**Government of Guyana Response to**

**Human Rights Council Advisory Committee**

**Questionnaire on the impact of new technologies for climate protection on the enjoyment of human rights [[1]](#footnote-1)**

**April 29, 2022**

# Core questions (for all stakeholders)

1. **Which new technologies for climate protection (NTCP) are of particular importance when it comes to impact on human rights? List three most relevant and explain your choice.**

The state party will highlight two technologies for climate protection which are being explored in Guyana:

1. **Sustainable energy solutions**: Technologies in this area not only have the potential to reduce GHG emissions, but also ensure energy security which is needed for people and communities to become resilient to the impacts of climate change.

The transition to renewable energy solutions is a necessary step for the protection of human rights. This is especially so given that the negative effects of climate change.

Guyana is primarily prone to flooding and droughts, which have more devastating effects on rural and hinterland communities, which face greater vulnerability and lower capacity to mitigate such hazards. As reported in Guyana’s first Voluntary National Review under the SDGs, providing electricity to communities in the hinterland remains difficult due to the high cost of access and infrastructure expansion. Nevertheless, electricity provision is important for the overall socio-economic development of those communities, equalizing

their access to goods and services, and, as such, technologies that provide sustainable energy solutions will greatly improve both the ease and cost of providing electricity to hinterland communities. Such solutions serve the dual purpose of reducing the harmful effects of fossil fuels on the environment and providing a necessary infrastructure for the fulfillment of the economic and social rights of the citizens who stand to benefit.

Through the expanded Low Carbon Development Strategy[[2]](#footnote-2) 2030, Guyana is aiming to undertake one of the world’s most ambitious energy transitions and expanding the economy up to five-fold, while keeping greenhouse gas emissions from energy generation at their 2019 levels. This transition will be accomplished by replacing expensive, polluting, heavy fuel oil with an energy system built mainly on natural gas as a bridge with hydropower, solar and wind power.

Notwithstanding the benefits of renewable energy transition, there is often concern surrounding the risk that they may have negative effects on indigenous land rights and, subsequently, livelihoods of communities dependent on the lands. To mitigate these risks, the LCDS 2030 makes provisions for targeted support for Amerindian and other forest-dependent communities, with a dedicated 15 percent of revenues from forest climate services being added to other investments for these indigenous communities.

1. **Increase in natural carbon capture and storage:** These technologies are important for sequestering carbon dioxide, along with climate regulation and in some instances such as mangroves and forests help with reducing the impacts of climate events. The International Energy Agency (IEA) recommends the use of Carbon Capture, Utilization and Storage (CCUS) technology by all investors involved in developing new fossil fuels projects to reduce emissions[[3]](#footnote-3). CCUS technology is the process of capturing, storing and sometimes utilizing CO2 that would have otherwise been emitted to the atmosphere. The CO2 is often stored in geological formations where it can be kept safely and permanently. CCUS can also be used to reduce CO2 in carbon-intensive sectors such as cement, mining, and steel. In fact, CCUS technology is still the cheapest and most

advanced option for reducing emissions in heavy industries, raising costs by less than 10 percent compared to 35 to 70 percent for electrolytic hydrogen[[4]](#footnote-4).

Guyana has integrated, as a requirement in the Environmental Permit granted to ExxonMobil for the development of the Yellowtail Project, the need for the company to provide the Government with a roadmap for emissions reduction and an examination of the feasibility of Carbon Capture, Utilization and Storage technologies[[5]](#footnote-5). The provisions of the permit state at Section 3.22 that

*“within 90 calendar days of the said document being awarded, ExxonMobil’s affiliate, Esso Exploration and Production Guyana Limited (EEPGL), must submit a work plan, including the schedule of activities for the conduct of a roadmap towards greenhouse gas intensity reduction in respect to its petroleum operations; the potential of CCUS technologies and systems in Guyana; the potential deployment or investment in carbon sinks, renewable energy projects, carbon negative technologies, or application of high quality carbon credits or offsets generated from within or outside of Guyana; and any other area of study that is beneficial for collaboration. This includes market mechanisms to promote innovation and supportive policies*”[[6]](#footnote-6).

To this end, ExxonMobil has applied for, and received permission from the Government to conduct studies on carbon capture and storage (CCS) so that the company may utilize it in its local operations[[7]](#footnote-7).

The most substantial risk associated with Carbon Capture and Storage technologies is the potential for leakage of CO2 from the storage sites. Although there has been some experience with storing CO2 and natural gas for short periods, the long-term storage of such gases is still a relatively new idea. Thus, the Government recognizes that it is important that the findings of the studies being done by ExxonMobil are carefully

studied, and that storage locations are carefully selected so as to reduce any potential human impact of an abrupt leakage on their rights and a healthy environment.

1. **What kind of NTCP may contribute to human rights promotion and protection? Please, explain how.**

Question similar to the above.

1. **What specific human rights may be affected by the use of NTCP? Please, explain how. Who are the rights-holders that potentially would be the most affected by the use of NTCP? Are they also the most affected by climate change? How could they and the society at large be engaged in the decision-making process?**

The ***Constitution of Guyana, Cap 1:01***, confers on all citizens the right to a healthy environment. This is a fundamental right enforceable through judicial action in a court of law. **Article 149J(1)** specifies that everyone has the right to an environment that is not harmful to his or her health or wellbeing. **Subsection (2) of Article 149J** places an obligation on the State to protect the environment for the benefit of present and future generations, through reasonable legislative and other measures designed to:

1. Prevent pollution and ecological degradation;
2. Promote conservation;
3. Secure sustainable development and use of natural resources while promoting justifiable economic and social development.

Notwithstanding the right conferred above, **Article 149J(3)** provides that an individual’s rights under subsection (1) will not be considered as infringed upon if, by reason only of an allergic reaction or other peculiarity, the environment is harmful to that person’s health or wellbeing.

**Article 154** provides for the incorporation of the rights enshrined in the human rights treaties that have been incorporated into the Fourth schedule of the Constitution. The following Treaties have been incorporated into the Fourth schedule which are relevant to this discussion are the Covenant on Civil and Political Rights, Covenant on Economic, Cultural and Social Rights (CESCR), the Convention on the Rights of the Child (CRC),

and the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW).

Based on the discussion above, specific rights under the CESCR which may be affected by technologies for the sustainable energy solutions and carbon capture and storage technologies in particular include:

1. **Article one**: the right to freely dispose of natural wealth and resources without prejudice to any obligations arising out of international economic cooperation.
2. **Article six**: the right to work. This right may be affected, where, for instance, carbon capture and storage technologies result in natural disasters that affect citizens’ ability to be gainfully employed in the profession of their choice.
3. **Article 7**: the right to safe and healthy working conditions. This right is relevant as there is the possibility that technologies aimed at reducing emissions can result in harmful pollution if not carefully managed.
4. **Article 11**: 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. In this case, the technologies discussed above have the potential to enable the fulfillment and expansion of this right but can in turn negatively impact the enjoyment of this right if not carefully managed.

The rights under the Convention on the Rights of the Child and the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) become relevant, as, often times, climate change and the resulting harmful effects, disproportionately affects women and children, and other vulnerable groups. Although the impact of disasters cuts across national, racial, ethnic, socio-economic and sex/gender boundaries, Guyana’s Country Assessment report, 2009[[8]](#footnote-8) found that the impact of disasters is generally greater on women. Cultural norms generally exclude women from formal planning and decision-making in their communities, and

they generally do not have the flexible resources that could facilitate their recovery from disasters. In addition, women’s position in the family puts a greater burden of household responsibilities (household work, caring for the young and elderly, ill, etc.) on them, and this in turn reduces their ability to quickly recover during and following disasters. The large number of female headed households exacerbates these problems.

1. **Is the existing international and your national human rights framework adequate to safeguarding human rights of those affected by the use of NTCP? Why or why not? If not, what principles may be identified in order to address the gaps? List them according to priority.**

The 2015 Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCC) has been lauded for being the first climate change instrument and one of the first environmental agreements to explicitly recognize the relevance of human rights in the context of climate change policymaking[[9]](#footnote-9). The preamble to the Agreement specifies that:

“Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities, and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.”

While the Agreement is historic in this regard, it still leaves several gaps, due to the fact that (i) it is a voluntary agreement and is therefore not legally binding on any state to fully adopt or implement, (ii) the preamble to a document is usually not immediately enforceable, as it serves mainly to set the tone for the document and provide guidance on the way the rest of the document is to be interpreted, and (iii) there is still a need to

translate this provision in a way that allows for the integration of human rights into practical actions in specific climate change policies[[10]](#footnote-10).

Guyana’s national framework includes the Constitution and the fundamental rights and freedoms enshrined therein. There is also a plethora of other statutes which serve to protect the rights and freedoms of citizens from harmful use of the environment. These include:

1. The Environmental Protection Agency Act
2. The Mining Act
3. The Petroleum Act
4. The Amerindian Act
5. The Public Health Ordinance
6. The Occupational Safety and Health Act
7. The Forests Act
8. The Protected Areas Commission Act

Nevertheless, as the use of New Technologies for Climate Protection globally and in Guyana are still in their infancy stage, there will be, by necessity, the constant updating of our laws in tandem with the development and use of these technologies to ensure that the rights of all citizens, particularly those most vulnerable to the effects of climate change continue to the protected.

1. **Given that NTCP may present potential risks for the enjoyment of human rights, to what extent do human rights legal obligations require the States to pursue other climate protection policies presenting less risks of harm, including mitigation and adaptation measures?**

There is undoubtedly a need for States to pursue other climate protection policies that present less harm to citizens. In this regard, Guyana has taken a step in the right direction with the development of our Low Carbon Development Strategy 2030 (LCDS). The State Party has developed a Climate Resilience and Adaptation Strategy which sets out a

comprehensive and overarching framework for adapting and building resilience to climate change impacts. The core elements of this Strategy have been incorporated into the LCDS, which is the overarching development strategy for the country. The key mitigation and adaptation measures to be completed under the strategy include:

1. **Sea defense enhancement and maintenance:**

Although Guyana has a land mass of 214,970km2, approximately 90 percent of the population resides along the 15,000km2 close to the low-lying coastline of approximately 459 km. This area is also the largest primary agricultural developed area in the country. However, the majority of the coastal zone is below sea-level and relies heavily on engineered seawalls and rip raps, natural mangroves, and mechanical pumps, to provide protection from the Atlantic Ocean[[11]](#footnote-11). Despite significant investment to rehabilitate and maintain sea defense structures, a recent survey found that there is an urgent need for significant investments to these structures. Further, mangroves are highly vulnerable to climate change, particularly sea level rise, which could destroy or damage mangroves and, with it, coastal habitats, and fisheries infrastructure such as landing sites. Through the LCDS, Guyana’s government will undertake targeted actions to ensure that the sea-defense system is more resilient to climate change, that they are restored and retrofitted, that mangroves are restored and protected, that coastal communities are protected against flooding, and that there is greater awareness of the importance of mangrove eco-systems to the sea-defense mechanism and livelihood among the general public[[12]](#footnote-12).

1. **Strengthening drainage and irrigation systems**

Guyana’s Drainage and Irrigation (D&I) system is connected to over 150 sluices/kokers located along the seawalls and is therefore intricately linked to sea-defense challenges outlined above. Since rising sea levels have been reducing the number of low-tide days,

opening of the sluicegates to expel water to the sea is becoming increasingly restricted, which increases the risks of flooding and further exposes Guyana’s population and assets located in low-lying coastal regions. Numerous economic activities, livelihoods, and communities are dependent on Drainage and Irrigation systems, not only for flood control and surface water drainage, but also to provide water for agricultural, domestic, and other purposes. Consequently, targeted actions will be taken to ensure that the functional relationship between Drainage and Irrigation and sea-defence is optimized so that both can operate efficiently[[13]](#footnote-13).

1. **Building climate-resilient agricultural systems**

 Guyana’s agricultural sector contributes significantly to non-oil GDP, employing approximately 17 percent of the direct labour force and generated 21.3 percent of Guyana’s non-oil exports. However, the conditions associated with climate change will have adverse effects on the agricultural sector, and by extension, Guyana’s economy. For example, sea level rise could increase salinity in rice fields, temperature increase could reduce rice yields, changes in growing conditions can result in increased weed and pest infestation, among other devastating effects with other agriculture and livestock production. To mitigate these risks, the Government is committed to investing in actions that will strengthen the sea and river defense system, improve flood control and water-management, address drought prevention, adopt climate smart agricultural techniques, and strengthen the institutions responsible for the management of these sectors[[14]](#footnote-14).

1. **Public health adaptation to climate change**

Health facilities which are vital to responding to risks in vulnerable communities, are themselves currently vulnerable to climate change risks due to their locations. In addition, climate change may exacerbate the incidence of vector and water-borne diseases, including malaria, dengue and chikungunya, as greater rainfall intensity increases the

number of breeding grounds for these vectors. These diseases represent a significant economic burden for Guyana and prevention, therefore, will be beneficial for both improving quality of life but also reducing the costs associated with their treatment and lost productivity. Through the LCDS, the government will support the improvement of public health adaptation infrastructure, improving planning and resource capability of the health sector to climate-related impacts, and the development and implementation of programmes to tackle climate-related illnesses.

1. **As opposed to focusing on selected few technologies, do you think a holistic and inclusive approach will help reduce any gaps in the existing system for addressing human rights challenges from NTCP?**

Without a doubt, a more holistic approach to the consideration of New Technology for Climate Protection would be a positive step towards addressing the gaps in the global framework for the protection of human rights. Such an approach can be led by the UN Framework Convention for Climate Change and must include State Parties, corporations involved in the industries that contribute heavily to climate change, corporations and research institutions and others involved in the development and use of New Technologies for Climate Protection, academia, vulnerable groups, and civil society. The state parties, especially the most vulnerable, would need to be given the scientific and financial support quickly in order to introduce and establish these new NTCPs.

Like the vaccines developed in the shortest possible time conceivable during the Covid 19 pandemic, where all long term repercussions could not have been known ( and still is not) but the objective to save lives trumped some of these considerations, so too, with some of the NTCP (and those still to be developed), something has to be done with haste to prepare for the worsening impact of climate change and to protect the most vulnerable states in the world.

1. **What should be the responsibilities of key stakeholders (UN agencies, states, NHRIs, civil society, technical community and academia, private sector) in mitigating the risks of NTCP to human rights and/or fostering its protection?**

This question should have been disaggregated as each entity named above plays a different role and functions in mitigating the risks of NTCP to human rights and/or fostering its protection.

# Specific questions for States

1. **In your country, what are the main human rights challenges arising from the implementation of climate change national plans and policies? List and describe them briefly.**
2. **Economic and social rights**

The greatest challenge to Guyana is climate change. It suffered the worse flood in decades in 2005 which impacted on 300,000 people and damage 67% of the economy. Whilst trying to recover, another flood followed in 2006 with slightly lesser consequences. Whilst there have been annual floods geographically specific, in 2021 floods caused by heavy rain, high seas, and the over-spilling of the connected river systems in the Guiana Shield which led to floods for the first time in all 10 Administrative Regions between May to July, affecting over 50,000 people but having a enormous impact on the agricultural, mining and forestry sectors.

The greatest threat is to economic and social rights.

In response, Guyana is a recipient of the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience (EnGenDER) Project that began in 2019 and ends in 2023 and is ongoing across nine (9) Caribbean countries. The project is aimed at improving climate resilience for women and girls and key vulnerable populations and future generations in the Caribbean, through enhanced practices of relevant actors for the sustainable implementation of gender-responsive climate change action and disaster recovery and improved national capacity for gender-responsive climate change planning and implementation among state and non-state actors in the target countries.

A key activity under the project was the development of a Gender-based Climate Resilience Analysis for Guyana[[15]](#footnote-15), which was completed and published in February 2021. The report describes the existing gender and social inequities and the ways in which climate change will impact on the vulnerabilities among men, women, and key vulnerable groups. Importantly, it also highlights key gaps, opportunities, and challenges for two priority sectors for Guyana, i.e., agriculture and health, and provides recommendations for developing gender-responsive and socially inclusive policies and plans to build climate resilience in the priority sectors identified for Guyana.

1. **Is your country involved in or supports in any way the development, implementation, or use of NTCP?**

As outlined in the first section, Guyana is currently undertaking two forms of New Technologies for Climate Protection.

**Sustainable energy technologies**: Through the Low Carbon Development Strategy, Guyana is aiming to undertake one of the world’s most ambitious energy transitions and expanding the economy up to five-fold, while keeping greenhouse gas emissions from energy generation at their 2019 levels. This transition will be accomplished by replacing expensive, polluting, heave fuel oil with natural gas as a bridge to an energy system built mainly from hydropower, solar, and wind power.

**Carbon capture and storage:** Guyana has integrated, as a requirement in the Environmental Permit granted to ExxonMobil for the development of the Yellowtail Project, the need for the company to provide our government with a roadmap for emissions reduction and an examination of the feasibility of Carbon Capture, Utilization and Storage technologies[[16]](#footnote-16). This form of technology is still in the exploratory stage, as permission was granted in the latter part of 2021 for ExxonMobil to conduct studies on carbon capture, utilization and storage with a view to incorporating these into their local operations in Guyana.

1. **What measures, if any, (legislative, administrative, institutional, or other) have been put in place to regulate the use of NTCP? Have the human rights challenges arising from such activity been taken into account in their adoption?**
2. **Sustainable energy technologies:**

Mechanisms for the implementation and management of the renewable energy transition are also outlined in detail in the Low Carbon Development Strategy 2030, which outlines the specific actions and targets for transforming Guyana’s energy mix. A specialized fund, the Guyana REDD+ Investment Fund (GRIF) was created in 2010 following a 2009 Memorandum of Understanding between the Governments of Guyana and Norway as a means to channel international financing for avoided deforestation. As part of the first iteration of the Low Carbon Development Strategy (2010), the Hinterland Renewable Energy project was initiated to support the energy needs of rural households without access to the national grid. The project was financed with funds from the GRIF. As of 2014, 11,540 home systems had been installed in nearly 200 communities. The project also resulted in the training of 400 people, mostly Amerindians for installation and maintenance of the systems. The agencies with responsibility for the implementation of these programs will be outlined in the response to the question below.

1. **Carbon capture, utilization, and storage**

The use of the CCUS technologies is now being explored in Guyana, and, as the data becomes available regarding their feasibility, measures will be instituted to regulate their use.

1. **In your country, which government agency has the initiative in the decision-making related to NTCP policies? If so, to what extent does the agency take the human rights issues into account in its agenda and decisions?**

There are several government agencies with responsibility for decision-making in relation to the use of NTCP. Ultimately, the final decision maker is the executive that is the Cabinet of the Government of Guyana.

The Office of the Vice-President, through the Department of Environment and Climate Change is the lead agency for the development and implementation of the Low Carbon Development Strategy, which is the primary development strategy for Guyana. As stated earlier, the LCDS outlines the goals and targets related to the transition to the sustainable energy solutions, but also includes development of a market-mechanism for forest climate services. This agency therefore takes the lead in the development of the policies and plans to operationalize the LCDS, but also in their implementation, monitoring and evaluation. As stated earlier, the LCDS addresses potential human rights issues and incorporates measures for building climate resilience in ways that will mitigate harmful impacts to the basic rights of persons living in vulnerable communities, including along the coastline, as well as Amerindian land rights and the issue of Free, Prior and Informed Consent.

The work of this office is supported by a number of other agencies including the Guyana Energy Agency which is the agency responsible for monitoring the performance of the energy sector in Guyana, the Guyana Power and Light Inc.,is a state-owned corporation and is the largest electricity supplier in Guyana, and the Environmental Protection Agency which is a regulatory agency with authority to grant or not grant permits for developmental project that will impact on the environment.

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1. The term *new technologies for climate protection* for the purpose of this questionnaire broadly refers to techniques of deliberate intervention in the Earth’s natural system in order to prevent further climate change or reverse it. The two main kinds are (1) Solar Radiation Management SRM (i.e. stratospheric aerosols) and (2) Carbon Dioxide Removal CDR. CDR solutions can be nature-based (forestation, soil carbon sequestration, biochar, etc.) or technological (enhanced weathering, bioenergy with carbon capture and storage, direct air capture and storage, etc.). [↑](#footnote-ref-1)
2. Guyana initiated the first Low Carbon Development Strategy in 2010 which emanated from countrywide consultations and approved in the National Assembly in the same year. The expanded LCDS 2030 is going through country wide consultations at this time. [↑](#footnote-ref-2)
3. Stabroek News (2021, October 13) [↑](#footnote-ref-3)
4. Ibid [↑](#footnote-ref-4)
5. <https://oilnow.gy/featured/exxon-to-provide-guyana-with-carbon-capture-roadmap-for-us10b-yellowtail-project/> [↑](#footnote-ref-5)
6. Ibid [↑](#footnote-ref-6)
7. <https://oilnow.gy/featured/exxon-granted-approval-from-guyana-to-conduct-carbon-capture-study-vp-jagdeo/> [↑](#footnote-ref-7)
8. UNDP (2009) Enhancing Gender Visibility in Disaster Risk Management and Climate Change in the Caribbean: Country Assessment Report for Guyana. [↑](#footnote-ref-8)
9. Abate, R. (2016) Climate Justice: Case Studies in Global and Regional Governance Challenges. Environmental Law Institute, Washington, D.C. [↑](#footnote-ref-9)
10. Ibid, pg 151 [↑](#footnote-ref-10)
11. Guyana’s Low-Carbon Development Strategy 2030, pg 71 [↑](#footnote-ref-11)
12. Guyana’s Low Carbon Development Strategy 2030, pg 71 [↑](#footnote-ref-12)
13. Ibid, pg 72 [↑](#footnote-ref-13)
14. Ibid, pg 72-3 [↑](#footnote-ref-14)
15. https://www.bb.undp.org/content/barbados/en/home/engender/country-reports.html [↑](#footnote-ref-15)
16. <https://oilnow.gy/featured/exxon-to-provide-guyana-with-carbon-capture-roadmap-for-us10b-yellowtail-project/> [↑](#footnote-ref-16)