

The thematic area

Gender and Diversity in Mining

State of the art

The mining industry stresses the importance of diversity and gender equality. Companies are proud to say that at some divisions or specific work teams there are now a mix of people, for example numerous nationalities and gender balance. The companies' diversity policy typically addresses prevention of discrimination based on gender, ethnicity, religion, sexual orientation and age etc., but also point at the gender and age imbalance as a pressing issue and suggests strategies to recruit more women as well young people.

The mining industry is a typical old and "classic" male dominated sector, but over the last 15 years the proportion of women has increased. Within the mining sector the percentage of women in white-collar is 26% and in blue-collar 15% and underground 10% women. This development mainly reflects recent strategic recruitment of women. However, there are many small companies in the mining sector, suppliers, contractors and entrepreneurs, where most of the employees are men. Here we find technological experts and consultants, construction contractors, equipment manufacturers and transport companies, which also are traditionally male sectors of working life. This type of external and temporary staff is becoming more common at mining sites, but is often invisible in a company's gender statistics. In trade unions, women are more common than before, but men are still in high positions as leaders and chairmen. To sum up, there is still an obvious numerical gender imbalance within mining companies. This is also a pattern for the mining sector in total, including research and education.

Men/masculinity is also a common theme in traditions and norms of global mining work. Although the industry has developed in many ways, old cultural expressions based on ideas of a close relationship between mining and masculinity are still evident. There is for example an idealisation of a certain type of masculinity embedded in the old manual, heavy and dangerous mining work, the "macho-masculinity". Research shows that such stagnation can create problems for companies as well as individuals in terms of hinders for flexibility, work environment, efficiency, learning and organisational and technological development. Some examples of this may be informal opposition to safety procedures, new technologies (automation, digitalisation), gender equality and more women at the workplaces. Taken together this implies problems with organisational development and recruitment. This is one reason why mining companies of today are interested in more knowledge about gender issues – or more precise: knowledge on *how* to break gender patterns.

Eventual contribution to the state of the art for the thematic area on sustainability:

Breaking gender patterns is also important in communities around the Swedish mining industries. In Kiruna, Gällivare and other mining communities the situation is paradoxical. In regressive times for the industry, these rural areas suffer from emigration, stagnation and cuts in the public sector. In progressive times the shortage of public service, housing, factory buildings and labour is a problem and the mining companies have difficulties to recruit locally. It is a complex demographic challenge to get people, especially young women, who are willing to live and work in these communities. A contributing factor may be that mining communities, more than others, have a history, culture and working life which, somewhat simplified, can be described as traditional, unequal, gender segregated and male-centred. A gender-divided economy with a low degree of variation is vulnerable in many ways, especially a labour market that centers on mining which so clearly reflects the ups and downs in the global market. If women continue to move out to the same extent as today, some communities may be reduced to mining areas with "fly-in/fly-out-personnel". The mining communities want to avoid a service sector of low paid women that serve a mining-population of well-paid weekly commuting men. There is a risk that the future holds "more of the same" and the same social problems. A key challenge is to break up the gendered structure of the industry and in the local labour market, as well as to integrate flexibility to change.

1. Summary/purpose of the thematic area

The thematic area *Gender and Diversity in Mining* is based on gender theoretical research as well as research on diversity, to meet the future challenges of capacity building as well as productivity, for an internationally competitive and socially sustainable mining industry. The thematic area also establishes critical, multidisciplinary and applied gender and diversity research in the Swedish mining industry as a field of excellence. The aim is to form visions, policies and financing that enable research that can contribute to a more gender equal, diverse and socially sustainable development of the mining industry. In 2045, Swedish mining is well known for being world-class at breaking ore and gender patterns and for creating and sustaining gender equal organisations and workplace cultures based on diversity for efficiency, productivity and innovation as well as prosperous regions and attractive mine communities in collaboration with local actors in society.

Global competitiveness, new technology, digitalisation and the implementation of effective, safe and sustainable mine production processes place the mining industry in need for skilled personnel and expertise, with wide and new type of skills and knowledges. A challenge for the future is to engage and retain new target groups in all social groups, especially young people and women, to education and jobs in the mining sector. For future capacity building, diversity and gender equality initiatives are a potential for additional global competitiveness, also in achieving a mining sector that is viable and sustainable for Sweden. Social sustainable development is about building technology, communities, organisations and clusters where humans are at the centre of development and innovation – where no groups are disadvantaged by formal and informal structures. Diversity and gender issues often focus on external solutions for the problems with under-representation, for example of women in mining. It is important that women in a better way be included, respected and valued. Equally important is to understand and change the existing internal organisations, including the cultures and norms within the majority (for example the men in mining). Today the overall gender pattern of the mining sector is characterised, more or less, by male stereotypes – in all parts of the sector, in the mining companies, in related business clusters, in mining communities and overall society as well as in education, research and innovation. Changing the old “macho-culture” is one important step in creating safe and flexible workplaces – and attractive, sustainable and productive mining workplaces – better suited for the high-tech mining work of the future. From this point of view, a critical gender and diversity perspective on Swedish mining is central.

2. Objectives and KPI

In 2045 the Swedish mining sector is:

- World leading in mining and gender equality and diversity.
- Competing with attractive, gender equal and culturally diverse workplaces for efficiency, productivity and innovation.
- Generating a prosperous and sustainable mining sector and mine regions characterised by openness and tolerance for all women and men, in all ages.

The long-term goal for the Swedish mining industry is to be world leading in efficient and innovative organisations based on gender equality and diversity. Midterm goals are to attract competence through responsibility and value-driven business development aimed at sustainable development and increased attractiveness by offering disruptive technology change and the development of a new industry. The short-term goal is to create new conditions for increased equality and diversity as well as institute new knowledge and research on gender, diversity and gender equality in the mining sector that will facilitate the long- and mid-term goals. It involves theoretical deepening but also need-driven development of methodologies and evaluation of best practices. An interactive structure for knowledge exchange and collaboration for all actors of the mining sector is necessary for successful implementation.

3. Research and innovation needs, strategies and actions

The industry faces challenges not only regarding breaking ore but also breaking gender patterns. The Swedish mining industry has for a long time been centred on men and associated with male-dominated activities. If nothing is done also future innovation, research and development are most likely to be tapered similarly. In order to secure safe, flexible and innovative high-tech mining and attractive workplaces, there is a need for more research and solid understanding of what the gender structures looks like, how gender inequality operates, at what costs and, most importantly, how problematic and unequal gender positions and patterns can be challenged and changed – and how diversity and gender equality can be constructed. The research should draw on critical theories on gender, gender equality and diversity. Parts of the research need to be theoretical in order to fill the research gap. It is also important that large parts of this research is applied and is done in close collaboration with the mining companies as well as with other actors. In this way it could connect to ordinary technological and organisational development processes in the mining context.

Some suggested themes for research are:

- Methods for systematic gender equality and diversity measures including mapping, risk assessment, measures, control and learning.
- Good psychosocial work environment (including culture, norms, attitudes, behaviour, jargon) for all women and men.
- Versatile and gender and diversity aware strategic recruitment, promotion and retention practices in the mining industry.
- Gender equality, diversity and innovation capabilities in the mining sector.
- Gender equality and diversity among mining entrepreneur companies, temporary staff and similar.
- The effects of the digital transformation of mining work on gender equality, diversity, attractiveness, workplaces, work environment and work organisations.
- Gender equality and diversity in the global mining sector and the relations with the local workplaces and the local societies.

Along the line of research areas these support actions are suggested:

- Develop systematic gender divided statistics in industry, clusters, education and academia etc.
- Create a learning platform where the mining companies can evaluate their diversity and gender equality related activities – to support best practice and cooperation.
- Encourage collaboration between industry and society for attractive, diverse and gender equal mining communities that are also flexible to change.

4. Expected impact

Research and actions within the thematic area *Gender and diversity in mining* has potential for a large impact on the Swedish mining industry's global competitiveness and for a vital and socially sustainable mining work sector in Sweden. The research will also contribute to a general and deeper understanding of problematic structures, as gender patterns, in working life and how to change these.

Technical

- Improved implementation of new technology.
- Improved implementation of effective and safe production.
- Creativity and innovativeness in organisational and technological development.

Economical

- Improved competitiveness through diverse capacity building.
- Flexibility to change and development within the industry.
- Flexibility to societal progression, locally and globally.

- Reduced vulnerability due to a gender-segregated economy and labour market.
- Sustainable economic growth in rural regions in Sweden.

Social

- Improved competence recruitment – thanks to possibilities to attract all sorts of skilled people to the industry, both men and women.
- Safe, healthy and attractive mining workplaces based on modern leadership and technology.
- Enable more women to stay in mining regions.
- Additional employment opportunities for men and women.
- Prevent fly-in-fly-out societies.
- Attractive, sustainable and creative mining communities for men and women.