

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



The information and data found by GIEHC-Water indicate the deepening of the Complex Humanitarian Emergency in the water sector. The hydrological cycle is at risk. The destruction and contamination of freshwater basins and the affectation of the Caribbean Sea are occurring on a transboundary scale. We are witnessing a deterioration with consequences for the entire region.

At the national level, the sector continues to decline without any attempt on the part of the government to stop its destruction, nor to take care of the affected people, or the aqueduct and sanitation network. Lake of Valencia or Tacariguas continues its ascent and at the time of writing this report is at the maximum safe level: 414 meters above sea level. The hydro-meteorological monitoring system still does not properly report on the status of rainfall or droughts, information that could prevent further human and material losses.

Constant oil spills are impacting coastlines and fragile ecosystems on land. Protected areas, the nation's natural heritage, are being commercially exploited (tourism, mining, timber extraction, extreme sports, etc.) under apparently legal maneuvers that disrespect both the protected areas and the nation's public goods.

More information on the situation of the right to water and sanitation can be found in the data and documentation collected at HumVenezuela.com.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



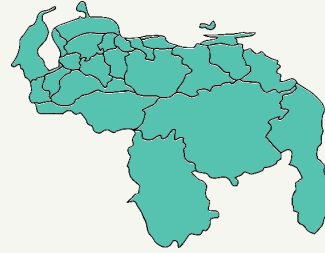
**Hydrological cycle
at risk due to
expansive policy of
gold mining**

1. The country's main water sources are south of the Orinoco. This area, strategic for the country as a producer of hydroelectric energy, was protected for years. Today it is at risk.
2. On February 24, 2016, by Presidential Decree 2,248 published in the Official Gazette 40,855, the "National Strategic Development Zone of the Orinoco Mining Arc" was established to reserve to the Venezuelan State to carry out exploration and exploitation activities for gold and other strategic minerals in river areas delimited by resolution.
3. A zone of 212,000 Km² in the State of Bolivar, destined for the exploration and exploitation of gold, diamonds, coltan, thorium, tantalum, and other resources. Although it is true that this decree is not the beginning of the extractive activity in the south of the country, it has encouraged a dangerous voracity for the country and the entire Amazon region.
4. As of April 8, 2020, Official Gazette 6.526, the exploration and extraction of gold in rivers of great importance for the health of the Amazonian ecosystems: Cuchivero, Aro, Yuruari, Cuyuní, Caura, and even in the Caroní is authorized by means of a "ministerial resolution", a legal figure of lower rank. This last river is at risk of decreasing its flow and increasing the number of sediments, which could compromise the hydroelectric generation on which almost 70% of the country depends, without forgetting that it is already polluted by mercury.
5. There are now gold mines at the headwaters of the Orinoco River. This activity, in addition to reducing water flow and increasing sediments, carries mercury contamination all the way to the Amazon River and the Atlantic Ocean, with unforeseeable consequences. Given the seriousness of the destruction and consequent contamination, the High Commissioner for Human Rights, Michelle Bachelet, requested that this resolution be revoked¹.
6. Venezuela has not ratified the Minamata Convention on mercury pollution². Decree 2.412, published in the Official Gazette 40.960 of 05/08/2016 which prohibits: "the use,

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



possession, storage, and transport of mercury", has only served to incentivize the smuggling of mercury³. La prohibición del mercurio obedece a intereses económicos del gobierno. La única empresa industrial para procesar oro MINERVEN utiliza cianuro y trabaja con las "colas" que obtiene de los mineros artesanales. The prohibition of mercury obeys the economic interests of the government. The only industrial gold processing company, MINERVEN, uses cyanide and works with the "tailings" it obtains from artisanal miners. The OECD report clarifies this⁴. There is no information on how cyanide is handled in this state mining company, nor its final disposal.

7. Gold mining pollution has unleashed an ecological tragedy in the states of Amazonas, Bolivar, and Delta Amacuro. Home to our ancestral cultures and ethnic groups: Yanomamis, Ye'Kuanas, Sanemas, Piapocos, Curripacos, Warao, among others, and the only 3 Afro-descendant Venezuelan Amazonian peoples. Adding many more threats to the already vulnerable ancestral peoples.

Native inhabitants at risk due to high exposure to health pollutants, neo-slavery and violence

8. Mercury contamination tests carried out in the population of El Callao, Bolivar State, on women of reproductive age show that the average is above 1ppm⁵. In addition to contaminating their water and food sources, the people are used to extract gold in a new form of slavery of children, adolescents, and women, both indigenous and Creole⁶. Their lives are worth only a few "grams" of gold.

9. Yacapana National Park is taken over by irregulars and terrorist groups who use it for gold mining, drug trafficking territory, and as a refuge from Colombian authorities⁷. The park is bordered by the Orinoco and Ventuari rivers. The latter receives, among other Colombian tributaries, the Guaviare, which, contaminated or not, has become the highway for the irregular groups that control the area

Similarly, the Cuyuní River is a two-way road between Venezuela and Guyana. This is where the mercury comes in and the gold goes out.

10.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



Loss of forests and ecosystems, "unprotected" areas, and militarization of public patrimony

11. Mining lagoons are breeding grounds for mosquitoes, vectors for the transmission of malaria. The country is once again experiencing high rates of this epidemic.⁸ Fifty-three percent of the cases in the continent originate in Venezuela. By 2021, more than one million cases were estimated, with the world's steepest increase in the number of infections."⁹, putting all the countries in the region at risk ¹⁰. In mining areas there are also cases of Covid-19, but there are not enough records.
12. In addition to mining, another problem, which affects watersheds and the hydrological cycle, is the loss of forest cover which, is due to several causes: fires, logging, oil spills, invasions, and change of land occupation. For example, the lack of gas during the last 5 years has led to cooking with firewood, which has generated a new business: the logging and sale of wood.
13. In 2020, the highest number of fires in protected areas was recorded. Let's remember that 80% of the water comes from national parks and that 80% of the water is located south of the Orinoco, in the states of Amazonas, Bolívar, and Delta Amacuro. "In 2020, Venezuela was the country in the Amazon region with the highest density of forest fires per area... Venezuela's fire density was 53.21% higher than that of Brazil"¹¹.
14. The states of Amazonas, Bolívar, and Delta Amacuro have the largest number of protected areas in the country: 7 natural parks, 15 natural monuments, two biosphere reserves, 7 forest reserves, and two fauna reserves. In one of the parks, Canaima, declared a UNESCO Natural World Heritage Site, the organization S.O.S. Orinoco reported finding mining sites. One of them is just 23 km from Angel Falls, the highest waterfall in the world¹². The World Heritage Committee in its last meeting on June 21st, 2021, requested Venezuela to invite a joint commission of the World Heritage Center and the International Union for Conservation of Nature, IUCN, to evaluate Canaima and present a new report on the situation by December 1st, 2022¹³.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



15. Just as the Mining Arc zone and Compañía Anónima Militar de Industrias Mineras, Petrolíferas y de Gas, CAMIMPEG, were created to administer it, Maduro repeats the formula in Official Gazette No. 42.034 of 12.22.20. There, Decrees 4.392 and 4.393 are enacted. With the first one, the Special Military Economic Zone for Forestry Development "ZEEMDEF" is created. It is Located in the Sifontes Municipality of the State of Bolivar and the Antonio Diaz Municipality of the State of Delta Amacuro. The decree also states that the executing arm of the zone will be the: Deconcentrated Service for the Management of Protection of Forest Products and Natural Resources of the Bolivarian National Armed Force.
16. The main purpose of the ZEEMDEF is "the planning, organization, administration, coordination, inspection, and surveillance of these special military-economic zones, in order to watch over the activity related to the protection of the environment, the use of forest resources, the protection of the ecological processes in the forests, soils, waters, natural wealth, fauna, flora, national parks, natural monuments and any other area under the administration regime of the Bolivarian National Armed Forces, any other area under Special Administration Regime (ABRAE) -Our underlining- and in environmental spaces or zones under the protection of the Bolivarian National Armed Forces, such as inhospitable areas, security zones, strategic location areas, insular areas, and other areas guarded and protected by the Bolivarian National Armed Forces due to their special conditions, as well as environmental sanitation and mining protection. Article 13 specifies: "To ensure the maintenance of conditions in fresh and saltwater currents". These functions are similar in scope to the Ministry of the Environment, eliminated in 2014, or compete with the Ministry of People's Power for Water, created in 2018.
17. With the 2nd decree, the Military Company for the Sustainable Use of Forest Products and Natural Resources, S.A., (EMASPROFORN) was created. Its purpose is: "the development of sustainable and endogenous primary activities of the forestry sector, the use of forestry resources and the industrial transformation of timber natural resources into finished products, their incorporation to the raw material needs of the companies of the national public sector and the housing programs of the National Executive, as well as its commercialization in the national and international market, to guarantee the satisfaction of the internal demand and to diversify the exportable supply of this item".

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



The functions described above will be supervised by the Ministry for the People's Power of Defense.

Massive collapse of water and sanitation services and its consequences for access to electricity

18. At the urban level, the loss of the national network of facilities, plants, aqueducts, and pipelines, was consciously induced for social control, in addition to corruption¹⁴. It has never received the proper maintenance, nor the replacement of pipes or equipment that an infrastructure installed in the second half of the last century requires. This network was able to connect more than 90% of homes and collected 84% of the wastewater. By 2021 it presents the following characteristics: A) a drop of 85.7% in the amount of water distributed. B) The drinking water treatment plants have an operating deficit of 99.3% and C) wastewater collection fell by 74%¹⁵.
19. The general results of the work: Community Diagnosis 2021, carried out by HumVenezuela, show that: 77.8% of those surveyed do not receive water regularly through the aqueducts. 90% say that they must store water and 80.9% of those who fetch water for the household are women. 55% do this search on foot¹⁶. 68% say that the water that arrives is cloudy, smells, or tastes bad. 46.8% buy water from bottles or tanker trucks.
20. Venezuela's Living Conditions Survey (ENCOVI) revealed that for the years 2019 and 2020, 75% of the population did not receive water every day. This same survey shows that, in many areas, the frequency of the supply is less than two days a week, forcing people to resort to even more unsafe water sources. During the last five years, under the circumstances of the Complex Humanitarian Emergency, and until March 2020, 18 million people, representing 63% of the population living in homes connected to the water supply system, suffered constant water supply interruptions. In such interruptions, 2.5 million people (9.7%) received water only once a week, 3.6 million (14.3%) every two weeks or once a month, and 3.4 million (13.3%) never received water at all¹⁷.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



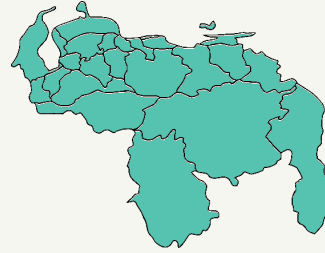
21. In March 2019, the electrical system left the country in darkness¹⁸ and its lighting remains intermittent to this day. The aqueducts require electric power to distribute water and guarantee its safety.
22. 65% of the energy is hydroelectric and although there is water to produce it, the electric distribution network has not received the necessary maintenance. Ninety percent of households report failures in the electrical system¹⁹. Water, sanitation, and energy services do not reach hospitals regularly: 88% have problems with sewage collection; 70% report problems with water, and 63% face problems with electricity²⁰, and have no alternative sources. For the same reason, 82% of public educational buildings²¹ do not have a regular water supply. In March 2020, the pandemic arrived and found us without water to wash our hands. The sale of water, of dubious origin and the opening of wells without technical procedures, speculation, and corruption are already part of the daily routine installed before.
23. At the end of the 1970s, as a result of the natural drying process and the extraction of water for agricultural activities, Lake Valencia reached its lowest level: 402 meters above sea level, m a s l, "The solution" to avoid this process was the diversion of watercourses from neighboring springs, mainly the Cabriales River. This work was carried out by the Ministry of Environment in 1979. By that time, the Cabriales River was already collecting sewage from the city of Valencia. Since then, the lake levels have risen, flooding agricultural and urban areas²², and causing the loss of important areas of cultivated land.
24. Forty-three percent of the area flooded by the growth of the lake corresponds to land with high agricultural potential²³. By 2005 its level reached 408 m a s l. In that year, a temporary wall was built for 3 years to prevent flooding in the urbanizations south of the city of Maracay. The initial height of the wall was 412 m a s l. The only thing that has been done in subsequent years, to stop the tragedy, is to increase the height of the wall, despite the warnings and contrary opinions of experts. Between the years 2011 and 2012, 2.40 meters were added. In 2017 another meter more. Meanwhile, the lake continues to advance.

**Sanitary emergency
of Lake Valencia or
Tacariguas and the
Central Regional
System (SRC) I and II**

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021

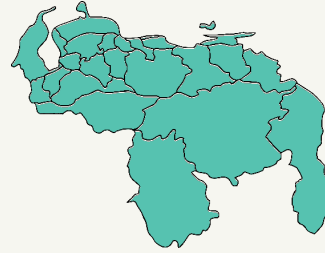


25. At the time of writing this report, the lake has already reached its maximum safety level 414.40 m a s l. above sea level. The urbanisms La Punta, Mata Redonda, La Esmeralda, La Esmeraldita, José Casanova Godoy, among others, live with the anguish of knowing that they are 6 meters below the level of the lake. Their lives, their homes, their families depend on a wall whose useful life has already expired. The storm drains and sewage discharges of all the communities located near the lake are submerged due to the increase in the level of the lake, which means that the sanitary installations of the residences do not work, causing flooding of houses and streets, of sewage water, increasing the sanitary risk⁶. The inhabitants of these sectors sued the Venezuelan State and won a lawsuit that compensates them for the damage to their homes. They have been waiting since 2007 for compliance with Ruling 1,632 of the Supreme Court of Justice.
26. From September to November 2020, four (4) major floods were recorded in Aragua State, affecting 5 municipalities. The most affected: Girardot, Mario Briceño Iragorry and Linares Alcántara. The latter, southeast of the state capital, Maracay, borders the lake. 4,000 inhabitants of the urbanizations: La Punta and Mata Redonda, Esmeralda, La Esmeraldita, José Casanova Godoy, Rómulo Gallegos, Palma Real, Rio Blanco 2 and Los Cocos, suffered the consequences. More than 300 houses were flooded due to the unstoppable growth and overflowing of the Madre Vieja River, a tributary of Lake Valencia. The waters reached a height of 1.80 meters (5.9 ft). For 20 days. Covid 19 cases increased and the Complex Humanitarian Emergency deepened.
27. The state-owned company Hidrocentro serves 4,491,123 million people through the Sistema Regional del Centro I and II²⁴ The water sent from the aqueduct is not fit for human consumption. This aqueduct recirculates wastewater. Pao-Cachinche is the reservoir that feeds the aqueduct. In 2001, an ecotechnology measure was applied to this reservoir to control the effects of eutrophication; however, this achievement was lost because A) in 2005 the waters of its highly polluted tributaries (Maruria and Cabriales rivers) were diverted to the Pao river basin. B) water from the lake itself began to be transferred to the reservoir, with the excuse of containing the growth of the lake's waters. The organic load exceeded the capacity of the aeration system installed, completely reversing the effects of the mitigation measures, thus worsening the water quality of the reservoir. The aqueduct plants are not functioning and even if they were functioning they

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



would not be able to make the raw water they receive drinkable. Therefore, all the SRC does is recirculate wastewater

28. In 2009, a pumping system was commissioned to transfer a flow of 3,000 liters per second (l/s) from the Taiguaiquay reservoir treatment plant to the Tucutunemo River, southeast of the Valencia Lake basin. The objective was to build the irrigation system for the valleys in this area. The work was never completed. Part of the effluent from this system was discharged into the Guárico River, the main tributary of the Camatagua reservoir (Aragua State). This action caused a deterioration in the water quality of this reservoir, which is now eutrophicated²⁵. The Camatagua reservoir is the main source of supply for the Caracas Metropolitan Aqueduct and neighboring towns. The State repeated what it did with the Pao-Cachinche reservoir. Although the transfer to the Guárico River ceased in 2015, the remaining organic and nutrient load is still excessive, maintaining the eutrophication of the reservoir waters, with a dominance of more than 90% of cyanobacteria, some of which could present strains with potent toxins (cyanotoxins) for the organisms of the reservoir itself and for humans. The water quality of another reservoir was impaired and more people were exposed to contaminated water, with a potential risk to their health. Conventional water treatment systems do not remove cyanobacterial toxins.

29. There is no official information from either the state oil company, Petroleos de Venezuela SA, PDVSA, or the Ministry of Popular Power for Ecosocialism MINEC, on oil incidents or accidents. However, spills and explosions are large enough to be seen and monitored by remote sensors and nearby villagers. In this report we only mention some of the most important accidents.

Persistent and large-scale oil pollution, without publicly available data

- **November, 2016:** 25 thousand barrels from a Petroanzoátegui pipeline spilled into the Aribí and El Palo rivers in Anzoátegui state²⁶.
- **October, 2017:** 200,000 barrels from the Amuay refinery, part of the Paraguaná Refinery Complex, were spilled into the Caribbean Sea²⁷.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021

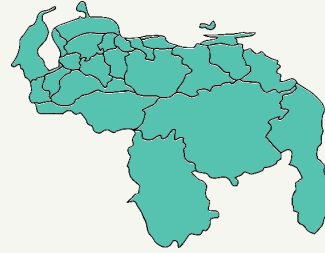


- **July 2018:** there was a spill from the Secondary Recovery Plant in Jusepín, Monagas state, east of the Country. The spill reached the Guarapiche River, which supplies water to the population of Maturín, the capital of the state. This is not the first time that the inhabitants of the area are left without water because the oil reaches the river. According to the authorities, the rains overflowed the drainage channel leading to the plant. More than 600,000 people were affected²⁸.
- **March 2020:** El Palito Refinery, is located on the central coast of Venezuela. Industrial lagoons are rebounding without rainfall or growth of the Aguas Calientes river. These spills are now recurrent and reach the sea.
- **July 2020:** A failure in the Catalytic Cracking plant of the El Palito Refinery spilled about 26,000 barrels of oil into the sea and reached Morrocoy National Park. The government kept silent. It was only through satellite research by Professor Eduardo Klein, from Universidad Simón Bolívar²⁹ that it was possible to verify that the oil was indeed coming out of the refinery. There was no technical information from PDVSA about the spill. The authorities prohibited researchers, biologists, environmentalists, and volunteers from entering the national park. Employees of the National Parks Institute, INPARQUES, were prohibited from providing information. The spills were repeated on July 31st, September 23rd, and November 16th. They have continued with irregular frequency since December until the time of writing this report.
- **October 2020/ July 2021:** The Cardón Refinery, part of the Paraguaná Refinery Complex, has been discharging petroleum and other oils into the sea on a frequent basis. As in the east of the country, unprocessed crude oil is burned through mechurrios lit 24/7, releasing organic pollutants such as dioxins and furans, as well as CO₂, into the atmosphere. In an October 2020 spill, the plume of black smoke from the oil spill, seen by satellite, may have reached 17 kms and below the smoke the oil slick was sighted at sea. The May 2, 2021 spill was estimated to be between 18 and 25 km long; the May 20 spill was 24 km long; the July 2 spill was 35 km long; and the August 11 spill was 15 km long.
- **January and May 2021:** In January 2021, an explosion was recorded in the Amana Operating Complex, located in Monagas state, but without a technical report; it was

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



not known what burned and what was released into the atmosphere. In May of the same year, another fire occurred in the gas compression line of this plant. There was also no information on the gases released into the atmosphere. Any combustion releases Dioxins and Furans are considered persistent organic pollutants by the Stockholm Convention, to which Venezuela has been a party since 2005.

- **April, June and July 2021:** Oil spills were recorded in Lake Maracaibo, the largest environmental liability in the country. In addition to being the great sewage collector of the city of Maracaibo, oil, chemicals and even industrial scrap have been dumped into its waters for decades. At its bottom lie thousands of kilometers of pipes that are abandoned in its waters when they are replaced.
- **May/June 2021:** The underwater pipeline, Rio Seco, in Falcón, was leaking gas from May 30 until June 6, 2021.

Efforts by the scientific and academic community, and environmental organizations

30. Organized civil society, national and foreign, in addition to recording as best they can what is happening in the Complex Humanitarian Emergency, is also providing solutions to the people. The Simón Bolívar University and the Sartenejas Technological Park, through SUINCA, designed water purifying equipment whose main input is sodium chloride, i.e. common salt. Unicef and the International Red Cross purchased the equipment and placed it in wells recovered from hospitals. SUINCA also provided its services to the government sector with the same idea of providing clean and safe water in health centers. The equipment installed under Unicef and International Red Cross contracts, 13 in total, are the ones that remain operational. Unfortunately, those that were sold to the government are not working, for various reasons: no salt, no electricity, or any other reason unrelated to the equipment itself, which is in good health and has proven its soundness. The complete table of hospitals and their operation can be consulted in the annex to this document.

COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



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COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



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COMPLEX HUMANITARIAN EMERGENCY IN VENEZUELA

RIGHT TO WATER AND SANITATION

National Report 2019/2021



²⁸ Contexto Diario. Derrame de petróleo volvió negras las aguas del río Guarapiche. En: <https://contextodiario.com/venezuela/derrame-petroleo-volvio-negras-aguas-rio-guarapiche/>

²⁹ Eduardo Klein *Remote Sensing Lab. Simon Bolivar University*. En: <https://bit.ly/39RYHy1n@usb.ve>