

Supporting Inclusive Resource Development (SIRD) East Africa TRAINING PROGRAM 2019





Global Affairs Canada Affaires mondiales Canada









Risk Assessment

Background

- 2.3 million occupational health related deaths occur each year (WSH Institute)
- The "no harm" approach:
 - Occupation illnesses are preventable;
 - Repeat occurrences should not occur; and
 - Consistent and preventative standards are implemented
- Occupational illnesses have widespread negative impacts



Agenda

- Risk Assessment in Canada
- Occupational Health Risk Assessment (HRA)
- When to Conduct an HRA
- Steps in the HRA Process
 - A Gender-Sensitive Approach
- The Benefits of HRAs and Other Risk Assessment Models
- The Right to Refuse Unsafe Work



Risk Assessment in Canada

- Canada: Canada Occupational Health and Safety Regulations and the Canada Labour Code
- Ontario: Regulation 854 Mines and Mining Plants under the Occupational Health and Safety Act





Source: Women in Mining Canada

Occupational Health Risk Assessment (HRA)

- International Council on Mining & Metals (ICMM)
- HRA = proactive and systemic approach to identifying, analyzing and controlling workplace health and safety hazards based on risk
- A collaborative process





The Use of HRAs in the Extractive Sector

- HRAs are complex due to the range and depth of the mining life cycle
- 4 Key Elements:
 - 1. Identification of hazards and their sources;
 - 2. Estimation of the potential for exposure and health effects;
 - 3. Quantification of exposures; and
 - 4. Assessment of risk through:
 - I. the use of specific techniques
 - II. the identification and evaluation of control effectiveness
- Goal = to implement measures to prevent the release of hazards and minimize the effects of hazards



When to Conduct an HRA

- Ontario: employers are required to conduct a risk assessment as often as necessary and at least annually
- •ICMM recommends an HRA be conducted or reviewed in relation to:
 - All new routine and non-routine exploration, design and construction activities
 - Existing operations
 - Changes to existing activities
 - Following an incident



Steps in the HRA Process - Identification

Step 1: Identification of Issues

- A specialist team identifies hazards in the workplace, their sources and harmful effects
- Specific hazards and health risks affect workers in the mining industry:
 - Physical environment
 - Hazardous substances
 - Other adverse health effects

Step 2: Identifying Potentially Exposed Individuals and Groups

- Workers can be grouped and assessed according to similar exposure levels based on:
 - Process or areas of work
 - Vulnerability to certain hazards



Women in Mining & Risk Assessment

- Women under represented in global mining industry and under served in health and safety representation (International Finance Corporation, "Unlocking Opportunities for Women in Business")
- A gender-sensitive approach is needed during risk assessment
 - Increased risk of musculoskeletal harm from machinery and tools
 - Safety risks associated with Personal Protective Equipment (PPE)





US astronaut Christine Koch was scheduled to take part in the first all-female spacewalk.

Photograph: Kirill Kudryavtsev/AFP/Getty Images

Women in Mining & Risk Assessment

- Increased mental health risks resulting from work conditions and traditional family responsibilities
- More susceptible to gender discrimination and sexual harassment





Be an Active Bystander Be a *DIGGER!*

- D DIRECT ACTION
- I INTERRUPT, DISRUPT OR DISTRACT
- G GET A COLLEAGUE OR ACTIVATE BYSTANDERS
- **G GET AN AUTHORITY**
- E ENGAGE THE TARGETED PERSON
- R RECORD AND REPORT

#Me Too Mining



Steps in the HRA Process - Assessment

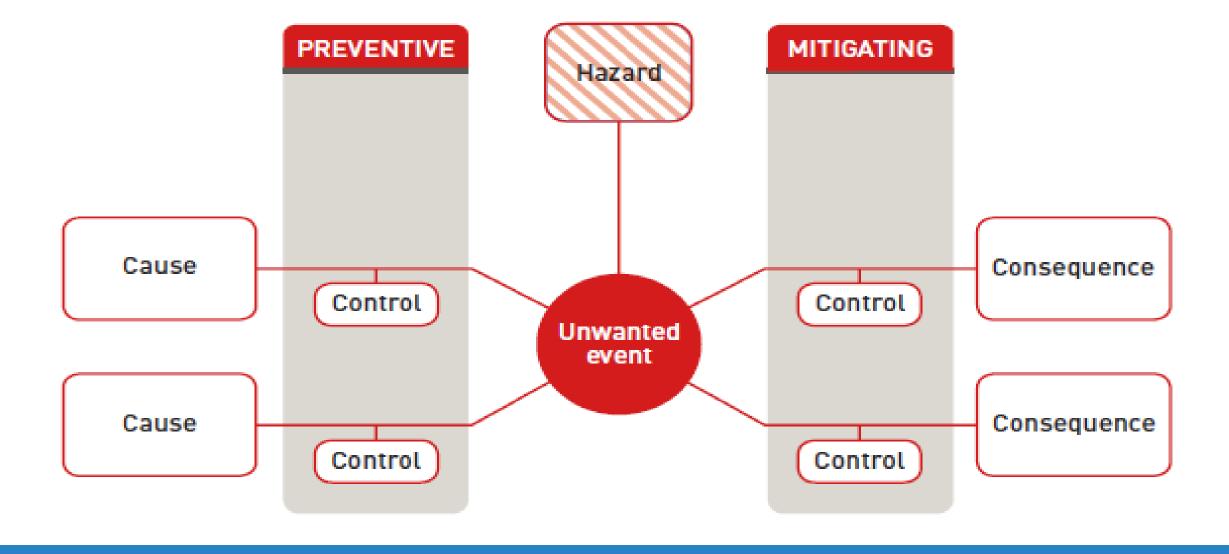
Step 3: Identify the Processes, Tasks and Areas Where Hazardous Exposures Could Occur

Step 4: Assess, Measure and Verify Exposure Levels

Step 5: Assess the Potential Health Risks of the Hazardous Exposures

Step 6: Rate and Prioritize the Health Risks, Including the Identification of Potential Health MUEs

Step 7: Identify Existing Controls and Assess the Effectiveness of These Control Measures



Bow-tie diagram depicting mitigating and preventative controls

Source: ICMM, "Good Practice Guidance on Occupational Health Risk Assessment – Second Edition", p. 38

Steps in the HRA Process—Analysis and Reporting

Step 8: Establish a Risk and Controls Register

Step 9: Decide on Risk Acceptability and Set Priorities for Action

Step 10: Implement Corrective Action

Step 11: Timely Reinstatement of Controls if They Fail

Step 12: Maintain Accurate and Systematic Records of the HRA or Amend Existing Risk Control Action Plan and Use Alternative and/or Additional Control Measures

Step 13: Review and Amend at Regular Intervals or Earlier if Changes to Processes of New Developments are Proposed

The Benefits of HRAs & Other Risk Assessment Models

- The Ontario Ministry of Labour has identified benefits of a formal risk-based approach:
 - Improved collection and management of data and metrics related to health and safety in the mining industry
 - Hazards are more likely to be identified and controls more likely to be implemented, reducing risks faced by workers





The Right to Refuse Unsafe Work

- A cornerstone of health and safety law in Canada
- Workers are empowered to refuse unsafe work without fear of repercussions
- The work refusal process:
 - An internal investigation is conducted
 - If the hazard is resolved, the worker returns to work
 - If the worker continues to refuse in good faith, a second investigation is conducted by a government actor
- The majority of work refusals are legitimate

Key Takeaways

- Canadian law requires employers to engage in risk assessment annually and whenever necessary
- Mining sector experts recommend the adoption of HRAs
- A gender-sensitive approach is needed during risk assessment
- HRAs require the commitment and collaboration of key stakeholders
- The right to refuse work is an essential component of risk assessment



Resources

- Canada Occupational Health and Safety Regulations, SOR/86-304.
- Canada Labour Code, RSC, 1985, c L-2.
- Occupational Health and Safety Act, RSO 1990 c 0.1.
- Regulation 854 Mines and Mining Plants, RSO 1990, Reg 854.
- WSH Institute: www.wsh-institute.sg
- Me Too Mining Association: www.metoomining.com
- International Finance Corporation: www.ifc.org
- International Council on Mining and Metals: www.icmm.com
- Women in Mining Canada: www.wimcanada.org
- Women in Mining Toronto Branch: www.women-in-mining.com
- The Guardian: www.theguardian.com
- Mining Industry Human Resources Council: www.mihr.ca



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June 2019





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