IGF INTERGOVERNMENTAL FORUM on Mining, Minerals, Metals and Sustainable Development

## WOMEN AND THE MINE OF THE FUTURE

# A Gendered Analysis of Employment and Skills in the Large-Scale Mining Sector: Ghana

Fitsum Weldegiorgis

March 2022

Secretariat hosted by IISD

Secretariat funded by Canada

Kingdom of the Netherlands

This report was produced as part of Women and the Mine of the Future, a project to increase understanding of the status quo for women in mining, so stakeholders can anticipate, assess, and address gendered impacts as mining evolves. The project is led by the Intergovernmental Forum on Mining, Minerals, Metal and Sustainable Development (IGF) and conducted with the following partners:

- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ)
- Environmental Governance Programme of the Swedish Environmental Protection Agency and the United Nations Development Programme
- International Labour Organization
- International Women in Mining

*The opinions expressed in this report reflect only the author's views and do not represent those of IGF or other partner organizations.*

Published by the International Institute for Sustainable Development



The International Institute for Sustainable Development (IISD) is an independent think tank championing sustainable solutions to 21st-century problems. Our mission is to promote human development and environmental sustainability. We do this through research, analysis, and knowledge products that support sound policy making. Our big-picture view allows us to address the root causes of some of the greatest challenges facing our planet today: ecological destruction, social exclusion, unfair laws and economic rules, a changing climate. IISD's staff of over 120 people, plus over 50 associates and 100 consultants, come from across the globe and from many disciplines. Our work affects lives in nearly 100 countries. Part scientist, part strategist—IISD delivers the knowledge to act.

**IISD HEAD OFFICE**

111 Lombard Avenue
Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

**IISD.org**

**@IISD_news**

IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States. IISD receives core operating support from the Province of Manitoba and project funding from numerous governments inside and outside Canada, United Nations agencies, foundations, the private sector and individuals.

### The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development

The IGF supports more than 75 nations committed to leveraging mining for sustainable development to ensure negative impacts are limited and financial benefits are shared. It is devoted to optimizing the benefits of mining to achieve poverty reduction, inclusive growth, social development, and environmental stewardship. The International Institute for Sustainable Development has served as Secretariat for the IGF since October 2015. Core funding is provided by the governments of Canada and the Netherlands.

**IGF/IISD OTTAWA OFFICE**

220 Laurier Ave W.
Suite 1100
Ottawa, Ontario
Canada R3B 0T4

**IGFMining.org**
**@IGFMining**

**GHANA COUNTRY REPORT**
**A Gendered Analysis of Employment and Skills in the Large-Scale Mining Sector: Ghana**

Fitsum Weldegiorgis

March 2022

# EXECUTIVE SUMMARY

This study falls under an overarching project which seeks to establish a baseline uncovering the existing gender-disaggregated profile of workers in the large-scale mining sector and in its supply chain, with particular attention paid to the participation of women. Focusing on the case of Ghana, the aim of this study is to establish a state of play of gender-disaggregated employment and skills development. The study set out to (i) collect and analyse gender-disaggregated employment data; (ii) conduct a situation analysis of women's working conditions at the workplace; and (iii) analyse women's participation in skills development programs.

The study applied quantitative and qualitative research methodology with descriptive data analysis. Due to the lack of sufficient and consistent data, various sources and data for different periods were used. The study was desk-based, and most of the raw data was sourced from the Ghana Minerals Commission (GMC); Ghana Chamber of Mines (GCM); the International Labour Organisation (ILO), which relied on the Ghana Living Standards Survey, Ghana Labour Force Survey, and population census; and Ghana Statistical Services. In some cases, data collection involved communication with relevant stakeholders in Ghana. While the data from the ILO covers all mines as well as quarrying activities, a specific number of mines is included in the GMC data (23 mines) and GCM data (9 mines). Due to data shortages and inconsistency, multiple trends ranging from 6 to 2 years are considered, to understand a series of changes over a time period.

The findings of the analysis are organised into six categories and are summarised as follows.

## Mining Employment by Industry Group and Commodity Types

1. The mining and quarrying sector accounts for only 2% of the general workforce, employing approximately 172,175 people in 2017. The sector is male dominated, with women accounting for 18% of total employment, which includes the relatively large proportion of women (45%) working in the quarrying sub-sector. Even with the inclusion of quarrying, it was the economic sector with the seventh-lowest proportion of women out of total employment in 2017.
2. Excluding the quarrying sub-sector and focusing on the 23 mines for which data was provided by GMC, Ghanaian women's representation in the large-scale mines and their contractors was 13.5% in 2017, which decreased to 8% (2,597) in 2019 before slightly picking up to 9% (2,737) in 2021. It seems that the sector's downturn in 2013–16 affected women's employment more than the employment of men. This is likely due to the types of jobs in which women are mainly employed

(e.g., clerical and administrative roles, community and personal services) which are subject to a decline with a downturn.

3. According to the 2021 data, employment of Ghanaians is much higher with contractors (18,607, 66%) compared to direct employment with large-scale mines (9,781, 34%). This means that there is a greater opportunity for women to be employed in large numbers with contractors than directly with large-scale mines. Despite this opportunity, it is concerning that there is the same proportion of women's employment in both large-scale mines and with contractors.
4. There was a slightly lower proportion of women employed in the top-producer and -employer mines relative to smaller mines in 2021. For example, the participation of Ghanaian women relative to men was 9% and 7% (Gold Fields–Tarkwa and Abosso, respectively); 6% (Adamus Resources), 8% and 7% (AngloGold Ashanti Obuasi and Iduapriem, respectively), 8% (Perseus Mining), 9% (Asanko Gold), and 12% and 7% (Golden Star–Bogoso and Wassa Mines, respectively). Although Newmont Ahafo Mine had a relatively higher proportion of women employed (14%), these large-scale mines would need to make far more effort to demonstrate their commitment to gender inclusivity.
5. According to the 2017 ILO data, 96% (163,939 persons) of employment in the mining and quarrying sector was in the private sector. Women accounted for 18% (30,195 persons) of employment in the private sector, and there was no woman employed in the public sector. It is difficult to understand why this is the case; however, it clearly indicates that the public sector, too, needs to address the issue and ensure gender inclusivity.
6. The proportion of women employed was greater in the age ranges of 15–24 years (34%), 45–54 years (25%) and 55–64 years (22%) whereas the proportion of men employed was greater in the age ranges of 35–44 years (91%) and 25–34 years (86%). In general, women tend to be employed in large numbers at young ages below 34 years, which can be due to the common occurrence that women's careers are interrupted during their late thirties and forties for family reasons, particularly as they leave for maternity and find it hard to return to employment.
7. Unlike in other countries, such as Australia, the 2017 data shows that women are mainly employed in rural areas, accounting for 26% of gender proportion. Moreover, women's wages were found to be about the same in both urban and rural areas (or higher in rural areas), while that of men is higher in urban than rural areas. This makes it harder for women to find employment in urban compared to rural areas.
8. Across all the nine GCM member mines considered, indigenous women employees made up 27% (266) of the total Ghanaian women's workforce that was directly employed in those mines in 2020. Gold Fields (Abosso) and AngloGold

Ashanti (Obuasi) employed the most indigenous women as a proportion of their respective total Ghanaian women employees, 41% (19) and 40% (43), respectively. AngloGold Ashanti (Iduapriem) employed the least number of indigenous women in the workforce, 3% (1), as a proportion of its total Ghanaian women employees. When considering a gendered proportion of indigenous women in the workforce (as opposed to the above number of indigenous women as a proportion of Ghanaian women), indigenous women employees accounted for 9% of the gender proportion of total indigenous employees with large-scale mines as well as with contractors. This suggests that employment by indigeneity is more in favour of indigenous men than women. Of the mines considered, Perseus Mining had the highest proportion of indigenous women employed both directly at the mine (15%) and with contractors (25%). Gold Fields (Abosso) had one of the lowest (7%) proportions of indigenous women employed, which is a sharp contrast to the 14% in its Tarkwa mine. The lowest proportion of indigenous women employed at both the mine (5%) and with contractors (5%) was by AngloGold Ashanti (Induapriem), as well as in its Obuasi mine, although at a slightly higher level (8% directly at the mine and 7% with contractors).

9. Women made up 16% and 17% of the permanent and temporary workforce, respectively. Of the total number of women employed, 80% were on a permanent contract and the remaining 20% on a temporary basis. Similarly, 81% of the total number of men employed were on a permanent contract, indicating that there is no gender discrimination with respect to the type of employment contract issued. Perseus Mining, Asanko, and Gold Fields mines in Abosso and Tarkwa are the main employers of casual workers, in which case the proportion of women ranges from 3% to 9% of total casual employees.
10. As elsewhere and based on the 2017 data, a significant number of Ghanaian women are employed part time, making up 31% (9,650) of the total part-time workforce, while accounting for 15% (20,545) of the full-time workforce. Of the total number of women in the workforce, 32% were employed as part-time and the remaining 68% as full-time workers.

## Mining Employment by Occupation

11. Across the nine mines operated by GCM member companies in 2020, most Ghanaian employees were technicians and trades workers (5,865, only 6% of whom were women), followed by professionals (1,462, with women making up 21%). There were 36 managers, 47% of whom were women. While this is encouraging, many women managers may be working in junior-level management, as the data on occupations by seniority imply.
12. Of the total number of women employed in the nine GCM member mines, 90% were labourers (49%) and managers (41%).

13. In 2020, women dominated the human resources occupation, accounting for 60% of the total 292 human resources workforce of contractors to Gold Fields (Tarkwa). Protection services and engineering were the other two occupations at Gold Fields that have a relatively large number of employees but were male dominated, with only 1% and 4% women, respectively.

14. On average, the oldest women (52) and men (53) at the AngloGold Ashanti (Obuasi) mine in 2020 were in employed management occupations. This is followed by employment in human resources, in which the average age of women was 39 and that of men was 46. The average age of women working across all the occupations listed, except for management, ranged between 30 and 39. The average age of men across nine of the listed occupations was above 40, with the youngest average age being 36 in sustainability and 37 in geology and environment departments. A similar situation can be observed in the case of Newmont Mine. This supports the observation that women employed in the mining sector are mostly in their 30s and 20s.

## Mining Employment by Education, Skills, and Experience

15. Based on the 2017 data, 130,041 (84%) men and 25,529 (16%) women working in the mining and quarrying sector had either a basic, intermediate, or advanced level of education. No women but some men (6,708) were recorded as having an advanced education. However, the 2020 GCM data, which focus on only nine large-scale mines, suggest that women had much more advanced educations, with 39 women (74 men) and 91 women (74 men) having a master's degree and first degree, respectively.

16. The opportunities for women to work in technical areas of the mining sector are hampered by the lack of a secondary/vocational/technical level of education, which is attained by only 12.7% of women compared to 21.5% of men across the national population.

17. About 92% of the labour force in the large-scale mines within the GCM membership was skilled in 2020, of which women accounted for 10%. For every unskilled man, there were 12.5 skilled men, whereas for every unskilled woman, there were 10.5 skilled women in 2020. This means that there were more unskilled in proportion to skilled women employed compared to that of men. This further highlights the lower levels of women's educational attainment, particularly in the technical and advanced levels of education. Of the GCM member mines, Newmont had the largest number of skilled women (236) and men (1,755). Golden Star Resources had the lowest number of skilled women (5%) in proportion to its skilled men.

18. There were higher levels of skilled women workers with the large-scale mines compared to those with contractors. This may partly be explained by the overall efforts made by the mining companies to increase gender equity in their workforce. It may also simply reflect the tendency of large-scale mines to attract skilled labour.

19. Ghanaian women made up 9% (694) of the 6,871 senior and 10% (1,867) of the 21,516 junior employees in the 23 mines considered in 2021. The proportion, however, varies when considering employment by seniority "as employed directly with the large-scale mines" compared to "as employed with contractors." Women who were employed in senior positions were more represented in the large-scale mines (a 14% proportion of women) than with contractors (a 7% proportion of women).

20. The larger mines, especially Newmont Ghana Ahafo (20%), AngloGold Ashanti Iduapriem (16), AngloGold Ashanti Obuasi (15%), and Goldfields Tarkwa (16%), had a relatively higher proportion of women directly employed in senior positions in the mines.

21. Overall, women tend to have more opportunities for senior positions when employed directly by large-scale mines than by contractors, and it is the larger mines that employ more women in senior positions than the smaller ones. In particular, Newmont Ghana had the highest proportion of women in senior positions for both direct employment and with its contractors.

22. Despite some government initiatives, the enrolment of women in science, technology, engineering, and mathematics (STEM) has not improved, which is considered the main impediment to women's career advancement. Among many other factors, cultural barriers that discourage women from pursuing education in STEM and acquiring technical skills could be behind this lack of progress.

## Training and Apprenticeship for the Workforce

23. Taking the example of Asanko Mine, women—including direct employees, employees with contractors, and those involved in supervisory/management roles—had 40 hours of training per person (compared to 28 hours for men) in 2019 and 19 hours of training per person (compared to 21 hours for men) in 2020. There was a total of 34,183 training hours in 2020, with women receiving only 4%. These latter numbers only reflect the proportion of women to men; otherwise, the training hours per person provide a more accurate depiction of the share of training hours for women, which is higher than for men.

24. Over the period 2015–2020, women's gender share of 15% in 2019 with respect to the total number of hours of training was the highest compared to the other years. While training and apprenticeships provided by mining companies prepare locals

for employment opportunities in the sector, there are concerns that those opportunities are limited overall and especially for women.

## Gender Pay Gap

25. The extractive sector pays significantly higher wages (about ten times) than other sectors; for example, Newmont reports men's average annual salary to be USD 25,347 (USD 2,112 monthly) and that of women to be USD 23,620 (USD 1,968 monthly). This indicates a gender pay gap of 7% per dollar (a pay equity of 52% for men and 48% for women), meaning that women in Newmont earn 93% of what men take home. A similarly low pay gap of 8% can be observed at Perseus Mining Ghana, with an average pay equity of 47% (women) and 53% (men) at the junior level. The pay gap at Perseus increases as the level of employment goes higher to senior (11%) and management (31%) levels. However, women in the extractive sector overall are found to be underpaid, with a median gender pay gap of 27.5% in 2013 largely attributed to women's lower levels of education and qualifications in STEM.

## Employment Turnover

26. At Newmont Mine, there has been a general increase in employee turnover since 2016. While the company-initiated employee turnover rate for men stayed stable over the 2016–2020 period, the company-initiated employee turnover for women more than doubled in that period, reaching 8.4% compared to 4.3% for men in 2020.
27. With respect to employee-initiated turnover, the rates for both men and women showed similarly increasing trends up until 2018 before decreasing in 2019 and 2020. Oppong's findings in 2013, although slightly outdated, reveal that the high turnover rates are because of dissatisfaction with pay and employees' concerns over their career development and progress. The rates of turnover initiated by employees are higher among women than men throughout the period 2016–2020. This is a further indication of the various challenges that women face at the workplace as well as broadly in the communities, and that force them to leave their mining jobs.
28. A different situation is reported by Asanko Gold Mine, in which no women employees lost their jobs between 2015 and 2020 (except for three women in 2017 and 2019) out of about 50 employees who either retired, resigned, or were made redundant.

# TABLE OF CONTENTS

# 1.0 INTRODUCTION

The economy of Ghana grew from USD 4.98 billion in 2000 to USD 72.35 billion in 2020, with the mining sector being one of the major drivers.[1] While gold is the main mineral produced, accounting for 45% of total export value in 2020, other minerals mined include bauxite, manganese, diamonds, brown clay, silica sand, kaolin, and mica.[2,3] The mining industry is predominantly foreign owned, with the Government of Ghana holding up to a 10% free carried interest share in most of the large-scale mining. Although the mining sector is traditionally not a major employer, Ghana has done relatively well in maximising the employment of nationals, who account for 98.5% of the mining labour force (GHEITI, 2019). This progress is partly attributed to the government's efforts to promote mining-related educational institutions such as the University of Mines and Technology (UMaT), Tarkwa; University of Ghana; Kwame Nkrumah University of Science and Technology; and University of Development Studies. These institutions annually produce a combined 400 graduates with mining-related degrees, although very few of these graduates get the opportunity to work in the sector (UNDP, 2015).

However, there is a higher unemployment and underemployment rate for women compared to men in the general Ghanaian labour market. Based on 2017 data, Baah-Boateng et al. (2022) estimate that women are largely employed in the informal sector (89% of all women employed with the company compared to 78% of all men employed) and engaged in vulnerable employment (78% of women, 54% of men), with less of them in productive employment (18% of women, 37% of men). This is reflected in the extractive sector, where women are in greater proportion (21.48%) in the informal sector that is largely artisanal and small-scale mining than in the formal mining sector, in which they accounted for 7.2% in 2017 (Baah-Boateng et al., 2022). Only 10% of women (compared to 27% of men) working in the mining and petroleum sectors had secondary and higher education in 2017 (Baah-Boateng et al., 2022). The study by Baah-Boateng et al. (2022), which is based on focus group discussions with a sample of employees in 12 extractive companies, found that the barriers to women's involvement in the sector include culture, the physically demanding nature of mining, the patriarchal practices and intimidating behaviours of men working at mining sites, and the remoteness of mining sites.

[1] https://tradingeconomics.com/ghana/gdp
[2] https://oec.world/en/profile/country/gha#yearly-exports
[3] https://www.mincom.gov.gh/minerals-in-ghana/

# 2.0 STUDY OBJECTIVES

The present study falls under an overarching project which seeks to establish a baseline for uncovering the existing gender-disaggregated profile of workers in the large-scale mining sector and in its supply chain, with particular attention paid to the participation of women. The aim of the project is to understand what global trends, such as the adoption of new and disruptive technologies and rising demand for minerals for the low-carbon transition, may hold for women, whether at the workplace (directly at mine sites, remotely in control rooms, etc.) or in the supply chain. Based on the findings of the analysis, the project will analyse the policy implications for women working in large-scale mining and its supply chains. A set of policy guidelines aimed at governments, but also relevant for companies, will be developed to help harness the potential of women in the large-scale mining sector, at present and in the future.

Focussing on the case of Ghana, the aim of this study is to provide a state of play of gender-disaggregated employment and skills development. Specifically, it is guided by three objectives:

- **Collect and analyse gender-disaggregated employment data:** Profile women's participation in the large-scale mining sector, according to their occupational functions/roles, levels of responsibility, ages, educational attainment, and technical capacities.
- **Conduct a situation analysis of women's working conditions at the workplace**: Include gendered working conditions by status of contract, full-time/part-time, earnings, indigenous, remoteness, and urban/rural.
- **Analyse women's participation in skills development programs**: Include on-the-job training, technical skills building, and targeted academic programs.

To the extent possible, depending on data availability, the specific data disaggregation as detailed in Annex A of the Terms of Reference is used as a guide. Based on the analysis, the study sheds some light on the gaps and challenges women face in the mining sector and on good practices implemented by mining companies and governments to help women overcome barriers. The study concludes with some recommendations to improve women's participation, as well as suggesting improvements in strategies for data collection and categorization.

# 3.0 METHODOLOGY

The study relied on a secondary data collection method involving the following elements:

**Desk-based review:** Secondary information is sourced both through online databases and peer-reviewed literature and relevant grey documents available. Most of the raw data are sourced from the Ghana Minerals Commission (GMC); the Ghana Chamber of Mines (GCM); the International Labour Organisation (ILO), which relied on the Ghana Living Standards Survey, Ghana Labour Force Survey, and population census; and Ghana Statistical Services. In some cases, data collection involved communication with relevant stakeholders in Ghana. While the data from the ILO covers all mines as well as quarrying activities, a specific number of mines are included in the GMC data (23 mines) and GCM data (nine mines). Due to data shortages and inconsistency, multiple trends ranging from 6 to 2 years are considered, to understand change over a series of time periods. A desktop search and review were also conducted to generate supplementary information, including company-specific reports such as sustainability reports.

**Case studies:** Short case-study boxes are included where needed to illustrate initiatives by various stakeholders to improve working conditions and provide opportunities for women's employment. These relied on a review of documents as well as content provided by some organisations such as Women in Mining Ghana and Ladies in Mining and Allied Professions in Ghana.

The collated and synthesised quantitative and qualitative data are analysed, providing descriptive and nuanced narratives and insights into the subject matter.

# 4.0 DATA ANALYSIS

The analysis presented here is based on the data related to the overall mining and quarrying sector, the data collected from the GMC and GCM related to 23 mines that are mostly gold but also include manganese and diamond mines (see Table 1), and data related to specific mines taken as examples. The following gender-disaggregated data analysis is presented in six categories:

1. Mining employment by industry group
2. Mining employment by occupation
3. Mining employment by education, skills, and experience
4. Training and apprenticeship of the workforce
5. Gender pay gap
6. Employment turnover

**Table 1. Major operating mines in Ghana**

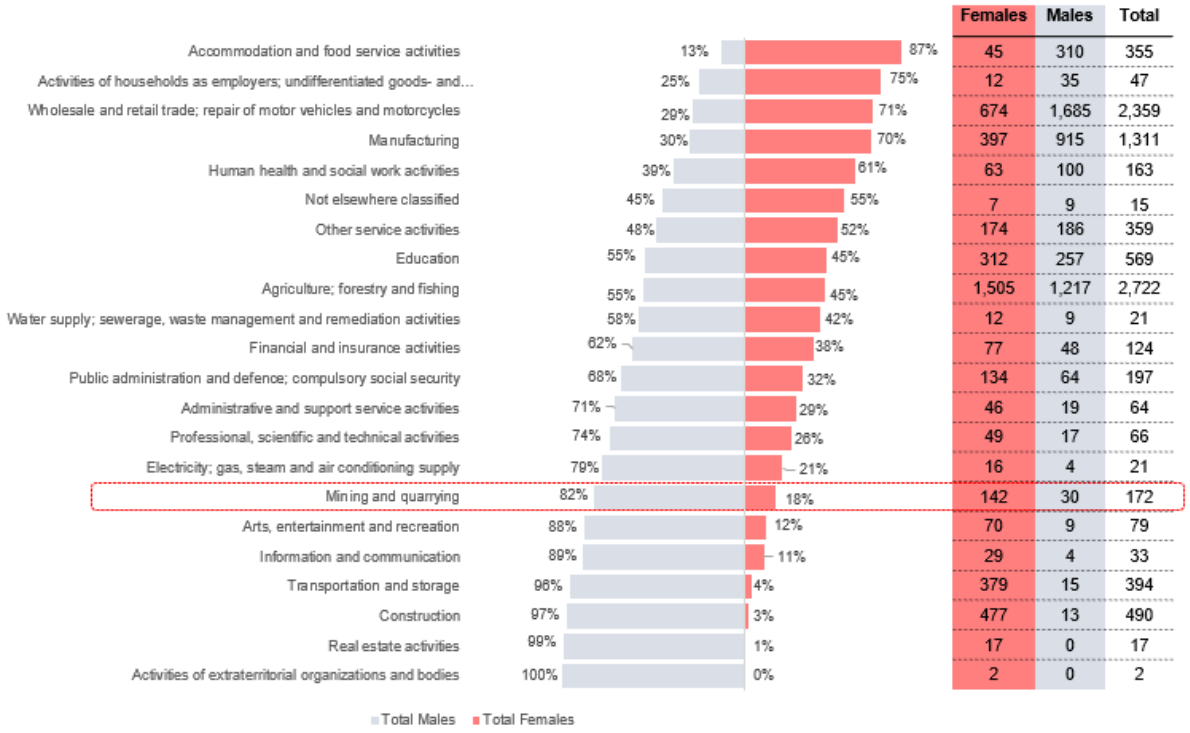
| | | |
|---|---|---|
| 1. AngloGold Ashanti, (Iduapriem) | 2. Chirano Gold Mine | 3. Kibi Goldfields Limited |
| 4. AngloGold Ashanti (Obuasi) | 5. Adamus Resources | 6. Ghana Bauxite Company |
| 7. Gold Fields (Ghana) Limited (Abosso) | 8. Perseus Mining Ghana Limited | 9. Ghana Manganese Company Limited |
| 10. Gold Fields (Ghana) Limited (Tarkwa) | 11. Asanko Gold Ghana | 12. Mensin Gold Bibiani Limited |
| 13. Golden Star (Bogoso/Prestea) | 14. Xtra-Gold Resources Corp. (Muoso) | 15. Great Consolidated Diamonds Limited |
| 16. Golden Star (Wassa Mine) | 17. Xtra-Gold Resources Corp. (Banso) | 18. Cardinal Resources Limited |
| 19. Newmont Ghana (Ahafo Mine) | 20. Xtra-Gold Resources Corp. (Kwabeng) | 21. Akroma Gold Company Limited |
| 22. Newmont Golden Ridge Limited | 23. Xtra-Gold Resources Corp. (Pameng) | |

Source: GMC.

# 4.1 Mining Employment by Industry Group and Commodity Type

As in other mineral-rich countries, employment in the mining and quarrying sector in Ghana is not significant, accounting for only 2% (172,175 employees) of the total employment in the country in 2017. It is also a sector that is male dominated. Figure 1 shows that the employment of Ghanaian women in the mining and quarrying sector in 2017 was 18% of the total, which includes the relatively larger proportion of women (45%) working in the quarrying sub-sector in which there are fewer educational requirements and technological applications (Baah-Boateng et al., 2022). Even with the inclusion of quarrying, it was the economic sector with the seventh lowest proportion of women out of the country's total employment in 2017.

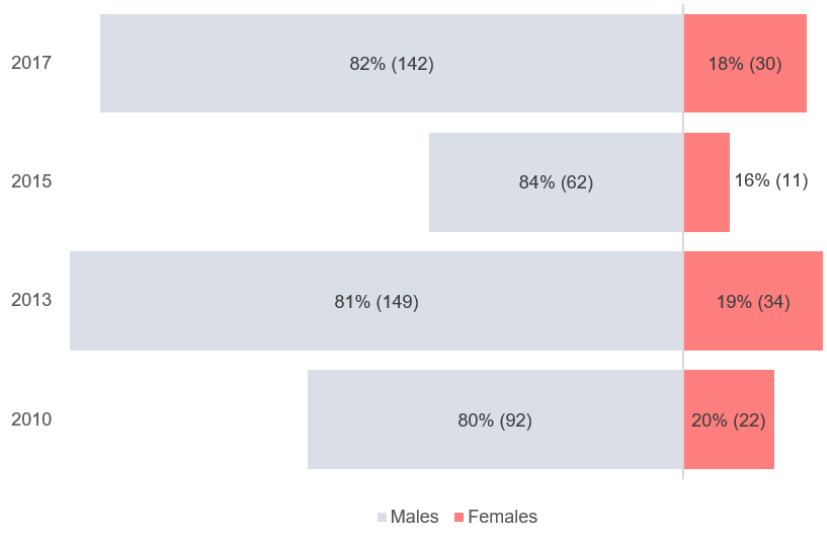
**Figure 1. Total employed persons by industry and sex, 2017 ('000, % share)**




Source: ILO.

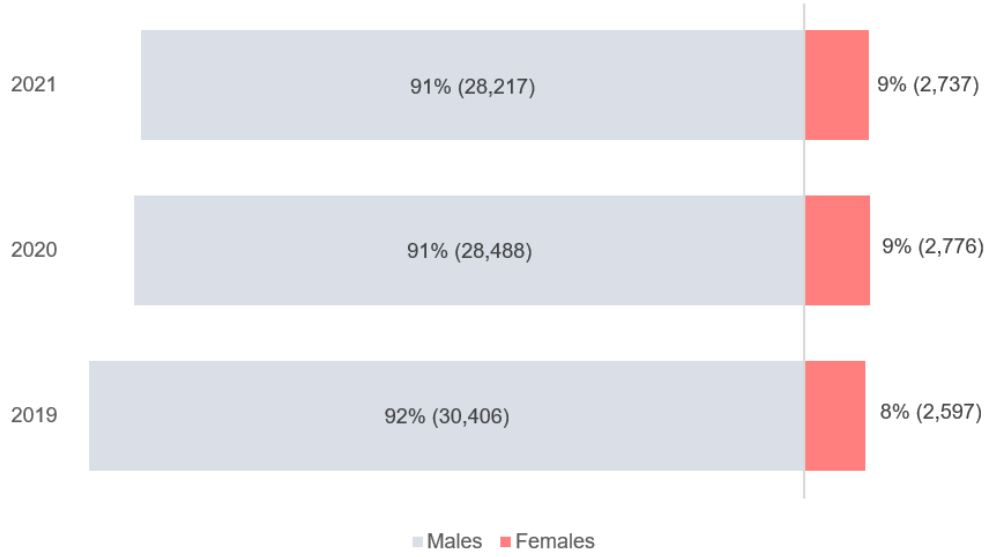
The proportion of women employed was higher (20%) in 2010, decreasing to 16% in 2015 before picking up to 18% in 2017 (Figure 2). It seems that the sector's downturn in 2013–16 had affected women's employment more than the employment of men. This is likely due to the types of jobs in which women are mainly employed (e.g., clerical and administrative roles, community and personal services) which are subject to a decline with a downturn.

**Figure 2. Persons employed in mining and quarrying by sex ('000, % share)**




Source: ILO.

**Figure 3. Total Ghanaian employees in 23 large-scale mines and their contractors by sex (% share, number)**



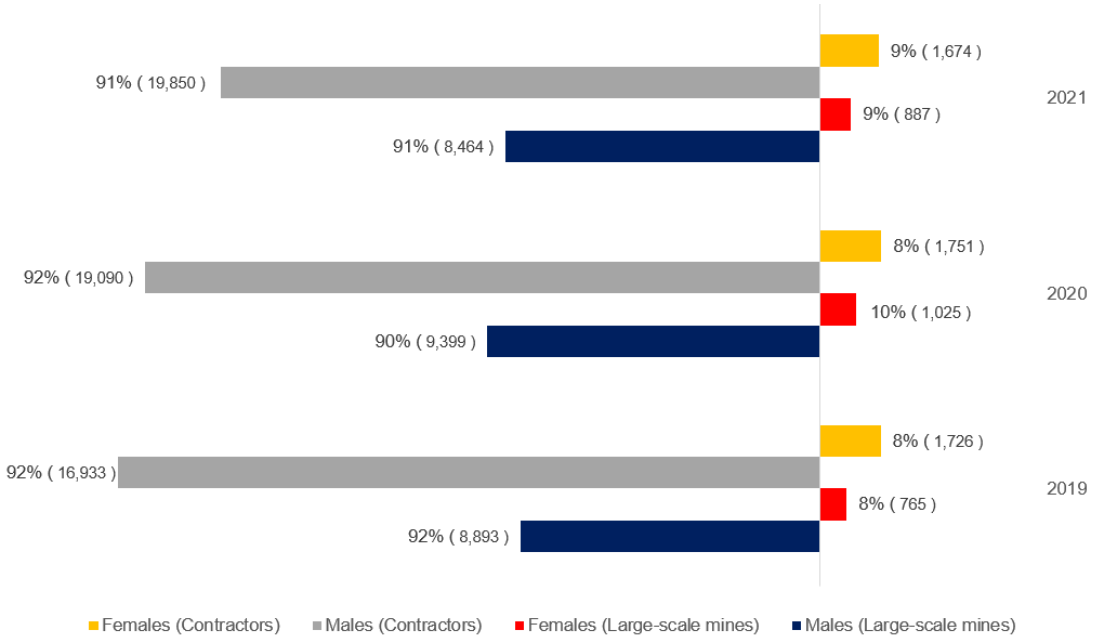

Note: This total includes casual labour.

Source: GMC.

Excluding the quarrying sub-sector and focusing on the 23 mines for which data was provided by GMC, Ghanaian women's representation in the large-scale mines and their contractors was 13.5% in 2017, which decreased to 8% (2,597) in 2019 before slightly picking up to 9% (2,737) in 2021 (see Figure 3). Women represented 9% of the total employment in both large-scale mines and their contractors in 2021 (Figure 4). According to the 2021 data, the employment of Ghanaians is much higher with contractors (18,607,

66%) compared to direct employment with large-scale mines (9,781, 34%). This means that there is a greater opportunity for women to be employed in large numbers with contractors than directly with large-scale mines. Despite this opportunity, it is concerning that the same proportion of women is employed in both large-scale mines and with contractors. Meanwhile, expatriates accounted for 1% (256) of the total, 43% of whom were employed by large-scale mines, with the remaining 57% employed by contractors.

**Figure 4. Ghanaian employees in 23 large-scale mines and their contractors by sex (% share, number)**

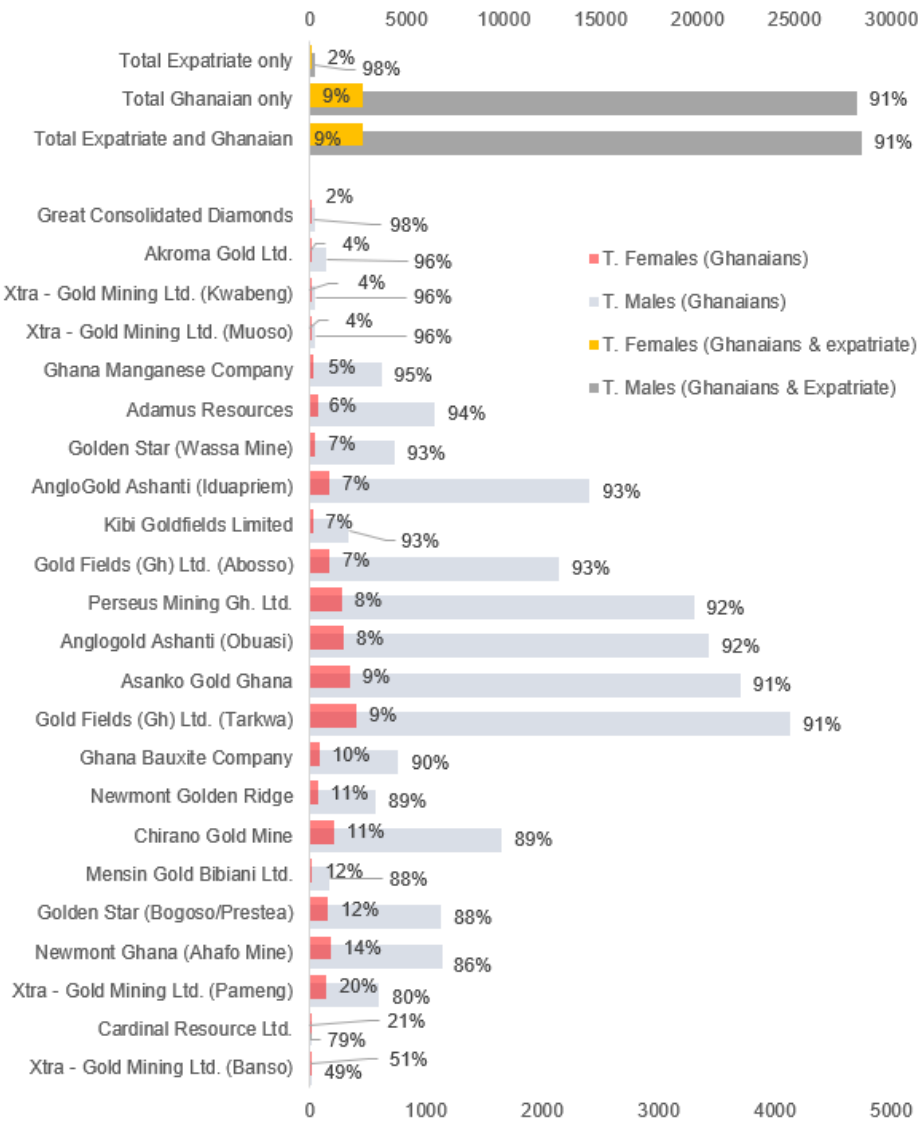



Source: GMC.

When considering the 23 mines for which data are available at the GMC, Xtra-Gold Resources Corp. (Banso) employed slightly more women (51%) than men in 2021, while Cardinal Resources Limited and Xtra-Gold Resources Corp. (Pameng) were highly ranked in their inclusion of women, at 21% and 20%, respectively (Figure 5). Although this high proportion of women employees is commendable, these mines employ the smallest labour force, particularly Cardinal Resources Limited (10 employees in total) and Xtra-Gold Resources Corp. (Banso, 30 employees in total).

**Figure 5. Total Ghanaian employees in large-scale mines and their contractors, by mines and sex, 2021 (number, % share)**

| Females | Males | Total |
|---|---|---|
| 6 | 250 | 256 |
| 2737 | 28,217 | 30,954 |
| 2743 | 28,467 | 31,210 |
| | | |
| 1 | 45 | 46 |
| 6 | 145 | 151 |
| 2 | 48 | 50 |
| 2 | 48 | 50 |
| 32 | 617 | 649 |
| 74 | 1,077 | 1,151 |
| 51 | 730 | 781 |
| 172 | 2,409 | 2,580 |
| 26 | 337 | 363 |
| 173 | 2,145 | 2,318 |
| 276 | 3,301 | 3,577 |
| 292 | 3,433 | 3,724 |
| 344 | 3,702 | 4,047 |
| 403 | 4,132 | 4,535 |
| 82 | 765 | 846 |
| 69 | 567 | 636 |
| 207 | 1,651 | 1,858 |
| 24 | 170 | 194 |
| 160 | 1,130 | 1,290 |
| 180 | 1,145 | 1,325 |
| 146 | 600 | 746 |
| 2 | 8 | 10 |
| 16 | 15 | 31 |




Note: Figure 5 includes all employees in company/contract/senior/junior/casual.

Source: GMC.

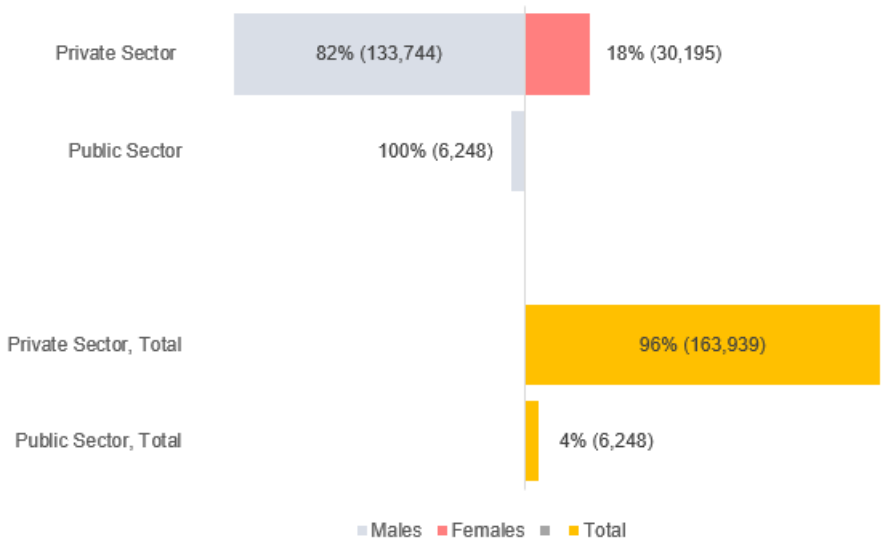
By contrast, there was a relatively and slightly lower proportion of women employees in the top-producer and -employer mines. For example, the participation of Ghanaian women relative to men was 9% and 7% (Gold Fields–Tarkwa and Abosso, respectively); 14% (Newmont Ahafo Mine), 6% (Adamus Resources), 8% and 7% (AngloGold Ashanti Obuasi and Iduapriem, respectively), 8% (Perseus Mining), 9% (Asanko Gold), and 12% and 7% (Golden Star–Bogoso and Wassa Mines, respectively). Although a relatively higher proportion of women employees in the Newmont Ahafo Mine probably indicates that some of the efforts made by the company (see an example in Box 1) to increase women's participation have shown some results, these large-scale mines need to make far more of an effort to demonstrate their commitment to gender inclusivity.

The varying share of women's employment in different mines of the same company shows that factors other than gender policies and initiatives by mining companies could be at play, though there could be differing initiatives at the mine site level. These may include varying availability of locals with the skills required at different mines, varying levels of effort made by personnel at different mines to seek out and employ local women, or pure coincidence when the different mines do not have active initiatives to employ women.

### 4.1.1 Employment in Public and Private Entities

According to the 2017 ILO data, 96% (163,939 persons) of employment in the mining and quarrying sector was in the private sector and the remaining 4% (6,248 persons) in the public sector (Figure 6). Women accounted for 18% (30,195 persons) of employment in the private sector, and there were no women employed in the public sector. It is difficult to understand why this is the case; however, it clearly indicates that the public sector, too, needs to address the issue and ensure gender inclusivity.

**Figure 6. Persons employed in mining and quarrying by public sector/private sector and sex, 2017 (% share, number)**



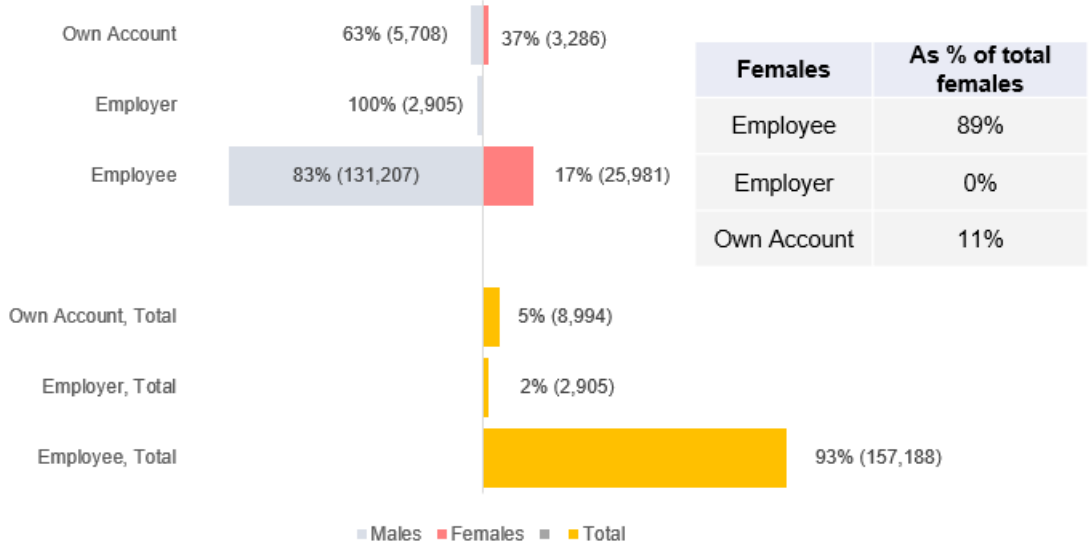

Source: ILO.

### 4.1.2 Employment Status

Of the total persons in the mining and quarrying sector in 2017, 93% (157,188) were employees, 2% (2,905) employers, and 5% (8,994) own account[4] or contributing family workers (Figure 7). Women were mainly employees and contributing family workers, comprising 17% (25,981) and 37% (3,286) of the gender composition, respectively.

[4] According to the ILO definition, own-account workers are those workers who, working on their own account or with one or more partners, hold the type of job defined as a self-employed job, and have not engaged on a continuous basis any employees to work for them during the reference period.

**Figure 7. Persons in mining and quarrying by employment status and sex, 2017 (% share, number)**



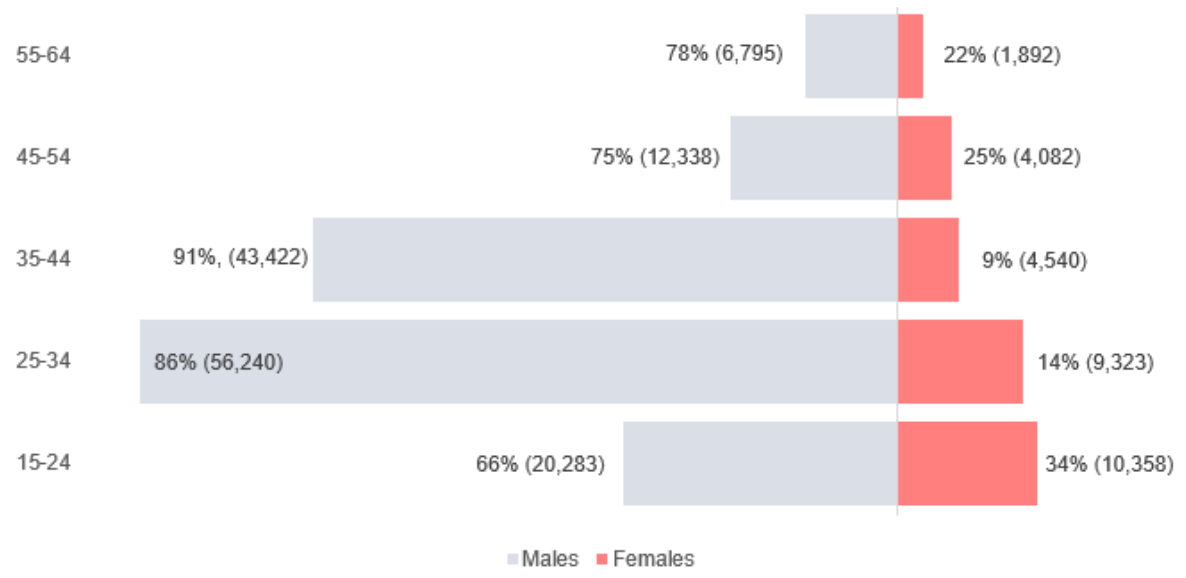

| Females | As % of total females |
|---|---|
| Employee | 89% |
| Employer | 0% |
| Own Account | 11% |

Source: ILO.

### 4.1.3 Employment by Age Distribution

Overall, employment in the mining and quarrying sector is dominated by persons in the 25–44 age range, as per the 2017 data (Figure 8). The proportion of women employed was greater in the age ranges of 15–24 years (34%), 45–54 years (25%) and 55–64 years (22%), whereas the proportion of men employed was greater in the age ranges of 35–44 years (91%) and 25–34% (86%). In general, women tend to be employed in large numbers at young ages below 34 years, whereas men's employment is concentrated in the age range of 25–44 years. This indicates a relative lack of women employed at the prime age range of 35–44, which can be due to the common occurrence that women's careers are interrupted for family reasons, particularly as they leave for maternity and find it hard to return to employment. A survey conducted in Ghana shows that 70% of the women surveyed commented on the lack of a child care facility at their workplace or lack of pay for child care by their employers, as well as inflexible work arrangements as the main challenges preventing continued employment after maternity leave (Business for Social Responsibility (BSR, 2017).

**Figure 8. Persons employed in mining and quarrying by age and sex, 2017 (% share, number)**

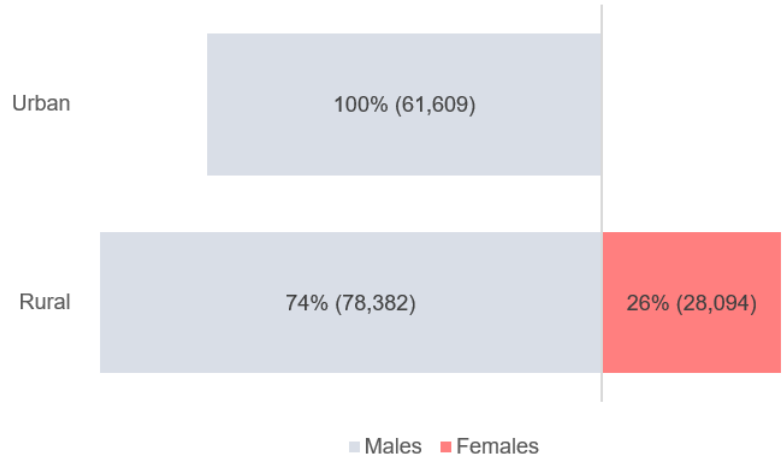



Source: ILO.

### 4.1.4 Employment by Geographic Distribution

According to the 2017 Ghana Living Standards Survey (GLSS 7), 28% and 11% of the employed population in Ghana were in rural and urban areas, respectively. This is also reflected in the mining and quarrying sector, in which, as shown in Figure 9, the overall employment tends to be higher in rural areas (106,476 persons) compared to that in urban areas (61,609 persons). Unlike in other countries, such as Australia, the 2017 data shows that women are mainly employed in rural areas, accounting for 26% of gender proportion, which partly reflects the higher rural-to-urban employment proportion. This may also indicate that it is hard for women in Ghana to obtain employment opportunities in central offices in urban areas, which may have led women to be more open to working in remote areas despite the likely challenges of abuse and discrimination that they commonly face in those areas. Moreover, women's wages were found to be about the same in both urban and rural areas (or higher in rural areas, according to Baah-Boateng et al. [2022]), while that of men is higher in urban than rural areas (Boahen & Opoku, 2021). This makes it harder for women to find employment in urban compared to rural areas.

**Figure 9. Persons employed in mining and quarrying by rural/urban and sex, 2017 (% share, number)**




Source: ILO.

### 4.1.5 Employment by Indigeneity

Indigeneity in the Ghanaian context refers to local community members employed in the mines within their locality. As shown in Table 2 and based on the 2020 GCM data for nine mines, there were 2,865 indigenous Ghanaians directly employed by the large-scale mines, which is a 27% proportion of all Ghanaians employed with large-scale mines. Gold Fields (Abosso) and AngloGold Ashanti (Obuasi) employed the most indigenous workforce as a proportion of their respective Ghanaian employees, 40% (264) and 40% (550), respectively. AngloGold Ashanti (Iduapriem) employed the least indigenous workforce, 3% (20), as a proportion of its total Ghanaian employees, reflecting the observation made above about the differing gender proportions by the same mining company in different mines.

The table also shows that there were 11,426 indigenous Ghanaians employed with contractors, which is a 33% proportion of all Ghanaians employed with contractors. Contractors to Gold Fields (Tarkwa) and AngloGold Ashanti (Obuasi) employed the most indigenous workforce as a proportion of their respective total Ghanaian employees, at 44% (3,083) and 44% (2,627). Contractors to AngloGold Ashanti (Iduapriem) had the least indigenous employees, 3% (62), as a proportion of their total Ghanaian employees. Ghana Manganese Company had no indigenous employees directly or with its contractors, while contractors to Golden Star Resources had no indigenous employees.

**Table 2. Indigenous employees in large-scale mines and their contractors as a proportion of total Ghanaian employees, 2020 (%, number)**

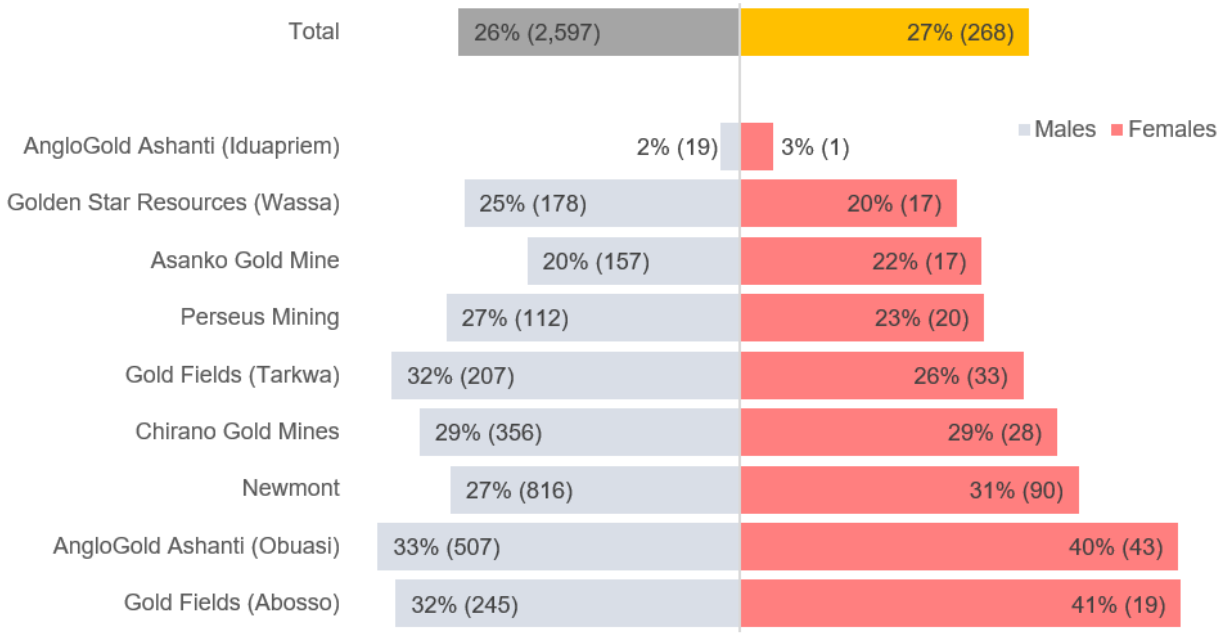
| Direct Workforce | | Contractors | |
|---|---|---|---|
| Gold Fields (Abosso) | 40% (264) | Gold Fields (Tarkwa) | 44% (3,083) |
| AngloGold Ashanti (Obuasi) | 40% (550) | AngloGold Ashanti (Obuasi) | 44% (2,627) |
| Newmont | 31% (906) | Gold Fields (Abosso) | 37% (1,189) |
| Chirano Gold Mines | 29% (384) | Chirano Gold Mines | 36% (619) |
| Gold Fields (Tarkwa) | 27% (240) | Newmont | 31% (1,842) |
| Perseus Mining | 23% (132) | Asanko Gold Mine | 28% (1,504)) |
| Asanko Gold Mine | 22% (174) | Perseus Mining | 17% (500) |
| Golden Star Resources (Wassa) | 20% (195) | AngloGold Ashanti (Iduapriem) | 3% (62) |
| AngloGold Ashanti (Iduapriem) | 3% (20) | | |
| **Total** | **27% (2,865)** | **Total** | **33% (11,426)** |

Source: GCM.

Figures 10 and 11 display the gendered employment of indigenous Ghanaians as a proportion of the total Ghanaian workforce in 2020. Across all the mines considered, indigenous women made up 27% (266) of the total Ghanaian women's workforce that is directly employed in those mines (Figure 10). Gold Fields (Abosso) and AngloGold Ashanti (Obuasi) employed the most indigenous women as a proportion of their respective total Ghanaian women employees, at 41% (19) and 40% (43). AngloGold Ashanti (Iduapriem) employed the least indigenous women in its workforce, 3% (1), as a proportion of its total Ghanaian women employees.

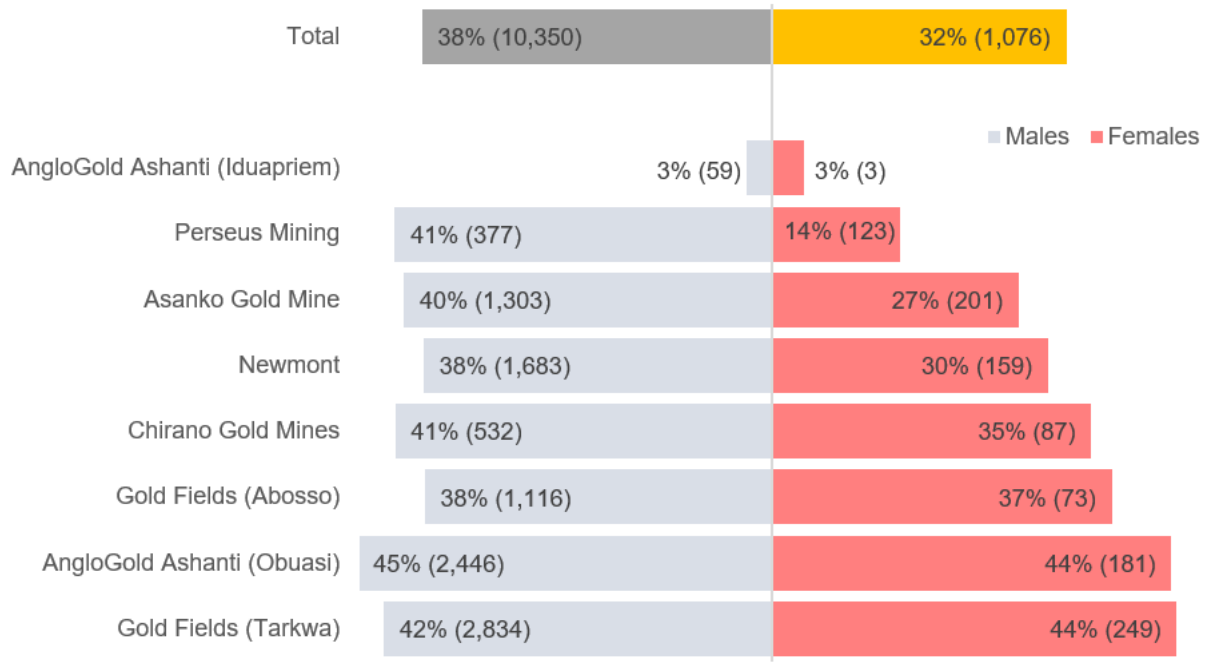
Figure 11 shows that indigenous women make up 32% (1,076) of the total number of Ghanaian women employed with contractors. Contractors to Gold Fields (Tarkwa) and AngloGold Ashanti (Obuasi) had the most indigenous women as a proportion of their respective Ghanaian women in the workforce, at 44% (249) and 44% (181). Contractors to AngloGold Ashanti (Iduapriem) and Perseus Mining had the lowest number of indigenous women employed as a proportion of their respective Ghanaian women's workforces, at 3% (3) and 14% (123).

**Figure 10. Indigenous employees in large-scale mines as a proportion of total Ghanaian employees by sex, 2020 (%, number)**




Source: GCM.

**Figure 11. Indigenous employees with contractors as a proportion of total Ghanaian employees by sex, 2020 (%, number)**



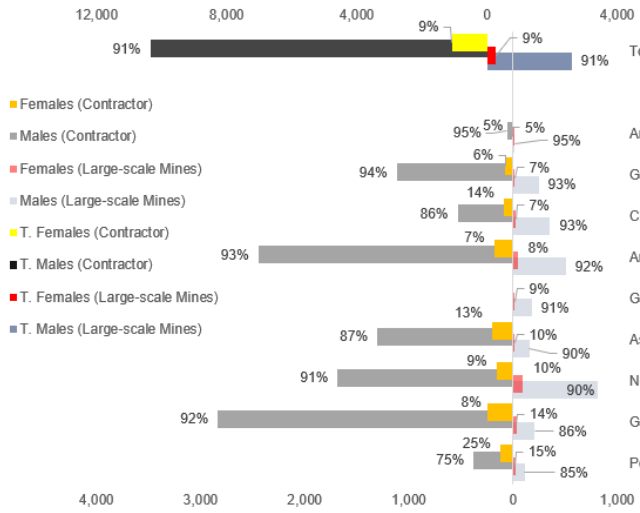

Source: GCM.

Figure 12 considers the proportion of women out of all the Indigenous employees in the workforce (as opposed to the above number of indigenous women as a proportion of

Ghanaian women workers). It shows that in 2020 indigenous women employees accounted for 9% of the total number of indigenous employees with large-scale mines as well as with contractors. This suggests that employment by indigeneity is more in favour of indigenous men than women, which is a testament to the lack of regulatory provision that specifically addresses the gendered aspect of indigenous employment. Of the mines considered, Perseus Mining had the highest proportion of indigenous women employed both directly at the mine (15%) and with contractors (25%). Gold Fields (Tarkwa) had a 14% proportion of indigenous women directly employed at the mine, whereas Chirano Mine had a 14% proportion of indigenous women employed with contractors. Gold Fields (Abosso) had one of the lowest (7%) proportions of indigenous women employed, in contrast to the 14% in its Tarkwa mine, again indicating the state of varying employment at different mines of the same company.

The lowest proportion of indigenous women employed at both the mine (5%) and with contractors (5%) was by AngloGold Ashanti (Induapriem), as well as in its Obuasi mine, although at a slightly higher level (8% directly at the mine and 7% with contractors). The different proportions of indigenous women's employment demonstrated by the various mines suggest that companies differ in their preferences, initiatives, and existing contracts (in the case of employment with contractors) when prioritising local workforce vis-à-vis national workforce.

**Figure 12. Indigenous employees in large-scale mines and their contractors by sex, 2020 (% share, number)**



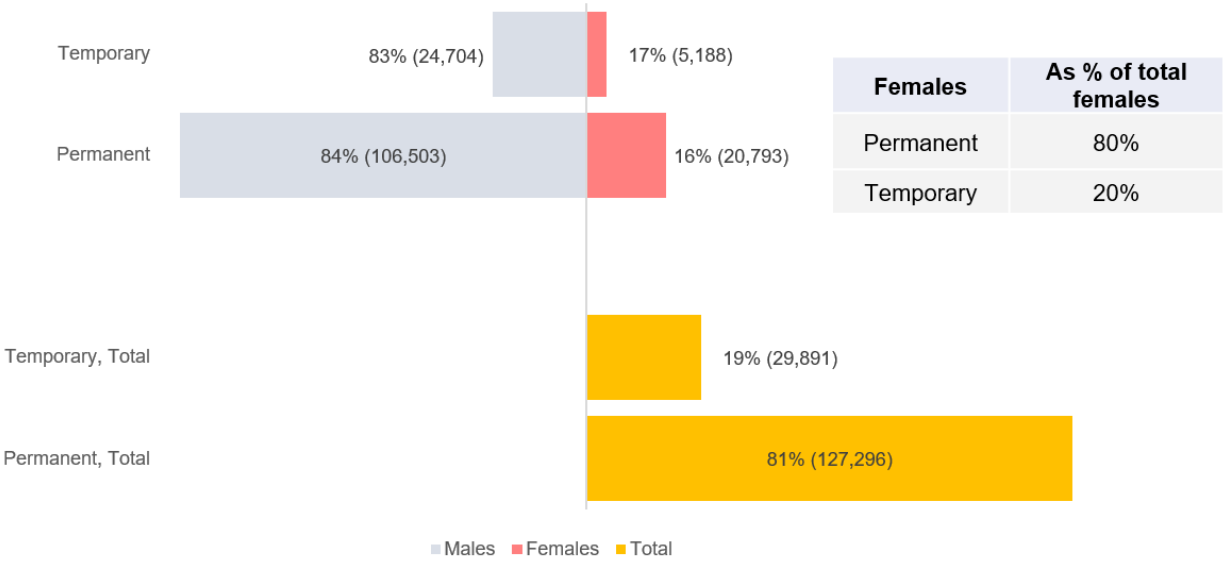

| | Females (Contractors) | Males (Contractors) | Females (Large-scale Mines) | Males (Large-scale Mines) |
|---|---|---|---|---|
| Total Mines | 1,076 | 10,350 | 268 | 2,597 |
| AngloGold Ashanti (Iduapriem) | 3 | 59 | 1 | 19 |
| Gold Fields (Abosso) | 73 | 1,116 | 19 | 245 |
| Chirano Gold Mines | 87 | 532 | 28 | 356 |
| AngloGold Ashanti (Obuasi) | 181 | 2,446 | 43 | 507 |
| Golden Star Resources (Wassa) | 0 | 0 | 17 | 178 |
| Asanko Gold Mine | 201 | 1,303 | 17 | 157 |
| Newmont | 159 | 1,683 | 90 | 816 |
| Gold Fields (Tarkwa) | 249 | 2,834 | 33 | 207 |
| Perseus Mining | 123 | 377 | 20 | 112 |

Source: GCM.

## 4.1.6 Employment by Type of Contract

As shown in Figure 13, there were 29,891 (19%) Ghanaians employed in the mining and quarrying sector on a temporary contract, and the remaining 127,296 (81%) were on a permanent contract in 2017. Women employees made up 16% and 17% of the permanent and temporary workforce, respectively. Of the total women employed, 80% were on a permanent contract, and the remaining 20% were on a temporary basis. Similarly, 81% of the total men employed were on a permanent contract, indicating that there is no gender discrimination with respect to the type of employment contract issued.

**Figure 13. Persons employed in mining and quarrying by permanent/temporary and sex, 2017 (% share, number)**

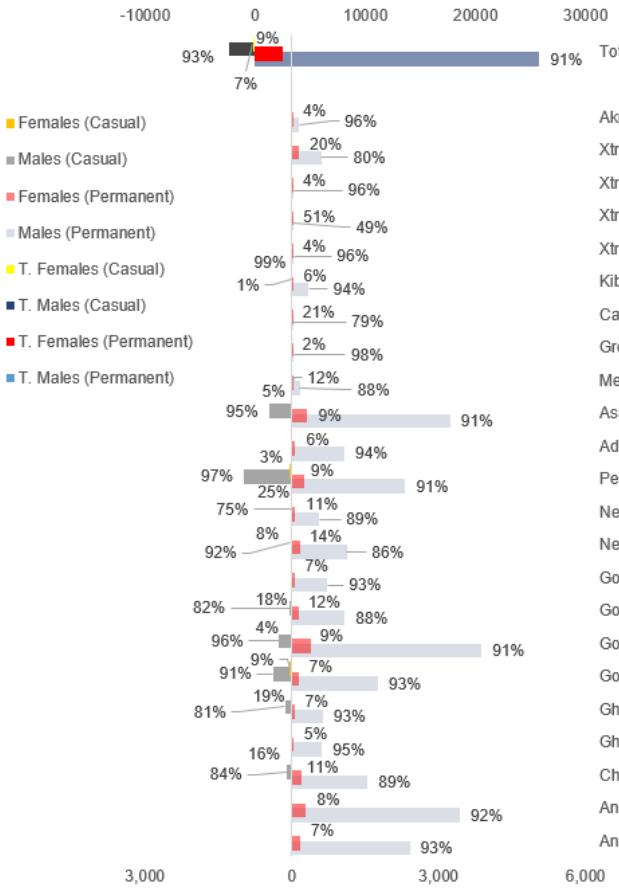



| Females | As % of total females |
|---|---|
| Permanent | 80% |
| Temporary | 20% |

Source: ILO.

Based on more recent data from 2021 and focusing on the 23 large-scale mines, Figure 14 shows that there is a higher proportion of women (9%) with permanent employment status than in casual work (7%). More employment on a permanent contract entitles women to take leave and other employment benefits. Perseus Mining, Asanko, and Gold Fields mines in Abosso and Tarkwa are the main employers of casual workers, in which case the proportion of women ranges from 3% to 9% of total casual employees. The gender proportion in the permanent positions across the different mines is like that shown in Figure 5, with women mostly accounting for between 4% and 12%.

**Figure 14. Ghanaian employees by permanent/casual and sex, 2021 (% share, number)**



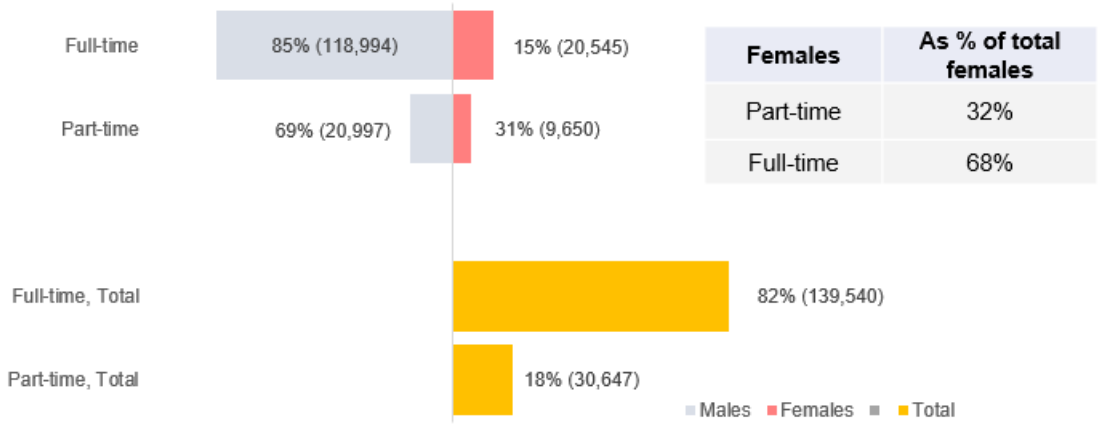

| | Females (Casual) | Males (Casual) | Females (Permanent) | Males (Permanent) |
|---|---|---|---|---|
| Total | 176 | 2,391 | 2,561 | 25,826 |
| Akroma Gold Ltd. | 0 | 0 | 6 | 145 |
| Xtra - Gold Mining Ltd. (Pameng) | 0 | 0 | 146 | 600 |
| Xtra - Gold Mining Ltd. (Kwabeng) | 0 | 0 | 2 | 48 |
| Xtra - Gold Mining Ltd. (Banso) | 0 | 0 | 16 | 15 |
| Xtra - Gold Mining Ltd. (Muoso) | 0 | 0 | 2 | 48 |
| Kibi Goldfields Ltd. | 6 | 0 | 20 | 337 |
| Cardinal Resource Limited | 0 | 0 | 2 | 8 |
| Great Consolidated Diamonds | 0 | 0 | 1 | 45 |
| Mensin Gold Bibiani Ltd. | 0 | 0 | 24 | 170 |
| Asanko Gold Ghana | 23 | 466 | 321 | 3,236 |
| Adamus Resources | 0 | 0 | 74 | 1,077 |
| Perseus Mining Gh. Ltd. | 34 | 979 | 241 | 2,323 |
| Newmont Golden Ridge | 2 | 7 | 67 | 561 |
| Newmont Ghana (Ahafo Mine) | 2 | 24 | 178 | 1,121 |
| Golden Star (Wassa Mine) | 0 | 0 | 51 | 730 |
| Golden Star (Bogoso/Prestea) | 10 | 46 | 149 | 1,084 |
| Gold Fields (Gh) Ltd. (Tarkwa) | 11 | 254 | 392 | 3,878 |
| Gold Fields (Gh) Ltd. (Abosso) | 37 | 382 | 136 | 1,763 |
| Ghana Bauxite Company | 31 | 132 | 51 | 633 |
| Ghana Manganese Company | 0 | 0 | 32 | 617 |
| Chirano Gold Mine | 19 | 101 | 188 | 1,550 |
| AngloGold Ashanti (Obuasi) | 0 | 0 | 292 | 3,433 |
| AngloGold Ashanti (Iduapriem) | 0 | 0 | 172 | 2,409 |

Note: Permanent employment data calculated by adding all Ghanaian employees in the mines including those who are contractors and senior/junior employees.

Source: GMC.

According to the 2017 data, part-time employment in the mining and quarrying sector constituted 18% (30,647) of total employment, with the remaining 82% (139,540) being full-time employment (Figure 15). As elsewhere, a significant number of Ghanaian women are employed part-time, making up 31% (9,650) of the total part-time workforce while accounting for 15% (20,545) of the full-time workforce. Of the total women's workforce, 32% were employed as part-time and the remaining 68% as full-time workers.

**Figure 15. Persons employed in mining and quarrying by full-time/part-time and sex, 2017 (% share, number)**




Source: ILO.

**Box 1. Company initiative to increase women's representation and retention in mining**

## Asanko Gold Mining

Asanko Gold Mining (AGM) is a 50:50 joint venture with Gold Fields and managed and operated by Asanko Gold Inc. AGM has broad "female-friendly" policies which include "prioritizing female applicants for vacant roles, provision of site accommodation for all women on the mine, maternity leave extended from 14 to 16 weeks and the provision of site accommodation and meals for all nursing mothers and their nannies."

AGM has an existing Women in Mining Chapter, which is affiliated with the Women in Mining Ghana (WIM-Gh) and works to advocate for women in mining and promote gender diversity and advancement within AGM and host communities. In addition, AGM introduced the Asanko Women in Mining "Botae Pa" (meaning Good Purpose in the Akan language) Initiative in 2018. The initiative is funded 50:50 by the mine and its contractors and broadly aims to empower and increase participation of women at the AGM and the host communities in the areas of "education, health, access to finance and business, and the professional development of Asanko's women through mentoring and networking programs."

Furthermore, AGM partnered with the Deutsche Gesellschaft für Internationale Zusammenarbeit and the Don Bosco Youth Network to initiate a skills development initiative and established the Esaase and Obotan Skills Development Centres in the early 2000s. Training is conducted in six trade areas, namely electrical installation, masonry, catering, welding, plumbing, and carpentry. In addition, AGM partnered with the Deutsche Gesellschaft für Internationale Zusammenarbeit to launch a skills development program known as the Amansueman Vocational Training Institute Skills Development Program in 2019. This centre of excellence in technical and vocational education is charged with training locals in various trades. It is a "seven-month intensive

competency-based skills development training program, including a one-month Workplace Experience Learning (WEL) placement."

Of the 293 local people that attended the training centres between 2014 and 2016, 97 (33%) were women. The graduates were provided with seed capital by Asanko "in the form of basic tools and equipment to start their own businesses, and 20% of graduates have either been employed by contractors to the AGM or have set up their own businesses in the local community." At the end of December 2019, the Amansueman Vocational Training Institute had a total of 97 students, of whom women comprised 30% (29), while admitting 115 trainees (53 of whom were women) for the 2020/21 academic year into the six trade areas.

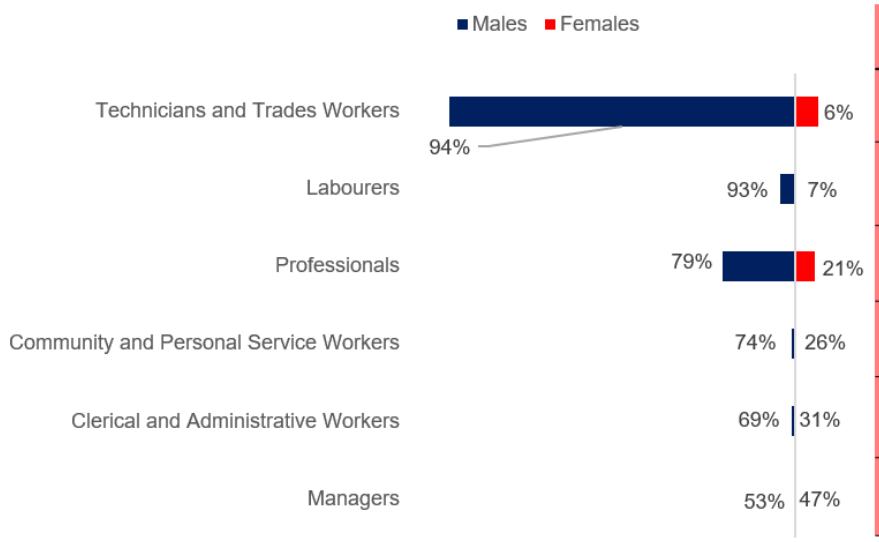
Moreover, AGM provided three-month internship training positions to 136 students (97 men and 39 women) in 2019. AGM also offers a 12-month work experience as part of Ghana's national service program, of which 47 graduates (30 men and 17 women) were beneficiaries in 2020 and 45 (25 men and 20 women) in 2019.

Sources: Asanko Gold, 2016; Galiano Gold, 2018, 2019, 2020.

## 4.2 Mining Employment by Occupation

Ghanaian mining employees are generally involved in various technical, professional, managerial, administrative, and labour-related occupations (details of the categories of occupations are presented in Appendix A). Figure 16 displays the number and gender proportion of employees by occupation in the nine mines operated by GCM member companies in 2020. Most Ghanaian employees were technicians and trades workers (5,865, only 6% of whom were women), followed by professionals (1,462, with women making up 21%). Across the nine mines, there were 36 managers, 47% of whom were women. It is encouraging to see that the highest proportion of women to men were managers, while women also accounted for 31% in clerical and administrative occupations. However, many of the women managers may be working in junior-level management, as the data on occupations by seniority imply (see Section 4.3.3).

**Figure 16. Ghanaian employees in large-scale mines by occupation and sex, 2020 (% share, number)**

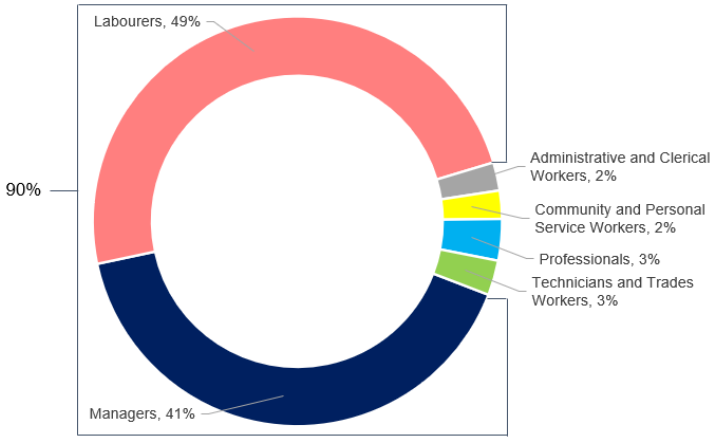



| | Females | Males | Total |
|---|---|---|---|
| Technicians and Trades Workers | 372 | 5,493 | 5,865 |
| Labourers | 17 | 243 | 260 |
| Professionals | 312 | 1,150 | 1,462 |
| Community and Personal Service Workers | 21 | 61 | 82 |
| Clerical and Administrative Workers | 25 | 55 | 80 |
| Managers | 17 | 19 | 36 |

Source: GCM.

Of the total number of women employees in the nine GCM member mines, 90% were labourers (49%) and managers (41%) (see Figure 17). When the entire management section[5] is considered, however, women accounted for only 8% (Figure 18). Women also had a 14% representation in board membership.

**Figure 17. Proportion of Ghanaian women employees in large-scale mines by occupation, 2020 (%)**

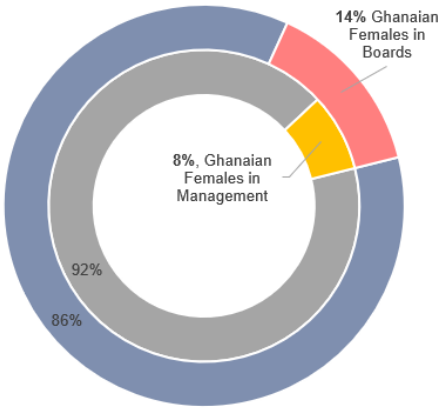



Source: GCM.

[5] The "Managers" category, as opposed to an occupation, meaning individuals working as managers, in this case refers to individuals who can be performing not only in managerial positions but also in other, non-managerial positions.

**Figure 18. Ghanaian employees on boards and in management, by sex, 2020 (number, % share)**

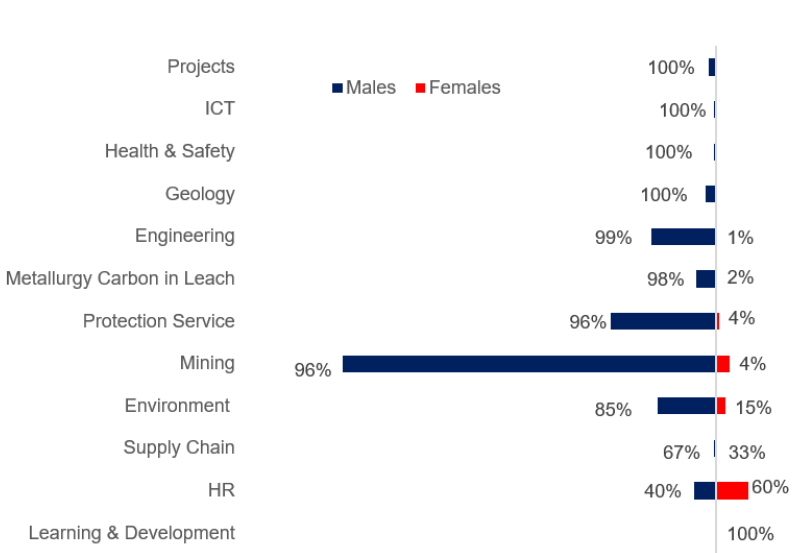
| NAME OF COMPANY | BOARD MEMBERS | | | | MANAGEMENT | | | |
|---|---|---|---|---|---|---|---|---|
| | EXPATRIATES | | GHANAIANS | | EXPATRIATES | | GHANAIANS | |
| | Females | Males | Females | Males | Females | Males | Females | Males |
| AngloGold Ashanti (Obuasi) | 2 | 2 | | 3 | 2 | 23 | 11 | 125 |
| AngloGold Ashanti (Iduapriem) | | 3 | | 2 | 0 | 1 | 2 | 31 |
| Perseus Mining | 0 | 3 | 0 | 3 | 0 | 1 | 1 | 28 |
| Newmont | 1 | 3 | 1 | 5 | 2 | 28 | 16 | 140 |
| Golden Star | | | | | 0 | 5 | 2 | 39 |
| Chirano Gold Mines | 0 | 3 | 1 | 3 | 0 | 3 | 0 | 9 |
| Asanko gold mine | | | | | | | 8 | 118 |
| Gold Fields Ghana | 0 | 1 | 1 | 6 | 0 | 12 | 12 | 90 |
| Adamus Resources | | | 1 | 2 | | | | |
| Ghana Manganese Company | | | | | 0 | 2 | 0 | 13 |
| **TOTAL** | **3** | **15** | **4** | **24** | **4** | **75** | **52** | **593** |




Source: GCM.

To demonstrate employment with contractors by occupations, Gold Fields (Tarkwa) and Chirano Gold Mine are used as examples. Based on the 2020 data, Figure 19 shows that most (2,086) of the employees of contractors to Gold Fields (Tarkwa) were occupied with the extraction (surface) of minerals, which is male dominated (only 4% women). Women dominated the human resources (HR) occupation, accounting for 60% of the total 292 HR workforce. Protection services and engineering were the other two occupations that have a relatively large number of employees but were male dominated, with only 1% and 4% women, respectively.

**Figure 19. Ghanaian employees with contractors to Gold Fields (Tarkwa) by department and sex, 2020 (% share, number)**



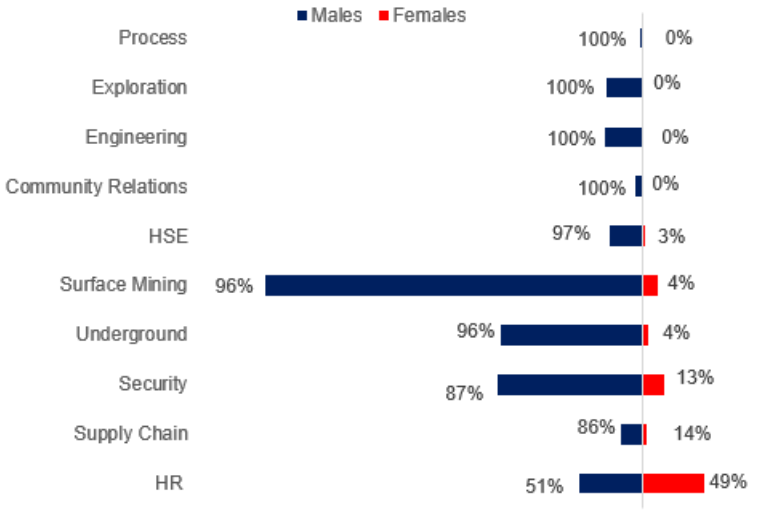

| | Females | Males | Total |
|---|---|---|---|
| Projects | 0 | 40 | 40 |
| ICT | 0 | 3 | 3 |
| Health & Safety | 0 | 2 | 2 |
| Geology | 0 | 54 | 54 |
| Engineering | 5 | 348 | 353 |
| Metallurgy Carbon in Leach | 2 | 103 | 105 |
| Protection Service | 21 | 563 | 584 |
| Mining | 77 | 2,009 | 2,086 |
| Environment | 55 | 312 | 367 |
| Supply Chain | 2 | 4 | 6 |
| HR | 174 | 118 | 292 |
| Learning & Development | 1 | 0 | 1 |

Source: GCM.

Figure 20 presents the second example of employees with contractors, based on 2020 data from Chirano Gold Mines. Like the first example of Gold Fields (Tarkwa), most of the

employment (449) is in surface mining, in which women account for only 4%. HR is again the occupation in which women have their largest proportion (49%) followed by supply chain (14%) and security (13%). There were no women in technical occupations such as engineering, exploration, and processing, while they made up only 4% of the workforce in the underground mining occupations.

**Figure 20. Ghanaian employees with contractors to Chirano Gold Mines by department and sex, 2020 (% share, number)**



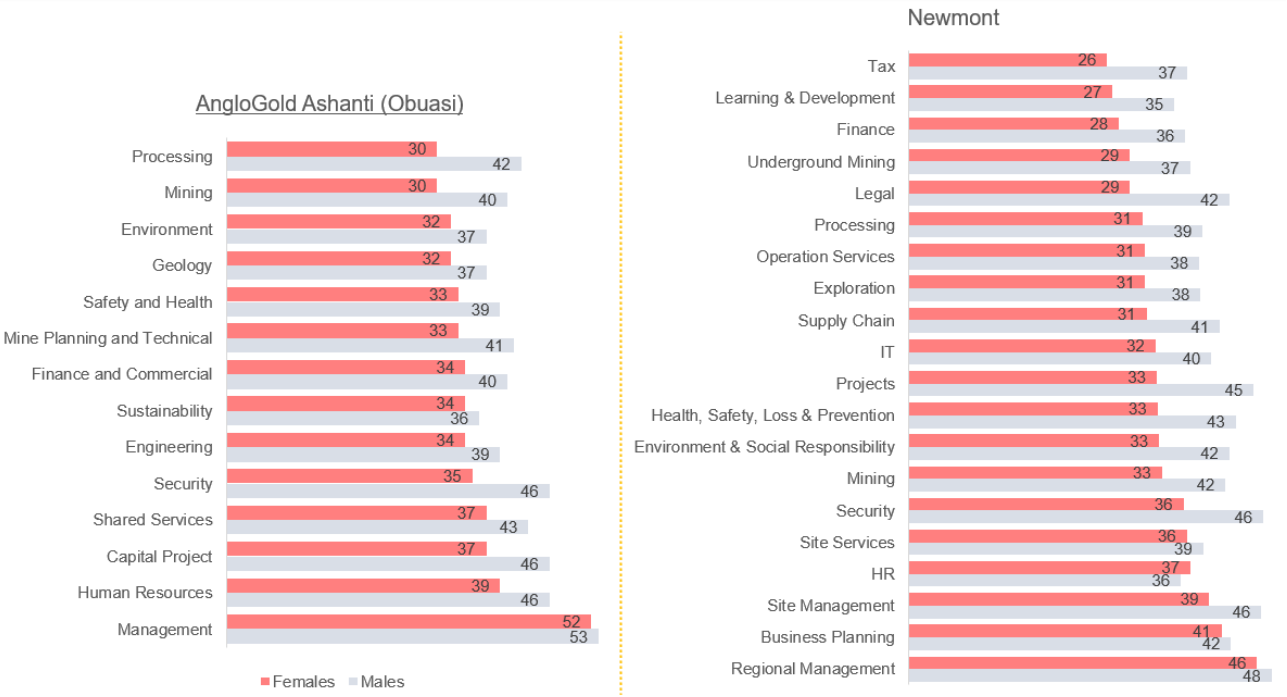

| | Females | Males | Total |
|---|---|---|---|
| Process | 0 | 3 | 3 |
| Exploration | 0 | 41 | 41 |
| Engineering | 0 | 43 | 43 |
| Community Relations | 0 | 8 | 8 |
| HSE | 1 | 38 | 39 |
| Surface Mining | 18 | 431 | 449 |
| Underground | 7 | 162 | 169 |
| Security | 24 | 166 | 190 |
| Supply Chain | 4 | 24 | 28 |
| HR | 70 | 72 | 142 |

Source: GCM.

### 4.2.1 Mining Occupations by Age Distribution

To illustrate the mining occupations by age distribution, we use the cases of Newmont and AngloGold Ashanti (Obuasi) mines as two examples. Figure 21 shows that, on average, the oldest women (52) and men (53) at the AngloGold Ashanti (Obuasi) mine in 2020 were employed in management occupations. This is followed by employment in HR, in which the average age of women was 39 and that of men was 46. The average age of women working across all the occupations listed in Figure 20, except for management, ranged between 30 and 39. The average age of men across nine of the listed occupations was above 40, with the youngest average age being 36 in sustainability and 37 in the geology and environment departments. A similar situation can be observed in the case of Newmont Mine (Figure 21). This supports the observation that women employed in the mining sector are mostly in their 20s and 30s.

**Figure 21. Ghanaian employees by department, age, and gender, 2020 (average years)**



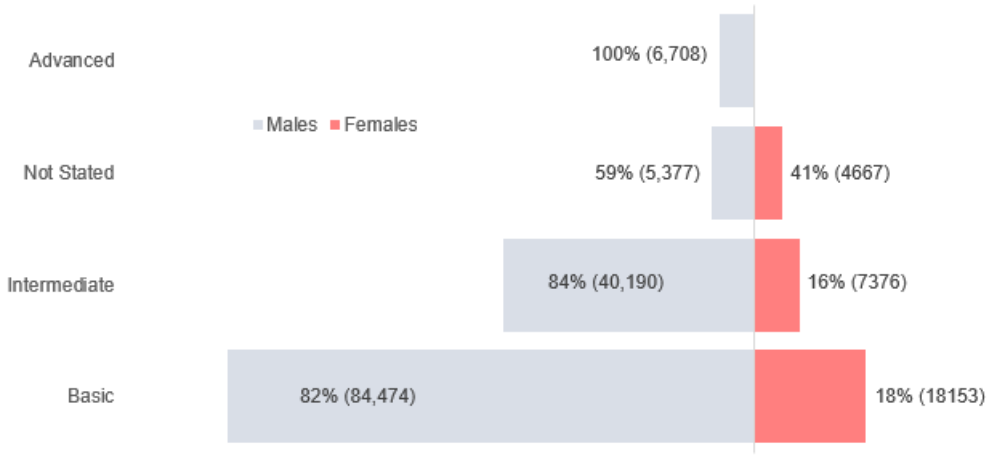

Source: GCM.

# 4.3 Mining Employment by Education, Skills, and Experience

## 4.3.1 Mining Occupations by Level of Education

Women are disadvantaged compared to men in terms of receiving educational opportunities. According to the GLSS 7, more than 26% of employed women in the Ghanaian labour force do not have any education, while the corresponding figure for men is 13%. Based on the 2017 data, 130,041 (84%) men and 25,529 (16%) women working in the mining and quarrying sector had either basic, intermediate, or advanced levels of education. Most Ghanaian employees (102,627, 61%) in the sector had a basic education, followed by 47,566 (28%) Ghanaians that had an intermediate education in 2017 (Figure 22). No women but some men (6,708) were recorded as having an advanced education. However, the 2020 GCM data, which focus on only nine large-scale mines, suggest that women had much more advanced educations, with 39 women (74 men) and 91 women (74 men) having master's degrees and first (bachelor's) degrees, respectively. The overall lack of advanced education for women is reflected across the national population, in which the proportion of men with tertiary levels of education (university, polytechnic, training college) was approximately twice (11.4%) that of women (6.3%). Similarly, the opportunities for women to work in technical areas of the mining sector are hampered by their lack of a secondary/vocational/technical level of education, which is attained by 12.7% of women compared to 21.5% of men across the national population.

**Figure 22. Persons employed in mining and quarrying by education level and sex, 2017 (% share, number)**



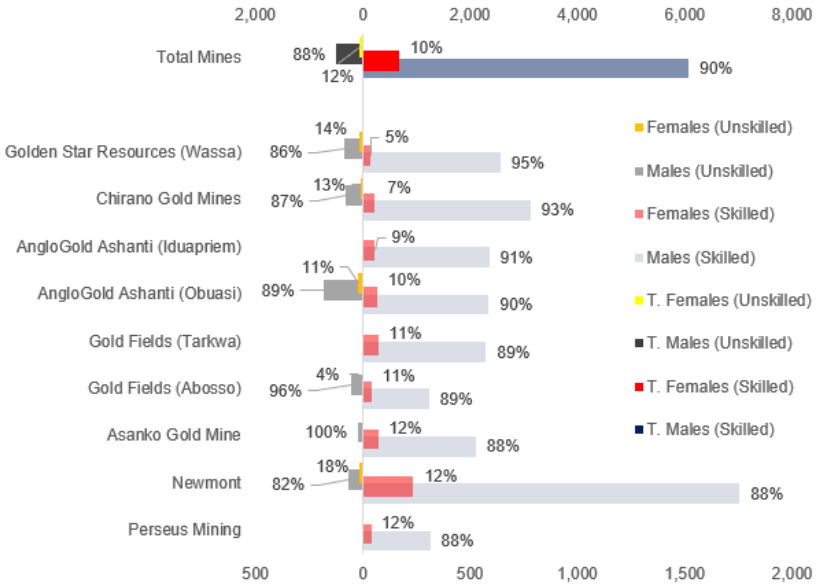

Source: ILO.

## 4.3.2 Mining Occupation by Skill Levels

About 92% of the labour force in the large-scale mines within the GCM membership was skilled in 2020, of which women accounted for 10% (Figure 23). For every unskilled man there were 12.5 skilled men, whereas for every unskilled woman there were 10.5 skilled women in 2020. This means that there were more unskilled in proportion to skilled women employed compared to men. This further highlights the lower levels of women's educational attainment, particularly in the technical and advanced levels of education. Of the GCM member mines, Newmont had the largest number of skilled women (236) and men (1,755). Golden Star Resources had the lowest number of skilled women (5%) in proportion to its skilled men.

**Figure 23. Total skilled and unskilled workers in large-scale mines by sex, 2020 (number, % share)**

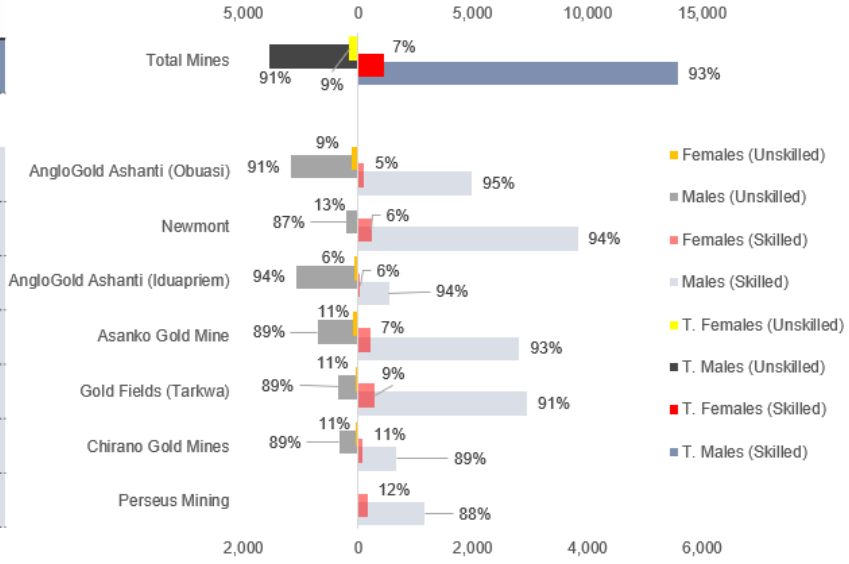
| Females (Unskilled) | Males (Unskilled) | Females (Skilled) | Males (Skilled) |
|---|---|---|---|
| 64 | 488 | 673 | 6072 |
| 14 | 85 | 36 | 641 |
| 12 | 80 | 55 | 780 |
| 0 | 0 | 57 | 588 |
| 22 | 182 | 66 | 587 |
| 0 | 0 | 70 | 574 |
| 2 | 53 | 39 | 308 |
| 0 | 22 | 70 | 526 |
| 14 | 66 | 236 | 1,755 |
| 0 | 0 | 44 | 313 |




Source: GCM.

**Figure 24. Total skilled and unskilled workers employed with contractors by sex, 2020 (number, % share)**

| Females (Unskilled) | Males (Unskilled) | Females (Skilled) | Males (Skilled) |
|---|---|---|---|
| 387 | 3,850 | 1,105 | 13,928 |
| 112 | 1,180 | 106 | 1,982 |
| 30 | 206 | 235 | 3,824 |
| 73 | 1,086 | 36 | 542 |
| 89 | 705 | 209 | 2,812 |
| 43 | 341 | 284 | 2,942 |
| 40 | 332 | 79 | 668 |
| 0 | 0 | 156 | 1,158 |




Source: GCM.

When considering the contractors to the large-scale mines within the GCM membership, Figure 24 shows that 78% of the labour force was skilled, of which women accounted for 7% in 2020. For every unskilled man there were 3.6 skilled men, whereas for every unskilled woman there were 2.9 skilled women in 2020. This means that there were more unskilled in proportion to skilled women employed with contractors compared to men.

The higher numbers of skilled women workers with the large-scale mines compared to those with contractors may partly be explained by the overall efforts made by the mining companies to increase gender equity in their workforces. It may also simply reflect the tendency of large-scale mines to attract skilled labour. Although contractors to Newmont had the most skilled labour, they had one of the lowest gender proportions, with women making up only 6% of the skilled labour. The gender proportion is highest with contractors to Perseus Mining, where women account for 12% of the skilled labour.

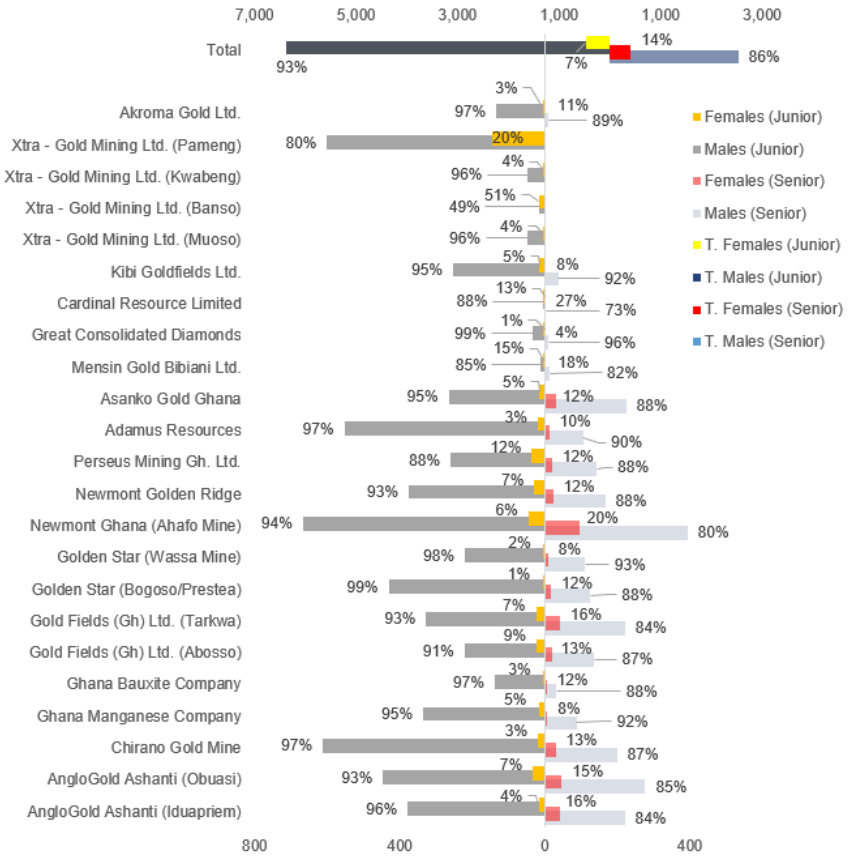
### 4.3.3 Mining Occupation by Seniority

The lack of higher education and advanced training in technical skills could also have impacted women's opportunities to work in senior positions. Across the national economy, Ghanaian women shared 27% of employment in senior and middle management positions in 2017, and 15% of firms had a woman as the top manager in 2013.[6] When it comes to the mining sector, Ghanaian women made up 9% (694) of the 6,871 senior and 10% (1,867) of the 21,516 junior employees in the 23 mines considered in 2021. The proportion, however, varies when considering employment by seniority "as employed directly with the large-scale mines" compared to "as employed with contractors," as can be observed from Figures 25 and 26. Women who were employed in senior positions were more represented in the large-scale mines (a 14% proportion of women in Figure 25) than with contractors (a 7% proportion of women in Figure 26). The proportion of women employed in junior positions with contractors was slightly higher (9%) than the proportion of women employed in junior positions with the large-scale mines (7%).

[6] https://data.worldbank.org/country/GH

**Figure 25. Ghanaian employees in large-scale mines by seniority and sex, 2021 (number, % share)**

| Females (Junior) | Males (Junior) | Females (Senior) | Males (Senior) |
|---|---|---|---|
| 476 | 6,369 | 412 | 2,524 |
| 5 | 133 | 1 | 11 |
| 146 | 600 | 0 | 0 |
| 2 | 48 | 0 | 0 |
| 16 | 15 | 0 | 0 |
| 2 | 48 | 0 | 0 |
| 15 | 253 | 4 | 39 |
| 1 | 4 | 2 | 4 |
| 1 | 33 | 1 | 12 |
| 2 | 11 | 3 | 13 |
| 15 | 265 | 30 | 224 |
| 19 | 553 | 12 | 106 |
| 35 | 260 | 20 | 143 |
| 28 | 375 | 23 | 166 |
| 45 | 667 | 98 | 393 |
| 4 | 220 | 9 | 111 |
| 6 | 431 | 17 | 126 |
| 24 | 327 | 42 | 221 |
| 23 | 221 | 21 | 136 |
| 4 | 138 | 5 | 33 |
| 16 | 335 | 7 | 89 |
| 19 | 612 | 30 | 199 |
| 33 | 446 | 47 | 278 |
| 17 | 378 | 42 | 220 |



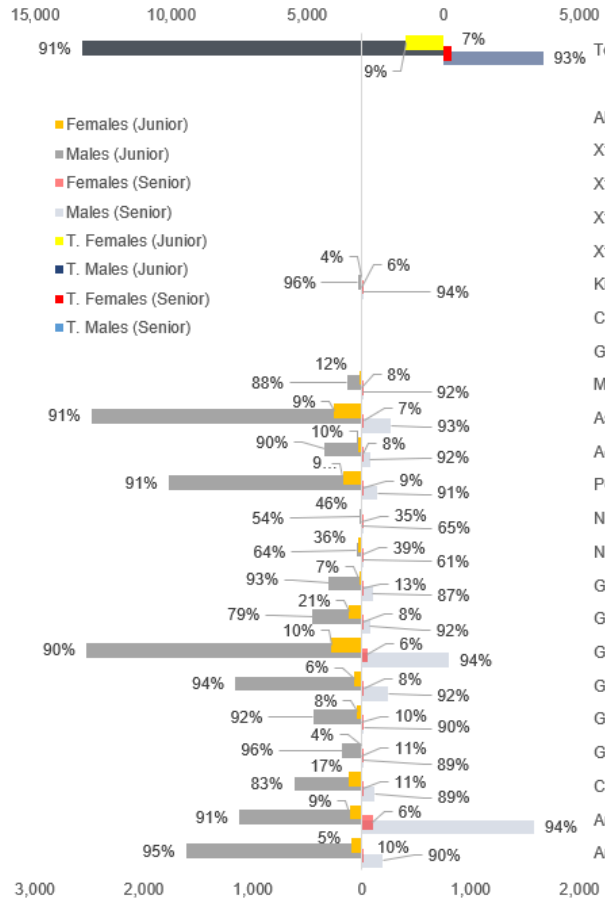

Source: GMC.

The larger mines, particularly Newmont Ghana Ahafo (20%), AngloGold Ashanti Iduapriem (16%), AngloGold Ashanti Obuasi (15%), Goldfields Tarkwa (16%), had a relatively higher proportion of women directly employed in senior positions in the mines (Figure 25). While contractors to the AngloGold Ashanti (Obuasi) Mine had the largest number of senior employees, they had one of the lowest proportions (6%) of skilled women (Figure 26). By contrast, contractors to Newmont Ghana had the highest proportion of women in senior positions (39%), although having one of the lowest numbers of employees. Contractors to Gold Fields (Tarkwa) and Asanko Gold Mines had the largest proportions of women in junior positions, at 10% and 9%, respectively.

Overall, women tend to have more opportunities for senior positions when employed directly with large-scale mines than with contractors, and it is the larger mines that employ more women in senior positions than the smaller ones. In particular, Newmont Ghana had the highest proportion of women in senior roles, employed both directly and with its contractors. This could be a testament to its various initiatives to empower women, promote them in science, technology, engineering, and mathematics (STEM) education, and help them reach leadership levels. These include the diversity and inclusion standard and strategy introduced in 2015; the Women's Consultative Committee as part of the

gender plan the company established in 2006; and the Women and Allies Network launched in 2016 (BSR, 2017).

**Figure 26. Ghanaian employees with contractors by seniority and sex, 2021 (number, % share)**




| | Females (Junior) | Males (Junior) | Females (Senior) | Males (Senior) |
|---|---|---|---|---|
| Total | 1,391 | 1,3280 | 282 | 3,653 |
| Akroma Gold Ltd. | 0 | 0 | 0 | 0 |
| Xtra - Gold Mining Ltd. (Pameng) | 0 | 0 | 0 | 0 |
| Xtra - Gold Mining Ltd. (Kwabeng) | 0 | 0 | 0 | 0 |
| Xtra - Gold Mining Ltd. (Banso) | 0 | 0 | 0 | 0 |
| Xtra - Gold Mining Ltd. (Muoso) | 0 | 0 | 0 | 0 |
| Kibi Goldfields Ltd. | 2 | 38 | 1 | 8 |
| Cardinal Resource Limited | 0 | 0 | 0 | 0 |
| Great Consolidated Diamonds | 0 | 0 | 0 | 0 |
| Mensin Gold Bibiani Ltd. | 18 | 136 | 1 | 10 |
| Asanko Gold Ghana | 256 | 2,482 | 21 | 265 |
| Adamus Resources | 37 | 343 | 6 | 76 |
| Perseus Mining Gh. Ltd. | 171 | 1,775 | 15 | 145 |
| Newmont Golden Ridge | 14 | 17 | 2 | 3 |
| Newmont Ghana (Ahafo Mine) | 29 | 52 | 6 | 9 |
| Golden Star (Wassa Mine) | 24 | 301 | 14 | 98 |
| Golden Star (Bogoso/Prestea) | 119 | 454 | 6 | 73 |
| Gold Fields (Gh) Ltd. (Tarkwa) | 278 | 2,530 | 48 | 800 |
| Gold Fields (Gh) Ltd. (Abosso) | 71 | 1,161 | 22 | 244 |
| Ghana Bauxite Company | 40 | 444 | 2 | 18 |
| Ghana Manganese Company | 8 | 182 | 1 | 11 |
| Chirano Gold Mine | 126 | 623 | 14 | 116 |
| AngloGold Ashanti (Obuasi) | 109 | 1,128 | 103 | 1,581 |
| AngloGold Ashanti (Iduapriem) | 91 | 1,615 | 21 | 195 |

Source: GMC.

The study by BSR (2017) that surveyed women in Ghana suggested that a lack of education and training is a key impediment to women progressing in their careers. To address this issue, the Government of Ghana introduced a free senior high school policy in 2017 and technical and vocational education and training placement, while also putting in place a policy of 60% enrolment in science and other programs, including girls in STEM, teacher training, and a teaching and learning portal in schools to encourage STEM education (African Center for Economic Transformation, 2021). Despite these initiatives, the enrolment of women in STEM has not improved (Baah-Boateng et al., 2022). Among many other factors, cultural barriers that discourage women from pursuing STEM education and acquiring technical skills could be behind this lack of progress. It is a common occurrence that science and mathematics are considered male domains, in addition to the common practice of encouraging men in their education over women (Fredua-Kwarteng & Effah, 2017). Despite this slow pace, however, institutions like UMaT have been making some progress in increasing women's enrolment (see Box 2).

**Box 2. UMaT Gender Mainstreaming program**

UMaT was established in 1952 as the Tarkwa Technical Institute and then reformed as the Tarkwa School of Mines in 1961 with the aim of training the workforce for mining and associated industries. Although UMaT admitted its first woman student in 2000, the number has grown since then, and women accounted for 20% of UMaT's students in 2014. This is after UMaT introduced a "Gender Mainstreaming" program aimed to increase women's enrolment rates in STEM education through measures such as simplifying admission requirements for women.

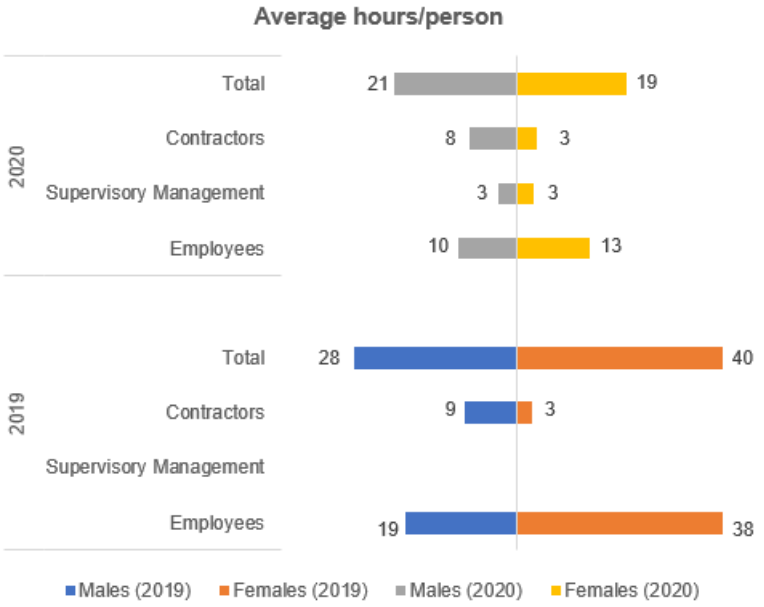
Overall, the mainstreaming of women into UMaT and the mining workplace has been slow, as evidenced by the current 17% (253) representation of women out of 1,472 total undergraduate students in 2022. This suggests that the problem is not merely related to access or procedures but also to behavioural and cultural factors, as well as the nature of mining operations not being women friendly. The other issue cited is that the UMaT courses are mainly on core mining and technical knowledge at both the graduate and post-graduate levels, with limited focus on developing the computing and database management skills of students, which would probably be of more interest to women in the sector.

Source: Kansake et al., 2019; Kansake et al., 2021; Kilu & Sanda, 2016.
https://www.umat.edu.gh/component/content/article/198-undergraduate-admission-forms.html

## 4.4 Training and Apprenticeship in the Workforce

In addition to efforts by government and other institutions to increase the education and skills levels of Ghanaians in general and women in particular, mining companies also offer training and apprenticeship programs for locals. Figures 27 and 28 use Asanko Mine as an example to demonstrate the extent of training hours for Ghanaian employees. Overall, women—including direct employees, employees with contractors, and those involved in supervisory/management positions—had 40 hours of training per person (28 hours for men) in 2019 and 19 hours of training per person (21 hours for men) in 2020 (Figure 27). There was a total of 30,348 training hours in 2019, with women accounting for 9%, and a total of 34,183 training hours in 2020, with women receiving only 4%. Although the women's share of training hours per person is higher than that of men in both 2019 and 2020, the low proportion of women's participation in training is a concern.

**Figure 27. Training hours for Ghanaian employees in Asanko by sex (average hours/person, total hours)**



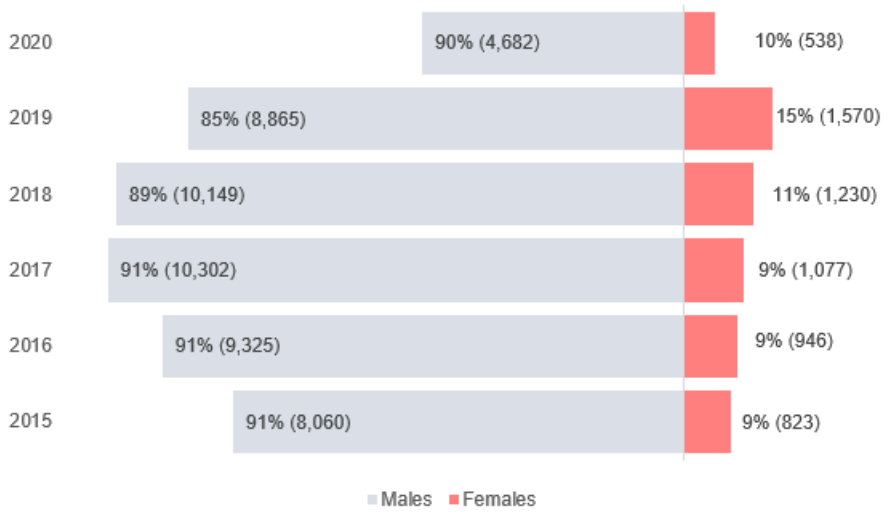

| | Females | Males | Total |
|---|---|---|---|
| Total hours (2019) | | | |
| 2020 Total | 2,676 | 27,672 | 30,348 |
| 2020 Contractors | 592 | 15,187 | 15,779 |
| 2020 Supervisory Management | 514 | 3,620 | 4,134 |
| 2020 Employees | 1,570 | 8,865 | 10,435 |
| Total hours (2020) | | | |
| 2019 Total | 1,522 | 32,661 | 34,183 |
| 2019 Contractors | 969 | 27,781 | 28,750 |
| 2019 Supervisory Management | 15 | 198 | 213 |
| 2019 Employees | 538 | 4,682 | 5,220 |

Note: Data on employees includes those employed directly, with contractors, and in supervisory/management with Ghana operations. Data covers Ghana, the corporate office in Vancouver, Canada, and the project office in Johannesburg, South Africa (although the project office in Johannesburg was closed in June 2020).

Source: Galiano Gold, 2019, 2020.

There was an increase in training hours for employees (excluding contractors and supervisory/management) from 2015 to 2018, when hours started to decline, reaching the lowest total training hours of 5,220 in 2020 (Figure 28). Over the period 2015–2020, women's gender share of 15% in 2019 with respect to the total number of hours of training was the highest compared to the other years. While training and apprenticeships provided by mining companies prepare locals for employment opportunities in the sector, there are concerns that those opportunities are limited overall and especially for women. For example, only 67 out of 130 graduates from the Newmont-Goldcorp's Ahafo Apprenticeship Program between 2005 and 2016 were granted employment in the mines (Dauda, 2020).

**Figure 28. Training hours for Ghanaians directly employed with Asanko by sex (% share, total hours/year)**




Note: Data is on workers employed directly with the mine only (excluding contractors and supervisory/management).

Source: Galiano Gold, 2019, 2020.

**Box 3. Company initiative to increase women's participation and develop women's capacity in mining**

## Newmont Ghana

Newmont Ghana has been contributing to the skills development of women through the following areas:

- **Employment:** Newmont Ghana in partnership with the International Finance Corporation (IFC) put in place the Ahafo Gender Workforce Programme with the aim of providing employment opportunities for local women in the traditionally male-dominated jobs in mining, including dump truck driving. This initiative helped train and recruit 30 female truck operators, who represented 18% of the total dump truck operators with the company.
- **Training:** The Tertiary and Secondary Skills Enhancement Program, under which Newmont supports women aged 15 to 25 years through a two-day residential program involving sessions of personal and professional development and interactions with Newmont's top management and industry experts. This exposes them to careers and STEM fields as well as providing them with work-readiness skills.
- **Apprenticeships:** New Futures for Girls Leadership Camp
- **Scholarships:** In 2021, over 1,100 scholarships, with a total value of about USD700,000, were granted to students pursuing mining engineering, health and

allied sciences, and social sciences. Through the Newmont Ahafo Development Foundation, Newmont awarded more than 4,000 scholarships to students, 40% of whom were women.

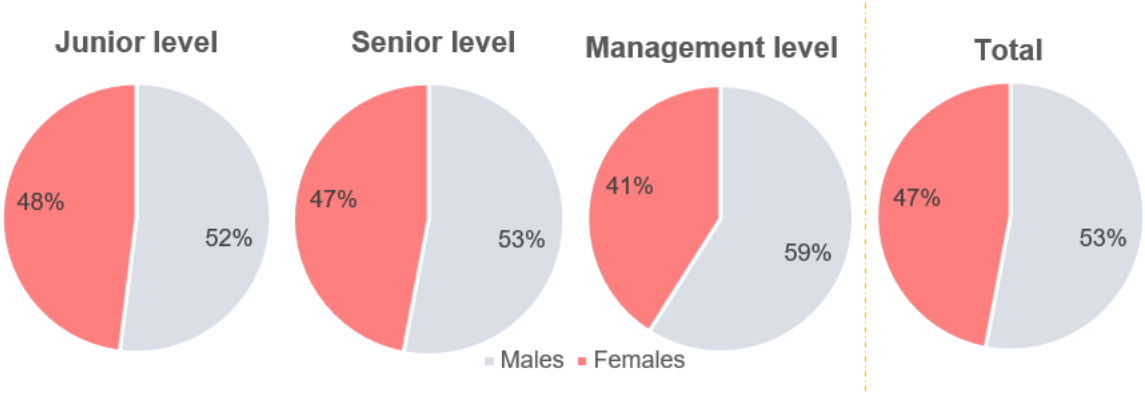
- **Awards:** "Newmont sponsors the annual award for Best Graduating Female Student in Mining Engineering at the (UMaT) in Tarkwa, Ghana. Winners of this award earn $1,000, a new laptop and the opportunity to complete their national service with Newmont Ghana."

Sources: (1) https://www.newmont.com/blog-stories/blog-stories-details/2022/Newmont-Supports-Educational-Opportunities-for-Employees-and-Communities/default.aspx; (2) https://www.newmont.com/blog-stories/blog-stories-details/2021/Ghanas-New-Futures-for-Girls-Leadership-Camp-Supports-Young-Women-Interested-in-STEM/default.aspx; (3) (Giovannetti & Poku Boasi, 2017).

## 4.5 Gender Pay Gap

According to the GLSS 7, men received on average a monthly payment of GH¢ 872.62 (circa USD 200) while women received GH¢ 600.61 (approximately USD 136) (Boahen & Opoku, 2021). This pay gap of approximately 31% is mainly attributed to cultural norms, the temporary or casual status women often have, and the fewer hours that they often work compared to men (Boahen & Opoku, 2021). The extractive sector pays significantly higher wages than other sectors; for example, Newmont reports men's average annual salary to be USD 25,347 (USD 2,112 monthly) and that of women USD 23,620 (USD 1,968 monthly) (Newmont, 2020). This indicates a gender pay gap of 7% per dollar (a pay equity of 52% for men and 48% for women), meaning women in Newmont earn 93% of what men take home. A similarly low pay gap of 8% can be observed at Perseus Mining Ghana with an average pay equity of 47% (women) and 53% (men) at junior levels (Figure 29). The pay gap at Perseus increases as the level of employment goes higher to senior (11%) and management (31%) levels. However, women in the overall extractive sector are found to be underpaid, with a median gender pay gap of 27.5% in 2013 largely attributed to women's lower levels of education and qualifications in STEM (Baah-Boateng et al., 2022).

**Figure 29. Ghanaian employees at Perseus by average pay equity and sex, 2020 (% share)**

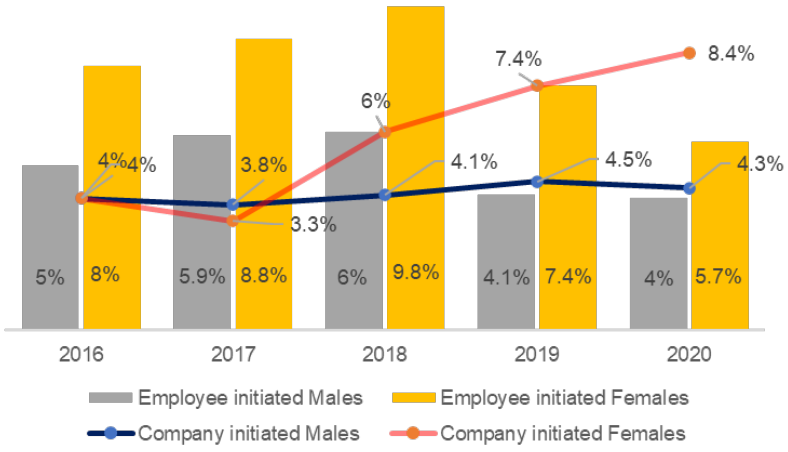



Source: Perseus Mining Limited, 2020.

## 4.6 Employment Turnover

The previous sections indicate the gender gap in various aspects of employment, with overall low women's shares of employment and pay. This situation, in addition to the socio-economic and cultural impediments women often face, could be the reason for the high rates of turnover for women employees, as shown in Figure 30. Figure 30 presents the case of Newmont Mine, in which there has been a general increase in employee turnover since 2016 (see the table in Figure 30). While the company-initiated employee turnover rate for men stayed stable over the 2016–2020 period, the company-initiated employee turnover for women more than doubled in that period, reaching 8.4% compared to 4.3% for men in 2020. This may need to be treated with caution because turnover rates consider the number of employees who left within a given period vis-à-vis the number of employees at the beginning of that period, which differs between men and women. In fact, according to the actual numbers, the number of men and women that were made to leave work showed similar increasing trends until 2019 before decreasing in 2020, with a generally higher number of men than women each year of the 2016–20 period (see the table in Figure 30).

**Figure 30. Ghanaian employee turnover at Newmont by sex and initiation (number, % rate)**




| | Company initiated | | Employee initiated | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| 2016 | 399 | 62 | 417 | 108 |
| 2017 | 362 | 53 | 563 | 140 |
| 2018 | 399 | 104 | 585 | 169 |
| 2019 | 627 | 172 | 581 | 172 |
| 2020 | 540 | 154 | 500 | 104 |

Source: Newmont, 2020.

With respect to employee-initiated turnover, the rates for both men and women showed similar increasing trends till 2018 before decreasing in 2019 and 2020. Oppong's (2013) findings, although slightly outdated, reveal that the high turnover rates are because of dissatisfaction with pay and employees' concerns over their career development and advancement. Another study, focusing on Gold Fields Ghana, found the "fear of contracting mine-borne diseases, lack of job security, excessive work pressure and stress on employees" as the main causes of employee turnover (Ephraim & Ephraim, 2016:28). The rates of turnover as initiated by employees are higher among women than men throughout the period 2016–2020. A different case is found in Gold Fields, where there was a higher turnover rate for men than women, as men are said to find it easy to quit and find another job because they can move around without children (Ephraim & Ephraim, 2016). Similarly, Asanko Gold Mine reported that there were no women relieved of their employment between 2015 and 2020 (except for three women in 2017 and 2019) out of about 50 employees who either retired, resigned, or were made redundant.

The role played by women's advocacy groups (see Box 4) to address the challenges related to lack of awareness and education, lack of skills, and unfavourable policy is important. Efforts by the government to increase girls' participation in STEM education include programs such as the STEM clinics, which were established by the Ghana Education Service in 1987, and the Girl Child Scholarship program, which started in 2001 (Kansake et al., 2021). These two programs work to raise awareness and educate girls and communities across Ghana through research and workshops and enabling interaction with women role models in industries. However, there is a need for the active and collaborative involvement of government and the mining industry to address the challenges faced by women in mining.

**Box 4. Advocacy groups to promote women's participation in mining**

## WIM-Gh

After a few women informally started it in 2012, WIM-Gh was officially established in August 2015 and incorporated as a company limited by guarantee. The main purpose, among others, is to "serve as an advocacy body for all women working in the mining sector (Industry, Academia and Government) by offering training, mentorship, networking and research projects."

WIM-Gh's activities include "mentoring, career guidance and counselling for girls from Junior High School to Tertiary level." WIM-Gh partners with the private sector, mining companies, non-governmental organisations, and development partners to support its activities through dialogues, workshops, seminars, webinars, and fairs. Since its establishment, WIM-Gh has mentored and created a pool of WIM-Gh mentors, while also providing visibility for senior mining women in Ghana.

WIM-Gh also works to influence policies and regulations on gender mainstreaming. Some of WIM-Gh's work includes the following:

- Stakeholder meeting involving WIM-Gh, media, and local content consultation to review the various amendments of Act 703. L.I. 2182, regulation 56, to reflect local content and participation.
- WIM-Gh has been engaged by the Uniterra program for the World University Service of Canada on "Career Made" contributions and reviews to stakeholder projects, e.g., Guidelines for Management of local management committees of the mining community development scheme, 2020; Minamatta Convention, 2017; Domestication of Africa Mining Vision into Country Mining Vision, 2016; Ghana Mining Policy Gap Analysis project 2015, and so on.
- WIM-Gh lobbied the Minerals Commission, which resulted in the establishment of a gender desk in 2019, which aims to support WIM-GH objectives.

WIM-Gh is now recognized within Ghana for establishing a regional network through Women in Mining of West Africa and the Association of Women in Mining Africa as well as a global network through engagement with International Women in Mining.

## Ladies in Mining and Allied Professions in Ghana

The idea to form Ladies in Mining and Allied Professions in Ghana (LiMAP-Gh) was conceived in 2012 by Professor Grace Ofori-Sarpong, when she participated in the "African women in mining and development study tour in South Africa and Australia." The group's motivation is to be role models and promote the participation of girls and women in STEM education. The main objective is to motivate women to work professionally and ethically to their full capacity in male-

dominated fields and to provide women the resources needed to serve as role models/mentors for young women and girls to reduce the gender gap in STEM and related disciplines.

The group organised programs on career guidance and mentoring for students in various basic and second-cycle schools. LiMAP-Gh also engages in special responsiveness programmes for women at UMaT, such as "Start Right, End Well" for first-year students, "Exit in Readiness" for final-year students, and year-long mentorship programmes for students upon application. Other programmes include the International Women's Day Celebration and Cancer Awareness and Screening, which are open to the entire municipality, and the LiMAP-Gh Monthly Webinar Series, which targets everyone available to join online.

LiMAP-Gh collaborates with WIM-Gh, the Girl Child Unit of the Municipal Education Directorate of Tarkwa, and Ladies Wings of the various mining companies, among others. LiMAP-Gh has enjoyed sponsorship from Cal Bank PLC, Abosso Gold Fields Limited, Anglo Gold Ashanti Iduapriem Limited, and UMaT.

Sources: WIM-Gh; (Kansake et al., 2021); LiMAP-Gh.

# 5.0 CONCLUDING REMARKS AND RECOMMENDATIONS

This report presented an analysis of the gender-disaggregated employment of Ghanaians in the mining and quarrying sector. Overall, there has been a decline in the proportion of women to men in employment over the last decade, which currently stands at only 9% in large-scale mining and 18% in mining and quarrying. This is one of the lowest ratios of women to men, which is explained by a combination of gender stereotyping, cultural barriers, lack of education on and awareness about women's roles in mining and STEM education, lack of consistent government policies to promote women's employment in the industry, insufficient initiatives by mining companies, and lack of government-industry collaboration. A shift is already underway in the demand for labour in the mining sector toward highly intellectual and technologically skilled professionals (McKinsey Global Institute, 2018). Such a shift presents an added urgency to the need for STEM education and the STEM-related skills development of women as well as for their employment in the sector. This is especially so given the stakeholder-wide expectation and fear of unemployment resulting from autonomous mining systems and that Ghanaian institutions are not ready to develop the skills needed in the mines of the future (Kansake et al., 2019).

Some macro-level recommendations that may be considered to address the gaps highlighted in this study are as follows.

- **Organisational policies and procedures** aimed at guiding the implementation of gender-inclusive practices. Rather than government policies for quotas, it is preferable that companies put in place their own policies. This is because companies can set gender-inclusivity targets that are cognisant of industry needs and ensure recruitment is based on merit. Still, a collaboration with governments can ensure that company policies speak to national development strategies and are implemented effectively. A dedicated unit needs to be established to ensure these policies and procedures are dynamic and are adhered to by all functions within mining organisations. Areas of focus for such policies and procedures may include diverse leadership, equal employment opportunities, advancement from junior to senior roles, closing the pay gap, and recruitment and retention.
- Organisational policies and procedures are driven largely by the **will and capacity of mining company leadership** to change workplace culture. The leadership group in any organisational setup can make a crucial difference by setting standards, performance measures, and monitoring and evaluation. Skilled leadership would also oversee successful awareness raising and increased effectiveness of the mining workforce on gender inclusivity. To this end, there is a

need to raise the awareness levels of company executives and managers on gender inclusivity.

- **Evaluation and reporting:** Company-imposed policies and procedures on gender inclusivity and their implementation need to be reviewed and evaluated internally, including by board members and by external reviewers. Internally, mining companies need to have performance and strategy management processes and a regular reporting mechanism. Based on data gathered and monitored, there should be mandatory regular reporting on the strategies, actions, and practice with respect to recruitment and retention, training, and pay gap. Disclosure agreements that could be made part of initial mining investment negotiations are crucial to ensure transparency and accountability, and most importantly to raise performance standards.
- **Partnerships between the mining industry, industry associations, and government** could increase the employment of women in the job category of professionals. There is no shortage of women with professional skills such as management, financial, and legal skills, and it is a matter of engaging with that pool of skills and identifying talent. This would entail providing measures to attract women with those skills into mining, which may include a flexible work environment, safe and inclusive work culture, advancement opportunities, skills development programs, and equitable payment standards.
- **Building the capacity of women in mining with a focus on mining technology and innovation** would position women to flexibly work remotely without having to be at mining sites. Capacity building can be initiated and run by companies, but a collaborative approach with government and the private sector could ensure contextualised and broadened skills development. Leadership along with skills in technology, digitisation, and innovation are the main professional development priorities. Skills development in areas like process and resource engineering, information technology and programming, data analytics, system designs, as well as technical, machine operation, and trades skills could be targeted for women in mining. In addition, the industry, government, industry associations, universities, and technical schools could partner to develop targeted skills for women in the future workforce for the mining sector.
- At the national level, specific focus could be made on increasing the number of women partaking in **STEM-based education**. A collaboration with the mining industry could also help identify the main areas of expertise in demand to help tailor skills development within the STEM education setting. This should be accompanied by awareness-raising campaigns in schools, colleges, and

universities about potential employment, apprenticeship, training, and scholarship opportunities for girls.

- **Indigenous women-focussed strategies and programs** need to be initiated by government and mining companies or by partnerships. The issue of indigenous women has often been overlooked, as policies and strategies tend to focus on women and indigenous people as a whole. Indigenous women-focused programs, particularly on career-tailored education as a long-term objective and on technical training and mentorships that link them with the different work areas of the mining sector, could help raise indigenous women's participation.
- **Gender-disaggregated database**: The lack of gender-disaggregated data is a problem in Ghana. As such, Ghana Statistical Services and gender-focused entities need to enhance the database, addressing the gaps in areas like mining-specific data that show (1) pay gap across different occupations, education levels, skills categories, and age groups; (2) women and men employees by occupation and age, occupation and hours worked, occupation and level of education, and occupation and field of education; (3) women and men employees by skills level and age, full-time/part-time and age; (4) women and men employees by education level and age, by field of education and age; (5) women and men employees by geographic distribution; (6) women and men employees who left/lost their mining job and reasons for leaving; and (7) women and men employees by traineeship and apprenticeship commencement, traineeship and apprenticeship by skills level, traineeship and apprenticeship by occupation, and traineeship and apprenticeship by field of education.

# REFERENCES


African Center for Economic Transformation. (2021). *Integrating to transform. African Transformation Report 2021*. A. C. f. E. T. (ACET).

Asanko Gold. (2016). *Corporate social responsibility report 2016*.

Baah-Boateng, W., Twum, E. K., & Akyeampong, E. K. (2022). Gender differences in extractive activities: evidence from Ghana. *International Journal of Social Economics*.

Boahen, E. A., & Opoku, K. (2021). *Gender wage gaps in Ghana: A comparison across different selection models* (9292569449).

BSR. (2017). *Women's economic empowerment in Sub-Saharan Africa: Recommendations for business action*.

Dauda, S. (2020). Operationalising the "Africa Mining Vision": critical reflections from Ghana. *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, *41*(3), 504-524. https://doi.org/10.1080/02255189.2020.1803049

Ephraim, L., & Ephraim, M. (2016). An assessment of employee turnover at Gold Fields Ghana Limited, Tarkwa Mine, Ghana. *Current Research Journal of Social Sciences*, *8*(2), 25-33.

Fredua-Kwarteng, E., & Effah, C. (2017). Gender inequity in African university engineering programs. *International Higher Education*(89), 18-19.

Galiano Gold. (2018). *Asanko Gold launches the women in mining "Botae Pa Initiative"* https://www.galianogold.com/news/news-details/2018/Asanko-Gold-Launches-the-Women-in-MiningBotae-Pa-Initiative/default.aspx

Galiano Gold. (2019). *Sustainability report 2019*.

Galiano Gold. (2020). *Sustainability report 2020*.

GHEITI. (2019). *Ghana Extractive Industries Transparency Initiative (GHEITI) final report for 2017 & 2018 mining sector, Ministry of Finanace*.

Giovannetti, F., & Poku Boasi, M. (2017). *Review of the WACAM Report "Assessing the Social and Economic Effects of Mining on Women Affected by NGGL" Final. Newmont Ghana Gold Limited*.

Kansake, B. A., Kaba, F. A., Dumakor-Dupey, N. K., & Arthur, C. K. (2019). The future of mining in Ghana: Are stakeholders prepared for the adoption of autonomous mining systems? *Resources Policy*, *63*, 101411.

Kansake, B. A., Sakyi-Addo, G. B., & Dumakor-Dupey, N. K. (2021). Creating a gender-inclusive mining industry: Uncovering the challenges of female mining stakeholders. *Resources Policy*, *70*, 101962. https://doi.org/https://doi.org/10.1016/j.resourpol.2020.101962

Kilu, R. H., & Sanda, M.-A. (2016). Enrolment regimes and gender differences in university of mines and technology: implication for gender-equity discourse in multi-national Ghanaian mines. *Gender and Behaviour*, *14*(1), 6983-6995.

McKinsey Global Institute. (2018). *Skills Shift. Automation and the Future of the Work Force*.

Newmont. (2020). *2020 sustainability report*.

Oppong, N. Y. (2013). Voluntary employee turnover phenomenon in Newmont Ghana Gold Limited: Is Hay pay system the force behind employee exit decisions? *Business and Enterprise Development*.

Perseus Mining Limited. (2020). *Sustainable development report*.

UNDP. (2015). *Final Report: Review of Alignment Between the Africa Mining Vision and Ghana's Policy/Legal Frameworks for Solid Minerals*.

# APPENDIX A

| OCCUPATIONS | JOB TYPES | |
|---|---|---|
| Labourers | Loading and shipping | Security |
| **Technical and trades** | Assay/metallurgy/processing<br>Carbonate plant<br>Engineering/electrical/mechanical<br>Exploration & geology<br>IT<br>Mine maintenance<br>Mineral resources<br>Mining | Operation services<br>Plant maintenance<br>Projects & construction services/civil<br>Surface operations<br>Technical services<br>Underground mining<br>Ghana operations<br>Site services |
| **Professionals** | Business improvement<br>Business planning<br>Commercial<br>Compliance<br>Environment<br>Environment & external relation<br>Finance<br>Finance shared services<br>Group contracts<br>HR<br>HSE | HSLP<br>Learning & development<br>Legal<br>Medical service<br>Ops. Planning<br>Organizational capability<br>S&ER<br>Supply chain<br>Tax<br>Resource modelling<br>HD & EME |
| **Community and personal services** | Sustainability/social & comm dev't | |
| **Clerical and Administrative** | Accra office | General administration |
| **Managers** | Executive management<br>Regional management | Risk management<br>Site management |

IGF

INTERGOVERNMENTAL FORUM
on Mining, Minerals, Metals and
Sustainable Development