



Written Submission

Special Rapporteur's report on "Water and energy nexus: the human rights to safe drinking water and sanitation and access to energy for all"

The Global Initiative for Economic, Social, and Cultural Rights (GI-ESCR) welcomes the opportunity to provide inputs to inform the development of the Special Rapporteur's report on the water and energy nexus: the human rights to safe drinking water and sanitation and access to energy for all.

We celebrate the effort to unpack how the international human rights framework can contribute to transforming the water and energy sectors, which are critical to ensuring a life in dignity and the integrity of ecosystems globally. In this line, this submission aims to provide insights into the following key issues that address questions 1, 3, and 4 of the call for inputs released by the Special Rapporteur:

- The energy-water nexus in the energy transition
- The right to sustainable energy
- The case of lithium extraction in Chile
- The case of the construction of the hydroelectric project in Guatemala

Furthermore, we provide a list of publications and references to resources that can help inform the report's development.

I. The energy-water nexus in the energy transition

The transition from fossil fuels to clean, renewable, and efficient energy systems is imperative and currently underway to avert the climate crisis that is putting at risk all conditions of life on the planet. However, this profound transformation of energy systems will be largely advanced or limited by the availability and sustainability of water resources. According to the International Energy Agency, hydropower is the main source of renewable energy generating as much as all other renewable energy sources with 47% of the global share of global renewable energy production.¹ But, despite its contribution to the reduction of CO₂, large-scale hydroelectric power plants may cause the diversion of rivers and other water resources, often impact wildlife living in freshwater ecosystems, and create conditions of water stress for local communities.² Furthermore, the construction and operation of large-scale dams have been associated with a wide range of human rights violations, including Indigenous Peoples' right to free, prior, and

¹ International Energy Agency. Hydroelectricity. Last accessed on 7 March 2025 at: <https://www.iea.org/energy-system/renewables/hydroelectricity>

² Amnesty International. Hydropower and the Defence of Rights at Risk. Last accessed 7 March 2025 at: <https://amnesty.ca/hydropower-and-the-defence-of-rights-at-risk/>

informed consent and the unequal sharing of benefits.³ In some instances, hydroelectric plants may even be a source of methane and other greenhouse gases driving the climate emergency.⁴

Ocean energy is a growing sector in the transition to green renewable energy, especially in island and coastal areas. These technologies are characterised by greater predictability than other renewable energy sources and have become a key component of the blue economy. Nevertheless, the impact of ocean energy technology on marine ecosystems is a significant concern.

In addition, the extraction and processing of some transition minerals, indispensable for the development of renewable energy technologies, currently requires large quantities of water in already pressured local ecosystems. For instance, the extraction of lithium, a mineral used in batteries for renewable energy storage, is often carried out through brine extraction. This process requires around 2 million litres of water which annually results in large quantities of water loss.⁵ This extractive process is currently putting in danger the integrity of underwater freshwater reserves.

Against this background, the availability of water resources has been decreasing, among other things, due to overconsumption, diversion, and the climate emergency itself. Looking at the impacts that one sector has on the availability of the other is therefore essential to ensure the sustainable provision of water and energy for current and future generations. In this line, the human rights framework provides a set of standards, principles, and norms that can help guide and ground a just transition that fosters complementarity and mutual supportiveness between the water and energy sectors and contributes to the just and sustainable governance of these critical resources.

II. The right to sustainable energy

Considering the relevance of energy in all possibilities to ensure adequate socio-economic living standards and a clean, healthy, and sustainable environment, there is a wide breadth of legal instruments that recognise the human right to energy. Despite the variations in its formulations and associated entitlements and obligations, recently, there has been growing interest and support in pushing for the recognition of this right at the international, regional, and national levels.

At the international level, the only binding international law instrument that enshrines this right is the International Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW). In its article 14, the CEDAW enshrines the rights of rural women, which includes their right to enjoy adequate living conditions concerning access to *electricity*. In General Recommendation No. 34, the CEDAW Committee goes further to recognise that beyond electricity, women may have other energy needs, for example, for cooking, heating, lighting and transport.⁶ It also highlighted that women are likely to be more directly affected by energy cost

³ Earth Rights International. Powering Human Rights Violations. 2020. Last accessed 7 March 2025 at: <https://earthrights.org/blog/powering-human-rights-violations/>

⁴ European Commission. Towards a new understanding of carbon processing in freshwaters: methane emission hot spots and carbon burial. Last accessed 7 March 2025 at: <https://cordis.europa.eu/article/id/418240-tropical-dams-an-underestimated-source-of-greenhouse-gas-emissions>

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⁶ CEDAW, General Recommendation No. 34 on the rights of rural women, CEDAW/C/GC/34, 2016, paras. 54 (d), 61, 84 and 85 (c).

increases or energy resource scarcity, underscoring the several differentiated gender impacts of energy poverty.⁷ The Committee, in this sense, clarified that States have an obligation to provide access to essential public services and goods, which include “sustainable and renewable sources of energy, extending on-grid services to rural areas and developing solar energy and other sustainable energy sources with low-cost technology.” It must be noted that the Committee refers to *energy services or energy sources*, which is more comprehensive than the language focused only on electricity used in Article 14 of the Convention.

An additional basis for this right can be found in Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) on the right to an adequate standard of living through an extended interpretation of the sub-rights contained in this provision. This article does not explicitly mention “energy” or “electricity”, but the proposition that it does, in fact, incorporate this right can be supported in the numerous pronouncements by the Committee, considering that energy is often enlisted among several other public services that are essential for the realisation of rights. The Committee on Economic, Social and Cultural Rights (CESCR) has, for instance, recommended that countries adopt effective measures to ensure all households meet their basic electricity needs⁸ and to expand the coverage for beneficiaries of social tariffs by mobilising more resources for the provisioning of energy services.⁹ Moreover, the CESCR’s General Comment No. 4 enlist access to energy among the facilities and services that adequate housing must contain to be in line with the Covenant.¹⁰

Concerning the participation of private actors, the CESCR recognised in its General Comment No. 24 that private providers should be subject to strict regulations that impose on them so-called “public service obligations”. The provision of water or electricity may include requirements concerning the universality of coverage and continuity of service, pricing policies, quality requirements, and user participation.¹¹ Other human rights mechanisms have recognised the provision of electricity as being necessary for the protection of the right to life¹², the right to benefit from scientific progress¹³, and as an underlying determinant of the right to health.¹⁴ Access to sustainable energy is also in the 2030 Agenda for Sustainable Development, enshrined in SDG7.¹⁵

At the regional level, there has also been progress in the recognition of the importance of energy for the provision of general conditions of well-being. Although not a binding instrument, the European Union Pillar of Social Rights enshrines the right to essential services of good quality, comprising energy, and recognises that those in greater need should be supported.¹⁶ The European Convention on Human Rights and the African Charter on Human and Peoples’ Rights had limited recognition of this specific right. Through case law and subsequent international legal instruments, relevant regional human rights standards have been developed. For instance, the European Court of Human Rights found that France violated the rights to non-discrimination and

⁷ Ibid.

⁸ CESCR, Concluding observations on the sixth periodic report of Germany, E/C.12/DEU/CO/6, 2018.

⁹ CESCR, Concluding observations on the fifth periodic report of Belgium, E/C.12/BEL/CO/5, 2020.

¹⁰ CESCR, General Comment No. 4 on the right to adequate housing, 1991, para. 8 (b).

¹¹ CESCR, General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, E/C.12/GC/24.

¹² CCPR, General Comment No. 6 on the right to life, 2018, CCPR/C/GC/36;

¹³ CESCR, Concluding observations on the initial and second periodic reports of Djibouti, 2013, E/C.12/DJI/CO/1-2, last accessed 17 August 2023, available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G13/499/93/PDF/G1349993.pdf?OpenElement>

¹⁴ UN Special Rapporteurs on Extreme Poverty and Human Rights and on adequate housing as a component of the right to an adequate standard of living, Communication to Nigeria, 2013, NGA 5/2013, last accessed 17 August 2023, available at: <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=21073>

¹⁵ United Nations Statistical Division, Goal 7: Ensure Access to affordable, reliable, sustainable and modern energy for all, <https://unstats.un.org/sdgs/report/2016/goal-07/>; See also: Tracking SDG7: The Energy Process Report, <https://trackingsdg7.esmap.org/>

¹⁶ The European Pillar of Social Rights,

adequate housing, among other things, due to the degrading housing conditions, including energy poverty conditions, of migrant Roma lawfully resident or working regularly in France.¹⁷ In the African human rights system, the right to a healthy and sustainable environment contained in the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa (Maputo Protocol) entails the obligation to “*promote research and investment in new and renewable energy sources and appropriate technologies, including information technologies, and facilitate women's access to, and participation in their control*”.¹⁸ This reference is particularly relevant as it goes beyond the requirement of accessibility, emphasising the role of States in ensuring rights-holders participation in the control of renewable energy sources and their technologies.

At the national level, there have also been significant developments concerning the right to energy. The constitutions of a number of countries, such as the Democratic Republic of Congo, encompass the right to energy or electricity.¹⁹ The constitutions of Nicaragua, Bolivia, and Ecuador recognise the right to energy as part of a broader duty of the State to provide public services.²⁰ The Colombian Constitutional Court went beyond this initial recognition to consider that even though the right to electricity is not an autonomous right under the Constitution, a “right to receive electricity” can be derived in relation to the right to life, health, and personal integrity.²¹ This, in turn, considers that energy services should meet, among other things, requirements common to other socio-economic rights such as accessibility, availability, appropriateness, and quality in its delivery.

These experiences at the international, regional, and national levels are evidence that the international recognition of a potential right to energy is moving forward despite its different formulations or the manner in which they have been recognised through treaties, laws, or case law. This has important implications for the standards that the delivery of energy should comply with, its priorities, and who has the power to shape its outcomes. It also means that the view of energy as a mere commodity is fundamentally altered to that of a human right that should be protected, respected and fulfilled by the State. This important shift alone can allow for new understandings of energy as a public service and good that should foster measures to ensure it is delivered for all, sustainably, and according to standards of quality that are vital for societies to flourish within planetary boundaries.

III. Case studies: lithium extraction in Chile and the construction of the large-scale hydroelectric project in Guatemala

The Global Initiative for Economic, Social and Cultural Rights, jointly with local partners in Chile and Guatemala, has documented the adverse impacts of green energy policies and projects on local communities with disproportionate and differentiated effects on women and girls.

i. The case of lithium extraction in Chile

The first case concerns the lithium extractive mining industry in the regions of Antofagasta and Atacama in Chile. A study with women Indigenous human rights defenders showed that lithium mining has resulted in, among other things, land dispossession, water stress, destruction of local

¹⁷ ECHR, *Médecins du Monde International v France*, 2011, paras 154-63.

¹⁸ Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa (Maputo Protocol), article XVIII 2(b).

¹⁹ Constitution of the Democratic Republic of Congo, 2005, article 48.

²⁰ Constitution of Nicaragua, art. 105; Constitution of Bolivia, 2009, article 20; Constitution of Ecuador, article 314.

²¹ Hesselman, M. (2022). Right to Energy. In C. Binder, M. Nowak, J. Hofbauer, & P. Janig (Eds.), *Elgar Encyclopedia of Human Rights* (pp. 62-69). Edward Elgar Publishing. <https://doi.org/10.4337/9781789903621.energy.right.to>

ecosystems, and food insecurity for local women.²² Mining projects often restrict access to territories and critical natural resources on which the livelihoods of local women depend. Traditional economic activities, such as the free range of animals, have become difficult in a context where lithium mines are constantly expanding.²³ Furthermore, mining activities are causing the rapid depletion of freshwater sources in a region already suffering from extreme conditions of water stress.²⁴ This has exacerbated the conditions of marginalization of women who need water resources to perform daily activities, including care domestic work and food production.

Most critically, the women of the regions of Antofagasta and Atacama highlighted that the drought has led to the desertification of areas used for agriculture and the collection of medicinal herbs and food crops.²⁵ Women who live near the lithium extraction sites mentioned that they are worried that lithium mining may be a key source of pollution of the few water resources available for human consumption in the area.²⁶ Furthermore, they raised concerns about the growing tensions between the communities and the mines for control and access to limited water services.²⁷ For instance, they mentioned that in the areas where mining and tourist activities are developed, normally, access to drinking water services is ensured, while low-income communities often face water disconnections and service cuts. People in those cases tend to rely on private water pipes to ensure water provision, which implies additional costs that many cannot afford.²⁸

In this context, lithium mining has become an extractive activity, putting in danger the living conditions of local communities, the traditional livelihoods of Indigenous Peoples, and the overall sustainability of critical ecosystems.

ii. The case of the construction of hydroelectric plants in Guatemala

The second case refers to the microregion of Yichk'isis (Ixquisis), in the department of Huehuetenango, Guatemala, where indigenous communities, especially Mayans including the Chuj, Q'anjob'al and Akateko ethnic groups, have seen their lives severely impacted by the planning and construction works of two hydroelectric dams called San Mateo and San Andrés. These large-scale energy projects were financed by IDB Invest, an independent branch of the Interamerican Development Bank, and implemented by the Guatemalan company Energía y Renovación S.A. The dams used water from the Río Negro, Pojom, Yalwitz Primavera, Varsovia and Palmira rivers, which are crucial for the livelihoods of the Indigenous communities in the

²² Global Initiative for Economic, Social and Cultural Rights (GI-ESCR) and Fiscalía para el Medio Ambiente (FIMA). *Minerales críticos e igualdad de género. Las voces de las mujeres de Antofagasta y Atacama*. July 2024. Last accessed 4 April 2025 at: <https://giescr.org/en/resources/publications/critical-minerals-and-gender-equality-voices-of-the-women-of-antofagasta-and-atacama>

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid.

region, as they nourish them, provide them with fish and keep crops alive.²⁹ The implementation and construction of the dam projects have violated several human rights.³⁰

First, the dams were authorized despite the absence of adequate community consultations with the local communities on the ground and without providing affected communities with sufficient information on the risks.³¹ This constitutes a clear violation of the right to free, prior and informed consent from the communities to the projects, a human right enshrined in the Covenant, as well as in UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and the International Labor Organization (ILO) Convention No. 16932, as well as the Convention on Biological Diversity.³³ In addition, community members resisting the projects faced threats, attacks, harassment, and other forms of intimidation³⁴ which in 2017 led to the murder of a resident, a case that has so far not been sufficiently investigated.³⁵

The construction has also caused severe environmental harm, especially water scarcity and pollution through oil spills, erosion, and wastewater.³⁶ Moreover, policy measures to address these environmental impacts did not consider the diverse ways in which inaccessibility to clean and safe water limited Indigenous communities' ability to fish, grow food, and maintain their traditional lifestyle.³⁷ This indicates a violation of their right to an adequate standard of living and, specifically, the right to water, the right to food, the right to culture, and to a clean, healthy, and sustainable environment.

The corporation did not consider the gender-specific impact of the implementation of the dam projects. Women were disproportionately affected by the creation of the dam and the rivers, and water played a significant role in their livelihoods as women were responsible for water

²⁹ AIDA, Guatemalan Indigenous Communities File Complaint for Dams Damages (6 August 2018), last accessed 12 August 2022, <https://aida-americas.org/en/press/guatemalan-indigenous-communities-file-complaint-for-dams-damages>

³⁰ Plataforma Internacional contra la Impunidad, Jotay: Acting Together Program, Bank Information Center, Who pays the cost of Development? (January 2021) last accessed 22 August 2022 https://issuu.com/piregional/docs/eng-quienes_pagan_los_costos_del_desarrollo_1_

³¹ AIDA, Guatemalan Indigenous Communities File Complaint for Dams Damages (6 August 2018), last accessed 12 August 2022, <https://aida-americas.org/en/press/guatemalan-indigenous-communities-file-complaint-for-dams-damages>, also Inter-American Development Bank Independent Consultation and Investigation Mechanism, Compliance Review Report Generadora San Mateo S.A. and Generadora San Andrés S.A. Projects (GU3794A-01 and GU3798A-01) (2021), MICI-CII-GU-2018-0136, p. 3

³² UNDRIP (2007), A/RES/61/295, arts. 19, 28. ILO Convention No. 169 (1989), C169, art. 6 (a). See also CESCR General Comment 21: Right of everyone to take part in cultural life (art. 15, para. 1 (a), of the International Covenant on Economic, Social and Cultural Rights) (2009), E/C.12/GC/21, para 37

³³ UNHR 2022, <https://www.cbd.int/convention/>

³⁴ FLD, Peaceful Resistance of the Microregion of Ixquisis members attacked, kidnapped and torture, (15 march 2019), last accessed 22 August 2022, <https://www.frontlinedefenders.org/en/statement-report/peaceful-resistance-microregion-ixquisis-members-attacked-kidnapped-and-tortured>

³⁵ AIDA, Guatemalan Indigenous Communities File Complaint for Dams Damages (6 August 2018), last accessed 12 August 2022, <https://aida-americas.org/en/press/guatemalan-indigenous-communities-file-complaint-for-dams-damages>

³⁶ Plataforma Internacional contra la Impunidad, Jotay: Acting Together Program, Bank Information Center, Who pays the cost of Development? (January 2021) last accessed 22 August 2022 https://issuu.com/piregional/docs/eng-quienes_pagan_los_costos_del_desarrollo_1_

³⁷ AIDA, Guatemalan Indigenous Communities File Complaint for Dams Damages (6 August 2018), last accessed 12 August 2022, <https://aida-americas.org/en/press/guatemalan-indigenous-communities-file-complaint-for-dams-damages>

management in the communities.³⁸ Moreover, the influx of outside workers and security forces has rendered the area more insecure for women as they have been a “*source of insecurity and fear because of harassment and physical and verbal threats targeting women, and an impediment to free movement when these groups have prevented women from accessing the river or used their equipment to block the way.*”³⁹

In 2022, after a complaint was submitted, IDB Invest, in a landmark decision, decided to stop financing the projects, which resulted in an agreement between the parties that implied that IDB Invest would no longer be participating in the financing of this project. While the Indigenous communities on the ground celebrate this decision, concerns remain about the bank’s divestment from the dams, which must be consistent with the recommendations of MICI’s findings report and with the request of the communities to ensure a responsible exit from the operations - in line with the other conclusions and recommendations of the report and with international human rights law.

IV. Right-based alternatives: small-scale and community-led hydropower systems

Small and micro renewable energy projects, such as small hydropower plants, provide an alternative that can have several co-benefits in terms of efficiency, democratic governance, and environmental sustainability while minimising any potential adverse impacts at the local level. These systems tend to operate with run-of-the-river technologies, which run with the natural flow of the river and do not require the construction of dams or land flooding.⁴⁰ Furthermore, most small and micro-hydro projects use a small fraction of the available stem flow to generate electricity, which significantly reduces its ecological footprint.⁴¹ These technologies easily allow for community engagement in decision-making and overall governance of energy provisioning, especially for remote areas and low-income populations suffering from energy poverty.

A case study report by the United Nations Industrial Development Organization showcases a series of promising examples of small hydropower projects led by local communities, ensuring the participation of a wide diversity of actors.⁴² These projects have ripple effects in building local skills and capacities, providing income-earning opportunities, and connecting the protection of key natural resources with the improvement of livelihoods.⁴³

V. List of Resources

- GI-ESCR and FIMA, [Critical Minerals and Gender Equality: The Voices of Women in Antofagasta and Atacama](#)

³⁸ AIDA, Guatemalan Indigenous Communities File Complaint for Dams Damages (6 August 2018), last accessed 12 August 2022, <https://aida-americas.org/en/press/guatemalan-indigenous-communities-file-complaint-for-dams-damages>

³⁹ Inter-American Development Bank Independent Consultation and Investigation Mechanism, Compliance Review Report Generadora San Mateo S.A. and Generadora San Andrés S.A. Projects (GU3794A-01 and GU3798A-01) (2021), MICI-CII-GU-2018-0136, para 2.40

⁴⁰ An Introduction to Micro-Hydropower Systems. Natural Resources Canada. Last accessed 4 April 2025 at: https://natural-resources.canada.ca/sites/www.nrcan.gc.ca/files/canmetenergy/files/pubs/Intro_MicroHydro_ENG.pdf

⁴¹ Ibid.

⁴² LIU, D., LIU, H., WANG, X., and Kremere, E., eds. (2019). World Small Hydropower Development Report 2019: Case Studies. United Nations Industrial Development Organization; International Center on Small Hydro Power. Available from www.smallhydroworld.org.

⁴³ Ibid.

- GI-ESCR and Shine, [Women at the Frontlines of the Extraction of Transition Minerals: A Vision for a Just Future in Bikita](#)
- Essex University and GI-ESCR, [Energy, Gender and Health: Mapping the Legal Frameworks and Potencial Policy Solutions](#)
- Human Rights Standards on the Energy Transition, [Legal Depository](#)
- UNIDO, [Small Hydropower Development Report 2019](#)