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WOMEN AND THE MINE OF THE FUTURE

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

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ACRONYMS

GMIT	German-Mongolian Institute of Minerals and Technology
IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
JSC	Joint-Stock Company
LLC	Limited Liability Company
MLFS	Mongolia Labor force survey
MNT	Mongolian Tugrik
NSO	National Statistical Office
SOE	State-owned Enterprise
STEM	Science, Technology, Engineering, and Mathematics

INTRODUCTION

Women and the Mine of the Future is a collaborative project of the Intergovernmental Forum on Mining, Minerals, Metals, and Sustainable Development, International Labour Organization, International Women in Mining, and United Nations Environmental Governance Programme.

The first phase of the project is to establish a baseline gender profile for workers in large-scale mining to inform an assessment of how global mining trends will affect women in mining and related supply chains. In turn, the project partners will identify gaps and challenges impeding women's participation in mining and provide guidance and technical support for decision-makers to promote gender equality in the sector.

Mongolia is one of 12 target countries. The study was conducted from September 15, 2021, to March 1, 2022.

Purpose and methodology of the study

The purpose of this study is to ascertain the state of play of gender-disaggregated employment by occupation, education, age, skills, pay, and seniority level in the large-scale mining sector.

Data and information for the study were collected and processed in the following ways.

1. Analyze the legal environment, policy documents, regulatory documents, and information on gender and employment in the mining sector of Mongolia obtained from the relevant government organizations, agencies, professional and sectoral associations, and international organizations.
2. Data on employment in the mining sector of Mongolia (excluding petroleum and artisanal mining) were compiled from the Mongolia Labor Force Survey and other data of the National Statistical Office in accordance with the International Standard Classification of Occupations.
3. The employment situation and employee skills development were clarified by questionnaires filled in by the selected representatives from the public, private, and foreign-invested companies in the mineral sector.
4. In order to verify relevant laws, regulations, and quantitative and other information, the Consultant conducted informant interviews with 10 key stakeholders,[1] including the officials of national government ministries, leaders of local

[1] See Appendix A. List of interviewed companies and organizations.

government, human resource managers of mining companies, representatives of civil society organizations, and scholars from research and academic institutions.

1.0 LEGAL ENVIRONMENT AND POLICIES

1.1 Legal Regulation

1.1.1 Special policy on gender and human rights

Gender equality is universally recognized as a fundamental factor in sustainable development, economic growth, poverty reduction, and justice, and the UN Sustainable Development Goals (SDGs) blueprint, adopted in 2015, declares the goal to "Achieve gender equality and empower all women and girls." The initiative to legalize this idea is widespread in many countries, including Mongolia.

Mongolia has acceded to international treaties and conventions on human rights and gender equality. In addition to this, the country supported the SDG initiative, and adopted the "Mongolia Sustainable Development Concept 2030" in 2016.[2] Since 2020, Mongolia has adopted a long-term development policy: "Vision 2050." The medium-term development policy has been repealed because the indicators that reflect the results of the "Mongolian Sustainable Development Concept 2030" and the SDGs are included in the "Vision 2050."[3]

Ensuring gender equality is a key human rights issue, as declared in the SDGs and Vision 2050.

In addition to proclaiming this idea in the Constitution,[4] Mongolia legislates specific policies on human rights and gender in legislation, such as the Law on Promotion of Gender Equality[5] (2011) and the National Program on Gender Equality (NGAP)[6] (2002–2017), and consequently, human rights and gender issues are reflected in government policies, programs, and plans.

The Constitution of Mongolia legalizes equal rights for men and women, stating that "No person may be discriminated on the basis of ethnic origin, language, race, age, sex, social origin or status, property, occupation or post, religion, opinion, or education" and that "Men and women enjoy equal rights in political, economic, social, and cultural fields as well as in marriage."[7]

According to the Law on Promotion of Gender Equality,[8] the principle of gender equality is that all men and women have equal rights in political, economic, social, cultural, family,

[2] Mongolia's Sustainable Development Concept–2030, 2016. https://legalinfo.mn/mn/detail/11725
[3] "Vision 2050": A long term development policy of Mongolia, 13 May 2020. https://legalinfo.mn/mn/detail/15406
[4] Constitution of Mongolia, 1992. https://legalinfo.mn/mn/detail?lawId=367
[5] Law on Promotion of Gender Equality, 2011. https://legalinfo.mn/mn/detail/253
[6] National Program on Gender Equality, 2017. https://legalinfo.mn/mn/detail/12687
[7] Constitution of Mongolia, Article 14.1, 16.11, 1992. https://legalinfo.mn/mn/detail?lawId=367
[8] Law on Promotion of Gender Equality, Article 5.1.4, 2011 https://legalinfo.mn/mn/detail/253

and other relations, participate equally in social life, and are guaranteed to have equal opportunities to benefit from development and social resources. The law stipulates that special measures must be taken to ensure gender balance in the civil service, provide equal employment opportunities for women and men, support balance in people's work–family responsibilities, provide conditions for childbirth and childcare, protect the health of every individual, ensure safe conditions for work, ensure women and men are paid the same salary and wages for the same work, create equal conditions, and include all parties in collective agreements and negotiations. It also stipulates that employers are required not to mention gender in job vacancy announcements, not to include content indicating gender preference, and, when possible, to select a person of a less represented gender group when hiring. This is particularly critical when considered that previously in Mongolia the job vacancies mostly indicated gender preference, particularly male, for some positions in the mining sector.

The National Program on Gender Equality aims to ensure the implementation of the law through comprehensive measures aimed at introducing gender-sensitive policies and planning, changing stereotypes about gender equality, and ensuring gender equality in political, economic, social, cultural, and family relations. The program reaffirms the goal of strengthening national capacity and sets specific goals to implement gender-sensitive policies, planning, and budgeting, to provide training and advocacy for gender education with aims to change stereotypes, to implement measures to prevent violence and discrimination, and to increase women's participation in decision-making.

The Law on Promotion of Gender Equality defines the principle of gender-sensitive policy as "making development policy more gender-based by incorporating gender concepts into legislation, government policies, programs, plans and projects," while the National Program on Gender Equality sets a goal to "develop gender-sensitive policies, planning and budgeting at the national, sectoral and local organization levels."[9] In line with these aims, a total of 14 ministries of Mongolia, the capital city and its nine districts, and 21 aimag government agencies have started to develop gender-sensitive policy planning and implement operational objectives and programs. Further, Article 11 of the law regulates gender equality in employment and labor relations.

However, in the course of this study, all government policy and planning documents in force in Mongolia were revoked by the Government Resolution dated October 13, 2021,[10] with an aim to reissue them in line with the country's longer-term goals on gender equality and women's empowerment. With the adoption of the Law on Development Policy, Planning and its Management of Mongolia on May 7, 2020, it became possible to define the country's long-term development policy. Prior to the enactment of this law, many sectoral development policies and programs were enacted and implemented, and have been repealed to bring them into line with this new law. An analysis of the repealed

[9] National Program on Gender Equality, Article 2.2.2, 2017. https://legalinfo.mn/mn/detail/12687
[10] Revoking the resolution, 2021 https://legalinfo.mn/mn/detail/12687

documents and their compliance with the law will be completed in June 2022. As a result, policy documents developed in accordance with the Law on Development Policy, Planning and its Management will be submitted to Parliament for approval and be approved within this year.

In line with this resolution, the National Program on Gender Equality and all of the gender policies, programs, and planning documents adopted and implemented at the sectoral and local levels have been repealed. But the concept of the Law on Promotion of Gender Equality is fully implemented. The scope of the study covers the time period when these documents were in effect.

1.1.2 Gender-responsive policy in the Sector of Geology, Mining, Petroleum, and Heavy Industry

The Ministry of Mining and Heavy Industry approved the "Gender responsive policy in the sector of Geology, Mining, Petroleum and Heavy Industry (2019-2026)" [11] in 2019. Prior to this, "The Assessment of the Gender Impact in the Mineral Resources Sector" was conducted in 2017 to evaluates the situation in the sector. The Ministry of Mining and Heavy Industry identified the situation based on the findings of the above Gender Impact Assessment, and has subsequently defined and developed the geology, mining, petroleum, and heavy industry sector gender-responsive policy.

"The Assessment of the Gender Impact in the Mineral Resources Sector" concluded that gender content is not reflected in the Minerals Sector Law and Policy Documents, and that the adoption of a gender-responsive policy in the sector was considered to be the beginning of a multi-stakeholder approach to ensure gender equality in this area.[12]

The goals of the policy, as defined, are "to ensure the achievement of gender equality and the implementation of the Law on Promotion of Gender Equality by mainstreaming gender in the policies and legal frameworks of the geology, mining, petroleum and heavy industry sector; changing gender stereotypes and biases; mitigating the sector's adverse environmental and social impacts, including implications on human rights and affected communities; ensuring equal access to the sector's benefits for women and men; enabling an environment where labor relations are family-friendly; and fostering the cooperation and partnerships within the all spheres."

[11] Gender-responsive policy in the Sector of Geology, Mining, Petroleum and Heavy Industry, 2019 http://portal.merit.mn/dataset/ca7a917c-a444-46a2-9dca-7557e9f5e24a/resource/6c171949-6b74-4f12-b6a8-2552ef794e54/download/gender-policy_en.pdf

[12] Gender Impact Assessment in the Mineral Sector." 2018.

It was emphasized in the Policy Rationale[13] that "it is different from other sectors, so it is somewhat limited in its comprehensive coverage of gender issues, as the geology, mining and heavy industry sector absorb[s] less female labor."

Within the framework of the goals of the sector's gender-responsive policy, the following objectives have been set.

Gender mainstreaming and capacity building targeted at the integration of a gender perspective into policy and regulatory reform, planning, budgeting, implementation, and monitoring and evaluation processes of the sector, and the elimination of gender discrimination;

- Implement necessary "special measures" and other activities in various forms to enable an environment that addresses gender-specific needs adequately in all levels of public and private spheres of the extractive sector; that ensures the work–life balance of all employees in the sector; that ensures equitable participation and representation of women and men in management levels across the sector, including in the sector's ministry, agencies, government offices at the aimag, capital city, soum, district, bagh and khoroo levels, and in business entities and organizations; and that ensures benefits to men and women in all spheres.
- A comprehensive strategy to change gender stereotypes and attitudes, which are root causes of gender discrimination, gender-based violence, and inequality within the sector, will be implemented among employees, stakeholders, affected communities, all other relevant parties, and the general public.
- Foster partnerships and strategic alliances for an integrated strategy among public sector institutions, civil society actors, investors, donors, and international and private organizations towards implementing the sector's gender-responsive policy.

The implementation of this medium-term policy was led by an ex-officio gender sub-council chaired by the State Secretary of the Ministry of Mining and Heavy Industry, and was intended to take place in two phases between 2019 and 2026. This policy document has been revoked and is being analyzed in order to be developed in accordance with the Law on Development Policy, Planning and its Management, approved in 2020.[14]

[13] Gender-responsive policy in the Sector of Geology, Mining, Petroleum and Heavy Industry, 2019 https://mmhi.gov.mn/wp-content/uploads/file_from_old/file/d456d06114889db8cc930db8193153a7d8d2666c.pdf

[14] Revoking the resolution, 2021 https://legalinfo.mn/mn/detail/12687

1.1.3 Other regulations and the Labor Code

The Impact Assessment Report on the implementation of the Law on Promotion of Gender Equality[15] states that there are 81 laws in force in Mongolia that regulate equality and justice. The revised version of the Labor Code, which came into force in January 2022, sets out a number of provisions in line with the Law on Promotion of Gender Equality.

The new version of the Labor Code reflects the principles and concepts of the Law on Promotion of Gender Equality, in line with current changes and trends in economic, business, and social relations; as well, it clearly lays out a plan to ensure gender equality in the workplace and establish a system for reviewing and resolving complaints about gender equality, and mechanisms for the participation and roles of employers, employees, trade unions, and government agencies.

Chapter 1, Article 6, of the Labor Code[16] makes it illegal to discriminate, limit rights, or give preference based on gender in employment and labor relations. As a result, there are no provisions in the legal framework that treat men and women differently, discriminate against either one, or differentiate between them in employment based on traditional gender roles.

Box 1

There was a list of jobs where women were prohibited from working under the Labor Code of 1999. This list included the jobs in the underground mining industry and [other jobs] in the mining sector … and it was repealed in 2016.

(Excerpt from stakeholder interview)

Moreover, the advanced regulations have begun to take effect to ensure that women are not discriminated against in terms of wages on the basis of sex or other grounds, that workers of the same value are paid the same, that harassment, violence, and sexual harassment in employment and labor relations are prohibited, and that the problem-solving mechanisms are defined under the new law. The previous law, which identified women as the principal caregivers for children, has been replaced by a new law that eliminates gender discrimination for employees with young children. For example, the law changed the very limited childcare allowance offered to fathers.

[15] Impact assessment of the implementation of the Law on Promotion of Gender Equality of Mongolia, 2021 https://www.legalinfo.mn/uploads/V8_Report_GenderLaw_implementation_evaluation_MMCG_last.pdf
[16] Labour Code, July 2021 https://legalinfo.mn/mn/detail?lawId=16230709635751

The law establishes national regulations on mine roster schedules in order to create a balanced work–life environment and to enable a combination of work and family responsibilities. In the mining and extractive industry, the roster schedule of 14 days on, 14 days off (14/14) is not only an advanced solution to one of the most difficult gender-based issues, but it also provides an opportunity to increase the participation of women in the male-dominated mining sector. This is a key provision that improves the working conditions of personnel in the mining and quarrying sectors. Trade Unions of the energy, geology, and mining sectors, as well as workers in these sectors, have repeatedly expressed their views that working long distances away from home makes it impossible to care for families and children and leads to increased rates of divorce. Prior to this legislation, mining companies had different roster schedules, such as 40 days of work, 20 days off (40/20), 28/14, and 30/15. An inflexible schedule requiring many days away from home is one of the key reasons that women have been restricted in their work in the mining sector. Therefore, the new regulations aim to increase the participation of women in the male-dominated mining sector of the labor force.

The revised version of the Labor Code was approved in July 2021 and came into force on January 1, 2022. However, the mining companies were permitted a 6-month period lasting until the second half of the year before their full implementation of the Code. In order to comply with the new Labor Code, most mining companies needed to add another full shift. So, during this period of time, the companies would have needed to hire and train additional human resources. It is estimated that the number of employees in the mining sector will have doubled upon the full implementation of this regulation.

Box 2

In regard to the change to the 14/14 roster schedule stated in the labor Code, our company announced 160 jobs in December 2021 and another 160 jobs in February 2022. About 20 percent of the 12,000 people who applied for the vacancies were women. Forty-nine percent of new hires are women. Most of them will receive training before starting work. This shows that we achieved our company's aim to hire women for 50 percent of its new employees.

(Excerpt from stakeholder interview)

1.2 Policy and Budgeting in the Education Sector

There are no specific provisions on gender equality in the laws and regulations of the Education sector. Although the national university admissions policy and regulations do not have specific components that encourage men and women to choose "non-

traditional" professions or that discourage them from doing so, the "Gender policy of education, culture, science, and sports sector" (2017–2024)[17] includes such objectives and measures.

The impact assessment report on the implementation of the Law on Promotion of Gender Equality concluded that there are no cases where special measures specified in the law have been implemented, despite the goals and objectives of the law "to increase the number of men studying in education and health professions, and the number of women in information technology and engineering professions, and to set gender quotas in the number of entrants."

The report states that the Ministry of Mining and Heavy Industry, the Ministry of Education, Science and Culture, and universities must work collaboratively to develop and implement human resource policies that focus on training engineering professionals and increasing women's participation in the mining sector in line with the gender strategy by the government. The German–Mongolian Institute for Resource and Technology is one of the first training institutions that focus on this area, according to the report. It aims to keep at least 30 percent of female enrollees in the engineering, technical, and technology profession programs. In terms of promoting technical and vocational education, the Polytechnic College of Umnugovi Aimag now pays increased attention to enrolling more female students in programs geared toward the technical professions. In the 2017–2018 academic year, 30 percent of the total of 153 students were women headed toward technical professions.[18]

Box 3

The government needs to take more [of a lead] to educate more women to work in … mining rather than mining companies. There is a need to work at the policy level to identify which jobs will be most needed in the future as the mining sector develops, and to provide accurate information to the entrants to the universities and colleges.

(Excerpt from stakeholder interview)

As the Government's spending on Science, Technology, Engineering, and Mathematics (STEM) education is not reported in the publicly disclosed documents on the budget, financial documents, and statistics of Mongolia, there is no exact information available. Moreover, information on scholarships for STEM students and government spending on research is not publicly disclosed.

[17] Education, Culture, Science and Sports Sector Gender-responsive Policy 2017-2024, 2017
[18] Impact assessment of the implementation of the Law on Promotion of Gender Equality of Mongolia, 2021 https://www.legalinfo.mn/uploads/V8_Report_GenderLaw_implementation_evaluation_MMCG_last.pdf

2.0 QUANTITATIVE ANALYSIS OF THE EMPLOYMENT SITUATION IN THE MINING SECTOR

This chapter compiles data on the educational status of Mongolian citizens and the employment status of the economic sectors, including employment in the mining sector from the Mongolia Labor Force Survey[19] (MLFS) of the National Statistical Office (NSO) and other data in accordance with the International Standard Classification of Occupations of the International Labor Organization. As the MLFS and other sources do not provide specific employment-related statistics for the exploration and mining development phases, only the general data on general mining operations are included in this quantitative analysis.

2.1 Employment situation in Mongolia

The total working-age population of Mongolia was 2,128,100 in 2020, of which 58.8 percent or 1,250,600 were in the labor force and 41.2 percent or 877,500 were outside the labor force.[20] 1,162,900 (93.0 percent) of the total labor force are employed, and 87,700 (7.0 percent) are unemployed. Compared to 2010, the labor force increased by 9.0 percent, and the number of employed increased by 12.5 percent. The labor force participation rate is 58.8 percent nationwide—66.8 percent for men and 51.8 percent for women.

[19] The Mongolia Labor Force Survey (MLFS) is the source of information on key labor statistics. MLFS collects data on employment. The survey gathers information from a nationally representative sample of households from Ulaanbaatar, as well as urban and rural areas.

[20] Persons outside the labour force are those of working age who were neither in employment nor in unemployment in the short reference period with reasons of either being enrolled in an educational program, retired, elderly, disabled, or discouraged from seeking employment.

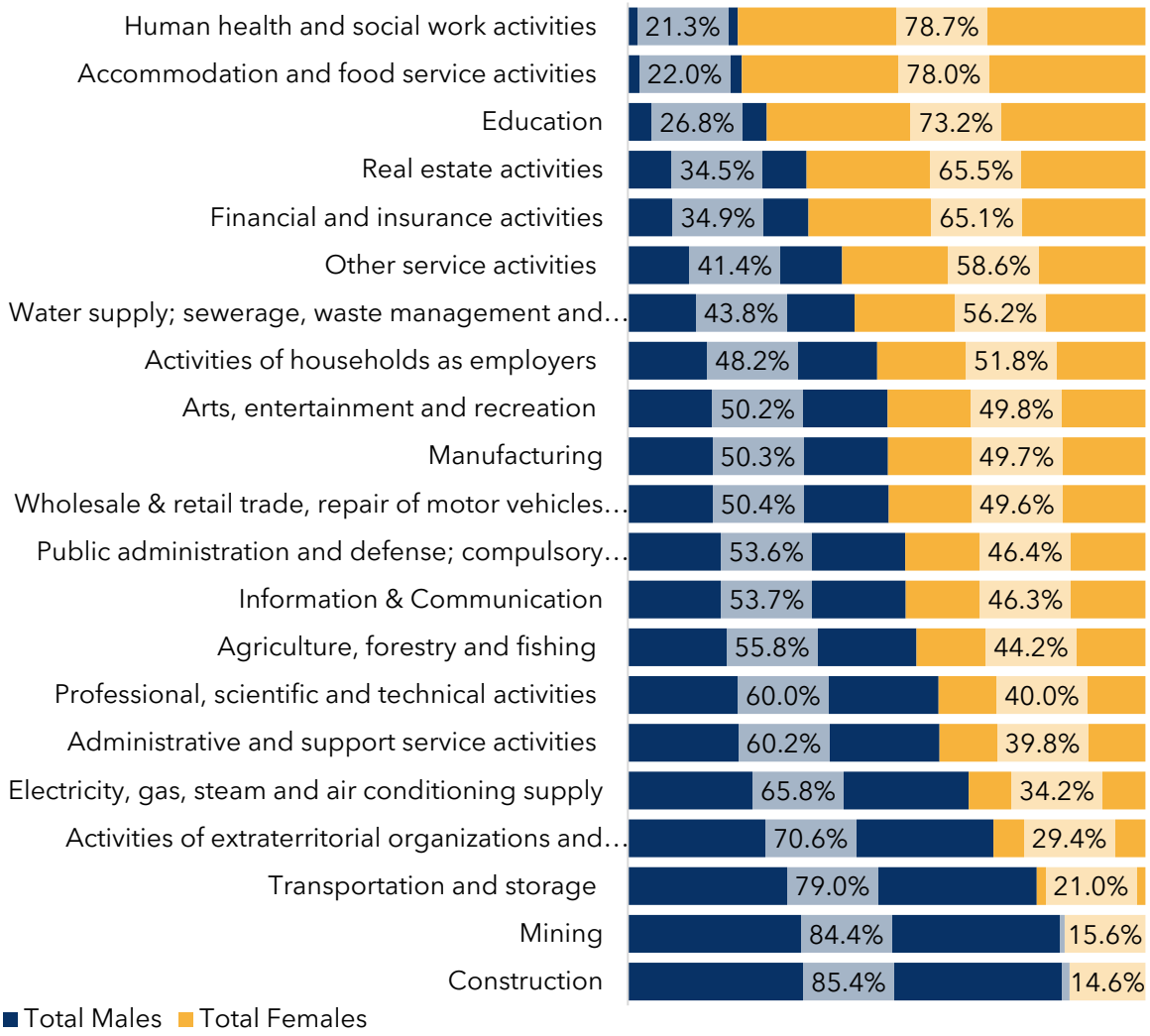
Table 1. Employment, 2010–2020

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Labor force	1,147.1	1,124.7	1,151.1	1,198.3	1,206.6	1,243.9	1,275.6	1,357.4	1,358.6	1,273.9	1,250.6
Employed	1,033.7	1,037.7	1,056.4	1,103.6	1,110.7	1,151.2	1,147.8	1,238.3	1253	1,146.2	1,162.9
Unemployed	113.4	87	94.7	94.7	95.9	92.7	127.8	119.1	105.6	127.7	87.7
Outside the labor force	716.2	673.7	661	738.8	735	779	831.4	863	868	832.2	877.5
Labor force participation rate, %	61.6	62.5	63.5	61.9	62.1	61.5	60.5	61.1	61	60.5	58.8
Employment-to-population ratio, %	55.5	57.7	58.3	57	57.2	56.9	54.5	55.8	56.3	54.4	54.6
Unemployment rate, %	9.9	7.7	8.2	7.9	7.9	7.5	10	8.8	7.8	10.0	7.0

Source: NSO

The employment rate of 2020 in different economic sectors is shown below. The largest number, or 78.7 percent, of women are employed in the health and social services sector, while 15.6 percent are in the mining sector, and 14.6 percent are in the construction sector.

Graph 1. Total number of employed persons, by industry and sex (2020)

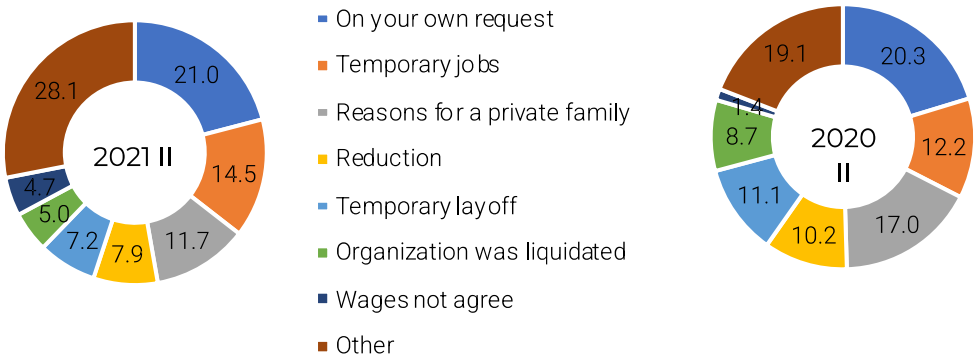


Source: NSO

As of the second quarter of 2021, 21,000 (20.7 percent) of the unemployed had never been employed, while 80,300 (79.3 percent) were employed previously. Out of the previously employed, 16,800 (21.0 percent) resigned voluntarily, 11,700 (14.5 percent) worked in temporary jobs, 9,400 (11.7 percent) were forced to quit their jobs due to personal and family reasons, and 6,300 (7.9 percent) were no longer employed because of redundancy due to the company's operations' downsizing and closure.

Educated unemployment is due to the lack of policy coordination between university intake and the labor market. This misalignment is evidenced by the results of the survey[21] conducted by the Labor and Social Welfare Research Institute in 2018 among more than 4,000 graduates. 54.1 percent of the unemployed graduates surveyed said that they could not find a job, and 25.5 percent said that they could not find a job suitable for their profession. However, 5.3 percent said they were not employed due to low wages, and 4.9 percent said they did not meet the requirements of the employers. The main conclusion of the study was that universities do not respond to the demands of the labor market.

Graph 2. Breakdown of unemployment by reasons



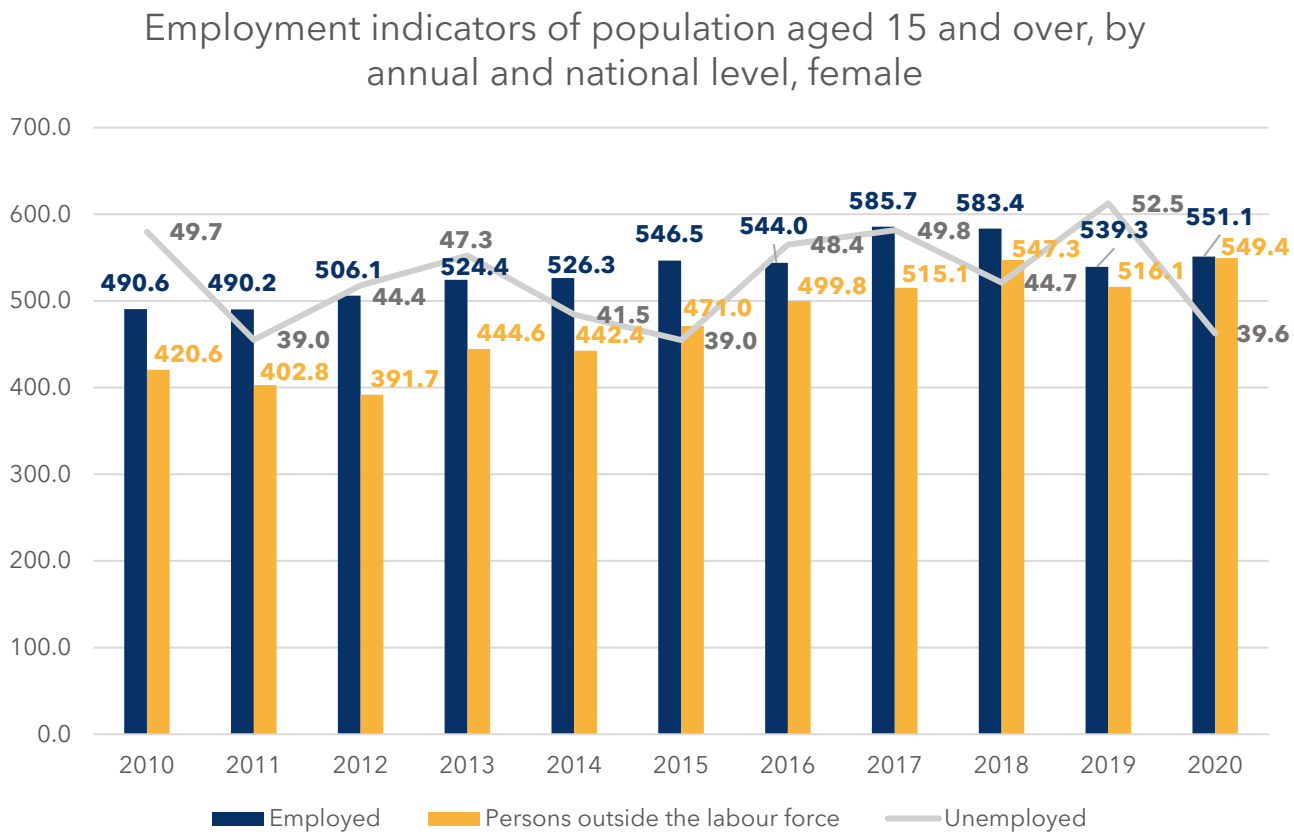
Source: NSO

The Graph below shows the percentage of women's employment in the period of 2010–2020. In 2010, women's employment rate was 51.5 percent, but by 2020 it had dropped slightly to 48.3 percent. The unemployment rate fell from 10.8 percent in 2010 to 3.4 percent in 2020. However, despite the decline in unemployment, the number of women outside the labor force has increased by 30.6 percent over the past decade. The top three reasons for women's inability to participate in the labor market are their engagement in the housework, being retired, and being involved in an educational program.

This may be linked to the decrease in the number of people who looked for a job due to their increased responsibilities for their families during the pandemic, long and repeated lockdowns, the cessation of most jobs and services during the quarantine periods, and government support for target group households. For example, mothers who took care for their children at home became women outside the labor force. However, a detailed analysis and information related to the increased number of those outside the labor force has not been issued yet.

[21]

Graph 3. Employment of women (2010–2020)



2.2 Information about students and graduates of educational institutions

As of 2020, out of a total of 1,116,700 students studying at all levels of education in Mongolia, the largest percentage is the number of pupils in secondary school. There are 680,800 children studying in secondary schools, and 339,700 or 49.9 percent of them are girls.

Table 2. Number of students at all levels in educational institutions (2020)

Classification of educational institutions	Number of persons	Percent (%)
Total	**1,116,700**	**100.0**
Preschool participant	247,000	22.1
Full-time students in secondary school	680,800	61.0
Elementary	356,900	52.4
Secondary	222,100	32.6
High school	101,800	15.0

Students in vocational education institutions	40,200	3.6
State	28,700	71.4
Private	11,500	28.6
Students in higher education institutions	147,300	13.2
State:	76,800	52.1
Institutes and Colleges	2,300	3.0
Universities	74,500	97.0
Private:	63,600	43.2
Institutes and Colleges	12,800	20.1
Universities	50,800	79.9
Public/religious property:	6,900	4.7
Institutes and Colleges	400	5.8
Universities	6,500	94.2
Student abroad	1,400	0.1

Source: Ministry of Education and Science

The structure of the education sector and the school enrollment rate of children are directly related to the future of the country's labor market, while the situation of graduates of educational institutions affects the demands of the labor market.

The analysis of the number of graduates of universities and their majors in 2020 shows that 63.7 percent of the total graduates are women, and the proportion of female graduates who majored in STEM fields is low. The low proportion of male graduates in other fields of study indicates that traditional gender-based choice is still affecting people's professional and career selections.

The German–Mongolian Institute for Resources and Technology aims to keep the proportion of female entrants in its engineering, technical, and technology professional programs at a minimum of 30 percent. In the 2021–2022 academic year, the school has had a total of 292 students, of which 113 or 38.7 percent are female students, which is higher than the percent of female students in other institutions of this type.

Most mining companies, in line with their human resource policies and strategies, cooperate with vocational training centers and polytechnic colleges and provide the local community members with opportunities for internships to allow them to become skilled workers and to facilitate job offers. But their policies and strategies for training do not include special provisions to support and promote female employment and traineeship. The human resources and training programs of the mining companies do not focus on gender equality and the involvement of women. Companies do not have incentive

programs that specifically support traineeship for professional women. The mining companies do not disseminate information on the working conditions of women in the mining sector, nor do they promote the health and safety conditions of it for women.

Box 4

In 2013 the Governments of Mongolia and Germany jointly established the German-Mongolian Institute of Minerals and Technology (GMIT), which is operational and helping advance human resource development and technological advancement in the mining sector. GMIT offers 6 engineering Bachelor degree programs and 2 Master degree programs. In the 2021-2022 academic year, the school has a total of 275 students, of which 113 or 41.1 percent are female students. Out of them, 57 students have scholarship[s], which is much higher than other schools of the same field.

The number of female students at GMIT for each program is available in the table below. Most of the female bachelor's degree students are studying in industrial engineering programs.

Table 3. Number of female students of the GMIT (academic year 2021–2022)

Field of studies	Total students	Male students	Female students
	275 (100%)	162 (58.9%)	113 (41.1%)
Basic engineering program	47	24	23
First year students, not decided which program	50	29	21
Raw materials and process engineering	21	13	8
Mechanical engineering	27	19	8
Environmental engineering	25	12	13
Industrial engineering	39	17	22
Mechatronic engineering	29	23	6
Energy and electrical engineering	16	13	3
International management of resources and environment (MBA)	7	3	4
Advanced mineral resources development (M.Sc.)	14	9	5

Source: GMIT

Box 5

The choice of career for female students depends on their family education and place of residence. For example, if they are from a community with a large-scale mine, or if their parents or siblings have a mining-related profession and jobs, the girls, who have more knowledge and understanding of the mining industry are more likely to choose a career and profession related to the mining.

(Excerpt from stakeholder interview)

2.2.1 Graduates information, by sex

Table 4. Graduates of educational institutions for all levels by 2020

Classifications of educational institutions for all levels	Number of persons	Percent (%)
Total	**130,700**	**100.0**
Of which: Female	69,900	53.5
General educational schools	**79,800**	**61.1**
Of which: Female	41,200	51.6
Technical and vocational educational institutions	**19,700**	**15.1**
Of which: Female	8,800	44.7
Universities, institutes, colleges	**31,200**	**23.9**
Of which: Female	19,900	63.8

Source: Ministry of Education and Science

In 2020, out of 19,734 graduates of technical and vocational educational institutions, 8,839 (44.8 percent) were female. In total, 86.6 percent of all graduates graduated from vocational educational institutions, 10.5 percent from technical educational institutions, and 2.9 percent from vocational training.

88.3% of all female graduates have completed vocational educational institutions, 8.9% have completed technical educational institutions, and 2.8% have completed vocational training. In 2020, the number of women who graduated from vocational educational institutions increased by 22.8% from the previous year, while the number of women who graduated from technical educational institutions decreased by 36.4%.

790 or 37.9% of 2,084 graduates of technical educational institutions were women. This represents 4 percent of all graduates of technical and vocational educational institutions. The low percentage of women with technical education indicates that the traditional approach and attitude to career choice remains.

Table 5. Number and percent of graduates from technical and vocational education institutions

	2019		2020	
	Number	Percent (%)	Number	Percent (%)
Total	**18,887**	**100.0**	**19,734**	**100.0**
Female	8,590	45.5	8,839	44.8
Technical education (mechanics, welders, operators etc.)	**2,460**	**13.0**	**2,084**	**10.6**
Female	1,242	50.5	790	37.9
Vocational education (tailors, cooks, etc.)	**14,263**	**75.5**	**17,085**	**86.6**
Female	6,351	44.5	7,800	45.7
Vocational training	**2,164**	**11.5**	**565**	**2.9**
Female	997	46.1	249	44.1

Box 6

It is the responsibility of the Ministry of Labor and Social Protection to focus on career choice and provide guidance and introductions. It is generally expected that men choose engineering and technical-related professions and career[s] while women choose to be doctors, nurses, and accountants. … This traditional public attitude [must be changed to] … make women aware that they can work in the mining sector. As well, it is [necessary] to create a professional directory with detailed information on salaries and working conditions. In fact, changing attitudes is a matter for all sectors. This will take some time.

(Excerpt from stakeholder interview)

63.7 percent of the total number of university and college graduates in 2020 were women. In terms of majors, including STEM, 54.7 percent of them were in the natural sciences, mathematics, and statistics, 29.9 percent were in engineering, manufacturing, and design, and 27.8 percent were in information and communication technology.

Table 6. Number and percent of university and college graduates (2020)

Fields of Study	Total	Percent (%)	Male	Percent (%)	Female	Percent (%)
Total	**31,161**	**100.0**	**11,300**	**36.3**	**19,861**	**63.7**
Teacher education and pedagogy	6,296	20.2	1,090	9.6	5,206	26.2
Arts, humanities, art studies	2,127	6.8	681	6.0	1,446	7.3
Social sciences, media	1,804	5.8	502	4.4	1,302	6.6
Business management, law	9,794	31.4	3,554	31.5	6,240	31.4
Natural sciences, mathematics, statistics	864	2.8	391	3.5	473	2.4
Information and communication technology	887	2.8	640	5.7	247	1.2
Engineering, manufacturing, architecture	4,061	13.0	2,845	25.2	1,216	6.1
Agriculture, forestry, fishery, veterinarian	407	1.3	254	2.2	153	0.8
Medical science, social welfare	3,661	11.7	493	4.4	3,168	16.0
Service	1,260	4.0	850	7.5	410	2.1

Source: Ministry of Education and Science

Box 7

Between 1960 and 2020, a total of 9,500 students graduated from the School of Geology and Mining of the Mongolian University of Science and Technology; 30 percent of them were women. Almost half of the women enrolled had their parents working in the field, and this factor influenced their choice of profession. The school has 19 bachelor's, 21 master's and 16 doctoral programs.

(Excerpt from stakeholder interview) ***http://www.guus.edu.mn/en/***

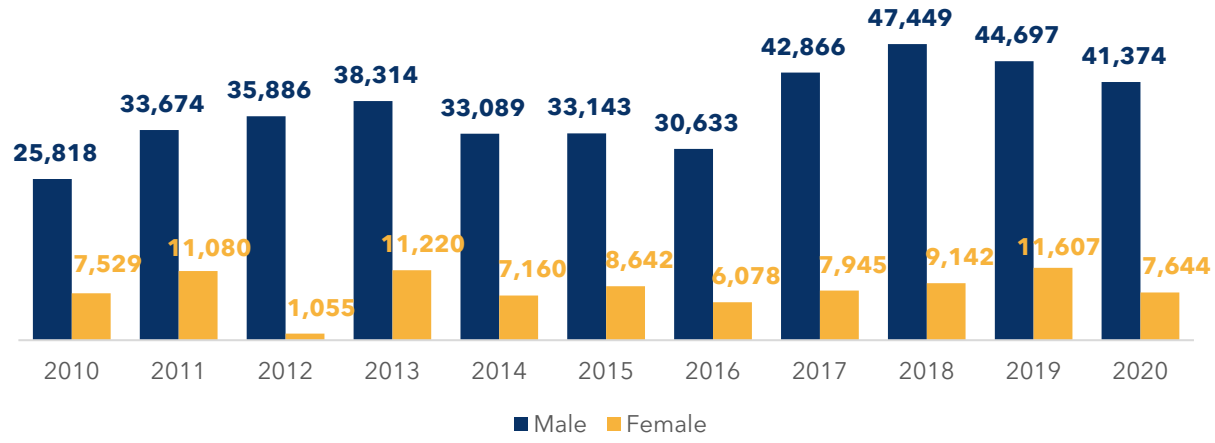
2.3 Employment situation in the mining sector

The MLFS of the National Statistical Office reports that as of 2020, the mining sector (excluding oil and artisanal mining) employs 49,018 people, of which 7,644 (15.6 percent) are women. This number was 22.6 percent in 2010, the highest in recent years. In 2019,

before the pandemic caused by COVID-19, the mining sector in Mongolia employed 56,304 people, of whom 11,607 (20.6 percent) were women.

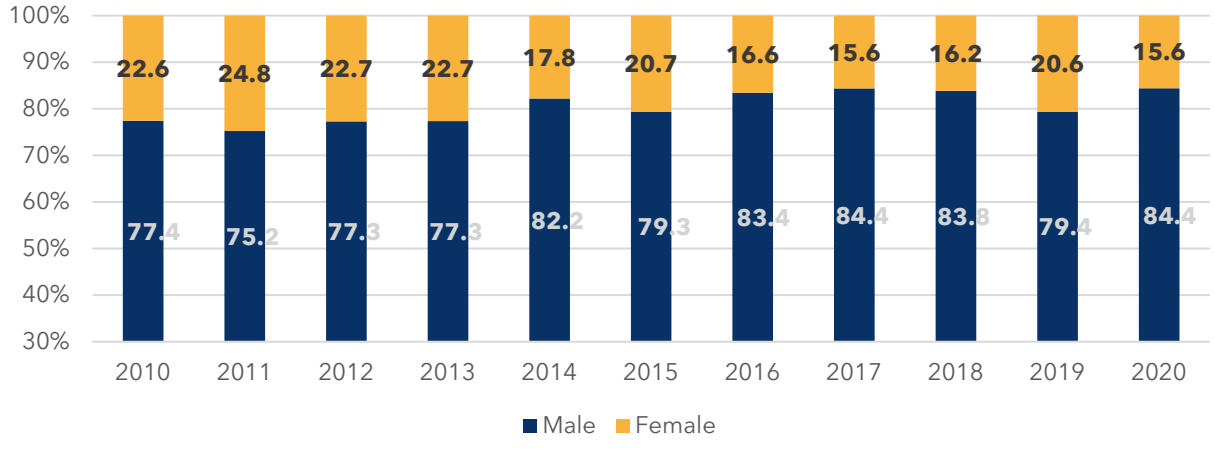
The following graph shows that the growth and decline of the Mongolian mining sector have affected women's employment in the sector. Mongolia's mining sector had the highest growth in 2010–2013. But since late 2013, as the global mineral market collapsed, the mining-based economic growth of Mongolia has slowed. This decline lasted until the end of 2016, and 2014–2016 were basically the years when the mining sector came to a standstill. However, the market recovered in 2017 and continued to grow, with a high growth rate in 2019, but in 2020, the mining sector receded due to COVID-19 outbreaks.

Graph 4. Number of employees in the mining sector, by sex (2010-2020)



Source: NSO

Graph 5. Percentage of employees in the mining sector, by sex (2010-2020)



Source: NSO

In 2019 11,607 women worked in the mining sector of Mongolia. This is the highest number of women working in the mining sector in the last 10 years. However, in the mining boom period, women's employment rate in the sector increased, while in the years when the mining declined, women's employment rate was much reduced

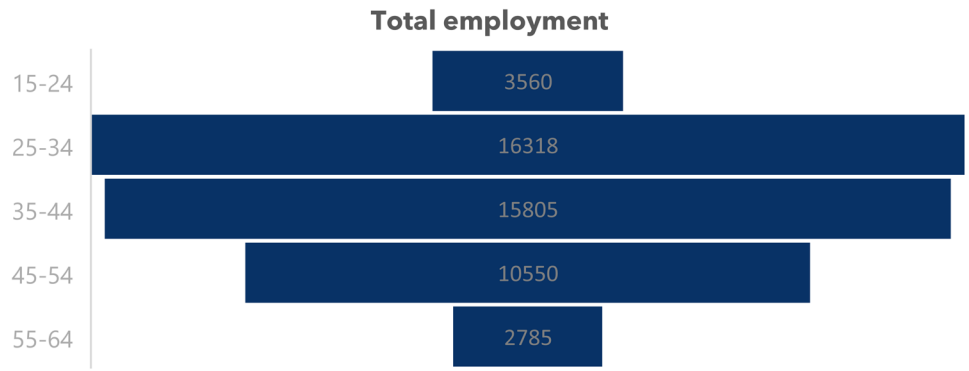
compared to the rate of men's employment. In 2014, the year of the mining downturn, the number of jobs in the mining sector fell by 17.8 percent. It was reported that the employment rate for men in the mining sector decreased by 13.6 percent, while that of women decreased by 36 percent. In 2020, or during the pandemic, jobs in the mining sector fell by 13 percent, with the employment rate for men falling by 7.4 percent and for women by 34 percent. However, during the mining boom years, the growth of jobs for men and women was equal, and in some cases more for women. In 2013 the number of jobs for women in the mining sector increased by 49 percent and men's jobs by 48 percent, while in 2019 the number of jobs for men jobs decreased by 2,752, and women's jobs increased by 2,465, which is an interesting fact. It can be concluded that during times of growth, the mining sector is more supportive of women's employment than that of men, and that women are more likely to be laid off than men when the sector declines.

2.3.1 Age distribution of the mining workforce

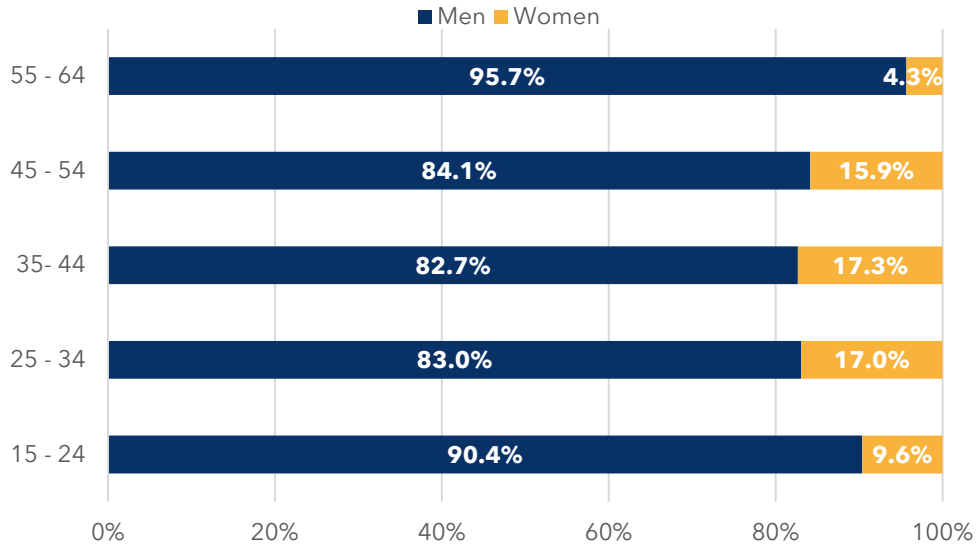
As of 2020, the majority or 72 percent of 7,644 women employed in the mining sector are aged between 25 and 44. For men, the figure is 64.4 percent. In the age groups 15–24 and 55–64, men predominate.

The employment rate of women over the age of 55 is very low or 1.6 percent, due to the fact that in Mongolia women are retired at the age of 55 and men at the age of 60.

Graph 6. Employment in mining by age (2020)



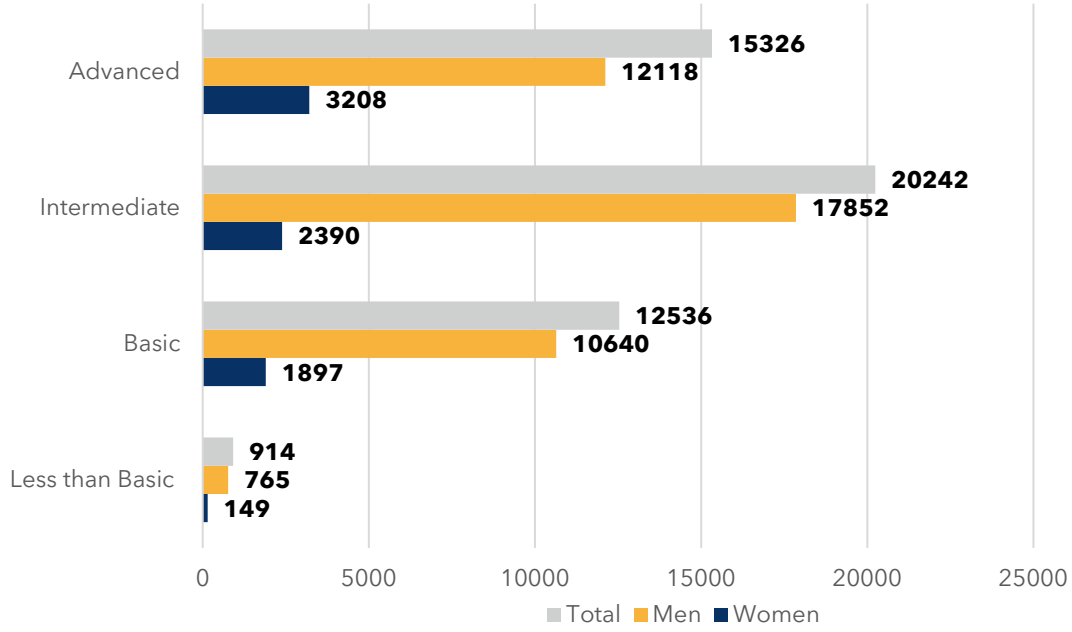
Graph 7. Employment in mining by age, sex (2020)



2.3.2 Educational analysis of the mining workforce

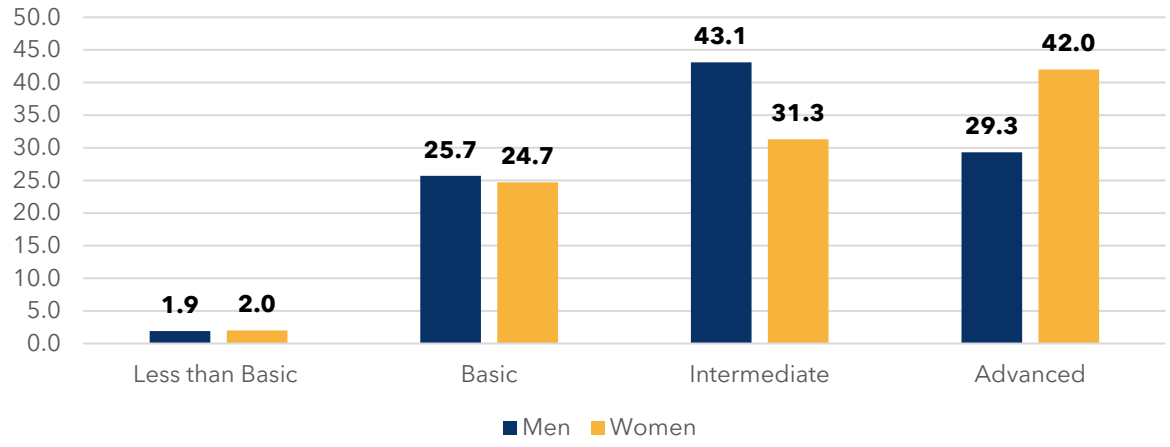
72.6 percent of those employed in the mining sector have completed technical and higher education. Out of them, 42 percent of women have a degree in higher education. This percentage is directly related to the percentage of women university graduates. For instance, in 2020, 63.7 percent of university graduates were women. Overall, women in the Mongolian mining workforce have higher educational attainment than men.

Graph 8. Number of employees in mining by education (2020)



Source: NSO

Percentage of employees in mining by education (2020)



2.3.3 Contract types

Table 7. Types of contract, 2020

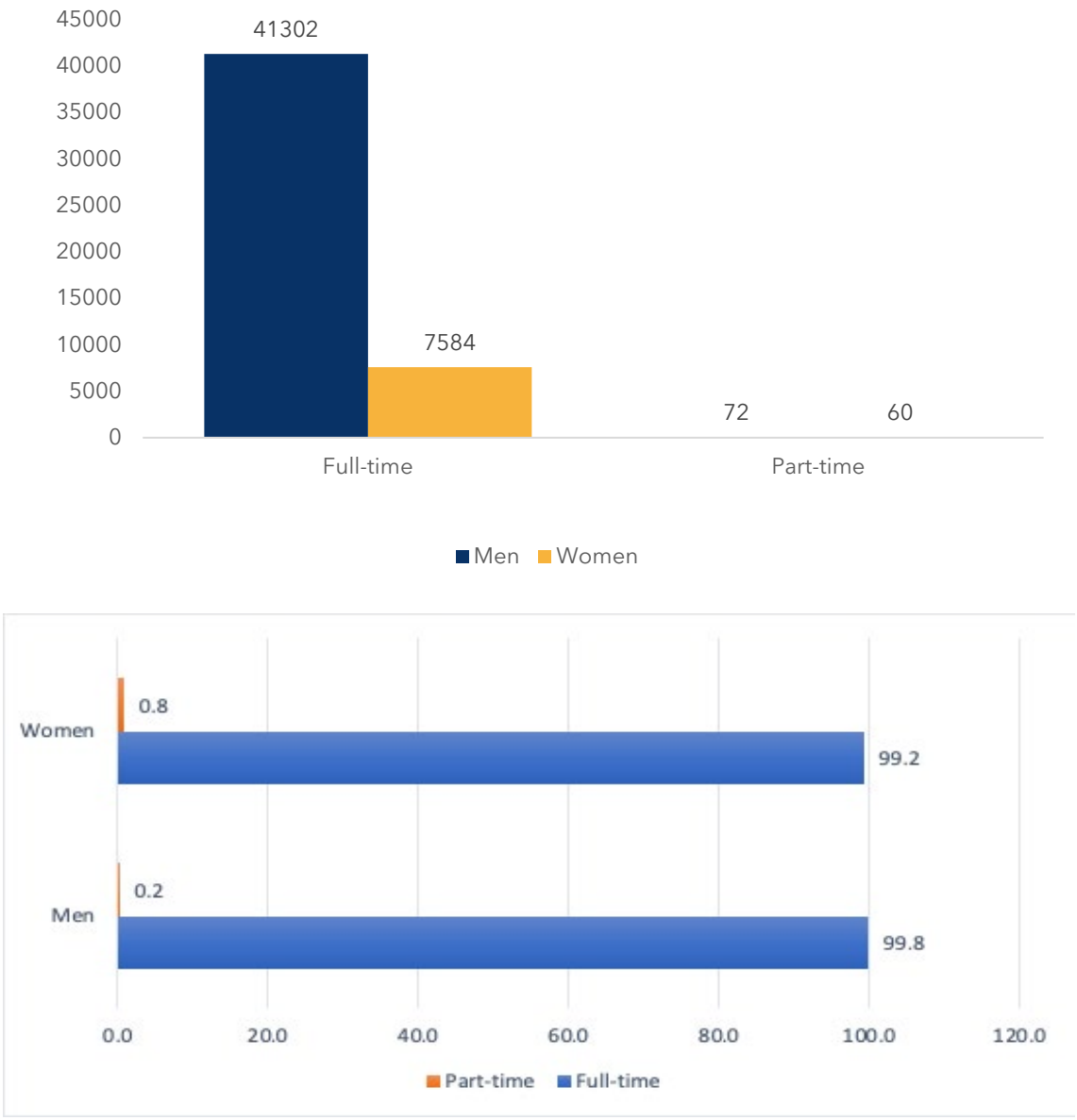
	Total	Percent (%)	Men	Percent (%)	Women	Percent (%)
Total	49,018	100.0	41,375	100.0	7,643	100.0
Permanent	23,750	48.4	20,187	48.8	3,563	46.6
Temporary	22,981	46.9	19,075	46.1	3,906	51.1
Other (verbal agreements)	2,287	4.7	2,113	5.1	174	2.3

Source: NSO

2.3.4 Working hours by gender

In terms of working hours, 99.8 percent of men and 99.2 percent of women have full-time work in the mining sector.

Graph 9. Number/Percentage of employees in mining, by working hour types, by sex



The percentage of men and women working full-time in permanent and temporary jobs is almost the same. It shows that there is no scheme with flexible working hours, and the sector does not support those who work part-time. When analyzed in the context of the responses to the interview questions, it can be argued that long working hours, inconvenient roster schedules, and inflexible working hours make it difficult for women to work in the mining sector.

Many women who participated in the interviews pointed out that this situation is ignored by employers.

2.3.5 Gendered analysis of mining occupations

In terms of mining-related occupations, Plant and Machine Operators and Assemblers account for 23,130 or 47 percent of all workers in the sector, of whom 22,015 (95.2 percent) are men. 44.8 percent of 3,443 Service and Sales employees and 43.8 percent of managers are women in the mining industry.

The persistence of harsh, abnormal working conditions and labor-intensive work in the mining companies has led to the public as well as industry employees having the general perception that it is difficult for women to work in the mining industry. The interviewees address the fact that gender stereotyping in relation to job requirements results in the availability of a limited number of job opportunities for women, which can be considered the main cause for there being fewer women who choose professions and careers in this sector.

Box 8

A female graduate who worked on the technological line with a dusty environment asked her employer to change her working conditions due to her pregnancy, but the company did not accept her request. She was required to continue working with the additional salary in difficult conditions or be fired. She … left.

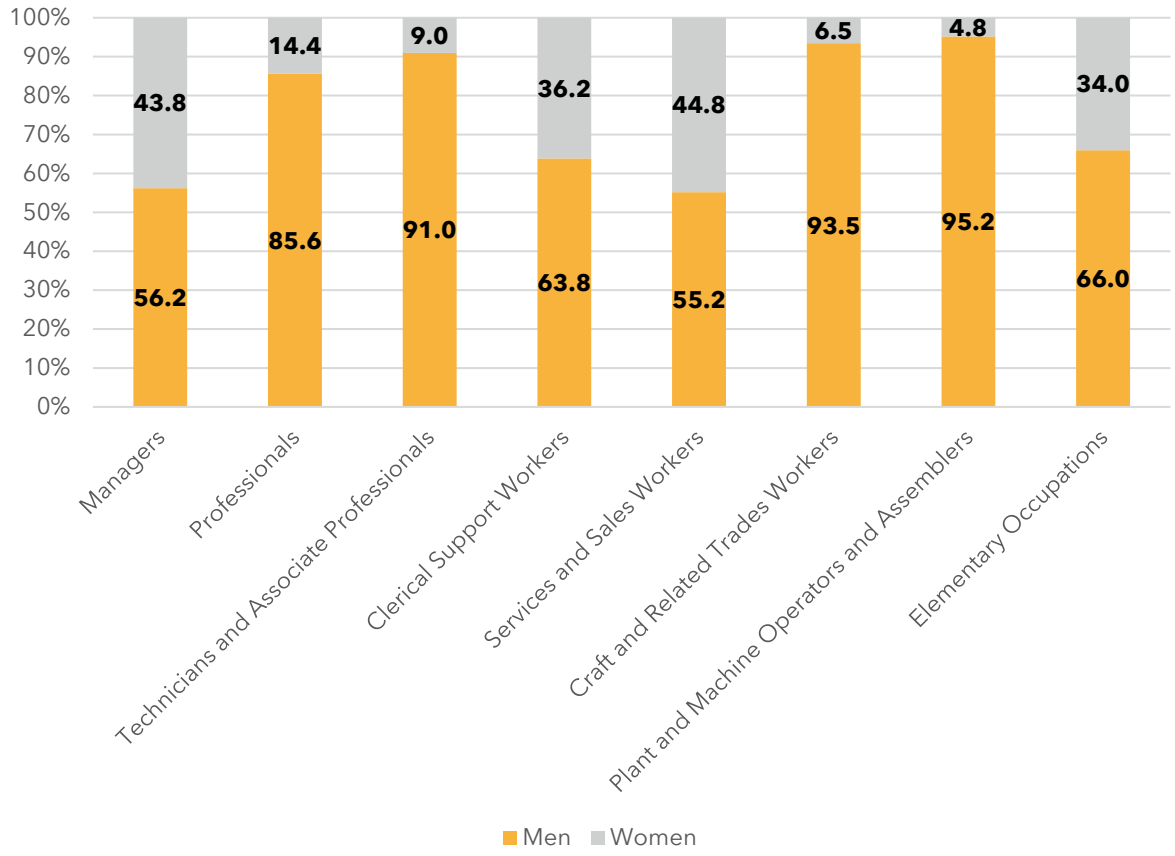
(Excerpt from stakeholder interview)

Note: The interviewee cited this case as an example of the difficulties faced by women employed in the mining sector, which happened before the adoption of the Gender Policy (2019–2026) in the geology, mining, oil and heavy industry sectors.

The case mentioned above shall be regulated by the Law on Promotion of Gender Equality that stipulates "special measures shall be taken to protect women's reproductive health and shall not be considered as discrimination," and "measures to protect health and work in safe working conditions shall be reflected in collective agreements and labor contracts."

The Policy of the sector states that "at the sector level, workplace health risks should be assessed, and recommendations should be made to reduce and eliminate risks and ensure their implementation." The action plan for the implementation of the policy includes the actions "to conduct gender assessment of working conditions at the sector level, to develop recommendations to reduce/eliminate abnormal working conditions and to ensure their implementation."

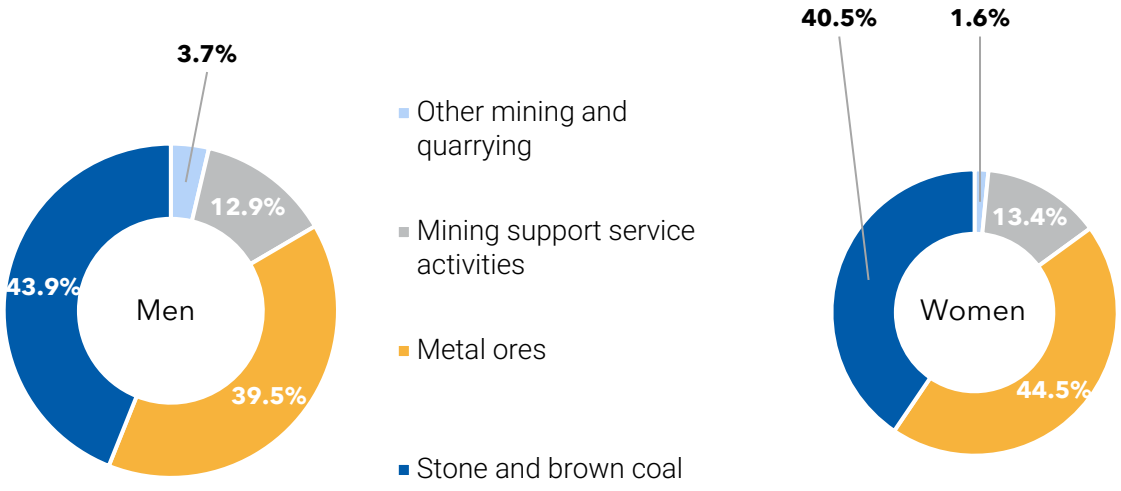
Graph 10. Mining sector occupations, by percentage, by sex



Source: NSO

2.3.6 Gender distribution by types of minerals extracted

18,181 (43.9 percent) out of the 41,374 male employees work in the stone and brown coal sector, while the majority of the 7,644 women employees, or 3,402 (44.5 percent), work in the metal ore sector.



2.3.7 Geographical distribution of the mining workforce

By their residential locations, 40,186 (82 percent) of the total workforce in the mining sector live in cities and urban areas. In Mongolia, the capitals of 21 aimags/provinces and Ulaanbaatar are considered to be the main urban areas. 2,713 out of a total of 23,230 living in Ulaanbaatar are women, 1,718 of 6,748 residing in Orkhon aimag are women, and 1,209 of 4,506 living in Umnugobi aimag are women.

The majority of mining workers are from Ulaanbaatar, as most mining companies are headquartered in the capital city, and specialized mining professionals travel to remote rural areas where the mines are located.

The place with the second-highest concentration of people employed in mining is Orkhon aimag, where the mining city of Erdenet and its plant are located, with 6,000 employees. Umnugovi Aimag, as a main mining region where Mongolia's major mines and enterprises have been operating since the 2000s, is one of the urban areas with an increased number of jobs in the mining sector.

Most mining operations take place in remote rural areas in Mongolia, so workers are relocated and live near or at their workplace. Women do not want to work in the mines because it is difficult for them to work long hours away from home. According to the interviewees, caring for children and the elderly, taking responsibility for their families, and maintaining a work-family balance are considered to be challenges for women.

Box 9

Women find it difficult to work away from home because their periods of childbearing and parenting coincide with their active employment. This is the main reason why women do not work in the mining sector.

(Excerpt from stakeholder interview)

At the interviews the employers reported that there are equal opportunities for employment in the sector, but then they contradicted this statement when they raised concerns related to their family responsibilities when seeking a long and sustainable employment situation and how the company will view these concerns when hiring and employing women.

The traditional perception of and social expectations regarding the duties and responsibilities of men and women for family, guardianship, and career choices are among the main causes for the smaller number of women working in the mining sector.

Box 10

Despite the changing roles of women in the culture and society and their professional and occupational choices, it is very difficult for women to manage family matters while working in the mining sector. Although women are legally entitled to work in this sector, they mostly find it difficult to care for their children and families while working in the mining [industry] and get employment and develop their careers in the sector. For example, most of the women working in the mines by the roster are unmarried or married to the men who work at the same mine sites. And, women married to non-miners are less likely to work at rosters in the mine. As this is a common problem for the female workers, the mining companies need to consider the issue to attract more women professionals and workers by regulating the roster schedules if the couple work at the same mine.

(Excerpt from stakeholder interview)

Table 8. Percentage of workers, by residential areas (2020)

	Total	Percent (%)	Men	Percent (%)	Women	Percent (%)
Total	**49,018**	**100.0**	**41,374**	**100**	**7,644**	**100**
Urban	40,186	82.0	33,843	81.8	6,344	83.0
Rural	8,832	18.0	7,531	18.2	1,300	17.0

Source: NSO

2.3.8 Recruitment in the mining sector

Box 11

In recent years, foreign and private companies have been announcing their vacancies without gender preference and [making them] open to the public[]. On the contrary, a state-owned company with a history of 40 or 50 years [has] not posted job advertisements. This is a … very serious problem [and] violates … labor rights.

(Excerpt from stakeholder interview)

Note: Mongolia's second-largest copper concentrate producer—Erdenet Mining Corporation, a State-Owned Enterprise established in 1978—renews an annual "Collective Agreement" with its Trade Union. The Collective Agreement says that children are to be the first choice to be employed by the company when the parents retire. The survey respondents criticized this scheme, which was set up at the request of employees, for not announcing jobs openly and publicly.

Box 12

Companies have often advertised their vacancies on their own. But more recently, private companies have turned to recruitment agencies for headhunting and recruiting tasks. For example, SCC, a headhunting company, successfully selected and recruited employees for 48 jobs in the mining sector in 2021. 58 percent of those recruited through the headhunting agency were men and 42 percent were women, and 3/2 of the jobs were in technical and engineering fields.

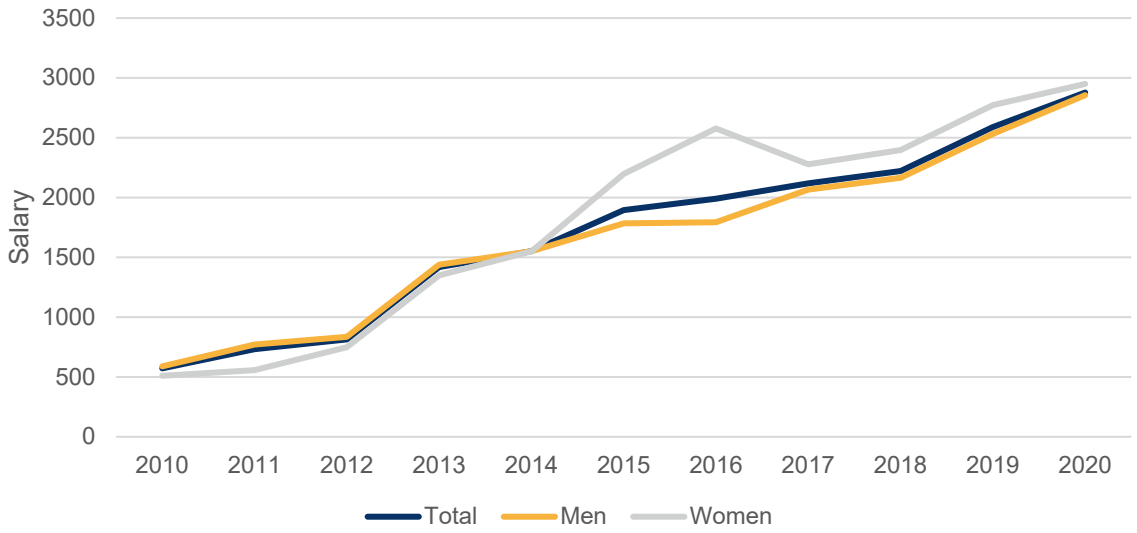
2.3.9 Salaries and gender pay gap

According to the Social Insurance General Office (SIGO) of Mongolia, the average salary in Mongolia in 2020 was MNT 1,220,600, while the average salary of the mining sector was MNT 2,877,400. The average salary for men was MNT 2,855,800 and for women MNT 2,949,700. On average, women in the mining sector were paid more than the man, by a total of MNT 93,900, as most women were employed in the Metals and Ores sector. The figure shows the increase in wages over the last 10 years by gender.

This is related to the scope of the SIGO and NSO studies. SIGO calculates the average monthly salary of 712,500 employees working for 46,000 entities, who pay social insurance. The SIGO reports that the gap between the average salaries of male and female employees has been widening in recent years, with men earning an average of MNT 1.5 million in 2021 and women MNT 1.2 million. The highest-paid sector is mining, with an average monthly salary of MNT 3.1 million, according to the SIGO data.

However, data from the NSO are based on sampling only, and there is no information on the classification of salaries by gender, position, occupation, or education. It is thus impossible to identify the factors that contribute to the wage gap.

Graph 12. Mining sector average salary, by sex, by thousand MNT



Source: SIGO

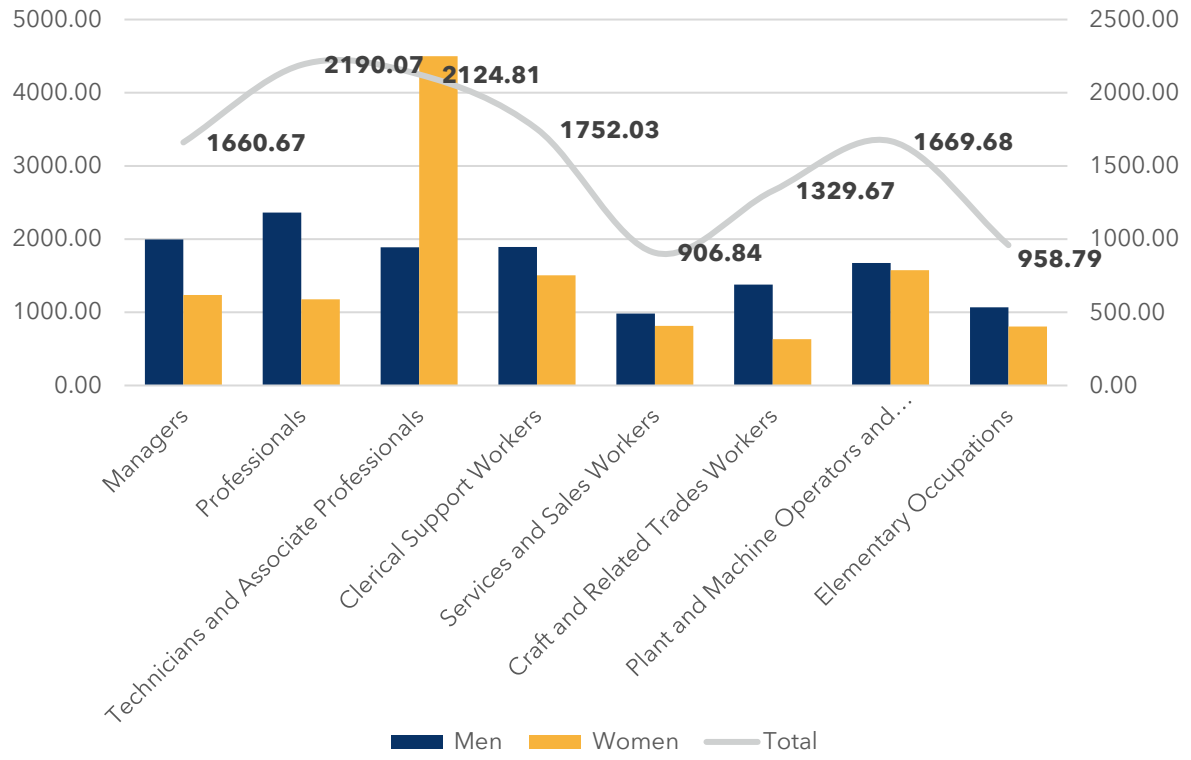
As the SIGO does not provide salary information by occupations, Table 9 has been developed based on the data and information of the MLFS and NSO. The table shows that the average salary in the Mongolian mining workforce and women's salaries are lower than men's average salary. It depends on the basic conditions under which the information was collected. Table 9 shows that women are paid less than men in all types of professions, except one job category: technicians.

The mining sector information about the salary classified by level of responsibility is provided in Appendix D.

Table 9. Salary average, by level of responsibility, by MNT (all sectors, 2020)

Professions	Men	M/AS %	Women	W/M %	Average salary
Total	**1,725,870**	**5.8%**	**1,142,770**	**-33.8%**	**1,630,910**
Managers	1,995,150	20.1%	1,235,940	-38.1%	1,660,670
Professionals	2,363,140	7.9%	1,177,510	-50.17%	2,190,070
Technicians and Associate Professionals	1,888,980	-58.0%	4,500,000	211.8%	2,124,810
Clerical Support Workers	1,892,000	8.0%	1,504,940	-20.5%	1,752,030
Services and Sales Workers	983,600	8.5%	813,360	-17.31%	906,840
Craft and Related Trades Workers	1,378,570	3.7%	631,880	-54.16%	1,329,670
Plant and Machine Operators and Assemblers	1,674,780	0.3%	1,575,720	-5.91%	1,669,680
Elementary Occupations	1,069,100	11.5%	805,140	-24.69%	958,790

Graph 13. Average salary, by level of responsibility, by thousand MNT (2020)



2.3.10 Ownership structure and employment

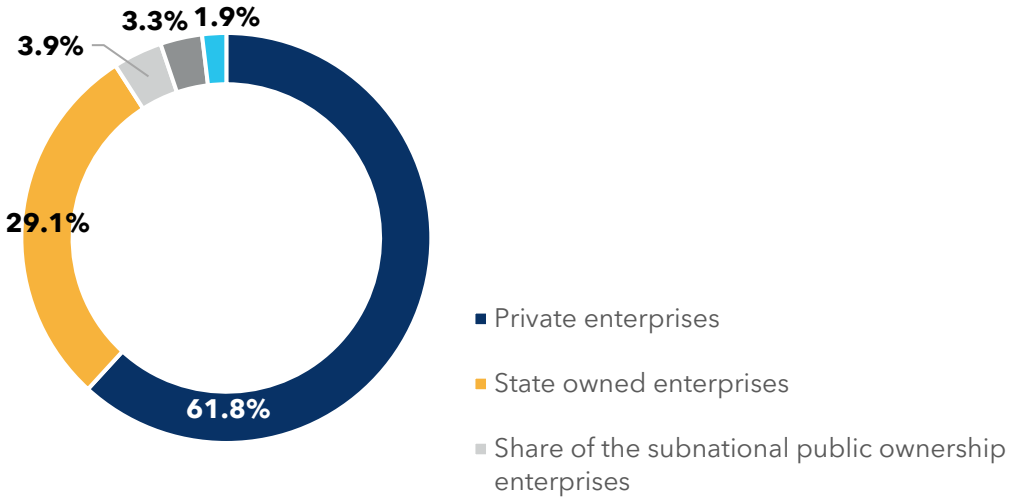
In terms of ownership type of the companies and entities, 72.7 percent of the 49,018 employees in the mining sector work for private companies, 18.6 percent for state-owned companies, and 2.6 percent for locally owned companies.

Table 10. Percentage of employees, by entity ownership types (2020)

	Total	Percent (%)	Men	Percent (%)	Women	Percent (%)
Total	**49,018**	**100.0**	**41,374**	**100**	**7,644**	**100**
State-owned enterprises	9,146	18.7	6,921	16.7	2,225	29.1
Share of the subnational public ownership enterprises	1,297	2.6	999	2.4	298	3.9
Private enterprises	35,648	72.7	30,924	74.7	4,724	61.8
Private person and Domestic/family small business	2,293	4.7	2,149	5.2	144	1.9
Others (State organization, NGO, International organization)	633	1.3	380	0.9	253	3.3

61.8 percent of female employees work in the private sector and 29.1 percent in state-owned companies. The remaining 10 percent of women employees work in other entities, such as NGOs, international organizations, small businesses, and so on.

Graph 14. Percentage of females, by entity ownership types (2020)



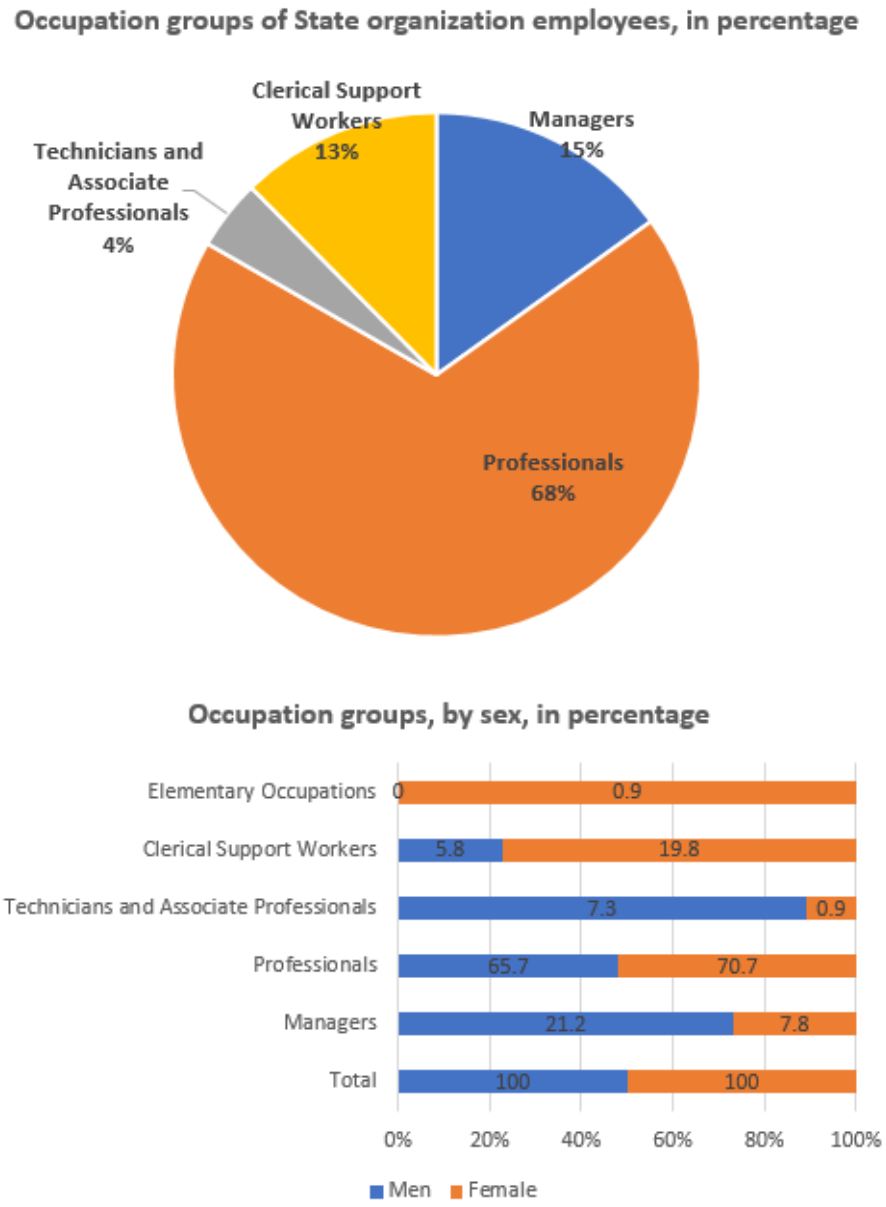
Source: NSO

2.3.11 Information on state agencies in the mining sector

At the national level, the Ministry of Mining and Heavy Industry is responsible for government policy and regulation in the mineral sector. There are also two Government agencies, the Minerals and Petroleum Authority and the National Geological Survey, which are responsible for implementing sector policies nationwide.

These three organizations are categorized as state agencies, and the information and data regarding their employees' education, age, and occupation are collected with the questionnaire.

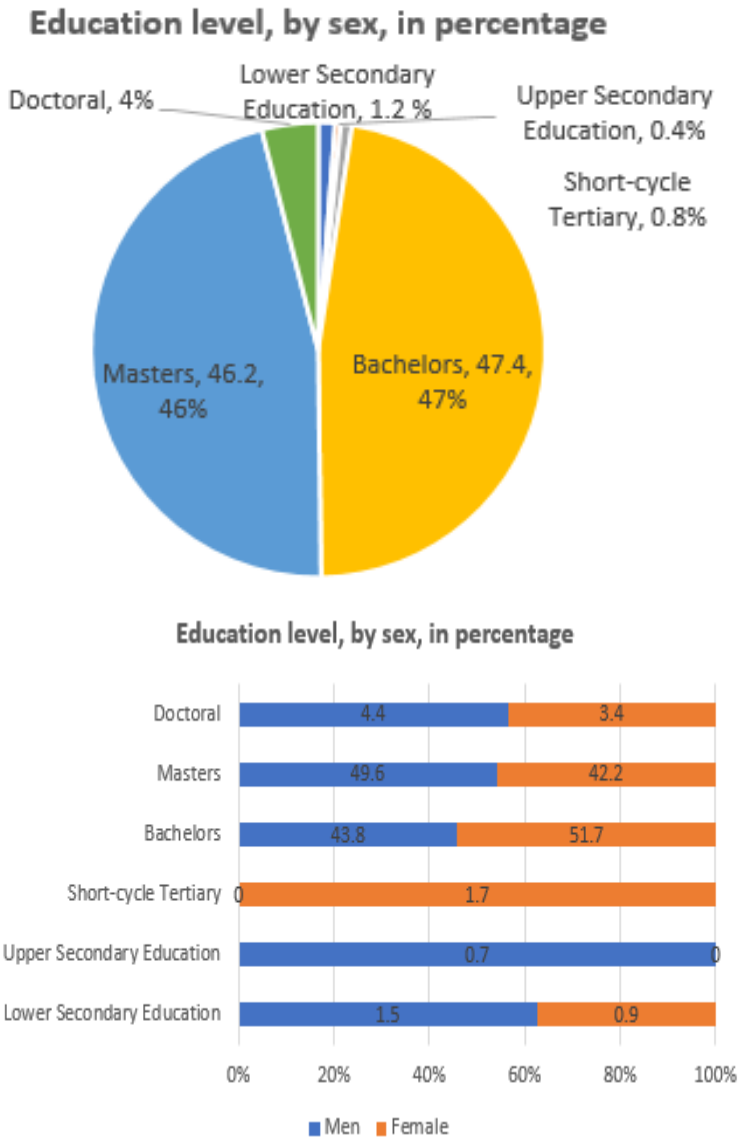
Graph 15. Occupation groups of State organizations (April 2021)



Source: Ministry of Mining and Heavy Industry

These three state organizations employ a total of 253 people, of which 137 (54.2 percent) are men and 116 (45.8 percent) are women. This shows that gender balance is relatively well maintained in the state organizations within the mineral sector. However, women's participation at the decision-making level is limited. For instance, 35 out of 85 employees of the Ministry of Mining and Heavy Industry are women, and only 4 out of 20 managerial-level employees are women. Among the total of 136 employees at the Minerals and Petroleum Authority, 63 are women, and only 2 out of 13 managers are women. Out of the 32 employees of the National Geological Survey, 19 are women, and 3 of 5 senior managers are women. The Minister, Deputy Minister, Secretary of State of the ministry, and heads of the two state implementing agencies are all men.

Graph 16. Education (April 2021)



Source: Ministry of Mining and Heavy Industry

38 people, or 15 percent of the total staff, are managers or managerial-level officials, of which 9, or 24 percent, are women. This indicates that there is a lack of gender balance

when it comes to the structure of organizations leading state policy and regulatory decision-making in the mining sector. It can be concluded that the predominance of men at the executive and managerial levels leads to the inability of women to influence decisions or to make gender-responsive policies and decisions.

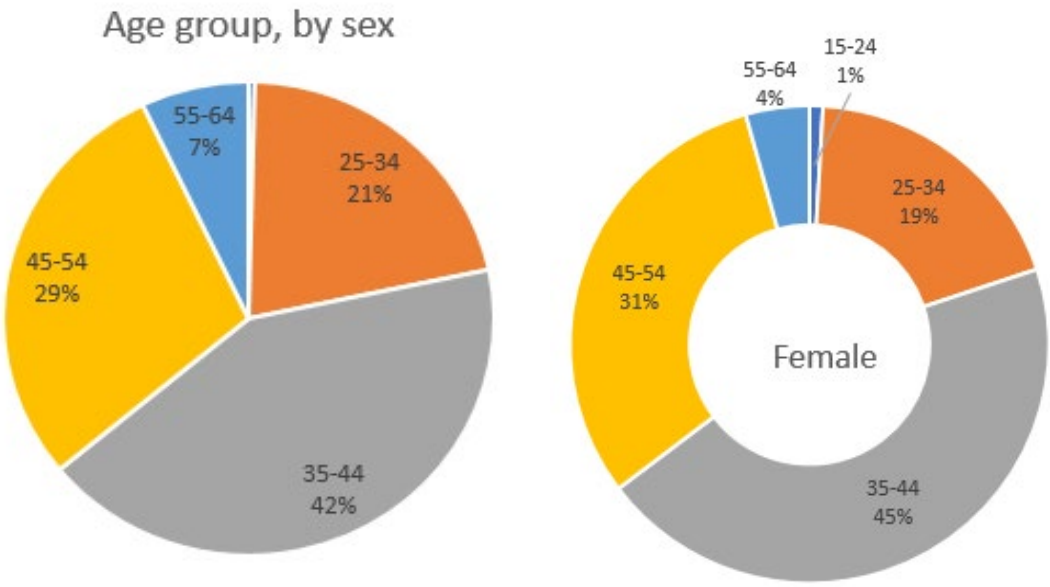
According to the gender balance of male and female employees at each of occupation groups in the 3 state organizations surveyed, men predominate at the executive/manager level (76 percent) and the professional level (52 percent). However, women make up the majority (74 percent) of office clerical and service staff.

In terms of education level, the majority of employees (47 percent) have a bachelor's degree, and 46 percent have a master's degree.

At the bachelor's level, the proportion of women and men is equal, while 6 out of 10 people with a doctoral degree are men and 4 are women.

In terms of age, 42 percent of all employees are aged 35–44, 29 percent are aged 45–54 and 21 percent are aged 25–34. 45 percent of the women employees are 35–44 years old.

Graph 17. Age group (April 2021)



Source: Ministry of Mining and Heavy Industry

It is interesting to note that employment at the National Geological Survey, which was established recently (two years ago by the Government decree in 2020), is more gender-balanced. Women are the majority at the organization's decision-making level and the managerial and professional levels of the organization. The percentage of women with a higher education level is high. At the organizational level, the bachelor's and doctoral

degrees are more balanced for men and women, while women dominate for master's degrees.

So, it can be concluded that women are more employed in the newly established organizations, and that the level of education of new hires is higher, and, to that extent, they are working at a managerial level.

Box 13

No conferences, meetings, career contests, or factory openings in the mining sector are [led] by women. … It is said that the[se events] should be [led] by an elder or the head of the commission[, a practice which excludes women]. This kind of discrimination is very common.

(Excerpt from stakeholder interview)

Box 14

There [are] enough rules and regulations on gender equality in the legal environment, but the main [problem] is that [the industry] cannot break away from stereotypes and cannot be changed due to individual perspectives and attitudes. This stereotype is reflected in the fact that the Ministry of Mining and Heavy Industry has set up a working group without a gender balance among the members of the working group.

2.3.12 Training and development programs

One of the things that can be seen from the labor force survey is the information on whether the employees have been trained in the last 3 years to improve their professional skills and what kind of training they have received.

Table 11. Number of employees involved in vocational, technical and skills training in the last 3 years (2020)

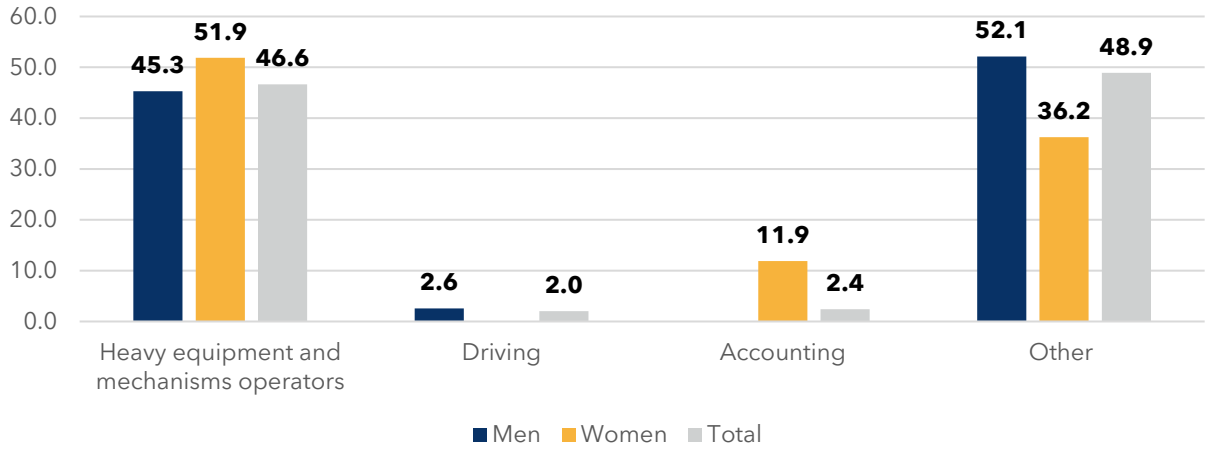
Have you attended any vocational, technical and skills training in the last 3 years?

	Total	Percent (%)	Men	Percent (%)	Women	Percent (%)
Total	49,018	100.0	41,374	100.0	7,644	100.0
Yes	2,271	4.6	1,809	4.4	462	6.0
No	46,747	95.4	39,565	95.6	7,182	94.0

Source: NSO

Out of a total of 49,018 employees, only 2,271 or 4.6 percent responded that they have received training and retraining. Graph 18 shows the ratio between the professional training fields and the gender of employees involved in the training.

Graph 18. Fields of involved training



Source: NSO

Box 15

[A] number of employees' health programs being implemented by the mining companies are seen as important in bridging the gap in the life expectancy of men and women in Mongolia. For example, the Baganuur mine implemented the HEALTHY MINER program in 2017-2019. At the beginning of the program, all employees were tested to determine their level of physical development and fitness, and a database was created. We also categorized our employees by gender, took individual health tests, and implemented a proper diet for each individual. Eighty-six percent of the company's employees are men. A pre-program survey found that the majority of men reported poor lifestyles and wrong diets. And, after the program it was reported that men's healthy life attitudes, knowledge, and exercising were improved, and 16 men quit smoking.

(Excerpt from stakeholder interview)

Box 16

80 percent of all male graduates from the Geology and Mining School of Mongolian University of Science and Technology of Mongolia work in the mining sector, while 20-30 percent of women graduates work in the sector. Most of these women are from the community where the mine operates, or are really interested to work in the mining sector. The rest, 70-80 percent of all female graduates, work in banks, insurance companies, research institutes and non-bank financial institutions due to the perception that their families do not allow them to work in the mining sector and that they are not suitable to work in the sector because they are young.

(Excerpt from stakeholder interview)

3.0 ANALYSIS ON EMPLOYMENT AND EMPLOYEE SKILLS

As part of the study, 12 mining companies were asked to get involved in the questionnaire survey. The companies were selected based on the diversity of operations, including types of minerals extracted, number of jobs, forms of ownership, and operation stages ranging from companies recently starting out to those with long, sustainable operations in the mining sector.

Nine companies out of the 12 contacted took part in the questionnaire survey. Only 7 companies provided complete information, and 2 companies provided incomplete information without proper data and information related to training for their employees.

Table 12. Ownership types of the surveyed companies (January – March 2022)

	Company	**Ownership**	**Response**
1	Baganuur JSC	State-Owned Enterprise	Participated
2	Bayan Airag Exploration LLC	Foreign	Participated
3	Bold Tomor Eroo Gol LLC	Mongolian	Participated
4	Energy Resources LLC	Mongolian (HKEX)	Participated
5	Erdenes Mongol LLC	State-Owned Enterprise	Did not participate
6	Erdenes Tavantolgoi JSC	State-Owned Enterprise	Participated
7	Erdenet Corporation SOE	State-Owned Enterprise	Participated
8	Mongolyn Alt (MAK) LLC	Mongolian	Participated
9	Monpolymet LLC	Mongolian	Did not participate
10	Oyu-Tolgoi LLC	Foreign	Participated
11	Steppe Gold LLC	Foreign	Did not participate
12	Thiess Mongolia LLC	Foreign	Participated

The purpose of this questionnaire was to identify the specifics of direct employment and workplace skills criteria and how employees' skills are being developed in the mining sector. The questionnaire results enabled us to compare and verify the collected statistical data.

A total of 20,423[22] employees work in the companies surveyed. 4,892 or 23.95 percent of them are female employees. This is 8 percent higher than the average share of women in the mining sector. The companies employ women in 1,042[23] different posts.

Box 17

A total of 6,187 employees from 54 contractors and subcontractors are currently working on Oyu Tolgoi's underground mining project and mine development and operations. Of these, 611 are female and 5,576 are male.

The education level of women working in the surveyed nine companies is above secondary education. Only men are uneducated and have a primary education level.

The following table shows the education level of the employees of these companies.

Table 13. Number and percentage of female employees of the surveyed 9 companies, by education level, 2021

Education level	Total	Female number	Female percent (%)
Total	**17,191**	**4,071**	**100.0**
Uneducated	145	1	0.02
Elementary education	7	-	-
Secondary	644	73	1.8
Complete secondary	3,476	530	13.0
Vocational and technical education	2,132	256	6.3
Special professional	1,671	200	4.9
Bachelor's level of higher education	7,444	2,329	57.2
Master's level of higher education	1,609	658	16.2
Doctoral degree of higher education	63	24	0.6

[22] The companies provided the number of their full-time emloyees excluding the employee number of their subsidiary companies.
[23] Appendix B.

Table 14. Number of women working in the surveyed companies, by professional fields

	Total	Percent (%)	Female	Percent (%)
Total	**6,768**	**100.0**	**2,301**	**100.0**
STEM	2,938	43.4	684	29.7
Non-scientific	3,830	56.6	1,617	70.3

Women with higher education in science and engineering fields are four times less often employed compared to the men. Moreover, in the list of jobs provided by companies, women are shown to be mostly working in the fields of the social sciences and humanities.

Box 18

Employers are reluctant to hire women because of the stereotype that engineers should be men. Most commonly, it is understood that a woman takes a long leave after giving birth. But it's the biggest investment a woman can make in society. So, the organization needs to develop its system for training and retraining the next person for the position [when] a woman takes a maternity leave. An organization with gender equality is more productive and has a positive working environment.

When women work in the mines, the atmosphere and environment become more comfortable. Young people are polite to women and the working environment is clean. Women have the advantage of being aware of details of what men don't notice. It seems to me that if all workers are men, the working environment becomes cold.

(Excerpt from stakeholder interview)

With the development of technology, jobs in science, technology, engineering and mathematics are expected to increase. However, the number of women who study at higher education institutions or work in these fields is relatively small. This affects the gap in employment positions between men and women, and shows that women are less likely than men to take on new job opportunities in the fields of science, technology, engineering and mathematics.

On the other hand, technological advances will increase the opportunities for women to work in the mining sector, but they also pose the risk that some jobs will not be needed in the future. The mining sector job list (Appendix B) shows that women are more likely to lose their jobs due to technological advances, as they are mostly employed in the executive and administrative positions.

Six of the nine companies reported that they have developed their gender policies, programs and plans. However, it is observed that the policy planning only weakly stipulates how to manage the impact of changing occupational criteria for the gender balance of the workforce, how to prevent discrimination in the workplace due to technological advances, and how to ensure gender equity at the organizational level.

Box 19

Male students used to dominantly participate in inter-school technology competitions, contests, research debates, and robotics competitions, but now female students have more opportunities and interest to participate in [developing] software and new creative ideas.

(Excerpt from stakeholder interview)

Although the number of women in the STEM fields of study has been statistically low, it has increased in recent years as a result of technological advances, and women's participation has increased. As well, targeted programs to increase the number of girls studying in ICT software programming have had positive impacts. In 2021, 30 girls were selected out of 2,100 registered girls to participate in "The Coding Program for Girls" implemented by the Communications and Information Technology Agency of Mongolia. The program, with an aim to train more female software engineers, will be organized annually and will involve more participants.

3.1 On-the-job skills development

The companies place great emphasis on professional skills, such as work experience and professional certifications, when they select and recruit employees. This is the common approach for all surveyed companies working at different stages of mining, including exploration and production. Followed by these criteria, employers value the soft skills and personal attitude of the candidates and try to have employees and teams with such skills.

Table 15 lists the skills that the surveyed companies value in recruiting.

Table 15. Valued skills in recruiting a new hire

What skills are required for your company's employees to fit in the following areas?	Very important	Percent (%)	Important	Percent (%)	Moderate	Percent (%)
Exploration stage	**28**	**100.0**	**25**	**100.0**	**-**	**-**
1. Education qualification	5	17.9	4	16.0	-	-
2. Professional certificate	3	10.7	6	24.0	-	-
3. Work experience	8	28.6	1	4.0	-	-
4. Soft skills (communications, team building, etc.)	4	14.3	4	16.0	-	-
5. Labor discipline	3	10.7	4	16.0	-	-
6. Expertise in a special area	1	3.6	3	12.0	-	-
7. Proficiency in computer application use	4	14.3	3	12.0	-	-
Operation stage	**36**	**100.0**	**24**	**100.0**	**3**	**100.0**
1. Professional grade	6	16.7	3	12.5	-	-
2. Professional certificate	2	5.6	7	29.2	-	-
3. Work experience	7	19.4	2	8.3	-	-
4. Soft skills (communications, team building, etc.)	6	16.7	3	12.5	-	-
5. Ability to analyze situations	3	8.3	4	16.7	1	33.3
6. Responsible	3	8.3	2	8.3	1	33.3
7. Observant	3	8.3	-	-	-	-
8. Proficiency in computer application use	6	16.7	3	12.5	2	66.7

The Employee Skills Development section of the survey questionnaire was not fully completed, as one company explained that it was impossible to fill in the questionnaire due to its having no information available, while another company sent an incomplete response.

There are two categories of external training. The companies selected the year (2020) and answered the questionnaire.

The skills development training conducted for company employees was classified into two categories, based on their available data in 2020: a) internal training organized by the company itself, and b) external training organized by other parties.

All of the companies surveyed have specific programs to develop the skills of their employees. These programs include vocational and professional development programs, new employee induction programs, skilled employee apprenticeships, and occupational safety training programs. There are also exclusive programs such as Personal Development, Talent Development, and Inspirational Leadership Programs to encourage and support personal motivation.

3.2 Internal and External Training

A total of 22,187 employees were involved in vocational training, of which 20.5 percent were women. In terms of age, 7,267 were aged 35-44, and 6,921 employees were the ages of 25-34.

All companies organized occupational safety and health training, which was mostly organized internally and involved 15,140 employees. This is followed by professional development training, involving 3,222 employees, of whom 400 (12.4 percent) were women.

In 2020 and 2021, relatively few training programs were conducted by external entities for the mining companies due to pandemic-related lockdowns and quarantines. A total of 6,872 employees were involved in external training, of which 1,598 (23.6 percent) were women. 690 women (43.3 percent), made up the highest percentage of women trainees enrolled in personal development training courses provided by the external entitities.

The low number of women involved in the training is directly related to the small number of female employees among the total number of employees in the companies. The surveyed companies responded that their employees were not discriminated against on the basis of gender and were equally involved in training. The interview respondents, on the other hand, said that female employees were more interested in training and development than men and were more actively involved in training. However, it was pointed out that the companies do not have gender-specific retraining arrangements for women who return to work after their maternity leaves. And they emphasized that when women return to work after long-term leaves, they are more likely to be left behind by their peers in terms of careers. Training and employee skills development planning is very general because the companies do not consider gender-related needs in professional development training, refresher training, and capacity building.

Only one company implements a specially designed program to determine the level of women's professional skills, identify missing skills, and improve the situation and skills of women.

Box 20

There are many union[s] and associations, such as the Mongolian Association of Women Scientists and Engineers and the Association of Women in the Mining Sector. I see these associations as a great opportunity and experience. We can unite our voices and create opportunities for research through these associations. It is also a great opportunity to show that women can work and succeed in the mining industry through [having] its best women workers … as role models.

(Excerpt from stakeholder interview)

The detailed information on the internal and external training provided to the employees in the mining sector is given in Tables 17-26 in Appendix C.

4.0 CONCLUSION

1. Mongolia implements human rights-based gender equality policies through laws and regulations and incorporates them into government policies, development programs, and action plans. Mineral laws and policy documents do not clearly reflect gender content. However, the adoption of a gender policy in the sector marked the beginning of a multifaceted effort to ensure gender equality in the sector's operations. Consequently, progress has been made in incorporating gender equality into the sector's policy and planning. But the results and findings of quantitative and qualitative studies and research show that the implementation of gender equality-related policies and actions is still insufficient, and no significant change in gender equality has been observed in the sector. As well, no analytical work or assessment of the implementation of the sector's gender-responsive policy has been conducted so far.
2. The number of people employed in the mining sector has increased by 47 percent in the last 10 years. However, there has been no increase in the percentage of women employed in the mining industry. Compared to 2010, the percentage of women in the total workforce of the sector has decreased by 7 percent. The relevant rules and internal labor regulations of the surveyed companies prohibit any form of discrimination against employees on the basis of age, sex, ethnicity, or nationality. Further, there is no regulation that sets out a preference for either sex in labor relations or employment. However, survey respondents said that employers are more interested in hiring men due to their own perceptions regarding the specifics of the positions. Gender stereotypes about the suitability of women and men for specific occupations influence the number of female employees in the sector.
3. The new Labor Code regulates mine roster schedules at the national level and introduces a 14/14-day roster system, which opens up some opportunities for women. In addition, the work environment and living conditions of employees are improving due to the introduction of international and occupational safety and health standards by companies operating in the sector. The creation of gender-sensitive and -responsive planning and actions attracts women, who are the less represented sex in the sector.
4. According to the data of the NSO, women have a comparative advantage in terms of education level and occupation positions. Despite that, in terms of the gender distribution of employees of the companies surveyed, men predominate in all occupational groups. The proportion of women workers in administrative, support, and service work is higher. The share of women in management or decision-making positions in companies and government agencies is low. The small number of female decision-makers indicates that women are unable to influence

decision-making. And it shows that the traditional conditions leading to policies and decisions that favor men have not changed. This is due to factors such as the political situation, women's employment opportunities, and social stereotypes.

5. According to the data on the average salary by level of responsibility of the NSO, the share of women in the mining and extractive sector is 17-51 percent lower than that of men, except for Technicians and Associate Professionals. However, according to the Social Insurance General Office, women are paid more on average. The SIGO does not provide information on the classification of salaries by sex, position, occupation, or education, so it is not possible to identify the factors that contribute to the wage gap.
6. During the mining boom years, job growth was equal for men and women. The mining sector employment data for 2010-2020 show that the growth in the mining sector is more supportive of women's employment than men's, while women are more likely than men to be laid off when the sector declines.
7. 44.5 percent of women employees in the the sector work in the Metal Ores sector, which can be explained by the fact that this sector is more technologically advanced and its operation is more automated.
8. All organizations covered by this survey implement professional development, retraining and capacity building training programs, though none of them has regulations based on gender. And no records or registration by sex are kept by the organization. Some companies have filtered data from their human resource registration systems for this study only. Having insufficient gender-distribution data and information makes it difficult to determine the gender impact in the mineral sector.
9. It is projected that the number of job opportunities in science, technology, engineering and mathematics is expected to increase due to the advanced development of technology. However, currently the number of women who have completed degree-level education and currently work in STEM fields is relatively small, according to the survey findings. Consequently, this results in an increased gap between the number of employed men and women in the sector.
10. The companies have made little or no effort to identify women's professional skills and skills gaps, or to improve the working situation, skills and competency of women.
11. Although most companies claim to have gender-responsive policies, programs, and plans, there is a lack of policy planning on how changing career criteria will affect the gender balance of the workforce, how to prevent workplace discrimination due to technological advances, and how to ensure gender equality.
12. The Labor Code regulates the prohibition of sexual harassment, abuse, and violence in labor relations and sets out mechanisms for resolving these issues. Employers are required to develop relevant policies and procedures and conduct

regular training in this regard. Accordingly, companies in the sector are updating their internal labor regulations and codes of conduct. There is a good practice of sharing and introducing the company's policies and procedures to other companies.

13. 11 experts, representing industry stakeholders, who participated in the survey interview were female. This demonstrates that although progress is being made, gender-related stereotypes that limit women employees are also present in the industry.

5.0 RECOMMENDATIONS

1. Classify and establish a gender-based database of employee statistics and improve the data analysis at the national levels, including both the public and private sectors;
2. Evaluate the implementation status of the gender-responsive policy in the mining sector and introduce the results and discuss for further improvement;
3. Improve monitoring and evaluation using the gender-specific indicators to ensure policy implementation;
4. Mining companies should align their gender-responsive policies with the gender-responsive policy in effect in the mining sector;
5. Train state labor inspectors specializing in the field of gender, in line with the Labor Code of Mongolia and other respective policies;
6. Develop mid-term human resource planning in the mining sector, cooperate with educational institutions and companies, and set quotas for women in some professions;
7. Advertise the opportunities for women to work in the mining sector to high school students and the public;
8. Provide comprehensive training on sexual harassment, violence, and discrimination prevention among the employees of mining companies, and develop a mechanism for reporting and protecting the privacy of the employees;
9. Incorporate gender-specific arrangements for employee skills development, refresher training and capacity building training;
10. Disseminate the best practices and cases that change gender stereotypes and perceptions in the sector, and actively involve managers in experience sharing;
11. Influence gender norms and attitudes among employers and the public through campaigns, discussions, and training to increase the awareness of employers and human resource managers about modern human resource development and gender-sensitive strategies, and age-appropriate work planning;
12. Provide opportunities for workers for balancing their family life and career by making working conditions and working hours more flexible.
13. Emphasize women's access to new job opportunities in science, technology, engineering and mathematics, and take policy and planning measures.

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APPENDIX A. LIST OF INTERVIEWED ORGANIZATIONS AND COMPANIES

Government

- Ministry of Labour and Social Protection
- Mineral Resource and Petroleum Authority

Mining Company

- Erdenes Tavantolgoi JSC
- Oyu-Tolgoi LLC

University

- German-Mongolian Institute of Minerals and Technology
- Mongolian University of Science and Technology

Local level (Aimag and Soum)

- Umnugovi aimag/province Women's Federation
- Umnugobi aimag/province Tsogttsetsii Governor's Office

Women and mining NGO

- Women's Association of Mineral Resources
- Women in Mining and Resources Mongolia

APPENDIX B. LIST OF JOB POSITIONS EMPLOYING FEMALES

1	Accountant
2	Accountant/receivables
3	Accountant/capital
4	Accountant/material
5	Accountant/monetary assets
6	Accountant for inter-groups
7	Accountant for salary and for processing plant
8	Admin senior specialist
9	Admin specialist/ bookkeeper
10	Admin, business specialist
11	Admin, tour specialist
12	Administration assistant
13	Administration coordinator
14	Administration manager
15	Administration specialist
16	Administrator
17	Administrator for training management systems
18	Advisor for contract administration
19	Advisor for contract and guarantee
20	Advisor for contract management
21	Advisor for employees database information
22	Advisor for foreign communication
23	Advisor for human resources project
24	Advisor for legal implementation
25	Advisor for legal implementation and database information
26	Advisor for multi-stakeholder cooperation
27	Advisor for occupational communication
28	Advisor for pharmaceutical product sales report and legal implementation
29	Advisor for process improvement
30	Advisor for risk evaluation
31	Advisor responsible for communication product
32	Advisor responsible for employees communication
33	Advisor responsible for occupational relation

34	Advisor responsible for pharmaceutical products sales and improvement
35	Air separation unit equipment operator
36	Analogy control lather base machine operator
37	Analyst responsible for operation service
38	Architect
39	Archive specialist
40	Archive, administration assistant
41	Archive, chief clerk
42	Archive, clerk
43	Archive, senior clerk
44	Archivist
45	Archivist -researcher
46	Asset information management team leader
47	Asset management, equipment condition
48	Asset systems development analyst
49	Assistant employee of the procurement
50	Assistant worker
51	Autocar repairman
52	Automation engineer for relay protection
53	Automation technician for relay protection
54	Bacteria analysis laboratory technician
55	Barman
56	Bedding launderer/washer-ironer
57	Bedding laundry washer
58	Blaster – Laboratory technician
59	Bookkeeper
60	Bookkeeper / tools and materials/
61	Bookkeeper /central warehouse/
62	Bookkeeper /Fuel, lubrication oil /
63	Bookkeeper /Monetary assets/
64	Bookkeeper /Spare parts, tools/
65	Bookkeeper for materials
66	Bookkeeper for production tools and equipment

67	Bookkeeper for recycled materials
68	Bookkeeper of the processing plant
69	Bookkeeper service
70	Bookkeeper/ oil/
71	Bridge and boom crane operator
72	Bridge crane operator
73	Bridge crane operator
74	Brochure, recording specialist
75	Budget coordinator
76	Budget engineer
77	Building and repair workers
78	Building coordinator
79	Business analyzing manager
80	Business client of human resources
81	Business improvement specialist
82	Business improvement specialist
83	Business innovation program specialist
84	Business operation improvement manager
85	Business readiness analyst
86	Business readiness chief advisor
87	Business readiness manager
88	Business readiness specialist
89	Business service manager
90	Business service supervisor
91	Camp administrator
92	Camp assistant worker
93	Camp coordinator
94	Camp manager
95	Camp senior officer
96	Camp service supervisor
97	Camp supervisor
98	Car battery handler
99	Cardiovascular care doctor

100	Caregiver
101	Caregiver/nurse
102	Cash bookkeeper
103	Cash bookkeeper
104	Cashier and capital bookkeeper
105	Cashier, service bookkeeper
106	Charter flight project coordinator
107	Chemical analysis quality control engineer
108	Chemical analysis quality methodology specialist
109	Chemical engineer
110	Chemical material bookkeeper
111	Chemical mixture preparation – Laboratory practitioner
112	Chemical production technologist
113	Chemical wash unit operator
114	Chemist
115	Chief
116	Chief
117	Chief accountant
118	Chief accountant deputy – Department deputy director
119	Chief architect
120	Chief clerk and archivist
121	Chief, crude oil storage facility
122	Chief doctor
123	Chief doctor of the laboratory
124	Chief engineer
125	Chief, fuel storage facility
126	Chief of archive treasury
127	Chief of information fund
128	Chief of the cafeteria
129	Chief of the kindergarten
130	Chief of the laboratory
131	Chief of the library
132	Chief of the restaurant

133	Chief of the service unit
134	Children's discipline supervisor
135	Chlorination equipment operator
136	Choir teacher
137	Civil control engineer
138	Civil engineer
139	Civil structural technologist engineer
140	Clay treatment nurse – cleaner
141	Cleaner
142	Cleaner
143	Cleaner for outside field area
144	Client responsible for human resources completion
145	Clothes bookkeeper
146	Clothes receiver
147	Clothes receiver and giver
148	Clothing room, clothes hanger worker
149	Communication and network engineer
150	Communication specialist
151	Community relations communication specialist
152	Community relations development assistant worker
153	Community relations development manager
154	Community relations development specialist
155	Community representative
156	Company administration unit head
157	Company work committee supervisor
158	Complier
159	Compressor operator
160	Computer systems engineer
161	Concept creator
162	Connection and transfer facility engineer
163	Construction materials production engineer
164	Consultant for legal implementation and permit
165	Consultant for Omnicom systems and clerk

166	Consultant responsible for digital channel and visit at the mine site
167	Consultant responsible for planning & scheduling
168	Container recorder
169	Continuous improvement specialist
170	Contract administrator
171	Contract lawyer
172	Contract specialist
173	Contracted worker
174	Control camera operator
175	Control engineer
176	Control engineer for building operation
177	Control operator
178	Control operator -Dispatcher
179	Control room operator
180	Control specialist for materials
181	Control technician for equipment
182	Control, examination specialist
183	Conveyor operator
184	Cook
185	Coordination specialist for sub-contracted organizations
186	Coordination team supervisor for sub-contracted specialist
187	Coordinator
188	Coordinator for certificated repair
189	Coordinator for permits
190	Coordinator for training information and the documentation
191	Copper product marketing specialist
192	Cost control worker
193	Cost management worker
194	Crane and erection schedule creator
195	Crane operator
196	Crane operator /bridge/
197	Crude oil product management consultant
198	Crusher

199	Crusher operator
200	Customs and tax specialist
201	Customs and tax supervisor
202	Customs clearance document declarant
203	Customs clearance document penner
204	Customs declarant
205	Customs field specialist
206	Cylinder filler
207	Dancer
208	Database administrator
209	Database development, analyzing engineer
210	Database inputting worker
211	Database management worker
212	Database, systems analyst
213	Daycare teacher
214	Dental nurse
215	Dentist
216	Department Chief
217	Department communications specialist
218	Department head
219	Deputy CEOs for financing and economics
220	Deputy Director
221	Deputy director of unit HS
222	Deputy head
223	Deputy responsible for training
224	Designer
225	Diagnosis engineer
226	Director assistant
227	Dispatcher
228	Dispatcher /west/
229	Dispatcher /east/
230	Dispatcher /locomotive/
231	Dispatcher /master/

232	Dispatcher /dump truck/
233	Dispatcher /Mining Equipment/
234	Dispatcher at the railway port transfer
235	Dispatcher for exploration unit
236	Dispatcher- engineer
237	Dispatcher- Superintendent
238	Distributer
239	Distributer /fuel/
240	Division deputy director
241	Division head
242	Doctor
243	Doctor
244	Doctor for occupation-related disease research
245	Doctor researching psychopathy
246	Doctor, hygienist
247	Document control consultant
248	Document control specialist
249	Document control specialist
250	Documentation specialist
251	Drilling machine/equipment operator
252	Drilling operator
253	Drilling, blasting engineer
254	Driver
255	Dump truck driver
256	Ecologist
257	Economist
258	Economist - standards creator
259	Economist /financing and investment analyst/
260	Economist – Accountant
261	Economist / control analysis /
262	Economist /Labor/
263	Economist /Materials normalization/
264	Economist, statistics

265	Efficiency, innovation specialist
266	Efficiency, innovation, training specialist
267	Efficiency, training specialist
268	Electric control engineer
269	Electric engineer
270	Electric equipment repairman
271	Electric equipment service specialist
272	Electric gas welding
273	Electric insemination engineer
274	Electric network engineer
275	Electric water penetration washer
276	Electrical archive specialist
277	Electrical dispatcher
278	Electrical electrician
279	Electrical maintenance supervisor
280	Electrical shift electrician
281	Electrical trainee
282	Electrical translator
283	Electrician
284	Electrician
285	Electrician /Equipment/
286	Electrician for equipment
287	Electrician for high voltage equipment maintenance
288	Electrician for technological process line
289	Electrician for tell-automatic and dispatcher instrumentation
290	Electrician for test and measurement
291	Electronics engineer
292	Emergency doctor
293	Emergency service electrician
294	Emulsion cook
295	Endocrine disease & disorder doctor
296	Endoscopy nurse
297	Engineer

298	Engineer -Translator
299	Engineer / thermal heating, plumping reduction /
300	Engineer /High voltage line/
301	Engineer responsible for pollution
302	Engineer, Procurement, Contract management senior advisor
303	Engineering and technical unit head
304	Engineering economist
305	Entrance permit control supervisor
306	Entrance permit control worker
307	Environment unit head
308	Environmental engineer
309	Environmental rehabilitation expert
310	Environmental specialist
311	Equipment maintenance engineer
312	Equipment, civil facility control engineer
313	Estimation accountant
314	Estimation engineer
315	Estimation specialist
316	Estimation technician
317	Estimator
318	Estimator, order taker
319	Estimator, quality control metallurgist
320	Excavator operator
321	Exhaust gas/air cleaning equipment operator
322	Expatriate and registration specialist
323	Explosive material distributer
324	Explosive substance production machine operator
325	Export sales specialist
326	Feeder operator
327	Filter presser operator
328	Financier
329	Financial accountant
330	Financial advisor

331	Financial analyst
332	Financial assistant employee
333	Financial auditor
334	Financial manager
335	Financial planning specialist
336	Financial report, control compliance specialist
337	Financial senior specialist
338	Financial specialist
339	Financial, business client senior consultant
340	Fire automation master
341	First aid doctor
342	Flotation process engineer
343	Folk treatment practitioner
344	Food hygienist
345	Food production senior technologist
346	Food technologist- Department chief
347	Foreign affairs specialist
348	Fuel bookkeeper
349	Fuel crushing mill operator
350	Functional food nurse
351	Furnace operator
352	Gardener
353	Gardening supervisor
354	Gardening worker
355	Gas blower operator
356	General advisor responsible for domestic region
357	General advisor responsible for internal communication to general public
358	General consultant providing assistant to the project
359	General manager for strategic project and business
360	General manager responsible for social issues
361	General public communication specialist
362	General public media specialist
363	Generator operator for acetylene base equipment

364	Geotechnical engineer
365	Geographical information system program and information analyst
366	Geographical information system's analysts
367	Geographical information/ Administration specialist
368	Geological information specialist
369	Geological input and reporting specialist
370	Geologist
371	Geologist engineer
372	Geologist for geographical information systems
373	Geriatrician
374	Glove sewer
375	Graphic technician
376	Greenhouse agronomist
377	Greenhouse worker
378	Guardian
379	Guide
380	Gynecologist nurse
381	Gynecologist-Chief of the department
382	Head of the administration and human resources department
383	Head of the archive unit
384	Head of the kitchen
385	Head of the Training unit
386	Health & hygiene specialist
387	Health specialist
388	Health technician
389	Heat and ventilation engineer
390	Heat, water supply engineer
391	Heavy duty dump truck repairman for mining technological process
392	Heavy duty machine operator
393	High-risk trainer
394	High voltage electrician
395	Hospitability worker
396	Hospital equipment engineer

397	Housekeeping worker
398	HR specialist responsible for research
399	HS trainer
400	HS training administration specialist
401	HSE specialist
402	HSE trainer
403	Human resource and competency project lead
404	Human resources advisor
405	Human resources and administration worker
406	Human resources and business client specialist
407	Human resources clerk
408	Human resources coordinator
409	Human resources information management specialist
410	Human resources manager
411	Human resources senior advisor
412	Human resources senior specialist
413	Human resources specialist
414	Human resources specialist
415	Human resources specialist – clerk
416	Human resources training and law implementation specialist
417	Hydrogeologist
418	Hygienist
419	Hygienist, infection research doctor
420	Implementation and control specialist for information technology law
421	Import logistic implementation specialist
422	Import market research specialist
423	Improvement specialist
424	Information communication engineer
425	Information processing and analyzing engineer
426	Information processing and analyzing senior engineer
427	Information system coordinator and customer service
428	Information technology administrator
429	Information technology engineer

430	Information, reporting specialist
431	Injection nurse
432	Instrumentation and automation technician
433	Instrumentation engineer
434	Instrumentation trainee
435	Interior repair personnel
436	Internal auditing specialist
437	Internal auditor
438	Internal management coordination senior specialist
439	Inventor engineer
440	Inventory handling specialist
441	Investment specialist
442	Iron workpiece preparator
443	Journalist
444	Jumbo bagging station operator
445	Kitchen assistant
446	Kitchen employee
447	Kitchen food preparation worker
448	Labor organization and normalization engineer
449	Labor relations specialist
450	Laboratory assistant worker
451	Laboratory chemist
452	Laboratory chemist of the processing plant
453	Laboratory practitioner for chemical analysis
454	Laboratory quality manager
455	Laboratory technician
456	Laboratory technician for pharmacy
457	Lathe machine operator
458	Lathe operator senior
459	Lathe operator
460	Laundry worker
461	Law consultant
462	Lawyer

463	Lawyer for criminal law
464	Lead economist for planning
465	Lead engineer
466	Lead engineer of the program software
467	Lead engineer of the system analyst
468	Lead specialist
469	Legal implementation and the pharmaceutical product sales trainer
470	Librarian
471	Lifting operator
472	Lifting senior operator
473	Loader driver
474	Lodge
475	Logistic masters
476	Low voltage trainee
477	Lumberman
478	Machinist
479	Maintenance & planning specialist
480	Maintenance controller
481	Maintenance planner
482	Maintenance schedule developer
483	Management board unit worker
484	Management structure and pharmaceutical product sales manager
485	Manager
486	Manager at the representative office
487	Manager for legal implementation and management coordination
488	Manager responsible for information technology operations
489	Manager responsible for mine infrastructure, service operation
490	Manager responsible for occupational relations
491	Manager responsible for outside report, accounting and recording
492	Manager responsible for primary school education and discipline
493	Manager responsible for procurement services implementation
494	Manager responsible for reserves and the systems
495	Manager responsible for safe operation

496	Manager responsible for senior year education and discipline
497	Manpower mobilization specialist with coronavirus risk management
498	Market research specialist
499	Market research, sales support unit worker
500	Marketing specialist
501	Mason, insulation fitter
502	Masseur
503	Master
504	Master/Hospitality & service unit /
505	Master /shift/
506	Master for road maintenance
507	Master- Superintendent
508	Material coordinator - distributer
509	Material logistics employee
510	Materials senior specialist
511	Materials specialist
512	Materials worker
513	Mechanic engineering trainee
514	Mechanical erection and maintenance personnel for ventilation equipment
515	Media officer
516	Media specialist
517	Medium-term planning engineer
518	Metallurgist for crushing and grinding
519	Methane gas project engineer
520	Methodologist
521	Methodologist-Efficiency personnel
522	Microbiologist
523	Microbiologist engineer
524	Mine assistant worker
525	Mine control, examination coordinator
526	Mine control, examination engineer
527	Mine dispatcher
528	Mine dispatcher

529	Mine service engineer
530	Mine supervisor
531	Mine supervisor
532	Miner
533	Mineral process engineer
534	Mineral surveyor
535	Mineral surveyor
536	Mineral surveyor assistant
537	Mineral surveyor technician
538	Minerals research engineer
539	Mining engineer
540	Mining engineer
541	Mining production centralized workshop worker (Bookkeeper)
542	Mining production engineer (Assistant)
543	Mining technical drawing technician
544	Mobile heavy-duty machine operator
545	Model creator, technologist
546	Monitoring, training engineer
547	Motor coil winding specialist
548	Mould pivot holder
549	Multi-stakeholder cooperation assistant worker
550	Music teacher
551	Musician
552	Network engineer
553	Network line technician
554	Network technician
555	Neurologist
556	New graduate electrical engineer
557	New graduate exploration geologist
558	New graduate financial accountant
559	New graduate geotechnical engineer
560	New graduate information technology engineer
561	New graduate logistics specialist

562	New graduate mechanical engineer
563	New graduate structure, mechanical and piping engineer
564	New graduate training specialist
565	Non-medicine-based treatment nurse
566	Non-metal minerals engineer
567	Nurse
568	Nurse-Supervisor
569	Nursing methodologist
570	Nutritionist
571	Occupational condition engineer
572	Occupational economist
573	Occupational engineer
574	Occupational engineer
575	Occupational health specialist
576	Occupational hygienist
577	Occupational lead economist
578	Occupational monitoring engineer
579	Occupational senior manager
580	Office cleaner
581	Office cleaner
582	Office manager
583	Open pit mine senior specialist
584	Operations deputy – Chief Doctor
585	Operations engineer
586	Operations improvement analyst
587	Operations management analyst
588	Operation mode, estimation engineer
589	Operation Mode, optimization engineer
590	Operations scheduler
591	Operations senior engineer
592	Operations supervisor
593	Operations trainer
594	Operations, maintenance master

595	Operator
596	Operator/control/
597	Operator for roller welding
598	Ophthalmologist
599	Orbit systems worker
600	Organization consultant for operation
601	Organization financial specialist
602	Organizer
603	Otolaryngologist
604	Pediatrician
605	Paint mixer
606	Painter
607	Pastry cooker
608	Payment, estimation and record tracking worker
609	Pediatric nurse
610	Performance Coordination, communications specialist
611	Permit, compliance manager
612	Permit, compliance specialist
613	Permit, legal implementation coordinator
614	Petrographic laboratory manager
615	Petrographic specialist
616	Petrol bookkeeper
617	Petrol filling station distributer
618	Petrol filling station engineer
619	Petrol filling station worker
620	Pharmacist
621	Physical engineer
622	Physicist, Chemist
623	Planner
624	Planner for planned maintenance and service
625	Planning & control specialist
626	Planning assistant worker
627	Planning engineer

628	Planning specialist
629	Planning specialist during planned stoppages
630	Plumping control engineer
631	Plumping Engineer
632	Postal worker
633	Postal worker-typer
634	Practitioner
635	Practitioner for Revitalization
636	Preparator
637	President
638	Presser
639	Price information analysts
640	Process improvement analyst
641	Process plant doctor
642	Process plant operation metallurgist
643	Process plant operator
644	Processing plant metallurgist
645	Processing, quality geologist
646	Procurement analyst
647	Procurement and contract senior specialist
648	Procurement engineer
649	Procurement senior specialist
650	Procurement senior specialist
651	Procurement specialist
652	Procurement specialist
653	Procurement specialist of automatic goods
654	Procurement specialist responsible for plant equipment, spare parts
655	Producer-compiler
656	Product unit price estimator
657	Production automation new graduate engineer
658	Production coordination senior specialist
659	Production engineer
660	Production facility attendant

661	Production facility cleaner
662	Production facility security
663	Production information engineer
664	Production Planning Engineer
665	Production preparative engineer
666	Production systems senior specialist
667	Production training specialist
668	Production work distributer
669	Professor
670	Program writer
671	Progress improvement team leader
672	Project accountant
673	Project assisting worker
674	Project consultant
675	Project control consultant
676	Project control senior specialist
677	Project coordinator
678	Project engineer
679	Project leader
680	Project management analyst
681	Project management specialist
682	Project metallurgist
683	Project senior metallurgist
684	Project senior metallurgist
685	Project senior specialist
686	Project specialist
687	Project worker
688	Public communication and social responsibility manager
689	Pump network operator
690	Pump operator
691	Quality certification and control specialist
692	Quality examiner
693	Quality management engineer

694	Quality management specialist
695	Quality specialist
696	Quality, efficiency specialist
697	Quantity surveyor
698	Radio equipment electrician
699	Radio technician
700	Radioactivity control and safe handling engineer
701	Radiologist
702	Radiology technician
703	Receiver
704	Receiver and cash bookkeeper
705	Reception, information worker
706	Receptionist
707	Receptionist/ dispatcher
708	Record taker/dispatcher /
709	Recording and control senior specialist
710	Recording and control specialist
711	Recording and reporting specialist
712	Recording and reporting specialist assistant
713	Recording manager
714	Recording specialist /sales/
715	Recording specialist /train/
716	Regional development specialist
717	Registered customs specialist
718	Registration and recording doctor
719	Registration nurse
720	Rehabilitation and research specialist
721	Rehabilitation doctor
722	Rehabilitation doctor – Unit Chief
723	Rehabilitation nurse
724	Rehabilitation practitioner
725	Rehabilitation specialist
726	Reject area assistant worker

727	Reject Sump engineer
728	Reliable operation engineer
729	Repair controller
730	Repair master
731	Repair planner
732	Repairman
733	Repairman for instrumentation and automation tools
734	Report consultant
735	Report developer, improvement analyst
736	Report specialist
737	Research engineer
738	Reserves geologist
739	Rigging hoisting and signaling
740	Risk management, coordination advisor during COVID
741	Risk manager
742	Risk, control assistant worker
743	Roller lathe operator
744	Rubber shell creator
745	Safety Advisor
746	Safety manager
747	Safety monitoring engineer
748	Safety trainer
749	Safety training engineer
750	Safety training specialist
751	Safety worker
752	Salary service team leader
753	Salary, estimation employee
754	Salary, promotion specialist
755	Sales analyst
756	Sales bookkeeper
757	Sales specialist
758	Sales specialist
759	Sample preparator

760	Sample taker
761	Sample taker - crusher operator
762	Sand drier
763	Sanitation nurse
764	Scheduler
765	School director
766	Secretary – assistant
767	Secretary – clerk
768	Secretary for Culture, free time sector
769	Secretary of Treasury
770	Security
771	Security
772	Seller
773	Senior accountant
774	Senior accountant of the report
775	Senior advisor for contract
776	Senior advisor for contract
777	Senior business analyst
778	Senior Chef
779	Senior Chemist
780	Senior consultant for cost control
781	Senior consultant for digital media and information
782	Senior consultant for documentation
783	Senior coordinator for mine control and examination
784	Senior database analyst
785	Senior electrical engineer
786	Senior engineer
787	Senior engineer for building operations
788	Senior engineer for civil piping, mechanical and services
789	Senior engineer for maintenance and planning
790	Senior environmental specialist
791	Senior geoinformation supervisor
792	Senior Geologist

793	Senior lawyer
794	Senior manager of human resources and training
795	Senior master
796	Senior mechanical engineer
797	Senior mineralogist
798	Senior mining engineer
799	Senior operator of heavy-duty machines
800	Senior pastry cooker
801	Senior Planner
802	Senior planner for maintenance and planning
803	Senior sales specialist
804	Senior service/cleaner
805	Senior specialist
806	Senior specialist devoted to providing assistance to training management system
807	Senior specialist for accounting and recording
808	Senior specialist for contract management
809	Senior specialist for general public communication
810	Senior specialist for mine entrance
811	Senior specialist for occupational relations
812	Senior specialist for permits
813	Senior specialist for planning and engineering
814	Senior specialist for quality certification and control
815	Senior specialist for risk and control
816	Senior specialist for safety operations
817	Senior specialist for tour and administration
818	Senior specialist for vocation training
819	Senior specialist in engineering
820	Senior specialist in human resources
821	Senior specialist in information technology
822	Senior specialist in planning
823	Senior specialist for Tactical unit
824	Senior specialist responsible for asset, material planning and the systems
825	Senior specialist responsible for customers assistance

826	Senior specialist responsible for materials control
827	Senior specialist responsible for media
828	Senior specialist responsible for site service
829	Senior specialist responsible for transportation at the mine site
830	Senior supervisor
831	Senior teacher
832	Senior translator
833	Senior worker responsible for fuel
834	Service and processing plant accountant
835	Service bookkeeper
836	Service senior worker
837	Service specialist
838	Service worker
839	Service worker for dry cleaning
840	Sewer worker
841	Shaft planner
842	Shaft planning senior specialist
843	Shift master
844	Shift master of ventilation air duct production unit
845	Shift nurse
846	Short-term mine planning engineer
847	Short-term planning senior engineer
848	Signal centralizing, forbidden facility engineer
849	Singer
850	Skills and competency specialist
851	Social worker
852	Sociologist
853	Software program engineer
854	Software program monitoring engineer
855	Sound technician
856	Spare parts senior worker
857	Spare parts worker
858	Spare parts, lubrication, grease, oil material accountant

859	Specialist
860	Specialist / research /
861	Specialist / Social responsibility/
862	Specialist / training /
863	Specialist / Control/Examination/
864	Specialist /Admin assistant /foreign communication/
865	Specialist for civil building handover to operation
866	Specialist for clerk and archive
867	Specialist for examination act
868	Specialist for forestry
869	Specialist for human resources assistance and service
870	Specialist for human resources completion
871	Specialist for human resources development
872	Specialist for human resources project
873	Specialist for human resources strategic planning
874	Specialist for legal implementation
875	Specialist for meeting protocol and archive
876	Specialist for occupational relations
877	Specialist for official meetings
878	Specialist for operations, business improvement
879	Specialist for order planning
880	Specialist for permits
881	Specialist for planning and control
882	Specialist for procurement and contract
883	Specialist for procurement and supply
884	Specialist for risk and control
885	Specialist for strategic projects
886	Specialist for surface facilities
887	Specialist responsible for bank payment & estimation
888	Specialist responsible for chemical substances and rejects
889	Specialist responsible for client assistance
890	Specialist responsible for common methodology, employee development
891	Specialist responsible for events

892	Specialist responsible for human resources policy and planning
893	Specialist responsible for internal work
894	Specialist responsible for logistic implementation
895	Specialist responsible for multi-stakeholder cooperation
896	Specialist responsible for progress improvement
897	Specialist responsible for Sarbanes-Oxley Act and legal implementation
898	Specialist responsible for standards
899	Specialist responsible for transport
900	Specialist-Call center
901	Standards engineer
902	Statistics doctors /health/
903	Steam, water heating equipment operator
904	Flight attendant
905	Storage manager
906	Sub-contracted organization management leader
907	Sub-station dispatcher
908	Supervisor (Together program)
909	Supervisor for culture and general public
910	Supervisor for Culture and sports
911	Supervisor for water supply and heating central facility
912	Surgery medic
913	Surgery nurse
914	Surveyor engineer
915	Systems and database information analyst
916	Systems communications specialist
917	Systems senior engineer
918	Tactical engineering, New graduate
919	Tailor
920	Tailor
921	Tax accountant
922	Tax consultant
923	Tax senior manager
924	Tax senior specialist responsible for the project

925	Teacher
926	Teacher assistant
927	Team leader for payment, estimation and cost management
928	Team leader responsible for tax
929	Technical and procurement engineer
930	Technical document developer
931	Technical senior typer
932	Technical software creator engineer
933	Technician
934	Technician - Inventor
935	Technician for copying & duplicating
936	Technician for instrumentation and automation
937	Technician for lighting
938	Technician for metallurgical estimator
939	Technician for polluted water pipe and water treatment facility
940	Technician for tactical engineering
941	Technician for X-Ray spectrometer equipment
942	Technician-Geologist
943	Technological material market research specialist
944	Technologist
945	Technologist engineer
946	Technologist engineer
947	Technologist engineer of rubber goods
948	Technology optimization engineer
949	Tell-mechanic engineer
950	Test, measurement and protection engineer
951	Therapeutic
952	Therapeutic, Hepatologist
953	Thermal center panel operator
954	Thermal center station operator
955	Thermal instrumentation and automation tools repairer
956	Thermal processor
957	Thickener

958	Ticket taker -Cleaner
959	Time recorder
960	Tools and equipment compiler
961	Tour coordinator
962	Tour management coordinator
963	Tour supervisor
964	Tour worker
965	Trainee
966	Trainer on-the-job training
967	Training advisor
968	Training assistant employee
969	Training coordinator
970	Training manager
971	Training organizer
972	Training program developer
973	Training scheduler
974	Training senior specialist
975	Training specialist
976	Training specialist, translator
977	Transfer fixer – binder
978	Translator
979	Translator of the management board
980	Translator supervisor
981	Transport admin specialist
982	Transport train handler
983	Treatment facility engineer
984	Turbine assistant operator
985	Turbine operator
986	Typer
987	Underground mine geologist
988	Underground mine logistics operator
989	Underground mine logistics team leader
990	Underground mine logistics team leader

991	Underground mine office manager
992	Underground mine operations trainer
993	Underground mine operators trainee
994	Underground mine safe operations transfer specialist
995	Underground mine shaft operation trainer
996	Unit head
997	Unit head
998	Unit master
999	Unitary tactical inspector
1,000	Unitary tactical scheduler
1,001	Unitary tactical senior inspector
1,002	United operations program management specialist
1,003	United operations supervision worker
1,004	Utilization master for gas supply equipment
1,005	Ventilation and plumbing piping technician
1,006	Vice president for human resources and competency development
1,007	Vice-president
1,008	Vocational training program specialist
1,009	Waiter
1,010	Warehouse assistance personnel
1,011	Warehouse bookkeeper
1,012	Warehouse chief
1,013	Warehouse chief for combustible, lubrication & grease material
1,014	Warehouse personnel
1,015	Warehouse senior personnel
1,016	Wash & dry machine operator
1,017	Wash equipment operator
1,018	Wash equipment operator
1,019	Wash machine operator
1,020	Washroom cleaner
1,021	Washroom cleaner
1,022	Water usage specialist
1,023	Water, steam optimization & usage engineer

1,024	Weigh operator
1,025	Weighing and recording specialist
1,026	Weighman
1,027	Welder
1,028	Welder, machine operator
1,029	Welding trainee
1,030	Work committee leader
1,031	Work distributor
1,032	Work distributor-gardener
1,033	Worker at the wardrobe – Cleaner
1,034	Worker for food production technologist
1,035	Worker providing assistance to emergency team and safety operations
1,036	Worker providing technical assistance
1,037	Worker responsible for fuel
1,038	X-Ray analysis engineer
1,039	X-Ray spectrometer analysis laboratory technician
1,040	X-Ray technician
1,041	Chief of explosive materials storage
1,042	Heavy Duty equipment & machinery operator

APPENDIX C. INTERNAL AND EXTERNAL TRAINING

Table 16. Number of employees involved in skills development training, by sex

Type of skills	Total	Percent (%)	Men	Percent (%)	Female	Percent (%)
	22,187	100.0	17,632	100.0	4,555	100.0
General skills training	**605**	2.7	557	3.2	48	1.1
Professional skills training	**3,222**	14.5	2,822	16.0	400	8.8
Occupational safety and health training	**15,140**	68.2	11,836	67.1	3,304	72.5
General knowledge improvement training (computer applications and other)	**803**	3.6	594	3.4	209	4.6
Introductory training on laws and regulations	**720**	3.2	596	3.4	124	2.7
Foreign language training	**104**	0.5	54	0.3	50	1.1
Productivity improvement training	**626**	2.8	334	1.9	292	6.4
Harassment prevention training	**404**	1.8	352	2.0	52	1.1
Training on internal labor regulations	**404**	1.8	352	2.0	52	1.1
Induction training for new hires	**22**	0.1	12	0.1	10	0.2
Adaptation training for employees (after their probation period)	**22**	0.1	12	0.1	10	0.2
Equipment training	**115**	0.5	111	0.6	4	0.1

49.8 percent of the employees involved in training are executive officers. 10.7 percent of executives are women.

Table 17. Number of employees involved in skills development training, by position level, by sex

Level of responsibility	Total	%	Men	%	Female	%
	22,569	100.0	18,136	100.0	4,433	100.0
Managerial level	**2,321**	10.3	2,073	11.4	248	5.6
Executive level	**11,355**	50.3	9,474	52.2	1,881	42.4
Support service	**8,893**	39.4	6,589	36.3	2,304	52.0

Table 18. Number of employees involved in skills development training, by positions

Types of jobs	Total	%	Men	%	Female	%
	7,741	100.0	7,059	100.0	682	100.0
Administration	315	4.1	289	4.1	26	3.8
Finance	164	2.1	123	1.7	41	6.0
Engineer	1,863	24.1	1,700	24.1	163	23.9
Driver	4,874	63.0	4,493	63.6	381	55.9
Operator, machinist	156	2.0	156	2.2	-	-
Servicepeople, welder	137	1.8	137	1.9	-	-
Electrician	52	0.7	39	0.6	13	1.9
Other	180	2.3	122	1.7	58	8.5

In terms of type of training, 47.7 percent of the trainees participated in induction trainings.

Table 19. Types of skills development training

Types of training provided	Total	%	Men	%	Female	%
	8,821	100.0	8,023	100.0	798	100.0
Issued a certificate	448	5.1	406	5.1	42	5.3
One-time	2,100	23.8	1,846	23.0	254	31.8
Induction	4,209	47.7	3,872	48.3	337	42.2
Professional skills development	1,459	16.5	1,342	16.7	117	14.7
General skills development	605	6.9	557	6.9	48	6.0

In terms of employee training fields, regular OSH training is predominant, followed by personal development and technical skills development training.

Table 20. Number of employees trained, by fields of skill development training

Fields in which employees were trained	Total	%	Men	%	Female	%
	19,120	100.0	14,917	100.0	4,203	100.0
Personal skills development training	1,108	5.8	875	5.9	233	5.5
OSH training, repeatedly	5,852	30.6	5,165	34.6	687	16.3
Technical skills development	947	5.0	871	5.8	76	1.8
General knowledge training	300	1.6	276	1.9	24	0.6
6 SIGMA	36	0.2	18	0.1	18	0.4

Training for employers	20	0.1	18	0.1	2	0.0
English language training module 1	39	0.2	21	0.1	18	0.4
English language training module 2	24	0.1	16	0.1	8	0.2
English language training module 3	11	0.1	7	0.0	4	0.1
Productivity improvement basic tools training	178	0.9	107	0.7	71	1.7
Productivity improvement advanced tools training	162	0.8	79	0.5	83	2.0
Refresher training	120	0.6	120	0.8	0	0.0
Piping and pressure vessel operation safety training	182	1.0	137	0.9	45	1.1
Target group training	190	1.0	164	1.1	26	0.6
Ionizing radiation safety training	24	0.1	19	0.1	5	0.1
Pre-master training	12	0.1	2	0.0	10	0.2
Training for chief and head of mine operation units	146	0.8	127	0.9	19	0.5
Professional grade training	701	3.7	578	3.9	123	2.9
High-altitude safety training	150	0.8	144	1.0	6	0.1
Training for all staff	7,275	38.0	5,028	33.7	2,247	53.5
Russian language training module 1	8	0.0	3	0.0	5	0.1
Russian language training module 2	10	0.1	5	0.0	5	0.1
Safety training for lifting and transporting machinery	105	0.5	96	0.6	9	0.2
Training on project management	90	0.5	47	0.3	43	1.0
Transport safety training	44	0.2	44	0.3	0	0.0
Training for OSH specialists	32	0.2	26	0.2	6	0.1
Safety training for handling toxic and hazardous chemicals	127	0.7	57	0.4	70	1.7
Dual specialization training	323	1.7	294	2.0	29	0.7
Soft skills and foundation of productivity training	160	0.8	83	0.6	77	1.8
Confined space safety training	39	0.2	39	0.3	0	0.0
New profession training	70	0.4	50	0.3	20	0.5
Induction training for new hires	314	1.6	165	1.1	149	3.5

Orientation training for new hires	22	0.1	12	0.1	10	0.2
Adaptation training for employees (after their probation period)	22	0.1	12	0.1	10	0.2
Professional training	277	1.4	212	1.4	65	1.5

Table 21. Number of employees involved in skills development training, by training types (external)

Type of skills training	Total	%	Men	%	Female	%
	6,872	100.0	5,274	100.0	1,598	100.0
Professional skills development training	2,014	29.3	1,744	33.1	270	16.9
Professional knowledge development training	621	9.0	568	10.8	53	3.3
Occupational safety and health knowledge improvement training	100	1.5	84	1.6	16	1.0
Training on business development	545	7.9	297	5.6	248	15.5
Goal 2022	20	0.3	8	0.2	12	0.8
7 qualities of an effective individual	71	1.0	59	1.1	12	0.8
Welding training	27	0.4	27	0.5	-	-
Training in online business development	3	-	-	0.0	3	0.2
EQ training	95	1.4	66	1.3	29	1.8
Communications and team building training	1,189	17.3	992	18.8	197	12.3
General knowledge training (Computer skills and other)	12	0.2	9	0.2	3	0.2
Personal development training	1,846	26.9	1,156	21.9	690	43.2
Document processing training	40	0.6	26	0.5	14	0.9
Training for educational degree	70	1.0	54	1.0	16	1.0
Orientation training for new hires	22	0.3	12	0.2	10	0.6
Adaptation training for employees (after their probation period)	22	0.3	12	0.2	10	0.6
Risk management training	60	0.9	49	0.9	11	0.7
Equipment training	115	1.7	111	2.1	4	0.3

Table 22. Number of employees involved in skills development training, by position level, by sex (external)

Level of responsibility	Total	%	Men	%	Female	%
	6,637	100.0	5,055	100.0	1,582	100.0
Managerial	1,325	20.0	1,095	21.7	230	14.5
Executive	4,671	70.4	3,620	71.6	1,051	66.4

Support service	641	9.7	340	6.7	301	19.0

Table 23. Number of employees involved in skills development training, by position (external)

Types of jobs	Total	%	Men	%	Female	%
	5,263	100.0	3,813	100.0	1,450	100.0
Administrative	908	17.3	802	21.0	106	7.3
Finance	366	7.0	136	3.6	230	15.9
Engineer	845	16.1	681	17.9	164	11.3
Operators, machinist, drilling	158	3.0	158	4.1	-	-
Driver	920	17.5	850	22.3	70	4.8
Professions in engineering	507	9.6	415	10.9	92	6.3
Business management	100	1.9	42	1.1	58	4.0
Teacher	27	0.5	6	0.2	21	1.4
Environmental protection, ecology	14	0.3	1	0.03	13	0.9
Other	1,418	26.9	722	18.9	696	48.0

One of the differences from the internal training is that 32.9 percent of the trainees received certificates, professional licenses and certificates. 14.6 percent of these 1,946 trained employees are women.

Table 24. Number of employees trained, by type of training (external)

Types of training provided	Total	%	Men	%	Female	%
	5,911	100.0	4,567	100.0	1,344	100.0
Issued a certificate	1,359	23.0	1,093	23.9	266	19.8
One-time	3,881	65.7	2,837	62.1	1,044	77.7
Personal development	74	1.3	59	1.3	15	1.1
Issued a professional certification	444	7.5	430	9.4	14	1.0
Issued a certificate of competency	143	2.4	138	3.0	5	0.4
Experience sharing, internship	10	0.2	10	0.2	-	-

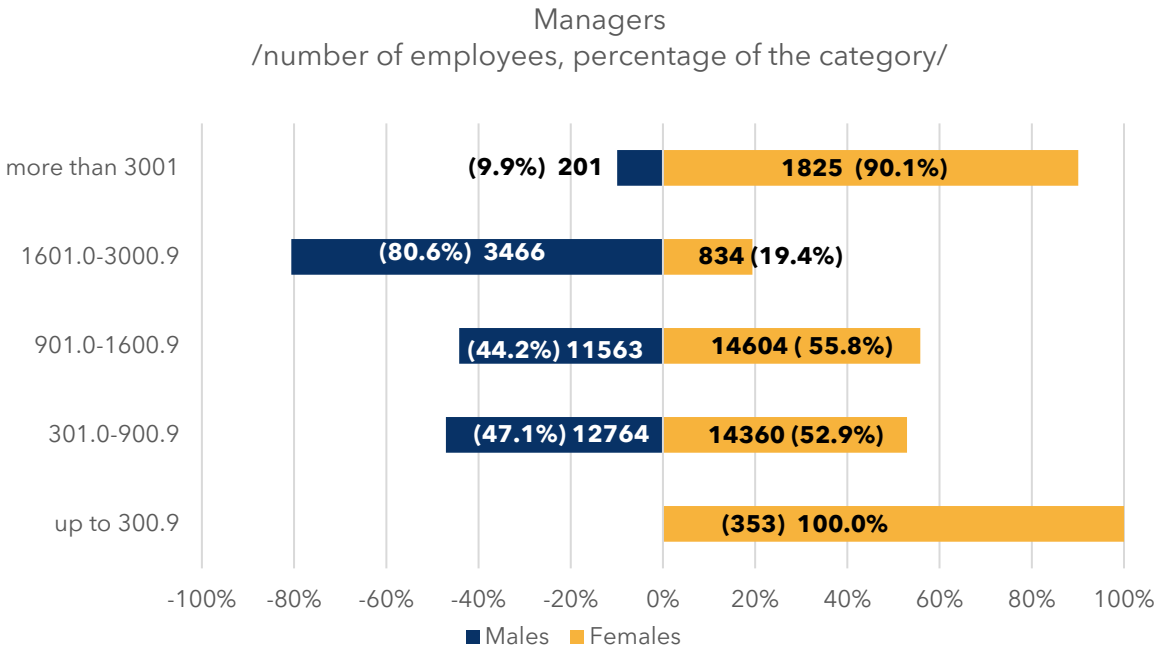
The companies mostly contract the external training providers for the training in management, professional development, law and legal studies, and soft skills.

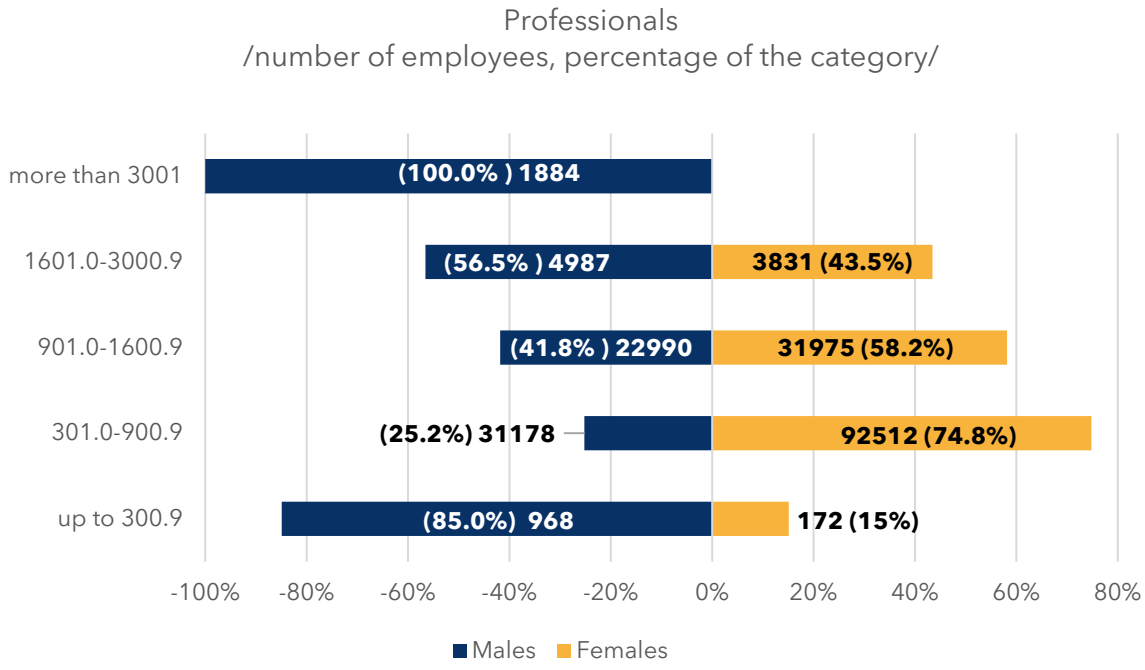
Table 25. Number of employees involved in skills development training, by field, by sex (external)

Fields in which employees were trained	Total	%	Men	%	Female	%
	3,885	100.0	2,747	100.0	1,138	100.0
Vocational training	597	15.4	567	20.6	30	2.6
Professional training	621	16.0	568	20.7	53	4.7
Leadership	169	4.4	106	3.9	63	5.5
Engineering	79	2.0	75	2.7	4	0.4
Management	1,099	28.3	734	26.7	365	32.1
Marketing	51	1.3	25	0.9	26	2.3
Software	27	0.7	26	0.9	1	0.1
Production, technology	113	2.9	93	3.4	20	1.8
Attitude	479	12.3	171	6.2	308	27.1
Health	5	0.1	1	0.04	4	0.4
Energy	3	0.1	1	0.04	2	0.2
Finance	141	3.6	35	1.3	106	9.3
OSH	128	3.3	113	4.1	15	1.3
Legal study	366	9.4	229	8.3	137	12.0
Foreign language	7	0.2	3	0.1	4	0.4

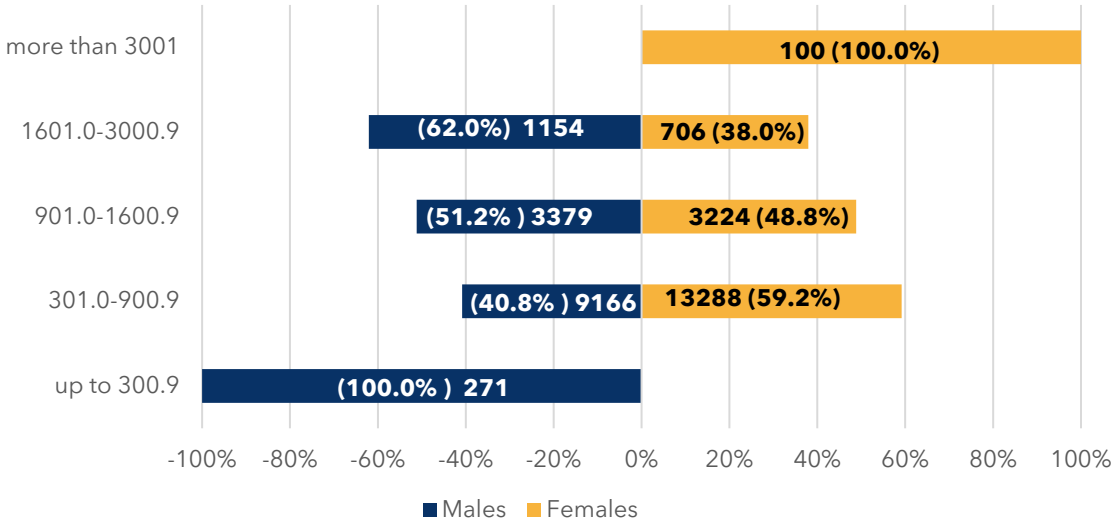
APPENDIX D. SALARY CLASSIFIED BY LEVEL OF RESPONSIBILITY IN THE MINING SECTOR

The mining sector information about salary classified by the level of responsibility is given below based on the data of 2020 from the NSO, MLSF

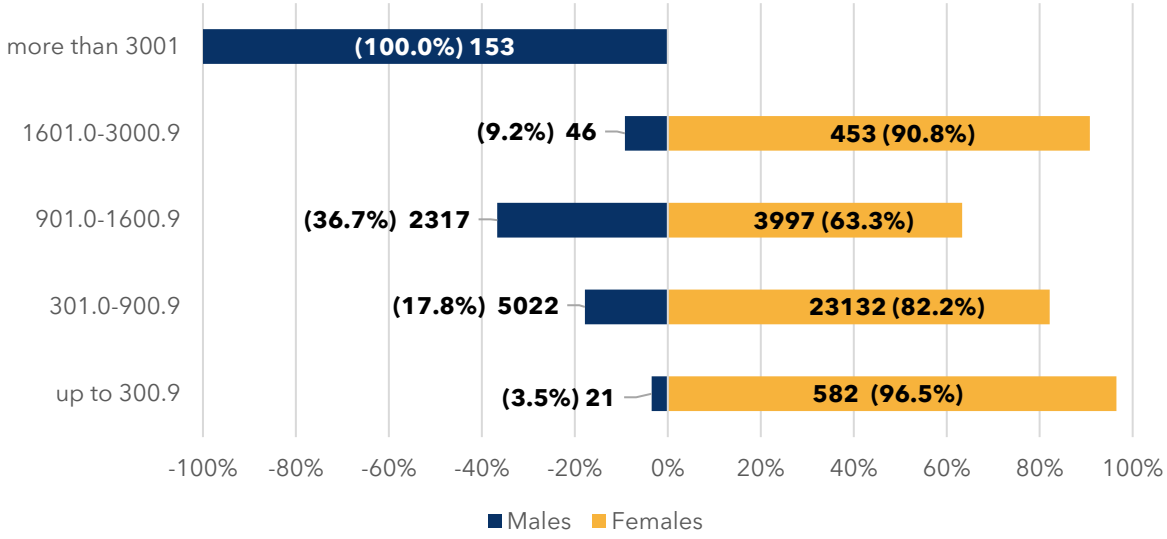




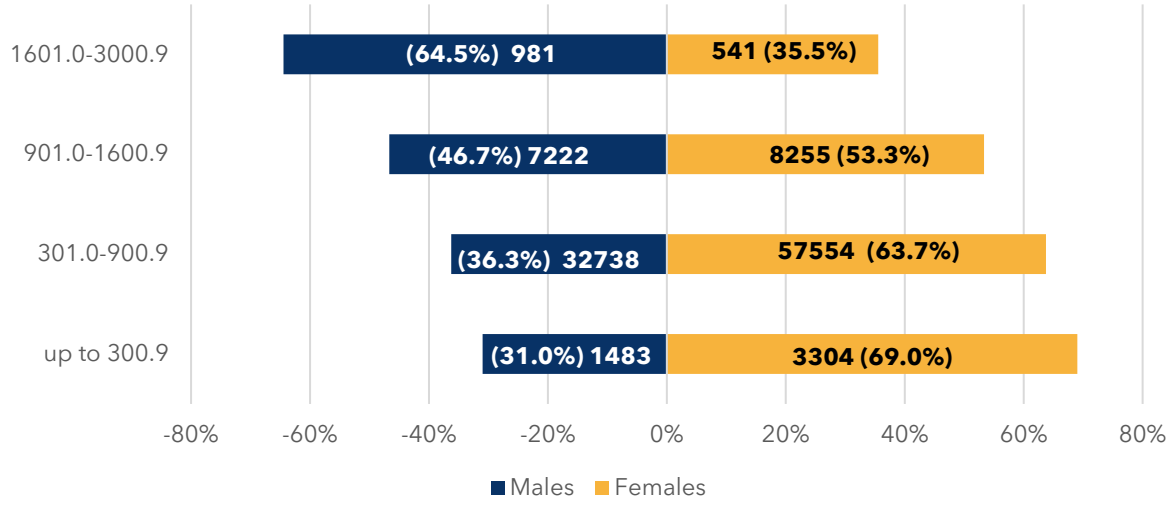
Technicians and associate professionals
/number of employees, percentage of the category/



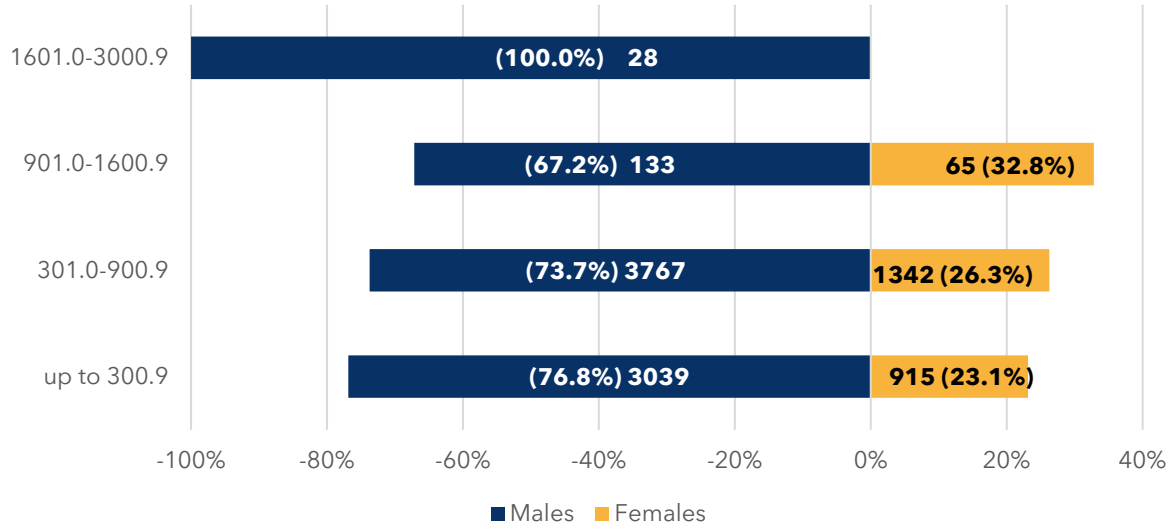
Clerical support workers
/number of employees, percentage of the category/



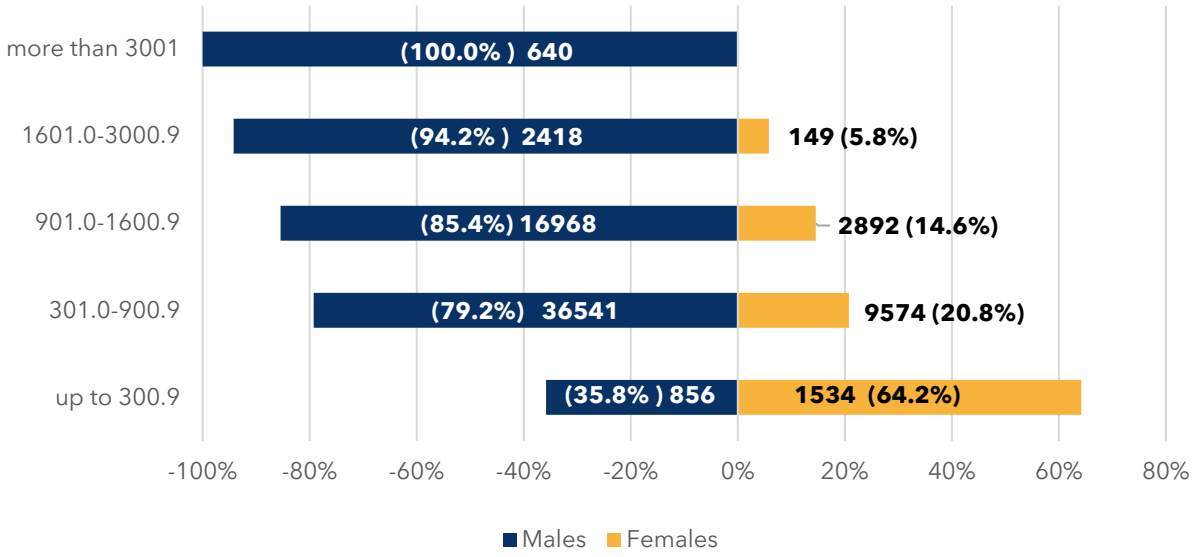
Services and sales workers
/number of employees, percentage of the category/



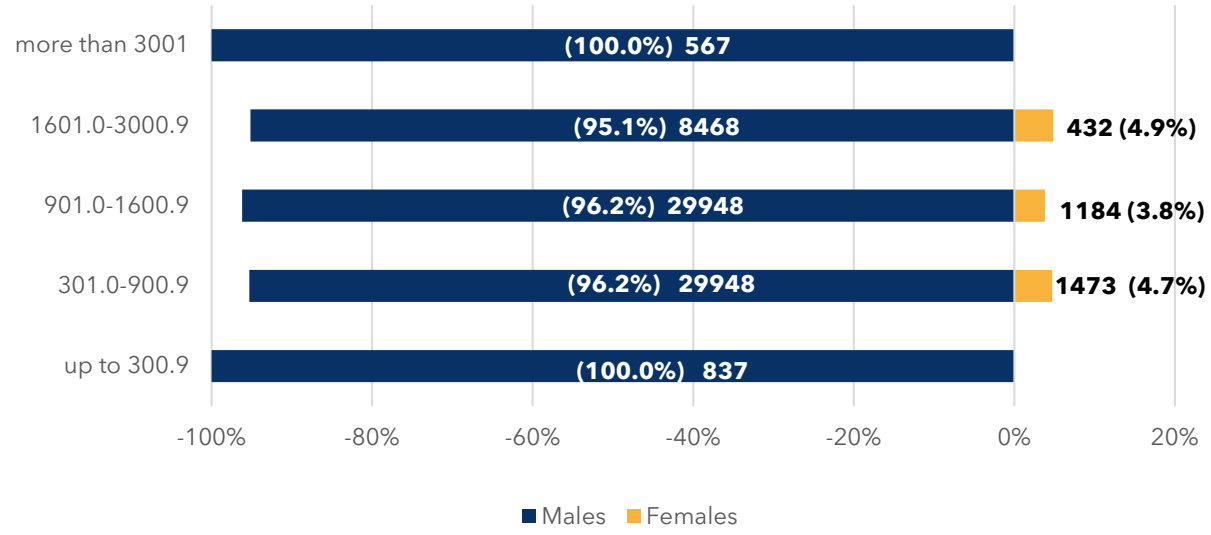
Craft and related trades workers
/number of employees, percentage of the category/



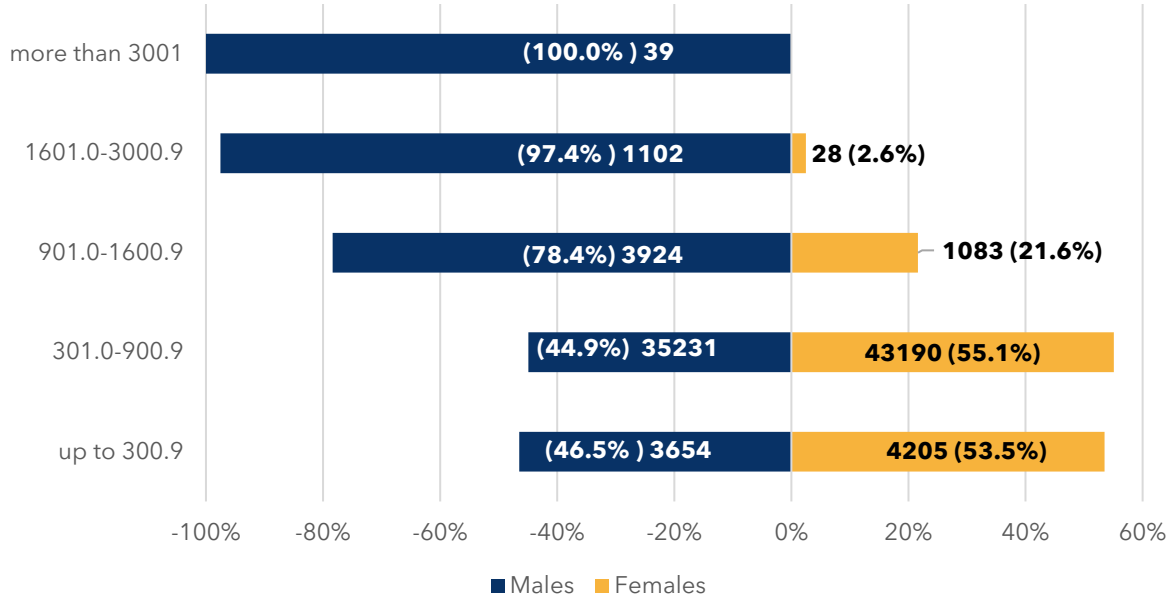
Skilled agricultural, forestry and fisheries
/number of employees, percentage of the category/



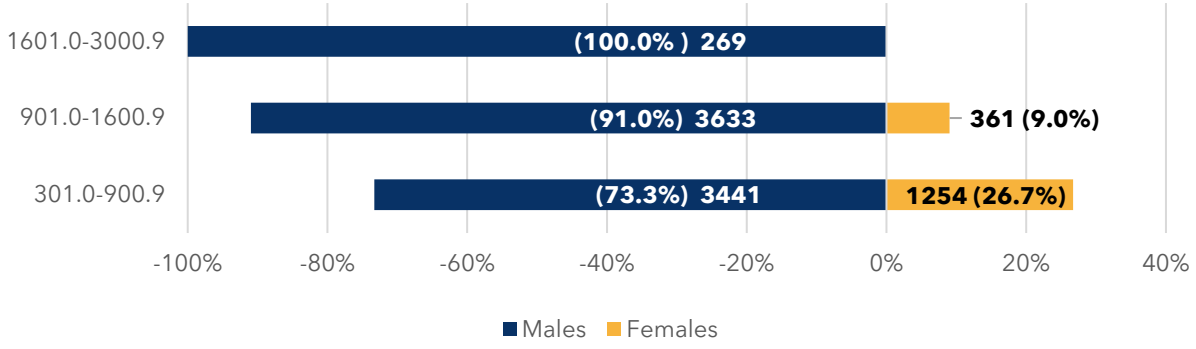
Plant and machine operators, and assemblers
/number of employees, percentage of the category/



Elementary occupation
/number of employees, percentage of the category/



Armed forces occupations
/number of employees, percentage of the category/



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