w3iowuu/view

79 ORPIA y otros (2020) Situación de la amazonía venezolana en tiempos de pandemia. Informe de diagnóstico y propuestas para la Asamblea Mundial Amazónica. <https://ecopoliticavenezuela.org/wp-content/uploads/2020/07/Informe-situacion-Amazonia-Venezuela.-AMPA-2020.pdf>

80 Observatorio para la Defensa de la Vida (Odevida) (2021) El aire huele a mal: situación de personas defensoras del ambiente en Colombia y Venezuela. https://e7c20b27-21c2-4f2b-9c38-a1a16422794e.usrfiles.com/ugd/e7c20b_3113683c4b3740dd8897b0c487a13581.pdf

81 Vitti, M. (2022) Amazonía venezolana: una historia de muchos Haximú. https://provea.org/wp-content/uploads/2022/10/AMAZONAS_Vzla_Final-1.pdf

82 Ebus, B. (2022) Exploiting Venezuela's Uncertain Future: Resource Conflicts and the Environment, Wilson Center. <https://www.wilsoncenter.org/publication/exploiting-venezuelas-uncertain-future-resource-conflicts-and-environment>

83 Clima21 (2022) El Pueblo Pemón: Dominación, resistencias y transformaciones frente al extractivismo depredador. <https://clima21.net/informes/el-pueblo-pemon-dominacion-resistencias-y-transformaciones-frente-al-extractivismo-depredador/>

In these circumstances, many in the indigenous communities have made the decision to participate in the exploitation of gold as a means of survival and maintenance of their autonomy^{84 85}.

As a consequence of these situations, mercury pollution expanded all across the indigenous territories of southern Venezuela, even to areas where mining is not practiced and to communities far from exploitation sites or living in voluntary isolation^{86 87}.

The situation has been recognized in several reports prepared by the Office of the United Nations High Commissioner for Human Rights,^{88 89} among other institutions and organizations.

“I have seen children and grandparents get sick and die in the Pemon community of Campo Alegre from drinking water with mercury, but we indigenous people have to defend the land from those things, we must continue with pride”
(Pemon man displaced to Brazil)⁹⁰

84 Vitti, M. (2018) Una mirada estructural del megaproyecto Arco Minero del Orinoco (I). <https://revistasic.org/una-mirada-estructural-del-megaproyecto-arco-minero-del-orinoco-i/>

85 Cabello, M. (2020). Depredación minera frente a los ojos del tepuy Roraima. <https://prodavinci.com/depredacionminera/>

86 Derechos de pueblos y comunidades indígenas. Hoja Informativa EPU – Venezuela. Contribuciones de la sociedad civil venezolana al 3er ciclo del EPU. (2022) Citado previamente.

87 Bello, L.J. y Díaz Mirabal, G. (2017) Informe sobre la Situación Actual de los Grupos de Pueblos Indígenas en Aislamiento Relativo y Poco Contacto en Venezuela (Jödi, Uwottüja, y Yanomami). <https://boletimisolados.trabalhoindigenista.org.br/wp-content/uploads/sites/3/2018/01/informe-situacion-grupos-aislados-venezuela.pdf>

88 Consejo de Derechos Humanos (2023) Situación de los derechos humanos en la República Bolivariana de Venezuela. Informe del Alto Comisionado de las Naciones Unidas para los Derechos Humanos. A/HRC/53/54. <https://www.ohchr.org/en/documents/country-reports/ahrc5354-situation-human-rights-bolivarian-republic-venezuela-report>

89 Consejo de Derechos Humanos (2022) Situación de los derechos humanos en la República Bolivariana de Venezuela Informe de la Alta Comisionada de las Naciones Unidas para los Derechos Humanos. A/HRC/50/59. <https://documents.un.org/doc/undoc/gen/g22/448/69/pdf/g2244869.pdf?token=rXYuN9rrcyLRvPug4y&fe=true>

90 Caruncho, S. (2022) Los desplazados del mercurio, un veneno en las entrañas de la Amazonía. <https://www.france24.com/es/am%C3%A9rica-latina/20221015-los-desplazados-del-mercurio-un-veneno-en-las-entra%C3%B1as-de-la-amazon%C3%ADa>



The Caura River. Photography: Nadiagmar Hernández

The ILO Indigenous and Tribal Peoples Convention (or Convention No. 169)⁹¹ describes the rights of indigenous and tribal peoples within States and sets out the responsibility of governments to protect these rights. The convention establishes the obligation of States to safeguard the persons, institutions, property, labor, cultures and environment of indigenous peoples (Art. 4.1), prioritize the improvement of living, health and education conditions of the peoples concerned in any project carried out in their territories (Art. 7.2) and take measures to preserve the environment of the territories inhabited by these peoples.

Likewise, the instrument established the obligation to consult indigenous peoples before undertaking or permitting any programs for the exploration or exploitation of the resources pertaining to their lands, as well as provide fair compensation for any damages resulting from these projects (Art. 15.2).

It also states that workers belonging to these communities shall not be subjected to working conditions hazardous to their health, in particular through exposure to toxic substances (Art. 20.3.b).

For its part, the 2007 United Nations Declaration on the Rights of Indigenous Peoples reaffirmed the rights to life, physical and mental integrity, liberty and security of Indigenous individuals (Art. 7.1), to the enjoyment of the highest attainable standard of physical and mental health (Art. 24.2) and to the conservation and protection of the environment and the productive capacity of their lands or territories and resources (Art. 29.1). It also urges States to take measures to progressively achieve the realization of these rights.⁹²

⁹¹ International Labor Organization (ILO) (1989). Indigenous and Tribal Peoples Convention (No. 169). https://www.ilo.org/dyn/normlex/en/?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:REV,en,C169,/Document

⁹² United Nations Organizations (UN) (2007) United Nations Declaration on the Rights of Indigenous Peoples. https://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

In Venezuela, a parallel process led to the incorporation of these rights in Chapter VIII of the National Constitution of 1999, particularly Articles 120 and 123 relating to the matter of this report.

As a consequence of the constitutional change, an Organic Law on Indigenous Peoples and Communities was established in 2005. An important part of the text directly addresses the environmental protection of indigenous territories, and some articles are of special relevance to the issue of mercury pollution: The prohibition of carrying out activities in the habitat of indigenous peoples and communities that may affect their cultural, social, economic, and environmental integrity (Art. 12); the obligation of the State to guarantee the conservation and integrity of indigenous habitats and lands (Art. 50); the responsibility of the State and companies to remedy any environmental liability that may affect indigenous territories (Art. 56); the rights of indigenous people to receive compensation for damages caused by resource exploitation activities carried out in their territories (Art. 58) and the prohibition of indigenous people being subjected to working conditions that are dangerous to their health, such as exposure to toxic or hazardous substances (Art. 119)⁹³

“A common name for mercury among the Yanomami people is ‘xawara upë’, the liquid of epidemics”^{94 95}.

Only three works could be found reporting mercury levels in indigenous Venezuelans. Additionally, the review included the results of a study by the Ministry of People’s Power for Health that could not be consulted directly but was reported by an anonymous informant, as well as an unpublished work from the Non-Governmental Organization S.O.S. Orinoco.

93 República de Venezuela. (2005) Ley Orgánica de Pueblos y Comunidades Indígenas. <https://www.asambleanacional.gob.ve/storage/documentos/leyes/ley-organi-20220214165309.pdf>

94 Caruncho Llaguno, S., Wizenberg, D. y Cabrera, N. (2022). Los desplazados del mercurio, un veneno en las entrañas de la Amazonía. <https://www.france24.com/es/am%C3%A9rica-latina/20221015-los-desplazados-del-mercurio-un-veneno-en-las-entra%C3%B1as-de-la-amazon%C3%ADa>

95 In the Yanomami culture, shawara are supernatural beings considered responsible for certain diseases and epidemics in general.

The first of them presents the results of measurements carried out in Pemón communities in the lower Caroní and the Paragua River (northern Bolívar state), where mercury concentrations were found to be high, and especially higher among women registered as ‘housewives’⁹⁶.

Another study published in 2009 measured mercury concentrations in Piaroa (Uwottüja) populations settled in the riparian communities of Samariapo, Ratón Island (Orinoco River) and Raudal Danto (Cuao River), all of them located south of Puerto Ayacucho, Amazonas state. The study found levels of mercury 3 times greater than a sample taken in Caracas⁹⁷.

In 2011, mercury concentrations were measured in indigenous women residents of five Ye'kwana and Sanema communities of the lower and upper Caura (Sucre municipality, Bolívar state). The findings show that 92% of the women had a much higher exposure to mercury than the limit recommended by the WHO and that 36.8% risked giving birth to children with neurological disorders⁹⁸.

The aforementioned study by the Ministry of People's Power for Health was carried out in 2018 in Pemón populations of Gran Sabana (southeast of Bolívar state), finding high levels of mercury in the population studied in all localities, being the highest in the communities of San Salvador de Paul and Kamarata. Likewise, the existence of cases of chronic mercury poisoning was verified, apparently related to the consumption of contaminated fish..

Additionally, an unpublished study by S.O.S. Orinoco found that 35% of the Pemon residents of Gran Sabana had mercury levels that exceeded the limits established by the WHO^{99 100}.

Finally, it is important to consider the outcry of the Yanomami people residing in Parima B (Southeast of Amazonas state) over the death of several members of their communities, including children, following the invasion of their territories by Brazilian miners (garimpeiros).^{101 102}.

96 Álvarez, L y Rojas, L (2006). Presencia de mercurio total en habitantes de los asentamientos Indígenas El Casabe, municipio autónomo Raúl Leoni y El Plomo, Municipio Autónomo Manuel Carlos Piar – estado Bolívar. *Saber*, 18 (2): 161-167. <https://www.redalyc.org/articulo.oa?id=427739430008>

97 Marcano, E., Labady, M., Gomes, C., Aguiar, G., y Laine, J. (2009). High levels of Mercury and Lead detected by hair analysis in two Venezuelan environments. *Acta Amazonica*, 39(2), 315–318. <https://doi.org/10.1590/S0044-59672009000200010>

98 Pérez, L., González, M., Urquía C, Perera, L., Bertsch, C. y Penna, S. (2012). Evaluación del riesgo a exposición al metil-mercurio en poblaciones indígenas ribereñas del Río Caura (Estado Bolívar, Venezuela). Fundación La Salle de Ciencias Naturales, Sociedad para la Conservación de la Vida Silvestre y Universidad de Oriente. <https://clima21.net/referencias/investigaciones/evaluacion-del-riesgo-de-exposicion-al-metil-mercurio-en-poblaciones-indigenas-riberenas-del-caura-estado-bolivar-venezuela/>

99 SOS Orinoco. (2021) Unpublished data.

100 Ramírez Cabello, M. (2021) La huella tóxica del mercurio llegó a la Gran Sabana. <https://especiales.correodelcaroni.com/la-huella-toxica-del-mercurio-llego-a-la-gran-sabana/>

101 Tillett A. y Kelly J.A. (2011) Los Yanomami en Alto Orinoco. *Povos Indígenas No Brasil 2006/2010*. Sao Paulo. Instituto Socioambiental. P. 291- 292.

102 Vicariato Apostólico de Puerto Ayacucho. Oficina de Derechos Humanos (2010). *La Minería en el estado Amazonas*.

No publicly available information or testimonies from members of the indigenous communities have been obtained on the actions taken by the Venezuelan State to take care of the affected or clean up their territories.

Situation of workers

“Of course I am contaminated, but what can we do” ”

(worker in El Callao)¹⁰³

Millions of people carry out mining activities in many tropical countries with limited financial and technological resources, often illegally or under unclear legal frameworks.

For most of these workers, mining is a means of subsistence, even survival, which involves extremely hard work in hostile conditions and a permanent situation of risk to their lives and health and rarely takes them out of poverty¹⁰⁴.

In the specific case of Venezuela, many of the people who participate in the illegal exploitation of gold in the south of the country work in conditions that have been described as modern slavery, in a context of violence and abominable circumstances^{105 106 107}.

103 El Callao: Uso del mercurio en la minería causa estragos. (2011). <https://reportero24.com/2011/04/21/el-callao-uso-de-mercurio-en-la-mineria-causa-estragos/> (originalmente publicado en El Nacional)

104 Human Rights Council. (2022). Mercury, small-scale gold mining and human rights. Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana. A/HRC/51/35. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/51/35&Lang=E>

105 CDH UCAB. (2021). Formas contemporáneas de esclavitud en el estado Bolívar una perspectiva género sensitiva. <https://cdh.ucab.edu.ve/wp-content/uploads/2021/08/2021-05-20.-Formas-Contemporaneas-De-Esclavitud-En-El-Estado-Bolivar.-Una-Perspectiva-Genero-Sensitiva.pdf>

106 Human Rights Council. (2020). Independence of the justice system and access to justice in the Bolivarian Republic of Venezuela, including for violations of economic and social rights, and the situation of human rights in the Arco Minero del Orinoco region. Report of the United Nations High Commissioner for Human Rights. A/HRC/44/54. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/44/54&Lang=E>

107 OHCHR. (2022). Detailed findings of the independent international fact-finding mission on the Bolivarian Republic of Venezuela: The human rights situation in the Arco Minero del Orinoco region and other areas of the Bolívar state. (A/HRC/51/CRP.2). <https://www.ohchr.org/en/hr-bodies/hrc/ffmv/report-ffmv-september2022>



Miner processing gold in El Callao. Photography Maolis Castro. Tomado de Reportero 24

In these conditions, miners use mercury to process gold ore due to its ease of acquisition and use, which does not require investments or sophisticated technologies¹⁰⁸.

Even when the main affected by mercury contamination in this case are the workers themselves, they are frequently unable to abandon the use of the metal because they are trapped in cycles of poverty and coercion by mercury traders who seek to guarantee the sale of this substance, which represents a business with extraordinary profits^{109 110}.

There is no official quantification of the number of miners that operate in Venezuela, and its estimation is very complex due to the largely illegal and changing nature of an activity whose behavior responds to the discoveries of new deposits -bullas-, rain cycles, the general situation of the country, pressure by the military, and the interests of the groups that control mining at different levels.

108 Lanz, A., Quintero, O., Duarte, Néstor y Navas, M. (2018). La contaminación mercurial: Un problema de Estado. <http://cievbolivar.blogspot.com/search?updated-max=2016-01-27T11:03:00-08:00&max-results=7>

109 IUCN NL. (2020). Abriendo la caja negra: Lo que revelan las investigaciones locales sobre el comercio mundial formal e informal de mercurio. https://www.iucn.nl/app/uploads/2021/07/spanish_mercury_brochure_a4_digital_use.pdf

110 Valverde, M.D. (2020). A orillas del Cuyuní, el mercurio brilla más que el oro. <https://armando.info/a-orillas-del-cuyuni-el-mercurio-brilla-mas-que-el-oro/>

Estimations made by different authors have varied over time, from 30,000-40,000 in 1997¹¹¹ to 350,000 in 2019¹¹². In addition to these calculations, a group of authors made global estimates based on gold prices, which in the case of Venezuela resulted in 70,000 miners, a fairly conservative figure¹¹³.

*Are we going to allow the use of mercury to continue? Well, I tell you, fellow miners, let's stop the mercury, please*¹¹⁴

Article 23 of the Universal Declaration of Human Rights recognizes the right to work under just and favorable conditions. Article 7 of the International Covenant on Economic, Social and Cultural Rights also recognizes this right, including the right to safe and healthy working conditions¹¹⁵.

Likewise, the International Labor Organization (ILO) considers that workers have the right to remove themselves from danger resulting from the use of chemicals when they have reasonable justification to believe there is an imminent and serious risk to their safety or health¹¹⁶.

In the Americas, the Protocol of San Salvador establishes the right to safety and hygiene at work (Art. 7), Prevention and treatment of endemic, occupational and other diseases (Art. 10) and to live in a healthy environment (Art. 11).

Other inter-American instruments such as the 2012 Social Charter of the Americas ratify the commitment of the States of the region to the environment, environmental sustainability and people's access to drinking water and sanitation services¹¹⁷.

111 Veiga, M. (1997) Mercury in Artisanal Gold Mining in Latin America: Facts, Fantasies and Solutions. UNIDO - Expert Group Meeting - Introducing new technologies for abatement of global mercury pollution deriving from artisanal gold mining, Vienna, July 1- 3, 1997. https://artisanalmining.org/Repository/01/The_CASM_Files/CASM_Projects/Topic_Mercury/veiga_02.pdf

112 The Artisanal and Small-scale Mining Knowledge Sharing Archive. ASM Inventory. <https://artisanalmining.org/Inventory/>

113 Seccatore, J., Veiga, M., Origliasso, C., Marin, T., y De Tomi, G. (2014). An estimation of the artisanal small-scale production of gold in the world. *Science of The Total Environment*, 496, 662–667. doi:10.1016/j.scitotenv.2014.05.003

114 Hibirma H. (2017). Somos un organismo de integración. En: Por una minería responsable. I Jornadas Tecnológicas del Oro. Ministerio del Desarrollo Minero Ecológico. pp. 113-118. https://desarrollominero.gob.ve/wp-content/uploads/2017/12/Por-una-mineria-responsable_I-Jornadas-Tecnologicas-del-Oro_web.pdf

115 For further details and observations, see: Human Rights Council. (2018). Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes. A/HRC/39/48. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/39/48&Lang=E>

116 CIEL. (2016). Human Rights Impacts of Mercury Pollution. https://www.ciel.org/wp-content/uploads/2015/10/HR_Mercury.pdf

117 OAS. (1988). Additional Protocol to the American Convention on Human Rights in the area of Economic, Social and Cultural Rights "Protocol of San Salvador". <https://www.oas.org/juridico/english/treaties/a-52.html>

For his part, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes stated in a 2018 report that the exposure of workers to toxic substances can and should be considered a form of exploitation.¹¹⁸

In the aforementioned report, the Rapporteur establishes a series of principles on the obligation of States to protect workers against toxic substances, including the obligation of States to protect the human rights of workers and their families by preventing their exposure to toxic substances, the right of workers to be informed, and their right to be protected from reprisals for denouncing irregularities that affect them.

Regarding the right to information, the Rapporteur's report states that *"[t]he absence of or inappropriately communicated information is tantamount to deception and deception of workers is a category of exploitation, which can constitute forced or compulsory labour."*

On the other hand, Goal 8 of the 2030 Agenda for Sustainable Development aimed at *"promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"* involves the promotion of a safe and secure work environment and ensuring that workers know their rights and responsibilities¹¹⁹.

In this sense, a 2022 report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes considered that *"[t]hese human rights violations and abuses from such unmanaged, informal and illegal mining activity also highlight States' failure to adhere to the Sustainable Development Goals to end poverty and hunger; to ensure healthy lives, clean water, decent work, sustainable consumption and inclusive access to sustainable development; and to protect and conserve lands and waters."*¹²⁰

"My husband just died. He was contaminated. His lungs were destroyed by the smelting of gold"

(Woman resident of El Callao)¹²¹.

118 Human Rights Council. (2018). Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes. A/HRC/39/48. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/39/48&Lang=E>

119 OIT. Trabajo decente y la Agenda 2030 de Desarrollo Sostenible. <https://www.ilo.org/global/topics/sdg-2030/lang-es/index.htm>

120 Consejo de Derechos Humanos. (2022). Mercurio, extracción de oro en pequeña escala y derechos humanos Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ambientalmente racionales de las sustancias y los desechos peligrosos, Marcos Orellana. A/HRC/51/35. <https://documents.un.org/doc/undoc/gen/g22/403/66/pdf/g2240366.pdf?token=s7MXVXat0pHaKDROtH&fe=true>

121 El Callao: Uso del mercurio en la minería causa estragos. (2011). Op. Cit.



Miner processing gold. Photograph of Villalobos, Y. (2012)

Since the late 1980s, there has been robust evidence in Venezuela of high levels of mercury contamination among workers who participate in gold exploitation and trading in the gold mining areas of Bolívar state. Unfortunately, the bibliographic references describing the results of these studies could not be reviewed for this work. (See: Rodríguez, M. et al. 1993 (See: Rodríguez, M. et al. 1993¹²²)

Nine other references were obtained that reported the results of measurements of mercury concentrations and, in some cases, neuropsychological studies carried out on individuals who work in gold mining and processing activities. All of them were conducted in the period spanning from 1996 to 2006 in the eastern region of Bolívar state.

The earliest work found dates back to 1990 and was carried out in the Las Claritas gold mining concession (Sifontes municipality). The study found that 69% of miners and 37% of non-miners were contaminated with high levels of mercury¹²³.

A different study refers to evaluations carried out in Las Claritas (Sifontes municipality, 1997), El Manteco (Piar municipality, 2002), La Paragua (Angostura municipality, 2002), riparian communities of the Caroní River, the Guri reservoir (Heres and Angostura, 2004) and the mining community of Hoja de Lata (Sifontes municipality), which found high levels of mercury concentrations in the urine of a high percentage of the individuals studied. Likewise, an unspecified percentage of miners showed signs of neurological disorders¹²⁴.

122 Rodríguez, M., Carreño, P. y García S. (1993). Contaminación mineral en mineros y afines del bajo Caroní. Salud de los Trabajadores. 1(2): 97-107. <http://servicio.bc.uc.edu.ve/multidisciplinarias/saldetrab/vol1n2/art04.pdf>

123 Hamilton D. (1996). Overview of small-scale mining and mercury contamination in South-eastern Venezuela, Estado Bolívar. Citado en: UNEP (2002) Regionally based assessment of persistent toxic substances: Central America and The Caribbean Regional Report. <https://www.oas.org/dsd/Quimicos/Central%20America%20Caribbean%20Report%20UNEP.pdf>

124 Various works in: Milano, S. (2014). Venezuela. In: Heck, C. (Ed.), La realidad de la minería ilegal en países amazónicos (220-246). SPDA. <https://spda.org.pe/wpfb-file/la-realidad-de-la-mineraa-ilegal-en-paises-amazonicos-spda-pdf/>

In the 1990s, mercury concentration studies were carried out among different groups of workers associated with the exploitation of gold in the lower Caroní area. One of the studies reported high levels of mercury concentration among the people studied and concluded that the contamination came from both exposure to mercury vapors from the gold refining process and the consumption of local fish, particularly from the Guri reservoir¹²⁵.

Other studies carried out at the beginning of the 2000s found high levels of mercury concentration in workers in El Callao^{126 127 128 129 130 131}.

One of these works found that the levels of mercury poisoning in workers from the gold mines and mills of Block B in El Callao, Venezuela, were one of the most serious in the world¹³². Likewise, 90% of people working in gold processing showed very high levels of mercury in their bodies..

In the review of both technical and journalistic sources, only two indirect references were found to workers affected by mercury receiving medical treatment. Likewise, it was not possible to find any information that epidemiological studies had been carried out that would allow the determination of the morbidity and mortality rates of mercury poisoning in workers, nor about the disease burden associated with this situation.

No information was available on the costs caused by mercury poisoning to families. Reference was only obtained from the testimony of a woman resident of El Callao who declared that the illness affecting her husband as a result of contamination by this toxic substance cost them a very high amount of money and exhausted all the money he had obtained from his work in gold-related activities¹³⁵.

125 Rodríguez, et al. (1993). Op. Cit.

126 Rojas, M., Drake P., Roberts, S. (2001). Assessing mercury health effects in gold workers near El Callao, Venezuela. *J Occup Environ Med.* 43(2):158-65. DOI: 10.1097/00043764-200102000-00016.

127 Veiga, M.M. et al. (2005). "Mercury Pollution from Artisanal Gold Mining in Block B, El Callao, Bolivar State, Venezuela" En: Pirrone, N., Mahaffey, K.R. (eds) *Dynamics of Mercury Pollution on Regional and Global Scales*, Springer.

128 Veiga, M., Bermúdez, D., Pacheco-Ferreira, H., Martins, L. Gunson, A. y Berríos, G. (2004). Mercury Pollution from Artisanal Gold Mining in Block B, El Callao, Bolivar State, Venezuela: Health and Technological Assessment. UNIDO. https://www.academia.edu/56288737/Mercury_Pollution_from_Artisanal_Gold_Mining_in_Block_B_El_Callao_Bolivar_State_Venezuela

129 García-Sánchez, A, Contreras, F., Adams, M. y Santos, F. (2006). Airborne total gaseous mercury and exposure in a Venezuelan mining area. *International Journal of Environmental Health Research*, 16 (5): 361-373. DOI: 10.1080/09603120600869315

130 Bermúdez, D. (2006). Contaminación por mercurio en la minería artesanal en el Bloque B de El Callao: Evaluación de la salud. II Foro internacional sobre la minería en pequeña escala, Estado Bolívar Venezuela, Puerto Ordaz, Venezuela. <https://iwlearn.net/resolveuid/c0568a46880947df16aa8377f132de80>

131 Carrasquero Durán, A., y Adams, M. (2002). Comparación de métodos para el análisis de mercurio en suelos procedentes de El Callao, estado Bolívar, Venezuela. *Interciencia*, 27(4), 191-194. http://ve.scielo.org/scielo.php?script=sci_arttextpid=S0378-18442002000400007yIng=esytlng=es.

132 Veiga, M.M., et al. (2004). Op. Cit.

133 Rodríguez, M., Carreño, P. y García S. (1993) Op. Cit.

134 El Callao: Uso del mercurio en la minería causa estragos. 2011. Op. Cit.

135 Provea (2022) Lo que traen las arenas del sur del Orinoco. <https://provea.org/actualidad/derechos-sociales/ambiente/lo-que-traen-las-arenas-del-sur-del-orinoco/>

Mercury management in Venezuela

The official discourse says that small-scale mining is allowed as long as mercury is not used, but everyone uses mercury, and those who do not just do not have the money to buy it¹³⁶.

Since the 1980s, the Venezuelan State has created a legal and institutional framework that aims at regulating the activities that degrade the environment, among other issues.

The 1976 Organic Law on the Environment considered any activity that directly or indirectly pollutes or deteriorates the air, water, seabed, soil or subsoil or has a negative impact on the fauna or the flora as probable to degrade the environment¹³⁷.

Likewise, the Organic Law on Territorial Ordering established a legal framework for the environmental ordering of the national territory. This law, together with the 1992 Environmental Penal Law¹³⁸, gave a legal basis to the development of environmental evaluation processes known as Environmental Impact Assessments under Decree No. 1,257 of 1996.

Other actions included a Presidential Decree banning mining in the state of Amazonas (Presidential Decree No. 269, of 1989) and the creation in the south of the country of an extensive network of Protected Natural Areas that would safeguard the ecosystems deemed more important from the impacts of mining.

136 Provea (2022) Lo que traen las arenas del sur del Orinoco. <https://provea.org/actualidad/derechos-sociales/ambiente/lo-que-traen-las-arenas-del-sur-del-orinoco/>

137 Repealed in 2006 and replaced by another under the same name.

138 Repealed in 2011 and replaced by another under the same name

The 1999 Constitution established a series of environmental rights, including the right to a safe, healthy and ecologically balanced life and environment (Art. 127) as well as the obligation of the State to guarantee the development of the population in an environment free of pollution.

In this context, towards the middle of the first decade of the 2000s, two simultaneous processes took place: an increase in the number of studies warning about alarming levels of mercury in workers who participated in gold mining activities and the rapid expansion of illegal mining in the Venezuelan Amazon.

In the following years, a series of actions were carried out by the national government that sought to bring mercury contamination under control (see Appendix 1).

Most of these actions do not seem to have been sustained over time, and no public information was obtained on their possible results and progress.

Two issues stand out among these actions. First, the fact that the Venezuelan State has yet to ratify the Minamata Convention, a global treaty to protect human health and the environment from the adverse effects of mercury¹³⁹. The national government has not provided any explanation for this delay despite having signed the document and committed to ratifying it. .

On this topic, the director-general for Environmental Quality at the Ministry of Ecosocialism (Minec) and coordinator of the Presidential Commission on Chemical Safety, declared in 2022 that the commission “**hopes to define whether or not the Minamata Convention will be ratified by the Bolivarian Republic of Venezuela...**” [emphasis added]”.¹⁴⁰

A second issue is related to the fact that a Presidential Decree in force since 2016 prohibits the use, possession, storage and transportation of mercury as a method for obtaining or processing gold. Despite this, mercury continues to be used freely in all areas where gold is exploited in the Venezuelan Amazon. This was confirmed by the Office of the High Commissioner for Human Rights and reflected in a 2023 report on Venezuela prepared by Michelle Bachelet.¹⁴¹ .

139 United Nations. Minamata Convention on Mercury - Text and Annexes. <https://minamataconvention.org/en/resources/minamata-convention-mercury-text-and-annexes>

140 MINEC (2022) Comisión Presidencial de Seguridad Química efectuó reunión en el Minec. <http://www.minec.gob.ve/comision-presidencial-de-seguridad-quimica-efectuo-reunion/>

141 Human Rights Council (2023). Situation of human rights in the Bolivarian Republic of Venezuela. Report of the United Nations High Commissioner for Human Rights. A/HRC/53/54. <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/53/54&Lang=E>

Regarding this situation, a senior official with the national government and current Minister of Ecological Mining Development stated in an event promoted by his office in 2017 that “**we have a decree prohibiting mercury. Do we have it or not? But mercury is still used in gold extraction...**” [emphasis added]¹⁴².

Also, the Minister of Ecosocialism declared that “**our legislation must move forward to reduce the damage caused by mercury used for the exploitation of minerals in the south of the country, including the area that makes up the Orinoco Mining Arc**” [emphasis added]¹⁴³.

In this confusing panorama, it seems to be clear that, in the end, the political and economic realities in the mining areas and the highest spheres of political power have much more weight than any action that can be taken to protect the rights of the most vulnerable people in the country.

Relevant findings and conclusions

Several issues stand out from this review:

Major information gaps exist in all aspects related to the topic of mercury pollution in Venezuela. Most of the information available is outdated and does not cover most of the spaces where gold mining is currently practiced in the Venezuelan Amazon.

This lack of information seems to have worsened in recent years. In the last decade, only five works could be obtained reporting data on mercury concentration in individuals in the areas covered by this report, and none of them was conducted in the last two years. Just one reference was found to measurements carried out in the state of Amazonas, and none in the southern region of that state.

There is also no information on the volume of mercury currently used in gold mining in the country, nor on Venezuela’s mercury imports¹⁴⁴.

142 Cano, V. (2017) Venezuela, una gran potencia minera. (129- 136) En: Por una minería responsable. I Jornadas Tecnológicas del Oro. Ministerio del Desarrollo Minero Ecológico. https://desarrollominero.gob.ve/wp-content/uploads/2017/12/Por-una-mineria-responsable_1-Jornadas-Tecnologicas-del-Oro_web.pdf

143 Ministerio de Ecosocialismo: Venezuela debe legislar para reducir daño causado por mercurio en minería (2023) <https://unionradio.net/2023/06/05/ministerio-de-ecosocialismo-venezuela-debe-legislar-para-reducir-dano-causado-por-mercurio-en-mineria/>

144 WWF y Fundación Gaia Amazonas. (2018). El mercurio en la minería ilegal de oro en los países del Bioma Amazónico. Diagnóstico de flujos comerciales, información científica y respuestas institucionales. https://wwfeu.awsassets.panda.org/downloads/reporte_esp_1.pdf

Similarly, no epidemiological information could be found to establish the impact of mercury pollution on human health in Venezuela, despite credible testimony of the existence of an apparently significant number of people affected, including children, women and indigenous persons.

This absence of information is common in Venezuela. A 2020 report by the United Nations High Commissioner for Human Rights states that:

“Owing to a lack of transparency on the matter, OHCHR is not able to determine to what extent the Government has managed to regularize mining activity and curb illegal mining in Arco Minero del Orinoco. The Ministry for Mining Development has not published key information of public interest, such as environmental and sociocultural impact studies, the number and names of companies with whom the Government has formed partnerships, or the number of registered miners in the Single Mining Registry”¹⁴⁵.

This situation is the result of both the Venezuelan government’s policy of opacity and the serious loss of institutional capacities to carry out research by academic institutions¹⁴⁶, government agencies or civil society organizations.

Despite these obstacles, the information available indicates that mercury pollution in Venezuela may be one of the main hazards to public health, the environment and the economic development of the country and that this threat may persist for very long periods, which represents a serious violation of the human rights of the population, particularly the most vulnerable groups.

Likewise, there is a lack of an effective, timely, adequate and continuous response to the serious problem posed by mercury pollution derived from small and medium-scale mining. The information available indicates that the public officials with competence in mining issues have knowledge of the situation, in many cases under confidentiality, according to testimonies.

However, total silence is the response in most cases. This silence surrounds not only the impacts of mercury pollution on human health but even the news involving national security topics such as mercury smuggling into Venezuela^{147 148}.

145 Human Rights Council. (2020). Independence of the justice system and access to justice in the Bolivarian Republic of Venezuela, including for violations of economic and social rights, and the situation of human rights in the Arco Minero del Orinoco region. Report of the United Nations High Commissioner for Human Rights.

146 Bonalde, I. y Montañes, B. (2023). Producción de conocimiento en Venezuela 1970-2022. Boletín de la Academia de Ciencias Físicas, Matemáticas y Naturales. Vol. LXXXIII, n.º 2, pp. 1-11.

147 IUCN NL. (2020). IUCN NL. (2020). Opening the black box: Local insights into the formal and informal global mercury trade revealed. https://www.iucn.nl/app/uploads/2021/07/Ir_mercury_brochure_digitaal_gebruik.pdf

148 Valverde, M. (2020). Op. Cit..



The Caura River. Photography: Nadiagmar Hernández

The vulnerable population does not seem to be receiving information regarding exposure to mercury and possible ways to avoid it. As the Special Rapporteur on toxics and human rights puts it in his 2018 report, “*the right to information is the foundation for the realization of all workers’ rights regarding toxic exposures.*”¹⁴⁹.

Even if the testimonies collected suggest that most mining workers seem to understand the risks associated with mercury exposure, they do not know how to avoid them and in some cases, they have no alternative.

No information has been obtained regarding the efforts made to educate the vulnerable population, except for some educational material on the subject^{150 151 152}, whose current use and mechanisms for dissemination among miners and other vulnerable groups are not known.

149 Consejo de Derechos Humanos. (2018). Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ecológicamente racionales de las sustancias y los desechos peligrosos. Informe del Relator Especial sobre las implicaciones para los derechos humanos de la gestión y eliminación ecológicamente racionales de las sustancias y los desechos peligrosos. A/HRC/39/48. <https://documents.un.org/doc/undoc/gen/g18/239/73/pdf/g1823973.pdf?token=cj3Eoi69sNnqlb85X8&fe=true>

150 Ministerio de Desarrollo Minero Ecológico. (2018). Cuadernillo: 4. SALUD. Enfoque para la prevención de riesgos asociados al trabajo en la pequeña minería. <http://www.desarrollominero.gob.ve/wp-content/uploads/2018/06/Cuadernillo-4.pdf>

151 Veiga, M.M. y Hinton, J.J. (2001). Mercury Bioaccumulation by Aquatic Biota in Hydroelectric Reservoirs: Review and Consideration of the Mechanisms. Paper presented at the 1st International Forum on Mercury Problem in Hydroelectric Reservoirs: The Guri Case, Bolivar State, Venezuela, Org. IAMOT/UNEG, Ciudad Bolivar, May 17-19, 2001.

152 Educational material of the Somos Caura Project elaborated by the non-governmental organization Todos por el Futuro. (2022).

The current situation of mercury pollution in the Venezuelan Amazon must be approached as a form of violence. In general, violence is defined as the intentional use of physical force or power that may result in injury, death, psychological harm or deprivation¹⁵³. This violence is generally exercised swiftly, producing intense damage or suffering.

However, there are forms of slow violence that are gradual, silent and cumulative, with very serious repercussions over different time frames^{154 155}. Due to their characteristics, these forms of violence are not often perceived as such, even by their victims. One example is the violence produced by chemical pollution, frequently classified as environmental damage and disassociated from any connotation of aggression against people and communities.

Thus, a traditional environmental approach is not enough for acting in cases similar to those described herein. Particularly in Venezuela, mercury pollution is a problem where a myriad of issues meets, including environment, public health, citizen security, national sovereignty and, above all, human rights.

In conclusion, the Venezuelan State is committing serious violations of the human rights of the residents of the Venezuelan Amazon by allowing, concealing and in some cases promoting mercury pollution and failing to protect the population against its effects.

For this reason, the Venezuelan State is urged to assume its obligations regarding the protection of the victims of pollution, the rehabilitation of human and environmental health, ecological restoration and reparation to victims. These processes can be complex because the damage is and has been extensive in time and space, but this is the challenge that will have to be assumed.

An example worth following by the victims is the recent ruling of the Inter-American Court of Human Rights in the case of La Oroya community v. Peru, which declared the international responsibility of the Peruvian State for the violation of the rights to a healthy environment, health, personal integrity, a life of dignity and access to information derived from the omission of its obligation to protect the environmental rights of the community in the face of pollution by mining operations¹⁵⁶.

153 For a more comprehensive definition see: PAHO. Violence prevention.

154 Nixon, R. (2011). *Slow violence and the environmentalism of the poor*. Harvard University Press.

155 Rubiano Galvis, S. (2023). M de Mercurio. En: Ruiz Serna, D. y Ojeda Ojeda, D.C. (compiladores) *Belicopedia*. Universidad de los Andes, Ediciones Uniandes. Bogotá.

156 IACHR. (2024). *Perú es responsable por la violación a los derechos al medio ambiente sano, la salud, la integridad personal, la vida, la protección especial de la niñez, el acceso a la información, la participación política y las garantías judiciales y la protección judicial en perjuicio de 80 habitantes de La Oroya*. https://www.corteidh.or.cr/docs/comunicados/cp_17_2024.pdf

Recommendations

Establishing recommendations on such complex issues is a difficult task, particularly when those previously made are still fully valid¹⁵⁷¹⁵⁸ and have not received attention or a response from the Venezuelan State.

Based on the above, the following recommendations are made:

- **Declare a national emergency due to mercury pollution in the Venezuelan Amazon** to allow the mobilization of financial and human resources and international support aimed at solving the problem.
- **Implement effective and gradual actions to eradicate mining extractivism** as a means of financing the State.
- **Ratify the Minamata Convention** and immediately set up a National Action Plan under the guidelines of Article 7 of this instrument that establishes effective processes for the regulation of the imports of mercury in the country, the elimination of the use of mercury and the regulation of the artisanal and small-scale mining sector to move toward the complete elimination of alluvial mining. This Plan must contemplate programs for the attention of miners and their reintegration into productive activities within a fair transition program, which allows them to lead a dignified and healthy life.
- **Develop a national policy to identify and protect populations at risk** and provide medical care to affected populations following Article 16 of the Minamata Convention.
- **Strengthen mercury-related institutional capacities.** This process must involve both the institutions that carry out scientific research on the topic and those that care for the affected.
- **Sign and ratify the Escazú Agreement** and follow its guidelines to establish policies that facilitate access to information, public participation and justice for all interested parties, as well as protect all people who act in the protection of the human rights of populations at risk and affected persons, as well as in the protection of the environment.
- **Investigate, prosecute and punish the material and intellectual perpetrators of mercury smuggling,** and establish effective control mechanisms to prevent it from continuing to occur.

157 Red Ara. (2013) Op. Cit.

158 Clima21 / Todos por el Futuro (2021). Op. Cit.

APPENDIX

Appendix 1. Summary of the main milestones in the management of mercury contamination in Venezuela

Summary drawn from multiple sources. Only references to topics directly related to mercury management were included. In the case of documents published by academic institutions or publications, the link to the text is provided.

2001	Se publica en Gaceta Oficial la Ley sobre Sustancias, Materiales y Desechos Peligrosos (Gaceta Oficial Extraordinario N° 5.554, de fecha 13 de noviembre de 2001)
2002	La ONUDI (UNIDO) inicia un estudio ambiental y de salud en comunidades mineras cercanas a El Callao
2004	El informe final de la ONUDI (UNIDO) demostró que más del 90% de los individuos muestreados que trabajan en los centros de procesamiento tuvieron niveles de mercurio en la orina por encima del nivel de alerta establecido por la Organización Mundial de la Salud (OMS) ¹⁵⁹ .
2009	Se creó una subcomisión sobre mercurio adscrita a la Comisión Presidencial de Metales Pesados cuyo objetivo es conocer la problemática por el uso del mercurio en Guayana.
2009	La Defensoría del Pueblo informa que ha realizado recomendaciones a la Subcomisión de Investigación Presidencial de Sustancias Químicas, presidida por el Ministerio del Poder Popular para el Ambiente (Minamb) sobre el uso de mercurio y su repercusión sobre los Derechos Humanos de los niños, niñas y adolescentes, mujeres y pueblos indígenas.
2012	Funcionarios venezolanos informan que el país se incorporará al Proyecto Global de Mercurio (GWP) que desarrolla la Organización de las Naciones Unidas para el Desarrollo Industrial (Onudi) conjuntamente con la University of British Columbia de Canadá. A través de este proyecto el país se compromete a reducir las emanaciones de mercurio en las áreas de minería artesanal del país.
2013	El Estado venezolano junto a otros 240 países firma la Convención de Minamata
2013	El Segundo Plan de la Patria 2015-2019 incluye entre sus objetivos los siguientes: 3.1.15. Contribuir al desarrollo del sistema económico nacional mediante la explotación y transformación racional sustentable de los recursos minerales, con el uso de tecnología de bajo impacto ambiental. 5.1. Construir e impulsar el modelo económico productivo eco-socialista, basado en una relación armónica entre el hombre y la naturaleza, que garantice el uso y aprovechamiento racional, óptimo y sostenible de los recursos naturales, respetando los procesos y ciclos de la naturaleza.
2014	El gobierno nacional lanza el programa: "Canaima Libre de Mercurio" dirigido a reducir y, en última instancia, eliminar el uso de mercurio en las actividades de extracción de oro en el Parque Nacional de Canaima.
2014	El Movimiento Ecológico de Venezuela (MOVEV) interpone denuncias ante la Fiscalía General de la Nación por la mala calidad del agua en Venezuela.
2015	El Instituto de Salud Pública del estado Bolívar plantea la creación de un centro de diagnóstico integral mercurial
2016	Se publica el Decreto 2.412, mediante el cual prohíbe el uso, tenencia, almacenamiento y transporte del mercurio, como método de obtención o tratamiento del oro y cualquier otro mineral
2016	El Ministerio de Desarrollo Minero Ecológico anuncia la producción del "primer lingote" de oro "ecológico" producido sin uso de mercurio.
2017	En el Foro "Mercurio en Venezuela realidades y perspectivas" se escribió un Proyecto Institucional del Minec que entre otros aspectos incluye: Elaborar un Plan de Acción y Gestión Sanitaria para atender a la población contaminada; Evaluar las tecnologías utilizadas en los diferentes sistemas de recuperación de oro para ser implementados en como medida sustitutiva al uso del mercurio; realizar un inventario nacional para determinar las liberaciones de mercurio de las diferentes fuentes, entre otros.
2018	Se anuncia la creación de la Red Venezolana de Investigaciones en Mercurio que tiene como función ser instrumento para promover la transformación de los modos de producción del conocimiento y de la tecnología al revalorizar la colaboración, posibilitar la transdisciplinariedad, colaborar a la internacionalización de las comunidades científicas venezolanas y permitir abordar objetivos de I+D de mayor amplitud en el tema de la contaminación del mercurio y sus compuestos.
2020	Una investigación periodística publicada en el portal Armando.info denuncia las rutas y procedimientos para el contrabando de mercurio en el oriente del estado Bolívar. ¹⁶⁰
2020	Un informe de IUCN NL indica que Guyana mantuvo operaciones de importación de mercurio luego de ratificar su anexión al Convenio de Minamata. Una parte de estas cantidades importadas parecen abastecer las operaciones mineras ilegales en los países vecinos de Surinam, Brasil y Venezuela ¹⁶¹ . Asimismo, el informe estableció que desde Guyana hasta Venezuela se trafica el azogue por rutas aéreas o marítimas. Esos movimientos frecuentemente pueden pasar desapercibidos debido a las pequeñas cantidades de mercurio contrabandeadas y la corrupción ¹⁶² .
2021	En el documento: Actualización de la Contribución Nacionalmente Determinada de la República Bolivariana de Venezuela para la lucha contra el Cambio Climático y sus efectos en el capítulo sobre Políticas de la Contribución Nacionalmente Determinada (CND) presentada por el Sector Minería incluye: "Apoyar la investigación de tecnologías de menor impacto al ambiente y a la salud: continuar con las campañas de erradicación y prohibición del uso de mercurio en la minería ilegal, estableciendo control y sanciones sobre su distribución y en la misma medida fortalecer el uso de tecnologías e insumos que sean de degradación o recuperación acorde en alianza con centros de investigación."
2022	El director general de Calidad Ambiental del Minec y coordinador de la Comisión Presidencial de Seguridad Química, José García declaró que "tenemos una agenda para el próximo año que debemos iniciar con el 'Diagnóstico Nacional de Mercurio', así como elaborar la base sólida del comportamiento y la gestión del mercurio".
2023	El Ministro de Ecosocialismo de Venezuela, Josué Lorca que se debe avanzar en la legislación para reducir el daño provocado por el mercurio, usado para la explotación de minerales en el sur del país, incluyendo la zona que compone el Arco Minero del Orinoco (AMO)

159 UNIDO (2004) Mercury Pollution from Artisanal Gold Mining in Block B, El Callao, Bolivar State, Venezuela: Health and Technological Assessment (Project XP/VEN/03/C04) <https://iwlearn.net/resolveuid/5bc5d67aa0bbc9b19c05df5513d68169>

160 Armando.info. (2020). A orillas del Cuyuní, el mercurio brilla más que el oro. <https://armando.info/a-orillas-del-cuyuni-el-mercurio-brilla-mas-que-el-oro/>

161 WWF /Fundación Gaia Amazonas. (2018). El mercurio en la minería ilegal de oro en los países del Bioma Amazónico. Diagnóstico de flujos comerciales, información científica y respuestas institucionales. https://wwfeu.awsassets.panda.org/downloads/reporte_esp_1.pdf

162 WWF /Fundación Gaia Amazonas. (2018). El mercurio en la minería ilegal de oro en los países del Bioma Amazónico. Diagnóstico de flujos comerciales, información científica y respuestas institucionales. https://wwfeu.awsassets.panda.org/downloads/reporte_esp_1.pdf

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