

# Integrating GESI into Drainage and Irrigation Planning: A Background Study to Inform NDIA's Strategic Planning



Towards developing a strategic sustainable integrated national drainage and irrigation system



This Technical Study ***on Integrating GESI into Drainage and Irrigation Planning: A Background Study to inform NDIA's Strategic Planning*** was developed by the Global Green Growth Institute (GGGI) and the National Drainage and Irrigation Authority (NDIA).

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**Acknowledgement:** The ***“Towards developing a strategic sustainable integrated national drainage and irrigation system in Guyana, project”*** extends its gratitude to the Governments of India, Australia, and the United Kingdom, and to the European Union, for their financial support through the Coalition for Disaster Resilient Infrastructure's Infrastructure Resilience Accelerator Fund (CDRI IRAF).

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## Executive Summary

This study examines opportunities to integrate gender equality and social inclusion (GESI) considerations into Guyana's drainage and irrigation (D&I) sector, to ensure that future diversity and inclusion (D&I) initiatives are inclusive, equitable, and responsive to the diverse needs of vulnerable groups, including women, Indigenous peoples, persons with disabilities, and smallholder farmers. The study provides an overview of national GESI trends, analyzes the agriculture sector through a social inclusion lens, maps key stakeholders, and identifies light, actionable recommendations aligned with NDIA's existing mandate.

Vulnerable groups in Guyana's agriculture sector, including women, youth, Indigenous communities, persons with disabilities, and smallholder farmers, continue to face barriers to land ownership, access to irrigation and flood protection, participation in water governance, and availability of financial or extension services. These challenges are compounded by climate-related risks and a lack of disaggregated data to inform inclusive planning and decision-making. While Guyana has made progress through constitutional commitments, national GESI frameworks, and sectoral policies, drainage and irrigation strategies have not yet systematically incorporated these considerations.

The study explores a set of best practices from international toolkits and recommends practical entry points for NDIA to enhance inclusive service delivery. These include strengthening participation of underserved groups through existing local structures, applying basic safeguarding principles when expanding to undeclared areas, integrating GESI into staff training and data systems, and considering simple social inclusion criteria in future project planning decisions.

The findings and recommendations presented are intended to support NDIA in aligning with national GESI commitments and strengthening the equity and resilience of its drainage and irrigation services. They are non-prescriptive and designed to complement the Authority's operational priorities while promoting more inclusive and contextually relevant outcomes.

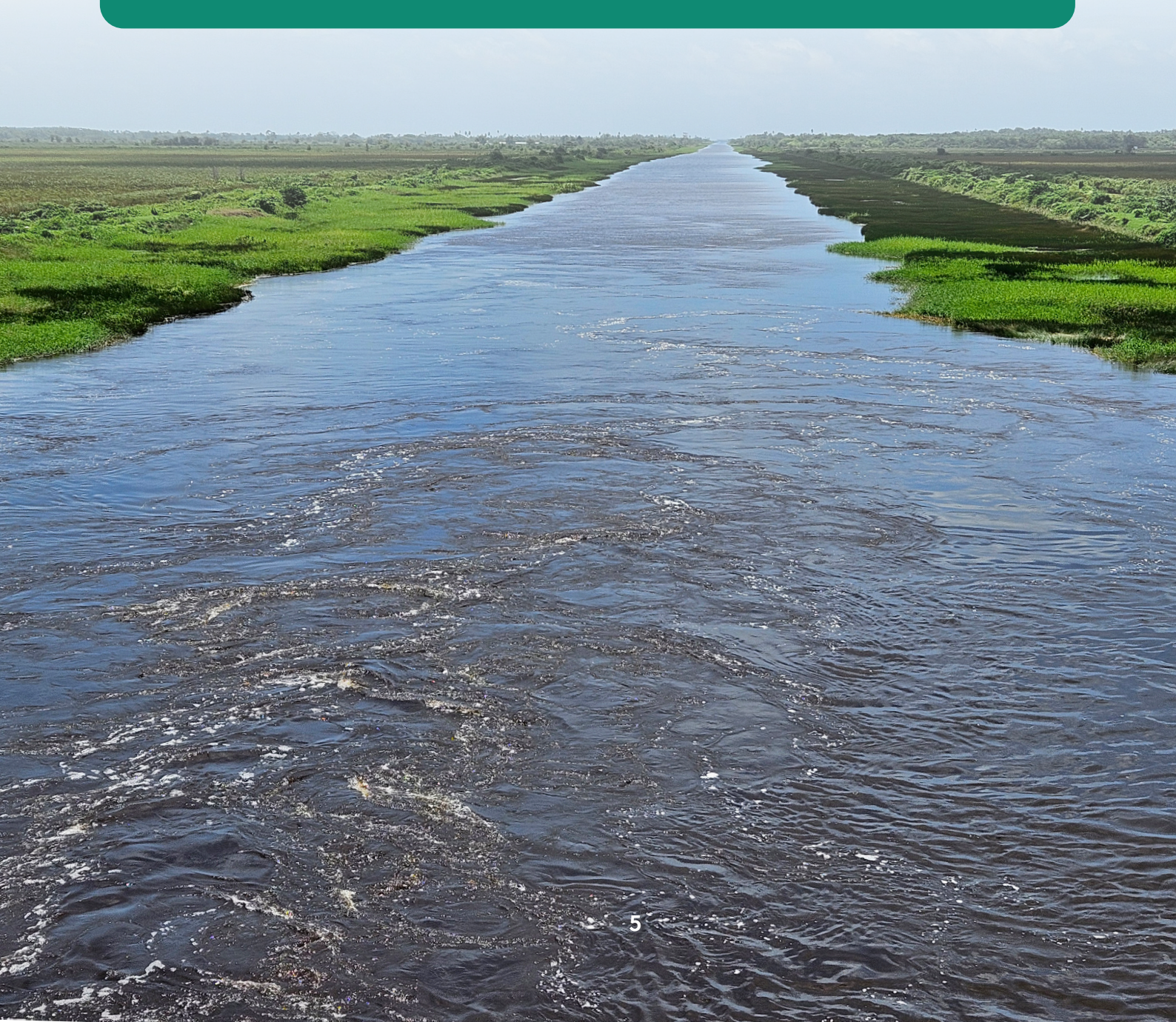


# 1. Introduction

This study presents the findings of a Gender Equality and Social Inclusion (GESI assessment) conducted to inform the development of Guyana's national Drainage and Irrigation (D&I) strategy. The study aims to ensure that future diversity and irrigation (D&I) initiatives are inclusive, equitable, and responsive to the diverse needs of vulnerable groups, including women, Indigenous peoples, persons with disabilities, and smallholder farmers. Drawing on a desk-based review of national policies, sector-specific reports, and global best practices complemented by targeted consultations with local GESI experts, the study highlights key considerations, gaps, and opportunities for integrating GESI into the D&I sector. Although data limitations posed certain constraints, the study offers practical recommendations that reflect Guyana's context and promote more inclusive water management and agricultural resilience planning.

## Purpose of the Report

The Gender Equality and Social Inclusion (GESI) study aims to provide a strong understanding of GESI considerations within Guyana's drainage and irrigation (D&I) sector. This understanding will inform the development of Guyana's D&I strategy, ensuring that proposed initiatives are inclusive and contextually relevant. The study intends to synthesize best practices from GESI approaches in related sectors and includes a stakeholder mapping exercise to foster partnerships that promote inclusive D&I practices.



## 2. Methodology

This study was conducted through a combination of desk-based reviews of existing literature, national policies, and regional reports related to gender equality, social inclusion, and the agriculture, drainage, and irrigation (D&I) sectors in Guyana, as well as engagement with experts working within the D&I sector. Key sources included national development strategies, sector-specific policies, census and statistical data, agriculture information systems data, academic publications, and reports from international development partners. The document also draws on regional and global best practices relevant to the integration of GESI in water management and agricultural planning.

This study is intended to support the National Drainage and Irrigation Authority (NDIA) and focuses on integrating GESI considerations within the drainage and irrigation infrastructure and services. However, due to the limited availability of data and research that explicitly addresses GESI in the D&I sector, the scope of the study was broadened to include relevant findings from adjacent sectors, namely, agriculture, flood management, and water resource management. These areas were selected for their relevance to NDIA's mandate and are used as a proxy for their role in shaping the experiences of vulnerable groups who depend on land, water, and agricultural services.

In addition to the literature review, targeted consultations were conducted with national GESI experts familiar with Guyana's policy and institutional landscape. These discussions provided context-specific insights into the practical barriers and opportunities for integrating GESI considerations into the D&I sector, informing the development of actionable recommendations.

### Limitations

The findings of this study are based on a series of consultations and a desk review of publicly available documents. Due to time and resource constraints, primary data collection was not undertaken. Consequently, the study may not wholly encompass the perspectives of all pertinent stakeholders, notably farmers, individuals with disabilities, and Indigenous communities. Furthermore, gaps in sex, age, and socially disaggregated data within the agriculture and D&I sectors have limited the capacity to evaluate the full scope of exclusion and disparities in services. While there is little information available on GESI disaggregated data for D&I, proxy data from agriculture, the closest aligned sector, is used. The scope of the study does not extend to domestic water supply or sanitation systems. Despite these limitations, the study provides a foundational understanding of GESI dynamics in the D&I sector and highlights critical areas for further research, data collection, and the development of inclusive policies.

### 3. The Importance of Gender and Social Inclusion in Water Management

This section explores the importance of integrating GESI considerations in the management of the National Drainage and Irrigation Authority (NDIA). While the term “water management” may also refer to water supply, sanitation, or broader integrated systems, this analysis is limited to water resources and infrastructure that support agriculture and flood control.

Integrating GESI considerations into drainage and irrigation planning helps ensure that all groups, including women, smallholder farmers, Indigenous communities, and persons with disabilities, benefit equitably from these services and are not disproportionately exposed to risks such as flooding and poor access.

Identities such as gender, age, income, ethnicity, and location all influence an individual's ability to participate in decision-making, express needs in consultations, and access water-related infrastructure and services. In Guyana, these dynamics are shaped by underlying structural factors, which will be explored in the following sections to promote greater equity and development.

Targeted activities can help identify which groups are not fully benefiting from or participating in drainage and irrigation initiatives, understand the specific challenges they face, and support tailored, inclusive responses. At a high level, integrating GESI into water infrastructure and project cycles, illustrated in Figure 1, can contribute to more equitable and resilient outcomes as suggested by the UNDP<sup>1</sup>. This indicates that to advance inclusive and equitable drainage and irrigation (D&I) services, several interconnected actions are essential. First, collecting disaggregated data and context-specific insights is crucial to understanding the unique barriers faced by different groups, such as women, youth, and Indigenous farmers, which vary by country and demographics. Data is the foundation for evidence-based interventions. Secondly, building the capacity of institutions and stakeholders enhances their ability to recognize and address these barriers, fostering the adoption of inclusive practices. Equitable access to water infrastructure must be prioritized, particularly for historically marginalized

groups, to prevent disparities in agricultural productivity and climate resilience. Moreover, decision-making processes should be participatory, ensuring that diverse voices inform project planning and governance, which in turn increases the relevance and effectiveness of interventions. Finally, strengthening community resilience requires ensuring all groups have access to the resources, knowledge, and support needed to adapt to climate and environmental risks, since they are the ones most impacted by these decisions. Collectively, these actions contribute to a more just, inclusive, and sustainable D&I system.



**Figure 1. GESI Integration into water infrastructure and project cycles**

1 UNDP. 2024. Human Development Report 2023/2024. <https://hdr.undp.org/system/files/documents/global-report-document/hdr2023-24reporten.pdf>

## 4. Gender and Social Inclusion in the Guyana Context

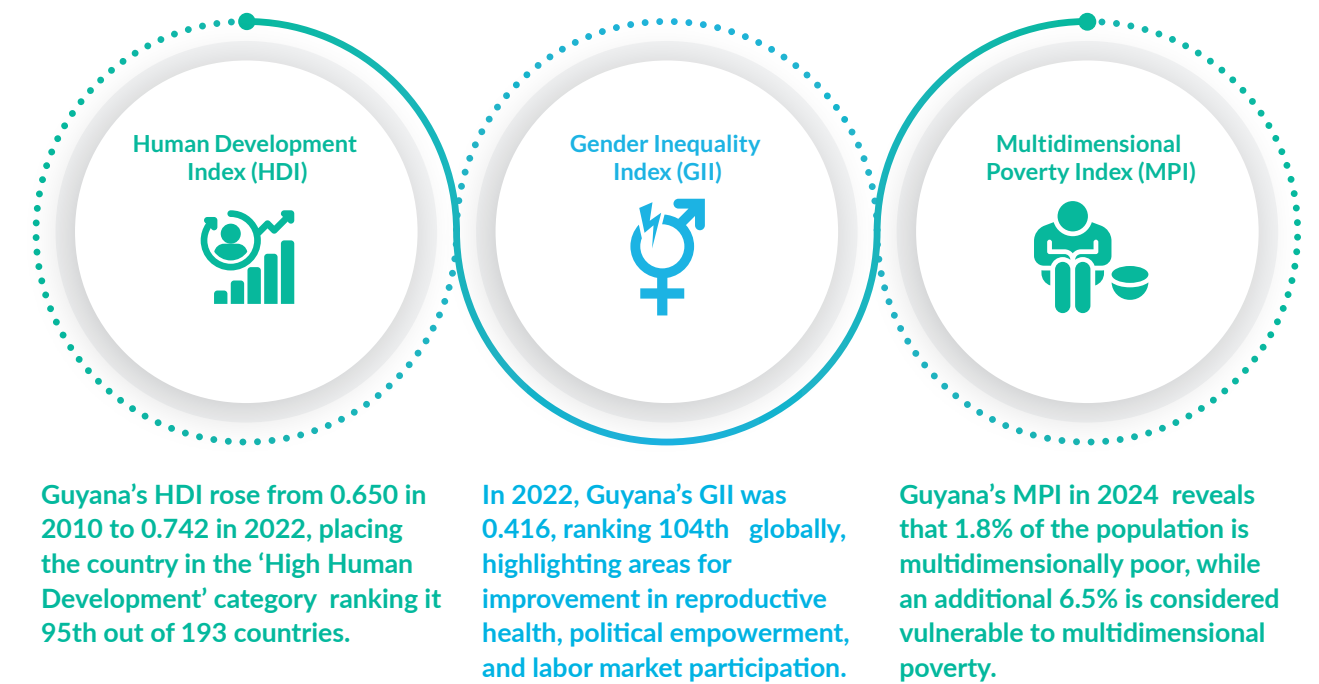


**Figure 2.** National Indicators and International Index

Source: UNDP.

### National Indicators

Guyana has experienced consistent improvements in human development over the past decade. According to the United Nations Development Programme (UNDP), Guyana's Human Development Index (HDI) rose from 0.650 in 2010 to 0.742 in 2022, placing the country in the 'High Human Development' category and ranking it 95th out of 193 countries. This upward trend highlights positive gains in life expectancy, education, and gross national income per capita, demonstrating meaningful progress, even as opportunities remain to reduce inequalities across various administrative regions and among the population groups. Despite overall progress, gender disparities persist and require continued attention.

Guyana's Gender Inequality Index (GII) stood at 0.416 in 2022, ranking 104th globally, indicating that significant opportunity exists to reduce the gaps in reproductive health, political empowerment, and labor market

participation<sup>2</sup>. The Gender Development Index (GDI), which compares female and male HDI achievements, placed Guyana at 0.992, indicating that women achieve approximately 99.2% of the human development outcomes of men. The GDI shows relatively small gender gaps in education and life expectancy, reflecting substantial progress; however, continued efforts are needed to address underlying barriers that affect economic participation and representation. While progress in gender parity is clear in education and health, the presence of multidimensional poverty indicates persistent structural inequalities that need targeted, evidence-based solutions.

Poverty levels in Guyana also present a nuanced picture. The Multidimensional Poverty Index (MPI) shows that 1.8% of the population is multidimensionally poor, with an additional 6.5% classified as vulnerable to multidimensional poverty (UNDP MPI, 2024). Although these figures are comparatively low in the regional context, pockets of deprivation remain, particularly

<sup>2</sup> Ibid.

among rural, Indigenous, and interior populations. These disparities present an opportunity to tailor development initiatives to the needs of underserved groups, enabling targeted interventions<sup>3</sup>.

The *Guyana Voluntary National Review* of 2019 highlighted that while poverty has declined since 1999, it remains particularly marked among indigenous and rural populations, children, and young people below 25 years old. Other vulnerable groups identified in the review included the aged, person living in large households, the homeless, the disabled, and youth, especially unemployed or out-of-school young people<sup>4</sup>. Regarding the elderly, the most relevant issues were highlighted as medical care, transportation, protection from abuse and exploitation, and financial security<sup>5</sup>.

The 2024 Global Multidimensional Poverty Index provides details on the difference in poverty across Guyana's administrative regions from the year 2019-2020<sup>6</sup>, as highlighted in Table 1. The four most interior regions have the highest poverty rates, ranging from 0.8% to 6.7%. The North-East coastal region experienced 0 percent severe poverty. A similar trend is observed in the differences in MPI across other areas, with interior areas exhibiting higher levels compared to the coastal areas.

**Table 1. Global MPI in Guyana by Subnational Region**

| Region                                 | MPI   | H     | A     | Vulnerable | Severe Poverty | Population Share |
|----------------------------------------|-------|-------|-------|------------|----------------|------------------|
| <b>Barima-Waini</b>                    | 0.063 | 15.5% | 41.0% | 17.8%      | 2.0%           | 2.6%             |
| <b>Cuyuni-Mazaruni</b>                 | 0.054 | 12.6% | 42.6% | 13.5%      | 3.4%           | 1.7%             |
| <b>Demerara-Mahaica</b>                | 0.002 | 0.5%  | 33.3% | 3.6%       | 0.0%           | 42.2%            |
| <b>East Berbice-Corentyne</b>          | 0.005 | 1.3%  | 38.4% | 10.9%      | 0.0%           | 14.3%            |
| <b>Essequibo Islands-West Demerara</b> | 0.001 | 0.3%  | 34.4% | 3.9%       | 0.0%           | 18.0%            |
| <b>Mahaica-Berbice</b>                 | 0.000 | 0.1%  | 38.9% | 9.7%       | 0.0%           | 5.6%             |
| <b>Pomeroon-Supenaam</b>               | 0.009 | 2.2%  | 38.9% | 7.5%       | 0.3%           | 6.3%             |
| <b>Potaro-Siparuni</b>                 | 0.102 | 23.0% | 44.3% | 20.2%      | 6.7%           | 0.7%             |
| <b>Upper Demerara-Berbice</b>          | 0.003 | 0.8%  | 39.8% | 3.1%       | 0.2%           | 5.0%             |
| <b>Upper Takutu-Upper Essequibo</b>    | 0.047 | 12.4% | 38.0% | 20.4%      | 0.8%           | 3.5%             |

Source: Alkire, Kanagaratnam and Suppa (2024), based on MICS year 2019–2020.

4 Ministry of Finance. First Voluntary National Review. 2019. [https://sustainabledevelopment.un.org/content/documents/24522Guyana\\_VNR2019.pdf](https://sustainabledevelopment.un.org/content/documents/24522Guyana_VNR2019.pdf)

5 United Nations Economic Commission for Latin America and the Caribbean. Measures taken by the Government of Guyana to implement International Agreement on Ageing. [https://www.cepal.org/sites/default/files/presentations/guyana\\_report.pdf](https://www.cepal.org/sites/default/files/presentations/guyana_report.pdf)

6 Guyana Monitoring the Situation of Children and women 2019-2020

Recent data from Guyana’s Multidimensional Poverty Index (MPI) extracted from the Global MIP Country Briefing 2019<sup>7</sup> illustrated in Figure 3 shows how different forms of deprivation affect regions in distinct ways across the 10 regions. In hinterland and interior regions such as Barima-Waini, Potaro-Siparuni, and Cuyuni-Mazaruni, poverty is driven largely by limited access to basic infrastructure, including electricity, safe drinking water, healthcare facilities and adequate housing. In contrast, coastal and more populated regions show higher contributions from education-related indicators such as years of schooling and school attendance.

Across all regions, poor nutrition remains a consistent and significant contributor to multidimensional poverty. These trends highlight that vulnerability in Guyana is both geographically concentrated and multifaceted, with rural, Indigenous, and remote communities facing overlapping disadvantages in infrastructure, health, and education. For NDIA, this highlights the need to consider regional disparities and intersectional vulnerabilities when expanding drainage and irrigation services, especially in underserved areas where better infrastructure can help lessen overall inequalities.

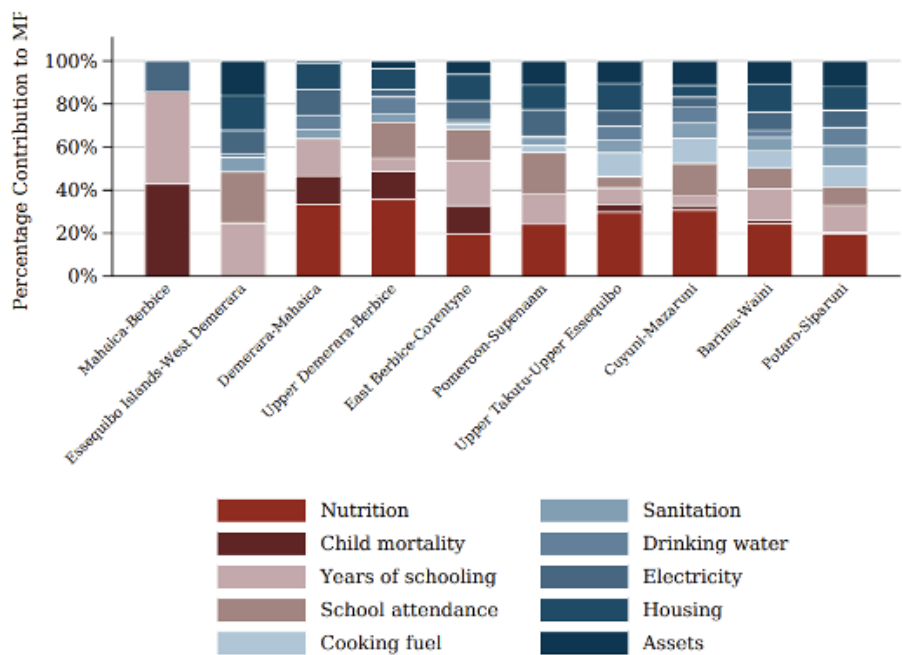


**Figure 3. Indicator Contribution to Global MPI of Subnational Regions**

Source: Global MIP Country Briefing 2019

Regarding Guyana’s D&I schemes, there is currently no clear definition of vulnerable groups, and it is uncertain whether initiatives are specifically aimed at addressing their needs. To ensure effective policy implementation and alignment with social safeguard and GESI principles such as ‘do no harm’ and ‘leave no one behind,’ it is crucial to clearly identify which populations are considered vulnerable. The section on ‘Best Practices’ in this study explores the most effective methods for identifying these vulnerable groups. Understanding these best practices is crucial for targeted interventions, especially in the labour force, where vulnerability limits access to decent work and economic opportunities.

In 2023, the female labor force participation rate, although not equal, is still a favorable ratio, standing at 40.3% for women, compared to 60.2% for men in Guyana<sup>8</sup>. Regardless of the poverty levels, more women in Guyana own land, a satisfactory amount is used for the agricultural purposes, which directly contribute towards their standard of living. The increased participation in the labor force is also evident in non-traditional sectors, such as agriculture. Data provided by the Ministry of Agriculture showed that there is a 40% female to 60 % male ratio involved in agriculture, with a wide geographical spread as shown in Figure 4.

<sup>7</sup> Global MIP Country Briefing UNDP: 2019

<sup>8</sup> World Bank. 2023. Gender Data Portal: Guyana. <https://genderdata.worldbank.org/en/economies/guyana>

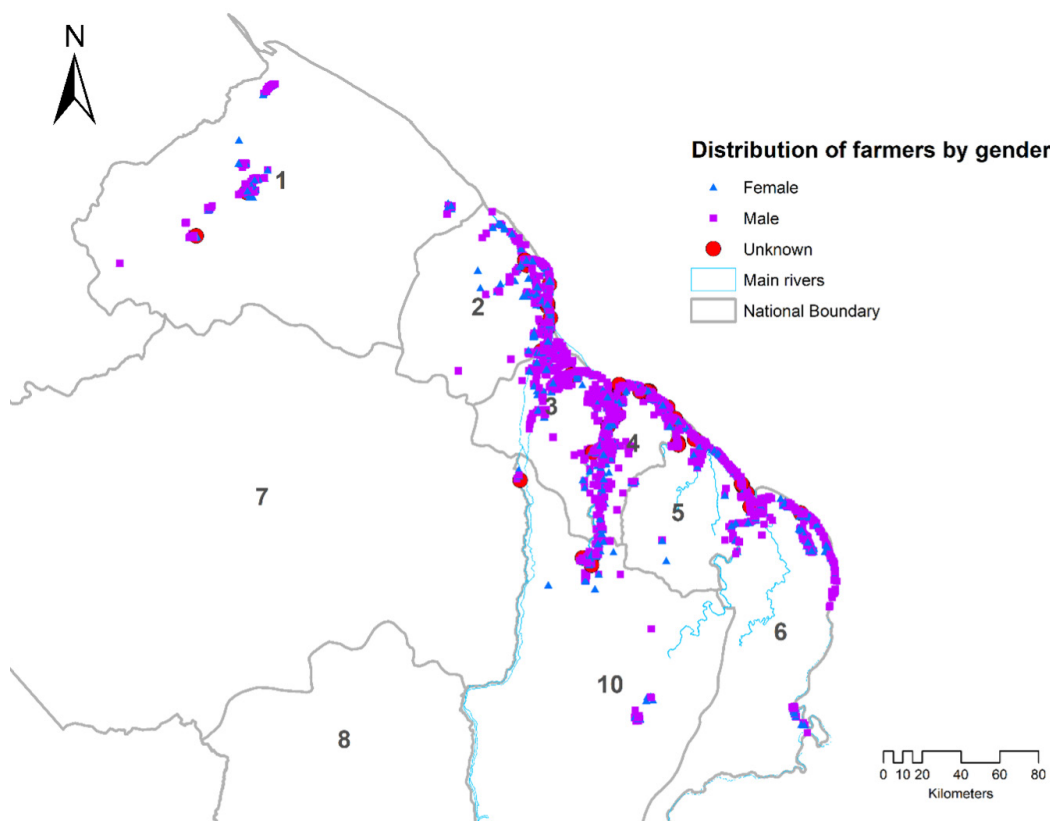


**Figure 4. Distribution of Farmers by Gender along Guyana's Coastal Region**

In terms of decision-making at the highest level in Guyana, women held 39.4% of parliamentary seats in 2024, reflecting notable progress in political empowerment; however, there is room for improvement at the broader societal level. Rates of child marriage remain a concern, with approximately 32.3% of women aged 20–24 reporting that they were married or in a union before the age of 18, and incidents of gender-based violence also persist, with 10.5% of women reporting recent experience of intimate partner violence in 2018<sup>9</sup>.

While Guyana's national indicators show progress in human development and gender equality over time, certain inequalities across gender, geography, ethnicity, and socio-economic status remain significant areas for improvement and considerations for achieving truly inclusive growth. These indicators not only highlight key development trends but also serve as essential inputs for shaping evidence-based national policies and strategic planning.

## National Policy

**The Constitution of Guyana** explicitly states that every woman is entitled to equal rights and status with men in all spheres of political, economic, and social life. Additionally, the constitution incorporates the provisions of the Convention on the Elimination of All Forms of Discrimination Against Women and the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women, as well as other international treaties. Included in these provisions are the elimination of all forms of discrimination against women, as well as equal access to training, employment, remuneration, and promotion in social, political, and cultural activity<sup>10</sup>. The Constitution also extends to various social groups and prioritizes access to social care for vulnerable groups. These include, but are not limited to, non-discrimination against persons with disabilities, Indigenous people, the elderly, children, and youth.

<sup>9</sup> Un Women. 2024. Women Count: Guyana. <https://data.unwomen.org/country/guyana>

<sup>10</sup> UN Women. 54th Session of the Commission on the Status of Women. 2010. [https://www.un.org/womenwatch/daw/beijing15/general\\_discussion/GUYANA.pdf](https://www.un.org/womenwatch/daw/beijing15/general_discussion/GUYANA.pdf)

## Gender equality and social inclusion

Guyana's National Gender and Social Inclusion Policy (NGESIP) notes that, despite the laws, Constitution, and key international commitments Guyana has made to promote social justice, gender equality, social inclusion, and nondiscrimination, some gaps in the legal framework still remain. The NGESIP provides the example of language limitations in the Constitution as a key gap, stating that *'the distinction between citizens and persons or between men and women in terms of recognizing their rights, which leaves unprotected some groups like immigrants, or certain members of the LGBTQ population'*. The NGESIP concludes that a review of current laws and policies is necessary.



**Figure 5. Gender Inclusive Activities in the Agriculture Sector**

The NGESIP is Guyana's principal policy framework for advancing GESI. It outlines various activities aimed at making the agriculture sector more gender-inclusive and socially equitable, with a specific focus on areas such as food security, access to credit, and water and sanitation. While the NGESIP does not explicitly address drainage and irrigation, it includes several policy measures relevant to the work of the NDIA. These include safeguarding national food security through the recovery of land with the involvement of small producers, women, and other vulnerable groups, supported by training and technical assistance from a gender perspective (Policy 7.1.1); promoting credit plans to support land acquisition for production and internal commerce among indigenous women, victims of violence, single mothers, and mothers of persons with disabilities (Policy 7.2.3); and mainstreaming gender and inclusion in climate change adaptation and mitigation strategies, including disaster

risk management (Policy 7.4.1).

The NGESIP monitoring framework includes specific indicators aligned with key policy proposals; however, it fell short in addressing dedicated indicators for Policy Action 7.4.1 on gender and inclusion in climate adaptation and disaster risk management. Instead, it has two broader indicators: implementing at least one conservation program involving vulnerable groups in each of the 10 regions and establishing at least one early warning program with participation from vulnerable groups.

## Low Carbon Development Strategy

Guyana's **Low Carbon Development Strategy 2030<sup>11</sup>**, is designed to chart a new growth trajectory in a non-polluting way, emphasizing the vital role of youth, women, and Indigenous populations in ensuring food security and reducing climate impacts. This strategy clearly highlights the importance of youth employment, business development, and addressing the effects of floods and droughts, along with initiatives to expand land ownership through land titling, especially for Indigenous communities. The strategy also emphasized that its mitigation efforts will produce sensitive and suitable solutions, including training, to confront the increasing frequency and severity of climate-related events, particularly in the agriculture sector.

## Agriculture

Guyana's primary agricultural policy, the National Strategy for Agriculture 2013-2020, articulates that the strategy aims to maximize the involvement of youth and women in agriculture. The focus for youth was intended to attract young individuals to the sector through entrepreneurship and technological initiatives, supported by training programs, scholarships, and financial management skills development. The sole GESI objective referenced is within the strategy's 'Priority Area 16: Consolidating and Improving Food and Nutrition Security as Fundamental for Economic Growth and Social Welfare Development.'

The GESI objectives and targets enumerated are:

- **Goal 3.5:** Facilitate access for youth, women, and relevant vulnerable groups to funding to promote value-added, cottage-type industries, and agro-processing.
- **Target 3.5:** A 5% annual increase in the participation of women, youth, and other vulnerable groups in value-added, cottage-type industries, and agro-processing from 2014 onward 2020.

11 [Low Carbon Development Strategy 2030](#)

While Goal 3.5 of the NGESIP emphasizes increasing participation in cottage industries and agro-processing, it is indirectly connected to drainage and irrigation services. These industries often rely on dependable agricultural inputs, which require consistent water supplies and flood protection. Ensuring that women, youth, and vulnerable farmers have equal access to D&I infrastructure can strengthen the value chains supporting agro-processing and promote broader inclusion goals.

### **Coastal and Riverine Flood Management**

There is sparse data on gender and social inclusion considerations in Guyana's coastal & riverine flood management. In 2021, UN Women released a policy brief titled 'Gender Inequality of Climate Change and Disaster Risk in Guyana', which touches upon how men and women are adversely affected by floods in the country<sup>12</sup>.

The Climate and Disaster Risk Study indicated that men suffer the greatest direct economic impact of disasters in Guyana. Floods on the coastlands and in the agricultural regions of Guyana result in a massive loss of crops and agricultural assets, of which men are the primary owners. Specifically, disasters can lead to<sup>13</sup>:

- Livelihood displacement.
- Loss of income and other socio-economic impacts.
- The need to seek other forms of livelihood outside of agriculture.
- Indebtedness in rice farming communities as a result of floods and droughts.
- Increased risk of gender-based violence

The UN Women policy brief states that women-headed households, estimated at 28% in Guyana, are at greater risk of disaster impacts. The document continues stating that indigenous women are more vulnerable to the effects of floods and droughts due to their higher reliance on natural resources, both in their reproductive and productive roles of securing water, food, and fuel, and limited mobility. Poverty, which is exacerbated by disaster impacts, is also higher among women, children, elderly people, and, in particular, indigenous women.

For children, the effect of floods on household income and food security increases early school dropouts, as children seek income opportunities, and can lead to early marriages, ultimately affecting their developmental growth<sup>14</sup>.

In Guyana, persons with disabilities are formally included in the disaster risk management (DRM) system, which the Civil Defense Commission coordinates under the framework of the Caribbean Disaster Emergency Management Agency. The National DRM Platform includes representation from the National Commission for Disability, and operational plans reference persons with disabilities and other vulnerable groups. However, accessibility challenges persist, including limited availability of sign language interpreters, insufficient meeting spaces, and a lack of hazard information in Braille. Communication methods differ between urban and rural areas: in towns and populated regions, social media and internet-enabled devices, such as smartphones, are widely used for early warnings, while in remote areas, communities often rely on traditional environmental cues to anticipate hazards<sup>15</sup>.

Emergency management has historically been a lower priority in Guyana, partly because the country lies outside the hurricane zone and most natural hazards have had manageable impacts. However, there is growing awareness of changing climate patterns and the vulnerabilities exposed during the COVID-19 pandemic. While Guyana has a national climate resilience agenda, it has largely focused on physical and economic adaptation, particularly in the agricultural and industrial sectors, with less emphasis on addressing the social dimensions of resilience, including the needs of persons with disabilities<sup>16</sup>.

Guyana has integrated GESI into several disaster risk reduction and flood management policies and decision-making approaches presented in Figure 6<sup>17</sup>. Public officer training covers emergency preparedness with a focus on gender responsiveness, climate change, Indigenous knowledge, and human rights.

12 [https://wr.d.unwomen.org/sites/default/files/2022-02/EnGenDER\\_Gender%20Inequality%20CC%20DRR%20Brief\\_Guyana\\_20220204.pdf](https://wr.d.unwomen.org/sites/default/files/2022-02/EnGenDER_Gender%20Inequality%20CC%20DRR%20Brief_Guyana_20220204.pdf)

13 [https://wr.d.unwomen.org/sites/default/files/2022-02/EnGenDER\\_Gender%20Inequality%20CC%20DRR%20Brief\\_Guyana\\_20220204.pdf](https://wr.d.unwomen.org/sites/default/files/2022-02/EnGenDER_Gender%20Inequality%20CC%20DRR%20Brief_Guyana_20220204.pdf)

14 Ibid.

15 World Bank. 2023. Disability Inclusion in Latin America and the Caribbean. <https://documents1.worldbank.org/curated/en/099061024112031792/pdf/P17125615440a50681bb011e3cd00471543.pdf>

16 Ibid.

17 [https://documents1.worldbank.org/curated/en/099625311282237430/pdf/P171256061c7720380a3930fca480d1e516.pdf?gl=1\\*18xcqk7\\*\\_gcl\\_au\\*MTAzMDI1MjQ0S4xNzI0ODEwMjg4](https://documents1.worldbank.org/curated/en/099625311282237430/pdf/P171256061c7720380a3930fca480d1e516.pdf?gl=1*18xcqk7*_gcl_au*MTAzMDI1MjQ0S4xNzI0ODEwMjg4)

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Flood Preparedness and Response Plan (2012)</b>            | Defines the principles of the Early Recovery Framework, which include gender sensitive and equitable distribution of resources. The recovery and rehabilitation phases are to provide opportunities promoting gender equality within communities, more evenly distributed ownership of assets, and improving the condition and position of women and other vulnerable groups. |
| <b>The Natural Resources and Environment Cabinet Subcommittee</b> | Advises on disaster risk management, climate change, and gender issues.                                                                                                                                                                                                                                                                                                       |
| <b>The National Disaster Risk Management Commission</b>           | Ensures gender-sensitive disaster risk reduction and climate measures.                                                                                                                                                                                                                                                                                                        |
| <b>The National Disaster Risk Management Strategy</b>             | Integrates gender and disability considerations into disaster management.                                                                                                                                                                                                                                                                                                     |
| <b>The National Damage Assessment and Needs Analysis</b>          | Collects data disaggregated by gender, age, disability, and income.                                                                                                                                                                                                                                                                                                           |

**Figure 6. Integration of GESI into Disaster Risk Reduction**

Source: World Bank.

Despite including GESI considerations in Disaster Risk Reduction (DRR) policies, the World Bank points out several remaining knowledge gaps. These include a lack of gender-specific data in vulnerability assessments, limited information on gender-differentiated impacts of disasters, gender budgets, and the absence of targeted strategies to address these impacts. The main barrier to more substantial institutional commitment is the lack of disaggregated data, especially by sex, age, ethnicity, and location. These are critical for understanding and responding to gender-specific vulnerabilities in disasters<sup>18</sup>.

While policy frameworks in Guyana acknowledge the importance of inclusive disaster risk reduction, implementation remains an area for improvement. According to the Inter-American Development Bank's Index of Governance and Public Policy in Disaster Risk Management (iGOPP), Guyana scores low on the overall effectiveness of its DRM system, with only 12% progress in aligning public policy with risk management objectives.

Specific shortcomings include the absence of a formal national DRM law, informal institutional mandates for risk reduction across various sectors, and limited enforcement of hazard mapping and zoning regulations. While some ministries allocate funding for flood control and climate adaptation, these efforts are fragmented and not legally required. These findings underscore the need to enhance institutional frameworks for disaster preparedness and resilience, particularly in coastal and riverine areas where vulnerable communities rely on drainage and irrigation infrastructure for their livelihoods and safety<sup>19</sup>. One such area for inclusion of GESI is in D&I as Guyana's Drainage and Irrigation Strategy 2017-2021 does not incorporate GESI elements. However, other more recent national plans, legislation, and policies integrate equitable and inclusive considerations into their design.

<sup>18</sup> <https://www.iisd.org/publications/gender-responsive-resilience-building-caribbean>

<sup>19</sup> Inter-American Development Bank. 2019. Index of Governance and Public Policy in Disaster Risk Management (iGOPP) National Report Guyana.

## 5. Agriculture sector

Agriculture is an integral sector in Guyana. In 2010, farming accounted for approximately 30 percent of employment and one-third of the national GDP<sup>20</sup>. Approximately 17% of the population works in agriculture, primarily as smallholder farmers<sup>21</sup>. Main farming centers focus on rice cultivation, sugarcane production, horticulture, and livestock farming. The country's population of ~750,000 is diverse, primarily Indo-Guyanese and Afro-Guyanese on the coastal plain, with predominantly Indigenous peoples living in the interior. Over 90 percent of Indigenous communities are located in remote hinterland regions, whereas the majority of the non-Indigenous population is concentrated along the narrow Atlantic coast. Coastal agriculture benefits from a drainage and irrigation network managed by the NDIA, while interior farming relies primarily on rainwater and traditional methods.

Socioeconomic indicators reveal rural disparities, including access to markets, finance, agricultural inputs, land ownership, and unpaid labor. According to the data generated by the Agriculture Information System (AIS), a greater number of women have increased or shared land ownership in the agricultural sector as seen in Figure 7.

The conclusions of the AIS revealed that the increase in land ownership by women is high amongst those of Indigenous descent. Rural areas host the majority of Guyana's Indigenous population and are disproportionately poor. Three in four rural people live in poverty<sup>22</sup>.

In the hinterlands, Indigenous populations, which make up 10.5 percent of Guyana's population, experience lower living standards than other groups, representing 63 percent of the multidimensionally poor<sup>23</sup>. Stress areas for Indigenous peoples include access to water, healthcare, sanitation, schooling, undernourishment, substandard housing, and the likelihood of victimization from partner violence.

Although Guyana has one of the lowest hunger rates in South America, alongside Uruguay, nutritional challenges persist. The country has the highest rate of child wasting in the region at 6.5%, the second highest prevalence of

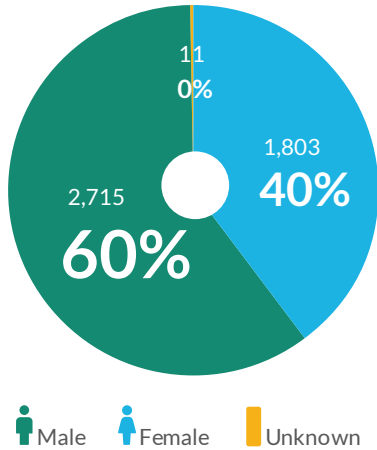


Figure 7. Land Ownership by Gender

Source: Agriculture Information System (AIS). anemia among women of reproductive age (31.7%), and the highest rate of low birthweight (17.2%)<sup>24</sup>.

Climate change is impacting Guyana, making the agricultural sector more important. Between 2006 and 2021, Guyana experienced drought or flood 12 times, resulting in an estimated USD 450 million in cumulative losses<sup>25</sup>. These threats underscore the need for robust drainage and irrigation systems, as well as inclusive strategies that help the most vulnerable groups adapt. Guyana's agricultural landscape since 2010 has presented both opportunities and challenges, with the current government's aspiration for Guyana to become the 'breadbasket of the Caribbean'. Guyana achieved self-sufficiency in food production in 2025<sup>26</sup> and is the only country globally to have achieved this milestone. However, despite this commendable achievement, some key groups remain vulnerable or underserved in this landscape, facing barriers that prevent them from fully accessing agricultural benefits and services.

20 World Bank. 2010. World Bank: Guyana's Agriculture Sector Will Benefit From Risk Assessment. <https://www.worldbank.org/en/news/press-release/2010/03/02/world-bank-guyanas-agriculture-sector-will-benefit-from-risk-assessment#:~:text=sector%20as%20a%20whole>

21 IFAD. 2021. Guyana Context. <https://www.ifad.org/en/w/countries/guyana#:~:text=Guyana%20is%20an%20upper,four%20rural%20people%20are%20poor>

22 IFAD. 2021. Guyana Context. <https://www.ifad.org/en/w/countries/guyana#:~:text=Guyana%20is%20an%20upper,four%20rural%20people%20are%20poor>

23 UNDP. 2023. Multidimensional Poverty Index Guyana. <https://hdr.undp.org/sites/default/files/Country-Profiles/MPI/GUY.pdf>

24 <https://openknowledge.fao.org/server/api/core/bitstreams/f6d5a32f-c6f5-476c-bcc4-c72c74be3b8d/content>

25 CGIAR. 2021. Farmers in Guyana have been battling climate change for years. <https://alliancebioiversityciat.org/stories/farmers-guyana-have-been-battling-climate-change-years#:~:text=and%20producers%20of%20Guyana%2C%20including,%E2%80>

26 Gap between national food production and food-based dietary guidance highlights lack of national self-sufficiency 2025



Rice Farming in Onverwagt Berbice is a critical farming community for both crops and livestock.

## Defining Vulnerable Groups in Guyana's Agriculture Sector

Guyana's NGESIP identifies several groups at a national scale as vulnerable, including women, children and youth, the elderly, persons with disabilities, people living with HIV, and Hinterland communities<sup>27</sup>. Guyana's agricultural policy, however, does not have a clear definition of vulnerable groups within the sector. Literature from various international agricultural organizations, including the United Nations Food and Agriculture Organization (FAO) and the International Fund for Agricultural Development (IFAD), highlights certain groups, primarily youth (children and young adults) and women.

Other groups, such as people with disabilities, the elderly, and the underserved, are mentioned less frequently. The findings from the AIS in 2025 highlight that women, despite being considered vulnerable groups, have been increasing their participation in the agricultural sector, contributing to household and economic empowerment. As seen in Figure 8, women are involved in both subsistence and commercial agriculture.

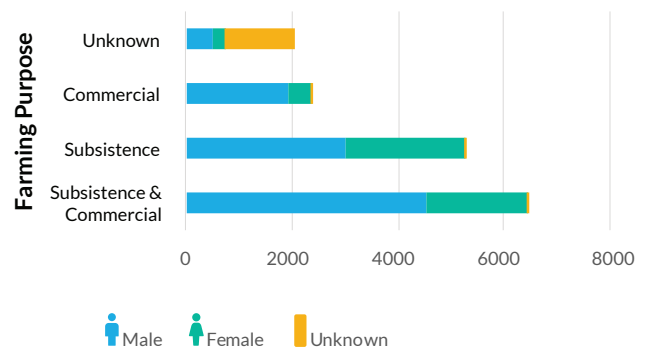


Figure 8. Farming Practices by Gender in Guyana

Source: Agriculture Information System (AIS).

In 2011, Guyana's Ministry of Agriculture published its Food and Nutrition Security Strategy, where vulnerable individuals in Guyana's agriculture sector are defined as "those with a high probability of falling or remaining below a minimum food security threshold within a given time frame". In 2004<sup>28</sup>, the FAO conducted a food security assessment that identified several vulnerable groups, shown in Figure 9.

<sup>27</sup> Ministry of Social Protection. National Gender Equality and Social Inclusion Policy. 2019. [https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA\\_NationalGenderEqualitySocialInclusionPolicy.pdf](https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA_NationalGenderEqualitySocialInclusionPolicy.pdf)

<sup>28</sup> Food and Nutrition Security Strategy for Guyana. Ministry of Agriculture. 2011. <https://faolex.fao.org/docs/pdf/guy166205.pdf>

A significant stress test for Guyana’s vulnerable groups in the agriculture sector was the COVID-19 pandemic. The UN Food Systems Hub states that the groups most affected during that time included casual and seasonal workers, women-headed households, those living far from markets, small crop farmers, small ruminant keepers, and small-scale or artisanal fishers<sup>29</sup>.



**Figure 9. Vulnerable Groups from Food Security Assessment**

Source: FAO.

<sup>29</sup> [https://www.unfoodsystemshub.org/docs/unfoodsystemslibraries/national-pathways/guyana/2023-03-17.-national-pathway-for-food-systems-transformation---guyana.pdf?sfvrsn=27ee9220\\_1](https://www.unfoodsystemshub.org/docs/unfoodsystemslibraries/national-pathways/guyana/2023-03-17.-national-pathway-for-food-systems-transformation---guyana.pdf?sfvrsn=27ee9220_1)

## Key GESI themes in Guyana's Agriculture Sector

The literature on gender and social inclusion in Guyana's agricultural and rural sectors highlights several persistent challenges grouped into four main categories shown in Figure 10.

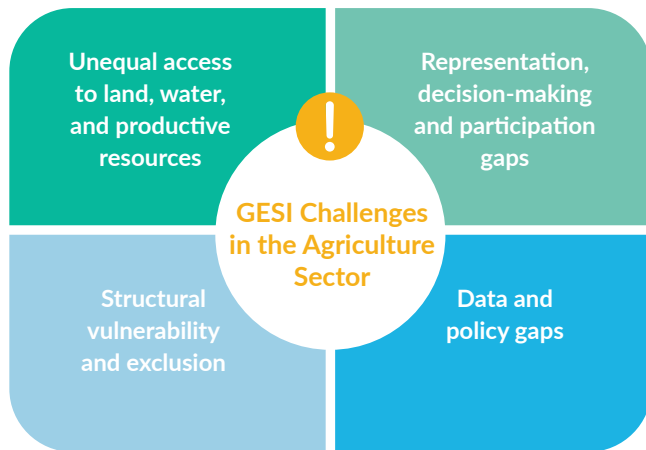


Figure 10. GESI Gaps in the Agriculture Sector

### 1. Unequal Access to Land, Water, and Productive Resources

**Gender and resources:** Men, women, and youth producers have limited access to extension services, technology, credit, and titled lands. Women are disproportionately disadvantaged in accessing land, labor, capital, and technology<sup>30</sup>. Women in Guyana face substantial challenges in land ownership due to cultural norms, as the majority of family farms do not provide women and female youth with access to land titles. Without land titles, women have limited access to credit and financial resources, which are crucial for expanding and improving their farming activities. As can be seen in Figure 11, men still own the majority of land used for agricultural purposes in Guyana. The findings generated from the AIS highlight Indigenous women with greater land ownership, and those who are considered 'squatters'. This classification will need to be revised on Indigenous lands as despite some land having community ownership with titles, individuals do not have ownership, hence they are included in this land tenure category. It should be noted that squatting is considered

illegal ownership of land in Guyana, as there are no land titles to support access to finance. This lack of access to credit contributes to higher levels of poverty among women, further deepening their economic vulnerability. The limited land ownership also affects their ability to participate in formal decision-making processes related to agriculture, particularly in bodies such as Water User Associations, where representation is typically reserved for landowners<sup>31</sup>.

Guyana's National GESI Policy states that there are no financing lines in the formal sector for vulnerable groups. The policy states that there is a need to 'generate financing programs aimed at vulnerable groups with cooperatives or the same private banking institutions, for which the government should support with incentives that allow them to lower credit rates. There is also a need to define a plan to provide bank guarantees that is valid



Figure 11. GESI Gaps in the Agriculture Sector

Source: Agriculture Information System (AIS).

and tied to the community.'

**Challenges in the Hinterland regions:** The Hinterland regions, which represent nearly 11 percent of the population, face unique challenges, including limited access to services and a high percentage of people living in poverty<sup>32</sup>. Guyana's NGESIP considers the Hinterland population vulnerable due to limited infrastructure and services, as well as limited economic development, and

30 Food and Agriculture Organization. A snapshot of gender affairs in the agriculture and rural sectors of Guyana. 2023. <https://openknowledge.fao.org/server/api/core/bitstreams/33cfb8af-5f16-4454-ae38-6c41d34fc2c5/content>

31 Ibid.

32 Ministry of Social Protection. National Gender and Social Inclusion Policy. 2019. [https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA\\_NationalGenderEqualitySocialInclusionPolicy.pdf](https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA_NationalGenderEqualitySocialInclusionPolicy.pdf)

33 Ibid.

issues of access to land and land rights<sup>33</sup>. The Indigenous population, which forms the majority in these regions, often struggles with equitable access to resources and decision-making platforms, including access to technology and improved farming practices. The government has been working to improve this access using the carbon finance generated from the various carbon sales including increasing land ownership, access to technology and improved infrastructure.

**Small-scale farming and productive resources:** There is limited data on the profile of small-scale farming in Guyana, as expressed in FAO's profile of small-scale farming in the Caribbean. Key trends are that smallholder farmers are a large percentage of Guyana's agriculture sector<sup>34</sup>. 80 percent of the small-scale farmers' households have at least one member working part-time or full-time off the farm. Recurring challenges in the region include limited access to machinery, inputs, and irrigation infrastructure, as well as access to formal credit and agricultural extension services. However, this has improved with more financial institutions recognizing the need for loans that target the agricultural sector, for instance, the Guyana Bank for Trade and Industry (GBTI) established the 'GBTI GROW' initiative targeting small and medium enterprises, including persons along the agriculture value chain<sup>35</sup>.

## **2. Representation, Decision-Making, and Participation Gaps**

**Inequality to land ownership impacting water resource decision-making:** The challenges related to land ownership extend to access to water and irrigation resources, which are largely governed by legal and regulatory systems that tie access to land tenure. As a result, women, who often lack formal land ownership, find themselves at a disadvantage when it comes to securing water resources for their farming needs. Rural women spend on average of 8.4 hours weekly fetching water for both domestic and farm use<sup>36</sup>.

This limitation not only reduces their agricultural productivity but also limits their influence in key

decision-making bodies, as their perceived role is to support farm production or caregiving. This ultimately decreases their participation in influential spaces such as the Water Users Association. The exclusion of women from these important decision-making platforms further marginalizes them within the agriculture sector, restricting their ability to advocate for their needs and contribute to the sector's growth.

While women are underrepresented in formal agricultural employment in Guyana, comprising only 4.1% of the workforce compared to 23.2% for men, their contributions in the informal sector and through unpaid labor are largely unrecognized. The census overlooks unpaid family work, where women likely play a significant role, especially in subsistence farming. This lack of data means their actual impact on the agriculture sector remains undervalued, despite their crucial involvement<sup>37</sup>.

**Rural youth migrating to urban areas for employment opportunities:** Youth engagement in agriculture is low in non-traditional indigenous farms due to the undeveloped potential felt along the entire value chain. Additionally, many youth consider agriculture as a laborious job with very little respect by society; hence, many Guyanese youth in farming or along the value chain are from an agriculture-prone community or exposed to agriculture. This further underscores the importance of exposing young people to diverse agricultural practices at an early age. Youth are migrating to urban centers for employment. A key challenge identified by CGIAR in the development of farming sectors is the lack of education and training targeted at youth on climatic conditions and access to grants and scholarships<sup>38</sup>. Guyana's 2012 population and housing census estimates that 69% of Guyana's population is categorized as youth, with youth unemployment accounting for 22.9% of the country's unemployment. Key challenges identified in Guyana's National Youth Policy (2015) include limited access to information, lack of skills, and experience for entering the job market. Further need for legislation for youth entrepreneurship, increased access for youth to financial products and credit schemes<sup>39</sup>.

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34 IFAD. 2021. Guyana Context. <https://www.ifad.org/en/w/countries/guyana>

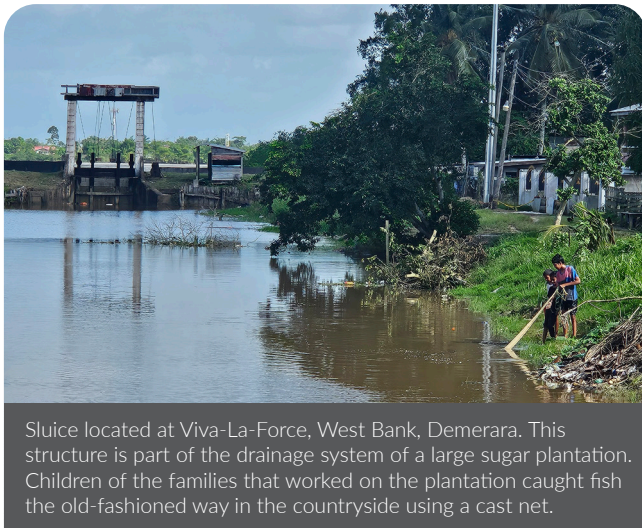
35 Grow - GBTI

36 <https://openknowledge.fao.org/server/api/core/bitstreams/46555b68-0e10-4086-8fba-3765afe0e920/content>

37 Ministry of Social Protection. National Gender Equality and Social Inclusion (GESI) Policy for Guyana. 2018. [https://wrdd.unwomen.org/sites/default/files/2021-12/GUYANA\\_NationalGenderEqualitySocialInclusionPolicy.pdf](https://wrdd.unwomen.org/sites/default/files/2021-12/GUYANA_NationalGenderEqualitySocialInclusionPolicy.pdf)

38 CGIAR. 2020. Climate-Smart Agriculture Rapid Appraisal (CSA-RA) Report on Guyana.

39 IFAD. 2021. Guyana Country Strategy. [https://www.ifad.org/documents/48415603/49460538/Country+strategy+note\\_3.pdf/2d239193-a871-051d-6169-923892ebc242?t=1726607182073](https://www.ifad.org/documents/48415603/49460538/Country+strategy+note_3.pdf/2d239193-a871-051d-6169-923892ebc242?t=1726607182073)



Sluice located at Viva-La-Force, West Bank, Demerara. This structure is part of the drainage system of a large sugar plantation. Children of the families that worked on the plantation caught fish the old-fashioned way in the countryside using a cast net.

The country's agriculture strategy for 2013-2020 acknowledges the importance of maximizing youth participation through initiatives like scholarships in agriculture and business development, as well as training in financial management, including access to credit<sup>40</sup>. Furthermore, the integration of climate-smart practices and technology is also crucial for attracting and engaging youth in agriculture. Additionally, the Agriculture and Entrepreneurship Programme launched by President Irfaan Ali has taken more concrete steps. This initiative is youth-led, providing more than 100 shade houses across various regions for youth to practice and learn climate-smart farming methods, with linked opportunities to market the produce they harvest. In 2022, approximately \$20 million was invested in developing the Agriculture Science departments of secondary schools and universities, providing technical assistance, tools, and infrastructure such as shade houses to support crop science efforts<sup>41</sup>.

### 3. Increasing vulnerabilities in particular groups

**Persons living with Disability:** Guyana's Ministry of Health estimates that 6.4% of the population, around 50,000 people, are living with a disability, with the gender distribution relatively even<sup>42</sup>. According to the 2019 National Commission on Disability Survey, physical and mobility impairments are the most common forms of disability, followed by visual impairments. As Guyana's population continues to age, the number and proportion of persons living with disabilities are expected to rise, and it is projected that by 2050, approximately 15% of the population will be over the age of 65, more than double the share in 2019<sup>43</sup>.

While there are no official national figures on the poverty or vulnerability of people living with disabilities, regional trends in Latin America and the Caribbean indicate that they are more likely to live in poverty<sup>44</sup>. In the region, one in five people living in extreme poverty has a disability, and nearly 70% of households with a member who has a disability are vulnerable to falling into poverty. Disabilities not only affect individuals but can strain the livelihoods of entire households, particularly in rural areas where smallholder farming is a primary income source. In a family farm, disability, whether affecting the head of household or another family member, can limit labor capacity, increase unpaid care, reduce access to markets, restrict income diversification opportunities, and heighten vulnerability to food insecurity and malnutrition. In response, Guyana has taken steps to support persons living with disabilities in agriculture: the Ministry of Agriculture and the Ministry of Human Services have partnered to deliver specialized, sustainable agriculture training tailored to diverse needs<sup>45</sup>. President Irfaan Ali recently launched a climate-smart farm fully operated by persons with disabilities, featuring accessible workspaces, specialized training, and measures to aid mobility<sup>46</sup>. Some of these inclusive approaches are being done with the private sector, organizations such as the

40 Ministry of Agriculture. National Strategy for Agriculture in Guyana 2013-2020. 2013. [https://www.fao.org/faolex/results/details/en/c/LEX-FAOC165953/#:~:text=The%20strategy%20is%20based%20upon,c\)%20Fuel%20Production%20%2D%20helping%20to](https://www.fao.org/faolex/results/details/en/c/LEX-FAOC165953/#:~:text=The%20strategy%20is%20based%20upon,c)%20Fuel%20Production%20%2D%20helping%20to)

41 Ministry of Agriculture. Over \$20 million expended since 2022 to promote agriculture in schools. 2023. <https://agriculture.gov.gy/2023/04/12/over-20-million-expended-since-2022-to-promote-agriculture-in-schools/>

42 Catalyze+. 2024. Guyana Prioritizing people with Disabilities at a New Community Unit. <https://www.catalystplus.org/our-impact/impact-stories/guyana-prioritizing-people-with-disabilities-at-a-new-community-unit/>

43 World Bank. 2023. Disability Inclusion in Latin America and the Caribbean: The Situation in Guyana. <https://documents1.worldbank.org/curated/en/099061024112031792/pdf/P17125615440a50681bb011e3cd00471543.pdf>

44 Ibid

45 Guyana Chronicle. 2024. 'Sustainable agriculture' training to empower persons living with disabilities'. <https://guyanachronicle.com/2024/11/07/sustainable-agriculture-training-to-empower-persons-living-with-disabilities/>

46 NCN. 2024. Guyana's First Climate-Smart Farm to be Operated by Persons with Disabilities. <https://ncnguyana.com/2023/guyanas-first-climate-smart-farm-to-be-operated-by-persons-with-disabilities/>

47 Ministry of Agriculture. Guyana's National Pathway for Food Systems Transformation. 2023. [https://www.unfoodsystemshub.org/docs/unfoodsystemslibraries/national-pathways/guyana/2023-03-17.-national-pathway-for-food-systems-transformation---guyana.pdf?sfvrsn=27ee9220\\_1](https://www.unfoodsystemshub.org/docs/unfoodsystemslibraries/national-pathways/guyana/2023-03-17.-national-pathway-for-food-systems-transformation---guyana.pdf?sfvrsn=27ee9220_1)

Georgetown Chamber of Commerce and Industry (GCCCI) have used partners to support such initiatives.

**Aging farming population:** There is limited data on whether Guyana's farming population is aging, but the *Guyana Voluntary National Review* of 2019 identified aging farmers and limited interest among youths in agriculture as important considerations to the country's food system<sup>47</sup>. Additionally, youth migration from rural to urban settings for employment opportunities may be generating a generational gap, as the farming population ages and few young people enter the sector.

**Migrants and informal work in the agriculture sector:** Guyana has one of the fastest-growing economies in the world, in part due to the emerging oil and gas sector. In 2023, GDP increased by 32.2 percent. This substantial growth has attracted migrants from neighboring countries, particularly Venezuela. In 2024, there were an estimated 25,000 Venezuelan nationals in Guyana, representing approximately 3 percent of the country's population<sup>48</sup>. Their migrant status does not allow them to legally work, often pushing them towards informal sector as well as rural areas. A 2022 report by the International Organization for Migration (IOM) highlighted that approximately 75 percent of Venezuelan migrants in Guyana are employed informally, often in sectors like

agriculture, forestry, and fishing<sup>49</sup>.

#### 4. Data and Policy Gaps

**Limited data:** In Guyana's agriculture sector, there is a significant lack of data on vulnerable groups, including people living in poverty, persons living with disabilities, and the elderly. Information on group-specific indicators has not been collected regularly for some of these groups, which hinders the analysis of factors that lead to their exclusion from full participation in the Guyanese economy<sup>50</sup>. This gap in information hampers the ability to design and implement equitable and data-driven policies and interventions, particularly in critical areas like the drainage and irrigation sector. Without a clear understanding of how these vulnerable groups are impacted by agricultural challenges, such as flooding or drought, it becomes difficult to allocate resources effectively, plan for inclusive infrastructure, or ensure that adaptation measures benefit those most at risk.

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48 The Borgen Project. 2024. Migration to Guyana. <https://borgenproject.org/migration-to-guyana/>

49 IOM. 2022. Labour Migration and Guyana's Emerging Economy. [https://programamesoamerica.iom.int/sites/default/files/whp.ls\\_info5\\_.pdf](https://programamesoamerica.iom.int/sites/default/files/whp.ls_info5_.pdf)

50 Ministry of Social Protection. National Gender Equality and Social Inclusion Policy. 2019. [https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA\\_NationalGenderEqualitySocialInclusionPolicy.pdf](https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA_NationalGenderEqualitySocialInclusionPolicy.pdf)



Hope Canal outward flow into the North Atlantic Ocean, built after the 2005 floods to release excess water from the East Demerara Water Conservancy (EDWC) into the Atlantic Ocean via an 8-door sluice.

## 6. Environment and Social Safeguarding

While Guyana's agriculture sector incorporates social inclusion objectives in broader national policies, there are currently no formal safeguarding frameworks that systematically assess or mitigate potential negative social impacts at the sectoral level. The National Strategy for Agriculture (2013–2020) encourages greater participation of youth and women in agriculture; however, the Drainage and Irrigation Strategy (2017–2021) does not embed gender equality, social inclusion, or safeguarding considerations. Both national strategies were developed sometime ago, existing GESI guidelines could help address current gaps where alignment is considered in the future.

As the National Drainage and Irrigation Authority (NDIA) plans to expand drainage and irrigation infrastructure into new or unlisted areas, it would provide the opportunity to minimize unintended safeguarding measures to reduce unintended negative impacts on vulnerable communities.

For example, upgrading drainage infrastructure or creating new irrigation schemes might intersect with communities that have informal land tenure, risking displacement or exclusion if not managed carefully. Likewise, efforts to enhance community involvement should ensure safe and fair participation, making sure that new responsibilities do not unintentionally put women, youth, or marginalized groups at greater risk, such as unsafe travel or social backlash.

Introducing safeguarding practices, such as social risk screening during project planning, inclusive consultation processes that identify existing community dynamics, and monitoring of potential unintended consequences, would help align the NDIA's activities with the principle of “*do no harm.*” It would also reinforce national commitments under Guyana's NGESI Policy and enhance the long-term sustainability and resilience of the D&I services.



Land preparation for large-scale rice cultivation in Berbice. This aspect of land preparation requires significant freshwater because rice is cultivated in flooded fields.

## 7. Gender and Social Inclusion Stakeholder Mapping

Stakeholder mapping was conducted to identify the key government agencies, departments, civil society organizations, and community groups that are active in areas relevant to gender equality, social inclusion, and the agriculture, drainage, and irrigation sectors (see [Annex 1](#)). It provides an overview of the institutional landscape within which the NDIA operates, highlighting stakeholders who may be necessary for future consultation, coordination, and engagement. [Figure 12](#) presents the stakeholder map for the GESI inclusion in the NDIA work.

The NDIA does not possess a formal strategy dedicated to gender and social inclusion; however, consultations with NDIA personnel indicate that the authority undertakes initiatives that may be regarded as efforts towards gender and social inclusion. Nonetheless, these activities are not directed by a comprehensive strategy. For instance, NDIA staff have reported that they actively recruit youth to assist with drain maintenance and provide monthly remuneration. The Guyana Pathway

Workers Project, implemented by the government of Guyana, exemplifies how NDIA, in collaboration with the Ministry of Agriculture, can further support learning and employment opportunities for women, youth, and marginalized groups within the sector. It is important to note that this project offers part-time employment for ten days each month, thereby providing temporary alleviation from the escalating cost of living in Guyana. Furthermore, NDIA personnel have emphasized their partnerships with other ministries to promote GESI-related initiatives. For example, the NDIA collaborates with the Ministry of Education to support school meal programs by ensuring water access.

By mapping these actors, the study supports NDIA in strengthening its understanding of the broader environment as it seeks to integrate GESI considerations into its strategic planning and operations. An extensive list of stakeholders relevant to other GESI-related sectors can be found in Guyana's NGEI Policy.

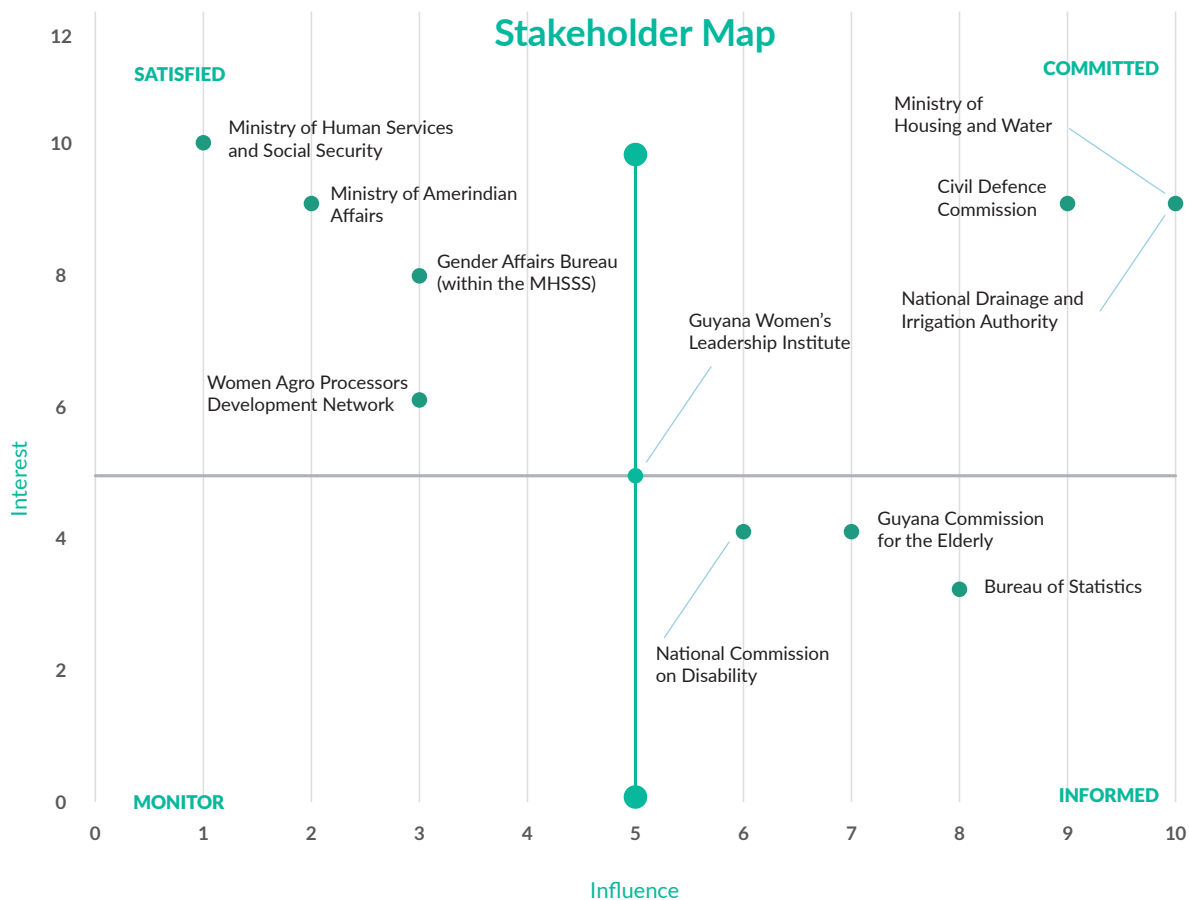


**Figure 12.** Gender and Social Inclusion Stakeholder Mapping

## 8. Best Practices

The drainage and irrigation sector are cross-cutting, intersecting agriculture, water management, and flood control. As a result, a range of GESI best practices from these sectors are relevant. This section highlights key practices to ensure that vulnerable groups are considered and benefit equitably across all areas of drainage, irrigation, and flood management in Guyana.

The best practices and toolkits presented in this section are intended as reference materials that can inform NDIA's future planning, operations, and capacity-building efforts. While the immediate use of these resources will depend on the priorities and scope of NDIA's updated strategic plan, they may serve as inputs for:

- Supporting inclusive design and implementation of drainage and irrigation projects;
- Informing revisions to internal guidelines or procedures;
- Enhancing staff awareness and training on GESI integration; and
- Providing a basis for collaboration with development partners who support technical assistance in the water management sector.

These materials are not prescriptive but are provided to support NDIA's leadership in applying practical, context-relevant approaches to inclusion as opportunities arise.

### Relevant Toolkits and Guides for GESI Integration into D&I

**Gender in water infrastructure projects :**The Climate Resilient Infrastructure Development Facility created a GESI toolkit for project preparation, with an emphasis on the planning phase. The objective of the toolkit is to provide a resource and tool for people working on water infrastructure projects to incorporate gender equality considerations into their work<sup>51</sup>.

### **GESI in agricultural water resources management:**

The Food and Agriculture Organization created a guide for integrating gender and social inclusion activities in water resources management and agrifood systems. The guide helps policymakers, practitioners, and other key stakeholders to understand and frame their projects and programs according to identified community needs and contexts<sup>52</sup>.

**Gender in irrigation learning:** The International Water Management Institute (IWMI) have created a Gender in Irrigation Learning and Improvement Tool, which identifies areas of policy and operations in formal irrigation schemes or projects that have been successful or need adjustment to promote gender equity. The tool is a series of indicators clustered around three themes in gender and irrigation<sup>53</sup>.

### GESI Toolkits and Guides

**GESI in agricultural water resources management**



**Gender in water infrastructure projects**



**Nature-based Solutions**



**Gender in irrigation learning**



**Integrated Water Resource Management**



**Figure 13.** Toolkits and Guides for GESI Integration into D&I

51 Climate resilient Infrastructure Development Facility. GESI toolkit for project preparation. 2019. <https://cridf.net/RC/publications/gesi-toolkit-for-project-preparation/>

52 Food and Agriculture Organization. Applying gender equality, disability, and social inclusion principles in agricultural water resources management. 2023. <https://openknowledge.fao.org/server/api/core/bitstreams/5bda9f67-ac55-4577-887e-52c531b2efb1/content>

53 International Water Management Institute. Introduction to the Gender in Irrigation Learning and Improvement Tool. 2017. [https://www.wocan.org/wp-content/uploads/2016/09/Gender-Performance-in-Irrigation-Learning-Tool\\_June2016.pdf](https://www.wocan.org/wp-content/uploads/2016/09/Gender-Performance-in-Irrigation-Learning-Tool_June2016.pdf)

**Integrated Water Resource Management (IWRM):** In 2006, The United Nations Development Programme created a reference guide for mainstreaming gender and social equity in the water sector. The document seeks out to share approaches to the planning, implementation, management and monitoring of IWRM<sup>54</sup>.

**Nature-based Solutions:** The World Bank published a guidance note on integrating GESI into nature-based solutions. The note presents factors for consideration in NBS projects from the early stages of project conceptualization through the project design and implementation process<sup>55</sup>.

## Broad Best Practices for Water Resource Management

This section presents a synthesis of best practices and recommendations from the previously mentioned guidance and toolkits, explicitly tailored for application in the D&I context. The FAO recommends integrating gender equality and social inclusion considerations into four key phases of an organization's work in water resources management: pre-design, design, implementation, monitoring, evaluation, and learning phases<sup>56</sup>. Best practices in water resources management have been linked to FAO's gender recommendations for Guyana's agricultural sector, as well as the International Water Management Institute's gender and irrigation tools.

### 1. Pre-design phase

- Systematically collect and update gender, age, and disability-disaggregated data, and conduct gender and social needs assessment to understand diverse groups' capacities, vulnerabilities, disaster risk exposure, and needs.
- Important to understand the level of integration and participation of women, and other relevant vulnerable groups, in three irrigation-related activities:
  - Access to scheme resources – Do women and vulnerable groups benefit from NDIA's resources?
  - Participation in scheme membership, leadership, and decision-making – Are women and vulnerable groups participating in decision-making at WUA and NDIA level?
  - Access to scheme benefits
- Raise awareness among project staff and

community members about GESI principles to foster understanding and sensitivity toward diverse needs and experiences.

- Foster transparent and open communication with community stakeholders, engaging diverse groups to identify and utilize their knowledge and expertise in water management and agriculture.

### 2. Design phase

- Form Partnerships with Rights-holder Organizations: Collaborate with organizations representing women, people with disabilities, and other marginalized groups to ensure their perspectives are included in project design, implementation, and monitoring.
- Involve Community Needs in Designs: Ensure that the specific needs of community members are considered in the design of infrastructure such as irrigation and water management systems, making them safe and accessible for everyone, including children and people with disabilities.

### 3. Implementation Phase

- Improve Government Coordination: Enhance collaboration among government agencies responsible for food, water, and gender-related issues. This helps break down departmental silos and ensures a comprehensive and integrated approach to project implementation.
- Build capacity of partner organizations to support implementation and mainstream gender for technical staff. This can be achieved through pilot activities, sharing toolkits and developing knowledge products relevant to the country context.
- Deliver Meaningful Participation Activities: Create opportunities for the active involvement of the entire community, engaging stakeholders across the agriculture and water value chain. This includes inclusive participation, consultation, and decision-making processes to ensure diverse perspectives are considered.
- Engage GESI Experts and Local Groups: Collaborate with GESI experts and local organizations focused on promoting inclusion and equality. These groups should be involved in the implementation process to ensure effective execution of GESI strategies, with a focus on safety and well-being.

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54 United Nations Development Programme. Mainstreaming Gender in Water Management. 2006. <https://www.undp.org/sites/g/files/zskgke326/files/publications/IWRMGenderResourceGuide-English-200610.pdf>

55 World Bank. Integrating Gender and Social Inclusion in Nature-Based Solutions. 2023. <https://documents1.worldbank.org/curated/en/099060123165042304/pdf/P1765160ae46bb0aa0aefa0235601f9d0c6.pdf>

56 <https://openknowledge.fao.org/server/api/core/bitstreams/5bda9f67-ac55-4577-887e-52c531b2efb1/content>

## 9. Monitoring, Evaluation, and Learning (MEL)



**Disaggregate Data by Social Categories:** Collect and analyze data disaggregated by gender, age, ethnicity, and other relevant social identities during the monitoring and evaluation processes. This provides a comprehensive understanding of the inclusiveness of water and agriculture projects.

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**Design Inclusive MEL Processes:** Work with GESI experts and rights-holder organizations to design MEL processes that consider diverse perspectives and promote inclusion. Engage these stakeholders in the design, implementation, and interpretation of MEL activities.

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**Indicators for Irrigation Water User Associations:** There are no universally applicable indicators or methodologies for the M&E of the performance of IWUAs themselves. IWMI identify the following outcomes and impacts that could be monitored for inclusive IWUA M&E: (i) livelihood and productivity-related impacts; (ii) equity, reliability and adequacy of water supply; (iii) sustainability and manageability of the O&M system of the scheme; (iv) financial viability and effectiveness of IWUA; (v) gender-disaggregated level of member participation; (vi) empowerment; and (vii) technical capacity.



An amphibious dredging machine positioned along the edge of the waterbody, carrying out rehabilitation and dredging activities within the East Demerara Water Conservancy.

## 10. Recommendations for Integrating GEDSI in the NDIA Strategy

The recommendations outlined in this section are suggested for incorporation into the revised NDIA strategy. Within its scope, they can address some of the key challenges identified earlier, following international best practices. These challenges include 1) unequal access to land, water, and productive resources; 2) issues in representation, decision-making, and participation; 3) increasing vulnerabilities for certain groups; and 4) lack of data.

### 1. Strengthen inclusive engagements through existing structures

- When coordinating with Water Users' Associations (WUAs), Community Development Councils (CDCs), and Neighborhood Democratic Councils (NDCs), encourage broader participation by women, youth, and Indigenous representatives in meetings and decision-making processes related to D&I planning, maintenance, and operations. This can be achieved by setting quotas or targets for participation and providing capacity-building support to enhance agency and participation.

**Address challenge:** The above groups are less likely to own land and so are not able to participate in WUAs. Creating spaces where agricultural workers are able to share perspectives and influence decision-making would support building informed practices by the NDIA.

### 2. Integrate inclusive activities when expanding to undeclared D&I areas

- As NDIA expands into undeclared farming areas, apply safeguarding principles to ensure that drainage and irrigation infrastructure benefits all groups, including smallholders, Indigenous communities, and women farmers.
- Conduct basic community consultations before major infrastructure interventions to understand who lives and farms in new areas, particularly where land tenure may be informal.

**Address challenge:** Land titling is a common issue in rural Guyana, alongside informal workers. Expanding into undeclared farming areas could cause issues with communities that may not have formal land ownership rights. Ensuring community consultations with diverse groups would better inform how undeclared farming areas are being used and integrated into the NDIA's scope.

### 3. Build gender equality and social inclusion skills capacity for D&I staff

- As part of NDIA's planned capacity building for engineers and technical staff, include basic awareness on the importance of social inclusion in service delivery, e.g., understanding diverse community needs in infrastructure placement, maintenance, and flood mitigation planning.

**Address challenge:** Increased GESI awareness and skills would help NDIA design, implement, and monitor projects with better gender equality and social inclusion outcomes.

### 4. Collect demographic-disaggregated data

- When NDIA collects operational data (e.g., on D&I usage, maintenance needs, service gaps), consider adding simple markers such as recording the number of women-headed farms or Indigenous communities serviced.

**Address challenge:** Data gaps are a widespread challenge. Disaggregating data by relevant demographics (such as gender, age, and income) would help provide valuable information for future projects as well as for other Ministries and agencies/organizations.

## 5. Integrate social considerations into project prioritization

While NDIA's Strategic Plan does not outline a formal project prioritization framework, the Authority regularly makes decisions on where to focus investments in new or upgraded drainage and irrigation infrastructure. As part of any future updates to internal planning processes, NDIA may wish to consider incorporating simple social and inclusion-based considerations alongside technical and economic factors, such as:

- **Service coverage gaps:** Identifying communities that have historically received limited D&I services.
- **Presence of underserved groups:** Considering areas where a high proportion of smallholder, Indigenous, or women farmers operate, particularly if these groups face barriers to accessing water services or infrastructure.
- **Opportunities for community partnership:** Giving weight to locations where local groups (e.g., Water User Associations or CDCs) are active and willing to support inclusive project implementation or maintenance.
- **Building awareness and inclusivity:** Through mass media, support the development of communication awareness campaigns that promote women, youth, and marginalized groups.

These considerations do not necessitate the creation of a formal system, but can help inform more inclusive and equitable decision-making over time, aligning with national development and GESI objectives.



Government engineers providing a group explanation to the donor during their in-country visit in 2025 on how the infrastructure works and its impact on farmers. This includes using renewable energy to power the operation.

## Annex1 – Gender and Social Inclusion Stakeholder

**National Drainage & Irrigation Authority (NDIA):** Guyana's National Drainage and Irrigation Authority (NDIA) functions as Guyana's apex organization dealing with all public matters pertaining to management, improvement, extension and provision of drainage, irrigation and flood control infrastructure and services in declared areas of the country<sup>57</sup>.

The NDIA also partners with Community Development Councils, community interest groups, consisting of individuals from within the particular community who are elected by members of the community to serve in leadership capacities<sup>58</sup>. See below some partner to support GESI across Guyana;

**Ministry of Housing and Water:** Responsible for overseeing local government, which comprises ten regional democratic councils, six municipalities and 65 neighbourhood democratic councils (NDCs). The municipalities and NDCs are responsible for raising and collecting taxes and the national government makes annual grants for specified development work. Regional democratic councils have responsibility for education, health, and agriculture support; ***NDCs are responsible for waste collection and sanitation, roads/ dams, and markets; and municipalities are responsible for drainage and irrigation, waste collection and maintenance of infrastructure***<sup>59</sup>.

**Ministry of Human Services and Social Security (MHSSS):** The MHSSS is the key institution towards the sustainable development and rehabilitation of children, women, families, the elderly and providing training and social and welfare services/programmes to persons in difficult circumstances and disadvantaged persons<sup>60</sup>. The Ministry creates policies to deliver social and welfare services towards vulnerable and disadvantaged groups among the population.

**Gender Affairs Bureau (within the MHSSS):** In 2016, the Women's Affairs Bureau and the Men's Affairs Bureau were merged to form the Gender Affairs Bureau – a national body responsible for the administration of gender affairs at the Government level. The Bureau promotes and advances gender equality, equity and identity in confrontation with the gender issues in the country. Key objectives include<sup>61</sup>:

- Addresses issues affecting men and boys, women and girls and its principal area of discussion has been Gender-Based Violence.
- Provides technical and other support to Non-Governmental Organisations and individual men/women.
- Focuses on the continuous gap and discrimination in the economic, social, political and educational experienced by men and women.
- Advises the Ministers on policy issues regarding the status of women.
- Conducts public education sessions, seminars and working sessions.

**The National Resource and Document Centre for Gender and Development** is another service provided by the Ministry of Human Services and Social Security. The centre provides information support for all programmes aimed at building the capacity of women in order to enhance their participation at all levels of decision-making. The centre is also engaged in developing specialized resources dealing with women, issues of gender and development, and relevant socio-economic and political issues. These issues include family life, child rights, child abuse, domestic violence, HIV/AIDs, poverty and other relevant social issues<sup>62</sup>.

**Guyana Women's Leadership Institute (GWLI):** Works at the national and local level to support women and girls as leaders and decision-makers through education and training to ensure equal accession and full participation.

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57 Ministry of Agriculture. 2024. National Drainage and Irrigation Authority (NDIA). <https://agriculture.gov.gy/ndia-2-2/>

58 Guyana Chronicle. 2020. 1000 CDCs to be established nationwide. <https://guyanachronicle.com/2020/12/06/some-1000-cdcs-to-be-established-nationwide/>

59 FAO. 2023. Country Gender Assessment of the Agriculture and Rural Sector. <https://openknowledge.fao.org/server/api/core/bitstreams/ebe89ba4-41e2-4189-ab76-441131382218/content>

60 Ministry of Human Services and Social Security. 2024. Who We Are. <https://mhsss.gov.gy/about.html>

61 Ministry of Human Services and Social Security. 2024. Social Services. <https://mhsss.gov.gy/socialservices.html>

62 Ministry of Human Services and Social Security. 2024. Social Services. <https://mhsss.gov.gy/socialservices.html>

**National Commission for the Elderly:** It is a semi-autonomous body. It is Chaired by a representative from civil society and includes representatives from: the Ministry of Public Health, Ministry of Social Protection, National Commission on Disabilities, Parliamentary Political Parties and the Pensioners Association. Activities include advice on policy creation, co-ordinate programmes and services for the elderly, and monitor implementation of policies and programmes<sup>63</sup>.

**National Commission on Disability within the Ministry of Health:** Is appointed by and accountable to the President of Guyana. Launched in 1997 is now governed by the Guyana Act No.11 of 2010 Persons with Disability Act. Comprised of 12 members appointed by Cabinet and selected by agencies and organizations. Influence policy changes and enforcement of laws that protects the rights of persons with disabilities, as well as a source of information on disability issues in Guyana<sup>64</sup>.

**The Ministry of Indigenous Affairs:** Established in 2005 to safeguard, protect and promote the social, cultural and economic interest of the Indigenous s and the Hinterland. A wide range of socio-economic projects and programme are developed by the Government of Guyana and executed by the Ministry to facilitate the continued growth and development of Guyana's Hinterland population<sup>65</sup>. The Ministry may be involved in coordination of drainage & irrigation activities within the hinterland although information on this is limited.

**Women's Agro-Processors Development Network:** Is a registered Friendly Society in Guyana. It aims to empower its member groups specifically through improving their entrepreneurial skills. The Network is also a member of the Caribbean Network of Rural Women Producers (CANROP). Members are all based in rural communities<sup>66</sup>.

**Indigenous Peoples' Association:** Established in 1991 to support community initiatives addressing human rights violations and to improve the overall conditions of the Indigenous Peoples of Guyana. Long-term goals are to achieve legislative and policy changes that safeguard Indigenous rights comprehensively, alongside promote the sustainable use of natural resources while ensuring environmental protection. Ensuring the state fulfils its obligations to provide essential services such as health, education, transportation, and communication to Indigenous communities<sup>67</sup>.

Other relevant civil society organisations include The Indigenous Peoples Commission, Indigenous Action Movement of Guyana, National Toshaos Council, religious groups, NDCS, CDC, councilors. UN women creating a compendium of grassroot organizations.

**Civil Defence Commission:** The Commission is accountable for, in partnership with national and community authorities, the management of shelters for those impacted by disasters and hazards; the monitoring and assessment of affected areas and structures; and the coordination of relief support to those affected<sup>68</sup>.

**The Bureau of Statistics:** The main coordinator and producer of economic statistics, including data on population and social conditions of households, The Bureau is recognized as the central authority on statistics in this country, and is often requested to advise and assist ministries and private/public sector organisations on statistical matters.

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63 United Nations Economic Commission for Latin America and the Caribbean. Measures taken by the Government of Guyana to implement International Agreement on Ageing. [https://www.cepal.org/sites/default/files/presentations/guyana\\_report.pdf](https://www.cepal.org/sites/default/files/presentations/guyana_report.pdf)

64 National Commission on Disability Guyana. Our Vision. <https://www.ncdguyana.org/about/>

65 Ministry of Amerindian Affairs. 2024. About the Ministry of Amerindian Affairs. <https://moaa.gov.gy/about-us/>

66 Caribbean Network of Rural Women Producers. Women's Agro-Processors Development Network (Guyana). <https://wearecanrop.wordpress.com/womens-agro-processors-development-network-guyana/>

67 Amerindian People's Association (APA). 2024. About. <https://apaguyana.com/about/>

68 Civil Defense Commission. About Us. <https://cdc.gy/about-us/>



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