

Mandates of the Special Rapporteur on the human right to a clean, healthy and sustainable environment; the Special Rapporteur on the right to food; the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; the Special Rapporteur on extreme poverty and human rights and the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

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(Please use this reference in your reply)

26 April 2024

Excellency,

We have the honour to address you in our capacities as Special Rapporteur on the human right to a clean, healthy and sustainable environment; Special Rapporteur on the right to food; Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; Special Rapporteur on extreme poverty and human rights and Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, pursuant to Human Rights Council resolutions 55/2, 49/13, 51/21, 53/10 and 54/10.

In this connection, we would like to bring to the attention of your Excellency's Government information we have received concerning **serious environmental degradation and toxic pollution in Lebanon linked to the ongoing energy crisis and poor and insufficient wastewater treatment; and its impacts on human rights, including the human rights to a clean, healthy and sustainable environment, water and sanitation, food, housing and health.**

More specifically, according to the information received:

The energy crisis and challenges in terms of access to electricity have had important environmental and human rights impacts over the last years. In particular, the negative impacts of the energy crisis compounded with challenges affecting the State-owned Electricity Company, "Electricité du Liban", including due to alleged corruption and mismanagement of the company, have undermined the enjoyment of human rights of the population, including the human rights to a clean, healthy and sustainable environment, food, water and sanitation, housing, and health.

Challenges in access to electricity and impacts on the right to a clean, healthy, and sustainable environment

The population's access to electricity has been fluctuating over the last years as a result of a severe energy crisis and numerous challenges in electricity provision. In fact, the Special Rapporteur on extreme poverty, who visited the country in November 2021, noted that before the crisis, "Electricité du Liban" (EDL), the national electricity provider, had the capacity to absorb only 63 per cent of the total electricity demand and was facing electricity "losses amounting to a third of the total (electricity) generation" (A/HRC/50/38/Add.1).

In this context, households have had limited access to electricity, grid connections being available for only a few hours a day. This situation has

triggered important impacts on air quality and ecosystems around Lebanon.

In particular, some households have resorted to tree logging, relying on wood burning to heat their houses or cook meals. Wood burning stoves have negative toxic consequences on indoor air quality as they release fine particles and they also contribute to outdoor air pollution. In other instances, individuals have resorted to logging to generate additional revenue, including to compensate for the high cost of energy. On occasion, such activity has taken place in areas whereas logging is not permitted, and it is alleged that the increase in illegal logging has resulted in thousands of oak, pine, fir, and juniper trees, some up to centuries old, being cut down.

In addition, many households and businesses have relied on private diesel generators for energy provision when financially accessible, with an estimated total of 8,000 private diesel generators in operation in Beirut. According to the information received, the market size of subscription-based generators was approximately 1.1 billion USD in 2018 and could be subjected to an 8-fold increase in light of the current situation.

Such means of energy generation releases fine particles and carcinogenic substances in the air with important impacts on the rights to health and to a clean, healthy, and sustainable environment. In fact, it is alleged that the surge in use of private diesel generators and related release of fine particles have been linked to a rise in the number of individuals suffering from respiratory problems, including wheezing, coughing and bronchial irritations. In addition, it was estimated that, in Hamra for example, the use of diesel generators for only 3 hours per day accounted for 38 per cent of the daily carcinogen exposure. It was also demonstrated by a 2021 study at an urban background site in Lebanon, that diesel generators were one of the main sources of ambient particle-bound polycyclic aromatic hydrocarbon (PAHs) emissions, contributing to 23% of the total of emissions which further result in air pollution. In this regard, a number of diseases associated with air pollution including lung diseases, including asthma exacerbations, chronic obstructive pulmonary diseases (COPD), lung fibrosis, and interstitial lung disease, have been identified by a number of health professionals in a context of a study discussing their knowledge about air pollution impacts on health.

Furthermore, the reliance on diesel generators imposes a heavy burden on low-income households at a time when the population is already experiencing the effects of a severe and prolonged financial and economic crisis, exacerbating poverty and inequality. The treatment of diseases related to air pollution, puts further pressure on the health system in general, which is already under heavy stress due to cuts in financing.

Additional stresses related to fuel and energy contributing to air pollution transport

According to the information received, it is estimated that the number of cars per capita is 865 per 1,000 persons in the country and that vehicles are, on average, 20 years old. In addition, passenger cars account for around 90 per cent of the country's vehicle fleet (1.8 million) and public transportation remains currently limited. The high number of cars circulating on Lebanon's

roads coupled with the poor fuel efficiency of old vehicles seriously impacts air quality in the country. More specifically, a 2021 study on air pollution in Lebanon found that traffic was the main contributor to the levels of polycyclic aromatic hydrocarbons emission, with 48 per cent of emissions attributed to this source of emission alone in an urban setting.

According to the information received, the estimated 1.8 million passenger cars in Lebanon travel on average 12,000 kilometres a year, consuming an average of 1,107 L of fuel. According to UNDP, it was estimated that gasoline consumption in Lebanon was 2.7 times higher than the world average and 2.3 times more than a citizen of the Arab world in 2015.

Energy generation

Power plants in Lebanon are major contributors to air pollution. Constructed in 1956, the Zouk Mikael thermal plant, located in the city of Mount Lebanon and operated by EDL, is one of the most important power plants in the country. Having been in operation since 1983, the plant includes four turbines and four stacks running on heavy fuel (HFO-6; density of 971 kg/m³) on a continued basis with each of the units consuming 40 tons of heavy fuel oil per hour. The plant's operations release a high volume of nitrogen dioxide and related suspended particles (estimated to be ~1800 Kg of total suspended particles per day in 2008).

Emissions are coming out of the plant's stacks on continuous basis and thick black smoke has been witnessed by the population on various occasions. It has been estimated that the levels Benzo[a]pyrene (BaP) were 10 times higher than those found at a background site, around the power plant. Furthermore, emissions have been associated with a rise in hospital admissions according to the information received. In addition, a high rate of cases of respiratory diseases as well as cases of lung cancer have been reported in areas surrounding the plant.

Zouk Mikael municipality has lodged several requests to relocate the plant or exchange the old turbines for cleaner gas operating ones. However, according to the information received no action has been taken by the Government to address the requests.

In addition, protests by the local population have taken place over the last years, including between April and July 2015, against the proposed expansion of the power plant. At the time, the road connecting the area to the capital was allegedly blocked. The power plant was expanded in 2017.

Environmental degradation through wastewater mismanagement

Wastewater management is a concern around the country, with a number of wastewater treatment plants not being operational or operating under limited capacity. For instance, according to the information received, in some districts, many wastewater treatment plants are not operational. A study also highlights that out of 70 wastewater treatment plants run by municipalities, 33 are not

operational.¹

In various areas across Lebanon, sewage effluent is regularly discharged by municipalities in water bodies including rivers, streams and the Mediterranean Sea, on open land or underground. The failure of public authorities to provide adequate sanitation services to residents of informal settlements causes that wastewater is also often released into the environment. In addition, desludging of holding tanks connected with latrines is conducted on a sporadic basis. The failure of public authorities to provide adequate sanitation also result in cisterns and wells being affected by pollution from untreated sewage discharged in water bodies, further exposing residents to human rights impacts and risks of contamination.

Furthermore, wastewater around the country is at times only partially treated, untreated or uncontrolled. It was estimated that around 300 Mm³ of wastewater is generated across Lebanon at the municipal level every year and, a paper suggested that until 2019, only 20 to 30 per cent of this volume was treated with only 8-12 per cent receiving “more than primary treatment”.² Another study sampled water from major rivers across the country and found that E. Coli and fecal coliforms were respectively detected in 95.5 per cent and 96.29 per cent of the samples.³ It also indicated that 73.48–61.3 per cent and 31.8 per cent “of the samples exceeded the microbiological acceptability standards for irrigation and the fecal coliform limit for recreational activities, respectively.”

Discharging untreated or partially treated wastewater in the environment can have important negative impacts on human rights including the rights to health, water, sanitation, food, housing and a clean, healthy and sustainable environment. The vast majority of farmers use groundwater for irrigation, and polluted groundwater can lead to contamination of crops. In this regard, the pollution level of water from 10 rivers in Lebanon has been tested in the context of a study for their suitability for irrigation in June 2023 and the PH levels of 4 out of 10 samples was above the permissible threshold. Individuals swimming in coastal areas are also at risk. In addition, it is alleged that inadequate wastewater management practices put specific populations at risk, including refugees, due to the lack of sanitation measures in place and evidence pointing towards freshwater contamination in refugee camps. According to the Government, it is estimated that more than 1.5 million refugees currently live in the country (1.5 million Syrian refugees and 13,715 refugees of other nationalities).

Wastewater discharges also contribute to the proliferation of diseases such as cholera. On 6 October 2022, the first outbreak of cholera since 1993 was registered in Lebanon, spreading over eight governorates and 18 districts in the following days. On 17 January 2023, there were 6,158 confirmed and suspected cholera cases reported in the country with 48 per cent of the cases affecting children of less than 15 years old according to UNICEF. According to the World Health Organization, over the period of January to August 2023,

¹ https://www.iwmi.cgiar.org/Publications/IWMI_Research_Reports/PDF/pub181/rr181.pdf

² <https://www.water-alternatives.org/index.php/alldoc/articles/vol16/v16issue2/712-a16-2-13/file>

³ [Antibiotics | Free Full-Text | Nationwide Assessment of Water Quality in Rivers across Lebanon by Quantifying Fecal Indicators Densities and Profiling Antibiotic Resistance of Escherichia coli \(mdpi.com\)](#)

2,197 cases were reported in the country. In June 2023, the cholera outbreak was declared over by the Ministry of Health.

Problems related to solid waste management

It is alleged that waste management challenges also extend to solid waste, including when it comes to collection, which has been qualified as “unreliable”. Poor solid waste management contributes to multiple threats to public health. Open dumping and burning are often practiced, with 900 open dump sites across the country according to the information received. Burning solid waste generates toxic air pollution, particularly as plastic is a significant portion of the waste stream. In 2011, 11 per cent of Lebanon’s greenhouse gas emissions were attributed to the waste sector.

Water pollution by leakage from sewage tanks or dumping into rivers constitutes an additional environmental impact, affecting directly natural ecosystems and food security. The deterioration of water quality is affecting not only potable water but also water used for irrigation. Solid wastes dumped in channels also results in obstruction of drainage systems which increases flood risks along rivers during winter.

While we do not wish to prejudge the accuracy of these allegations, we would like to express our deep concerns regarding the impact of environmental degradation on human rights in Lebanon. We are also further concerned by the negative human rights impacts of specific sources of environmental pollution and contamination, including untreated or uncontrolled wastewater, poor solid waste management and toxic emissions from energy production from power plants such as Zouk Mikael, particularly as these environmental problems may disproportionately affect groups in situations of vulnerability.-

In connection with the above alleged facts and concerns, please refer to the **Annex on Reference to international human rights law** attached to this letter which cites international human rights instruments and standards relevant to these allegations.

As it is our responsibility, under the mandates provided to us by the Human Rights Council, to seek to clarify all cases brought to our attention, we would be grateful for your observations on the following matters:

1. Please provide any additional information and/or comment(s) you may have on the above-mentioned allegations.
2. Please indicate measures taken to ensure that Your Excellency’s Government complies with international environmental laws and human rights standards, especially in relation to air quality, water quality, and preventing people from exposure to toxic substances.
3. Please provide information on efforts made to implement the recommendations of the Special Rapporteur on extreme poverty, following on his visit to Lebanon, regarding electricity (A/HRC/50/38/Add.1).

4. Please indicate measures put in place to achieve the targets of meeting 18 percent of electricity demand and 11 percent of heating demand from renewable sources by 2030, as pledged in Lebanon 2020 National Determined Contribution.
5. Please explain Your Excellency's Government efforts to encourage, support, subsidize and finance the development and expansion of clean energy such as solar, drawing on Lebanon's significant potential, including by seeking to secure funding through foreign investment and lending.
6. Please indicate measures taken to tackle transport-related air quality challenges from a human rights perspective, including potential plans to improve the public transportation system and, reduce greenhouse gas emissions (GHG) by 20 percent compared to a business-as-usual scenario as pledged in Lebanon's 2020 National Determined Contribution.
7. Please indicate measures taken in terms of forest conservation in line with international environmental and human rights standards.
8. Please indicate any action undertaken in response to concerns of the population regarding the Zouk Mikael power plant impacts on human rights, including the right to health and the right to a clean, healthy and sustainable environment, (including requests to relocate the plant, decommission the plant, or exchange the old turbines for cleaner operating ones).
9. Please provide information on the environmental impact assessments carried out prior to the approval projects (e.g. latest expansion of the Zouk Mikael Plant) and whether these studies were prepared with a human rights-based approach, taking into account the climate change impacts, as well as the social, environmental and cultural impacts on the relevant communities located in the affected areas.

We would appreciate receiving a response within 60 days. Past this delay, this communication and any response received from your Excellency's Government will be made public via the communications reporting [website](#). They will also subsequently be made available in the usual report to be presented to the Human Rights Council.

While awaiting a reply, we urge that all necessary interim measures be taken to halt the alleged violations and prevent their re-occurrence and in the event that the investigations support or suggest the allegations to be correct, to ensure the accountability of any person(s) responsible for the alleged violations.

Please accept, Excellency, the assurances of our highest consideration.

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Annex

Reference to international human rights law

In connection with the above alleged facts and concerns, we would like to draw your Excellency's Government's attention to the applicable international human rights norms and standards, as well as authoritative guidance on their interpretation.

We would like to draw the attention of your Excellency's Government to its obligations under articles 11.1 and 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), ratified by Lebanon in 1972, which recognizes the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions, and stipulates that States shall take appropriate steps to ensure the realization of this right. Article 12 recognizes the right of everyone to the enjoyment of the highest attainable standard of physical and mental health without discrimination and take steps to achieve the full realization of this right, including those necessary for the creation of conditions which would assure to all medical service and medical attention in the event of sickness. These articles must be read in conjunction with article 2.2 of the Covenant, which provides for the exercise of any right under the Covenant without discrimination of any kind. In its General Comment No. 14, the Committee on Economic, Social and Cultural Rights (CESCR) stresses that the right to health is defined not only as the right to timely and appropriate health care, but also to "the underlying determinants of health, such as access to [...] an adequate supply of safe food, nutrition and housing [...] as well as] healthy [...] environmental conditions" (para.11). In this regard, WHO defines social determinants of health, as the non-medical factors that influence health outcomes, that is "the conditions in which people are born, grow, work, live, and age"⁴. The Committee also stressed that "the right to health is closely related to and dependent upon the realization of other human rights [...] including the right to food, housing, [...] human dignity, life, non-discrimination [and] equality," among others (para. 3). We also would like to draw the attention of your Excellency's Government's to its obligations under articles 6 and 17 of the International Covenant on Civil and Political Rights (ICCPR), ratified in 1992, on the rights to life and to non-interference with privacy, family, home or correspondence.

We would like to reiterate that Article 11(1) of the ICESCR requires States to "take appropriate steps to ensure the realization of the right to food". The CESCR has defined the corresponding obligations of States to respect, protect, and fulfil the right to food in its General Comment No. 12. According to the Committee, the obligations to **respect** existing access to adequate food requires State parties to refrain from taking any pressures that result in preventing such access. The obligation to **protect** requires measures by the State to ensure that enterprises or individuals do not deprive individuals of their access to adequate food. The obligation to **fulfil** means the State must pro-actively engage in activities intended to strengthen people's access to and utilization of resources and means to ensure their livelihood, including their access to land in order to ensure their food security. (para. 15.)

⁴ World Health Organization, "Social determinants of health", available at: www.who.int/health-topics/social-determinants-of-health#tab=tab_1.

In its General Comment No. 4 on the right to adequate housing, the Committee on Economic, Social and Cultural Rights has clarified that the right to housing should not be interpreted in a narrow or restrictive sense, such as merely having a roof over one's head; rather, it should be seen as the right to live somewhere in security, peace and dignity. It includes, among others, the availability of services, materials, facilities and infrastructure essential for health, security, comfort and nutrition, including sustainable access to natural and common resources, safe drinking water, energy for cooking, heating and lighting, sanitation and washing facilities, means of food storage, refuse disposal, site drainage and emergency services. The right to housing includes access as well to adequate services, including utility services such as heating, refuse disposal and sanitation services, including for persons living in informal settlements. The Committee has indicated that States must allocate sufficient resources to the realization of the right to adequate housing and prioritize the needs of disadvantaged and marginalized individuals or groups.

Outdoor and indoor pollution can significantly undermine the right to the highest attainable standard of health and the habitability and safety of housing, which are both core elements of the right to adequate housing. In this context the WHO Guidelines on Housing and Health (2018) set out evidence-based recommendations to ensure that outdoor and indoor pollution does neither undermine the right to adequate housing nor the right to the highest attainable standard of health. These WHO recommendations should as well inform policy responses to address the alleged human rights violations.

In this connection, we recall the 2023 report (A/HRC/52/28) on the climate crisis and the right to housing to the Human Rights Council presented by the Special Rapporteur on the right to adequate housing, and its recommendations. In the report, the Special Rapporteur noted that the housing sector is a significant contributor to climate change, including through energy consumption, the emission of pollutants, deforestation, and waste management. The Special Rapporteur called on States to achieve as quickly as possible a just transition towards rights-compliant, climate-resilient and carbon-neutral housing for all, including by the expansion of access to electricity produced in an environmentally friendly manner and other green sources of energy where households still depend on fossil forms of energy for heating, cooking and other needs; as well as by ensuring that urban planning policies integrate, among others, climate change, energy response, transport, location of services and infrastructure equity, including in those efforts any informal settlements and their residents.

In addition, in its General Comment No. 15 on the right to water, the Committee has affirmed that the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. The Committee further prescribed that States parties should adopt comprehensive and integrated strategies and programmes to ensure that there is sufficient and safe water for present and future generations, which among others may include ensuring that proposed developments do not interfere with access to adequate water and assessing the impacts of actions that may impinge upon water availability and natural-ecosystems watersheds.

Furthermore, we would like to underscore resolutions Human Rights Council resolution 48/13 and United Nations General Assembly resolution 76/300, respectively adopted in 2021 and 2022, both recognize the human right to a clean,

healthy and sustainable environment. The Framework Principles on Human Rights and the Environment, presented to the Human Rights Council in March 2018 (A/HRC/37/59) set out basic obligations of States under human rights law as they relate to the enjoyment of a safe, clean, healthy and sustainable environment. In particular, principle 12, provides that States should ensure the effective enforcement of their environmental standards against public and private actors. As per principle 14, States should take additional measures to protect the rights of those who are most vulnerable to, or at particular risk from, environmental harm, taking into account their needs, risks and capacities.

The Special Rapporteur on human rights and the environment has identified 6 substantive elements to the human right to a clean, healthy and sustainable environment, in his recent reports, including clean air, safe and sufficient water, healthy and sustainable produced food, a safe climate, a healthy biosphere and non-toxic environment to live, work, study and play.

In his 2019 report on clean air,⁵ the Special Rapporteur on human rights and the environment recommended that “States must accelerate programmes to replace solid fuels and kerosene with cleaner energy and clean technologies. A concerted effort is required to address nonfinancial barriers to clean cooking by extending fuel supply infrastructure, implementing policies to reduce the variability of fuel prices and promoting gender equity in household decision-making. States must also educate the public about the adverse health consequences of household air pollution and the availability of cleaner alternatives” (para. 114). He also concluded that:

“Given the devastating impacts of poor air quality on people’s lives, health and human rights, actions must be taken rapidly and systematically, with a priority focus on ameliorating conditions for the most vulnerable. Fulfilling the right to breathe clean air goes hand in hand with achieving the Sustainable Development Goals, including healthy lives for all, sustainable cities, universal access to clean energy and effective action to address climate change. A rapid shift away from fossil fuels to renewables such as solar and wind (except in the context of clean cooking, which often involves a shift to LPG) could save as many as 150 million lives over the course of the twenty-first century by reducing air pollution” (para. 109).

In his 2021 report on human rights and the global water crisis: water pollution, water scarcity and water-related disasters,⁶ the Special Rapporteur put forward a set of recommendations to fulfil the water component of the right to a healthy environment. In this regard, the Special Rapporteur stressed that States “must implement the seven steps of rights-based water governance outlined in paragraphs 61–80 above (capacity-building, public engagement and empowerment, monitoring, legal mapping and strengthening, development of rights-based plans, implementation and evaluation)” (para. 88).

⁵ A/HRC/40/55

⁶ A/HRC/46/28