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Paul Jourdan
Picture by: Duane Daws

Least-mined Bushveld SA's biggest iron-ore resource

By: Martin Creamer
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CAPE TOWN (miningweekly.com) – South Africa's Bushveld Complex was the country's largest but least-mined iron-ore resource, independent South African mineral policy analyst **Paul Jourdan** told the International Mining and Metals third African Iron Ore conference here on Tuesday.

While the Bushveld hosted between 25-billion tons and 27-billion ton of iron-ore, it was the Kalahari basin with 3-billion tons in the Northern Cape where most of the mining was under way.

"The future resources are very much in the Bushveld Complex," said the former Department of Trade and Industry (DTI) deputy director-general and former Mintek head, who is currently working with the DTI, the Department of Mineral Resources, the Department of Science and Technology and the State-owned Industrial Development Corporation (IDC) on mineral value chain development.

Kumba Iron Ore was by far the largest miner, followed by Assmang, Evraz Highveld Steel and Vanadium and smaller start-ups. South African production was now at some 55-million tons a year, with plans for expansion.

Reflecting on the opportunities for iron-ore beneficiation in South Africa, he said that, while there were different definitions of beneficiation, the correct one was the total domestic value addition embodied in the final exports, excluding all imported inputs.

In terms of that definition, the total beneficiation of a smelting operation for nickel, for example, which had a number of imported inputs, might be lower than for a mining operation of another mineral, because of the imported content.

"The broader definition looks at both the backward and forward linkages," Jourdan said.

There were also two beneficiation methodologies. The supply-side methodology was based on building industries on the basis of having a rare commodity. The other was a demand-side methodology, which could be based on the need for jobs. In that regard, there was nothing to beat manufacturing. "If you look globally in the last ten years, 800-million jobs were created in manufacturing. It's quite clear that there's nothing like manufacturing to create jobs," he added.

South Africa, in need of jobs, should focus on the critical mineral inputs that create jobs. According to that logic, the DTI had made steel its priority because it was by far the most important feedstock. Total global consumption of steel at 1.5-billion tons a year was ten times more than all the other metals combined.

The second-biggest feedstock into global manufacturing was polymers, at 400-million tons a year.

"If you're going to extract resources, you can either be a dirt digger, and just be left with a 'groot gat' or big hole, like Kimberley, or you can catalyse wider development, like it did in Germany.

"But it is a finite resource. No matter what Anglo American or BHP Billiton or Rio Tinto tell you about sustainable mining, we all know that mining is not sustainable. It's a finite resource and you will always be left in the end with 'a Stilfontein' or what's happening to Welkom today," he said.

There was a window of opportunity, which opened and shut. If the opportunity was not taken while the window was open, there would be no second chance. There were also the backward linkages into the inputs. For example, the mining industry was a big consumer and, although the country was only 1.5% of the world's market, for specific mining inputs like mining chemicals, it was 10%.

Knowledge, fiscal and forward linkages, which most people referred to as beneficiation, were all interlinked and there would be no backwards linkages unless all three were carried out.

There was a need to reserve a portion of select strategic resources for local value addition at cost-plus reasonable return.

He reported that the Cabinet had signed off on proposals of the inter-departmental task team on iron and steel, with work in progress including the finalisation of the regulations limiting the unencumbered export of scrap metal and supporting domestic producers - after public consultation - under the provision of the International Trade Administration Act and Second Hand Goods Act. The export of scrap was closely associated with highly deleterious cable and metal theft and masking of illegal export of precious metals.

Amendments were being made to the Competition Act to limit the abuse of dominant market position in key value chains, especially iron and steel and plastics and polymers, and to lower the cost of strategic inputs into manufacturing.

Effort was being made to build competition in the iron and steel sector by introducing at least one more steel producer. Work led by the IDC had been advanced to include a foreign investor, new technology and strong conditions, to ensure that developmental ore prices were passed through as a competitive advantage to manufacturing sector.