

THE PROJECT FOR PROMOTING YOUTH EMPLOYMENT THROUGH CONSTRUCTION EQUIPMENT OPERATING SKILLS TRAINING

A Private-Public Development Partnership (PPDP)

Industrial Study Tour – North Western Province

17TH – 21ST SEPTEMBER, 2023

SAP 200069



HITACHI

Reliable solutions



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

1 INTRODUCTION

SAP 200069 project aims to contribute to closing the skills gap in Zambia’s construction and mining industries in order to support the country’s Eighth National Development Plan (8NDP). This will be achieved by; 1) Developing and accrediting a competency-based and demand-driven modern curriculum for construction equipment operator’s workforce; 2) Establishing a regional Centre of excellence for construction equipment operator training; and 3) Providing vocational training and career services to unemployed and underemployed youths, with a particular focus on female and disadvantaged students. This project (SAP 200069) builds on UNIDO’s extensive experience in the design and implementation of Technical and Vocational Education and Training (TVET), particularly in projects adopting the Public-Private Development Partnership (PPDP) modality. Partnership between the Government of Japan, the Government of Zambia, Hitachi Construction Machinery (HCM), and United Nations Industrial Development Organization (UNIDO) will stimulate systemic change in closing the skills gap observed in the construction and mining sectors in Zambia.

In line with project activity 3.3, which focuses on establishing a career service centre at Kitwe Vocational Training Centre (KVTC) and facilitating linkages with the private sector for internships, apprentice programs, and job placements for future HEO graduates. UNIDO in collaboration with KVTC and HCM Zambia conducted an industrial study tour of the mines in Zambia’s North-Western Province. The purpose was to provide an opportunity for the project to explore the potential synergies and placements for students, particularly in terms of attachments and job placements within the mining industry. Additionally, the tour aimed to facilitate knowledge exchange and technology transfer with the industries visited. The industrial study tour spanned three days, taking place from September 17th to 21st, 2023.

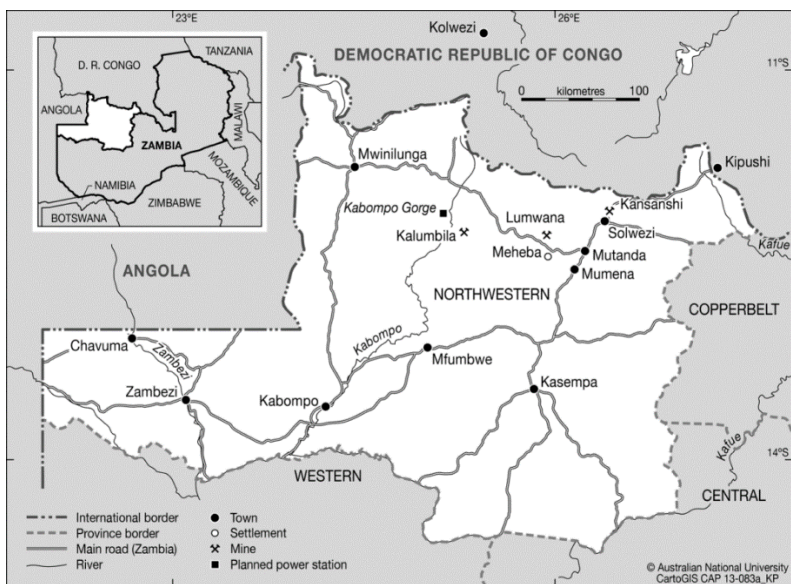
2 PARTICIPANTS

The table below highlights the participants for this industrial study tour.

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3 A QUICK GLANCE OF NORTH-WESTERN PROVINCE

North-western Province is among the 10 provinces of Zambia. The main capital of the province is Solwezi Known for the mining companies and it was founded in the early 1900. The province is well known for industrial developers as it holds a number of the country’s important industries such as Kalumbila Mine Owned by First Quantum Mineral Limited, Lumwana Mine Owned by Barrick Gold, & Kansanshi Mine Owned by Kansanshi Mine PLC with First Quantum Minerals having a Majority Share.



Map¹ showing the location of Solwezi, Lumwana, Kansanshi and Kalumbila Districts.

4 OBJECTIVES

The following were the objectives of the industrial visit:

1. To have a practical understanding of mining operations, processes, technologies, and industry dynamics beyond theoretical knowledge.
2. To exchange ideas, information, and best practices between the visiting group and the mining industry professionals.
3. To create opportunities for participants to connect with industry experts, potential collaborators, and stakeholders.
4. To inspire creative thinking and innovative ideas by exposing participants to new technologies, approaches, and challenges faced by the mining industry.
5. To create possible collaborations such as Memorandums of Understanding (MOU) and explore potential career paths, job roles, and industry opportunities within the mining sector for students.
6. To raise awareness about environmental sustainability, safety protocols, and responsible mining practices.
7. To promote understanding of the cultural and social aspects of mining communities, fostering empathy and cross-cultural competence.

¹ Credit: <https://copperbelt.history.ox.ac.uk/2019/10/21/why-zambias-north-western-province-is-not-the-new-copperbelt-margaret-ocallaghan/>

5 TARGET COMPANIES

Arrangements for the visit was made prior to the study tour.

#	COMPANY NAME	SECTOR	LOCATION
1	First Quantum Mineral Trident Limited (Kalumbila)	Mining	SOLWEZI
2	Barrick Gold (Lumwana)	Mining	SOLWEZI
3	First Quantum Minerals (Kansanshi)	Mining	SOLWEZI

Table 1.1 shows list of the targeted mining companies

6 INDUSTRY FEEDBACK

From the companies visited, the following were the overall outcomes:

- There is still need to improve on the training offered in TVET institutions for Operator training, particularly in response to the upgrading of training equipment and machinery in the industry.
- Some experts agreed to online scheduled interviews to give feedback on graduates received from TVET institutions.
- Industry experts highlighted that the study tour is a helpful means of showing training institution how industry is mapping out new ways of training learners to cope with new technological changes.
- Industry expressed interest in future possible partnerships by identifying local community youths as candidates and offering employment opportunity on merit basis upon completing the training program.
- Industry welcomed the idea of agreeing to more visits in order to strengthen the shared focus for operator training in relation to the KVTC project.

7 INDUSTRIAL HIGHLIGHT

The following are some of the highlights of the Industrial Study Tour within North-Western Province. *(Please note that photos are not included in this report due to data protection)*

1. **FQM TRIDENT LIMITED**

The FQM Trident Limited Training Centre staff, led by Mine Training Superintendent and Technical Training Manager, warmly received the team as she explained how the training Centre collaborates with TVET institutions affiliated to TEVETA to train their own operators using simulators and assessments based on dover tests before actual training. As a part of the company's CSR activities, they support a community vocational training Centre run by LTVC, which is under TEVETA, by offering necessary infrastructure for the heavy equipment operator course at the school. The visiting delegation could not visit the training Centre due to time limitation. However, FQM Trident

advised that the project team could visit again to see the training Centre. The visit to the mine paved the way for possible synergies including student placements, ToTs and partnerships.

2. BARRICK GOLD LUMWANA MINE

The Site Manager for HITACHI Construction Machinery, greeted the delegation warmly. The delegation then met with the General Manager of Barrick Gold. The project team presented a brief overview of the UNIDO projects being implemented in the Copperbelt, at NORTEC in Ndola and KVTC in Kitwe. They emphasized the importance of visiting the Barrick Lumwana training facility for TVET institutions. He also shared some of the future plans they have for the existing training centre at Lumwana and how they have been upgrading their local staff to more skilful roles from general workers. The delegation toured the training Centre and the simulation used to train operators, and learned about the training procedures and enrolment methods. In the briefing with the staff from the training section, it was highlighted that as the mine is trying to double the production capacity in the coming years, they are facing a shortage of heavy equipment operators as well as engineers. They also confirmed that accepting trainers from KVTC and NORTEC would be a possibility. The visit gave more insight on the visiting team for future collaborations especially regarding student placements and Training of Trainers.

3. KANSANSHI MINE

The Kansanshi copper-gold mine near Solwezi, in the North Western Province of Zambia, has been flagship operation since 2005. From its open pits, the mine produces copper and utilizes state-of-the-art technology to extract copper and gold from three different ore types, with world-class efficiency. Kansanshi Mine has one of the best mining-orientated training facilities in Zambia and beyond. This world-class training centre has full scale simulations so that all theoretical courses are also seen and experienced in practice on site. Kansanshi has continued to recruit mining industry-oriented graduates, attracting students from TVET institutions as far as Copperbelt province. The project team had an opportunity to interact with some NORTEC graduates for feedback on how they are performing in industry. Industry was pleased to give feedback on how the graduates they are receiving are working on earth moving equipment in the mines. This visit was fueled by a number of graduates working in this mine from ZAMITA programs. The visiting delegation looked forward to future engagements with regards to training development. A Hitachi Dump truck simulator was identified for a potential collaboration with the KVTC project. More discussions are planned with HCMZ and Kalumbila management for the KVTC project.

8 CONCLUSION

In conclusion, the industrial study served as a foundation for identified potential synergies and yielded valuable results, including gaining practical insights into mining operations, fostering information exchange with industry experts, and creating opportunities for gaining awareness on environmental sustainability and sustainable mining practices. The tour provided the visiting delegation with an opportunity to observe new mining equipment and technological advancements in the industry. Moving forward, the project anticipates utilizing these insights to amplify its influence on skill development in operator training.