

8.5 Manufacturing and Industry

By global standards South African industrial development has been unique, having been concentrated far inland and not on the coast as in most maritime nations. This is attributable to the fact that for many years gold mining provided the catalyst for industrial development inland. While this may have protected the coast from environmental degradation, it also denied KZN opportunities for development.

However, progressively this has changed and the competitive advantage of being located at the coast for many industries has been recognised in recent times. Access to excellent port facilities and maritime waste assimilation are two key factors driving industrial development in coastal KZN.

Today, there are a number of large, globally competitive industries located in KZN, involved in manufacturing diverse products such as motor vehicles and vehicle parts, specialised

metals, textiles, chemicals, forestry products, food and beverages - many of which are located within the KZN coastal zone. KZN's manufacturing sector is the second largest contributor to the country's GDP, after the Gauteng province, and produces approximately a third of the country's manufactured exports.¹ Manufacturing in KZN provides roughly 20% of the province's employment and contributes about 22% to the province's total GDP.¹

Metals fabrication

The metals fabrication in KZN is a specialised industry producing ferrous (containing iron) and nonferrous (not containing iron e.g. aluminium or brass) metals. This industry plays a significant role in the development of up- and down-stream industries including plating and coating operations.¹ Industries that have an important relationship with the metal

Sezela Mill, KZN South Coast.



Photo: ORI



fabrication sector include infrastructure programmes, construction, engineering, mining, car manufacturing and packaging. As a result, the metals fabrication industry is recognised as a key element in the global competitiveness of the manufacturing sector in general.¹

Several key metals fabrication companies are based in the KZN coastal zone drawing benefit from port and maritime waste outfall facilities (see *Section 9.3*). Notable are BHP Billiton's two large aluminium smelters at Richards Bay, Tata Steel at the Richards Bay Industrial Development Zone (RBIDZ) producing 150 000 tons of ferrochrome from locally supplied ores annually, and Macdonald Holdings in Durban which produces a diversified stock of steel and metal products.¹

Automotive industry

The automotive industry is considered to be one of South Africa's most important manufacturing sectors, with numerous multinationals such as BMW, Ford, Volkswagen, Daimler-Chrysler and Toyota using South Africa to source components and assemble vehicles for their local and international markets.¹ A visit to the port of Durban's dedicated car export terminal will attest to the magnitude of this industry. These South African based vehicle manufacturing companies benefit from historically low production costs and strategic geographic location to access new markets.

Within the coastal zone the Durban Automotive Cluster (DAC) is well-established, consisting of a proactive, ambitious public-private partnership between the eThekweni Municipality and the automotive industry in KZN.¹ Prominent is the Toyota plant in Durban, which produces some quarter of a million vehicles annually, with approximately half of production exported to nearly 60 countries worldwide. The company is a significant employer, with in excess of 8 500 employees, and creating further employment opportunities for staff at more than 50 major automotive and other component suppliers.

While vehicle manufacturers operating in South Africa have been largely influenced by international trends, with an annual market growth of 3.7% between 2000 and 2010,¹ the future outlook may be less certain with currency fluctuations and labour issues. A key challenge going forward will be to improve output and competitiveness of the South African and KZN automotive industry.¹

Clothing and textiles

The textile industry is broadly defined as establishments engaged in spinning natural and manmade fibres, which are in turn converted into fabrics. From this the clothing and accessories industries supply people-finished products. While the textile industry is one of the oldest in the world, there is now a higher degree of specialization and companies operate as either manufacturers (wholesalers) or retailers, or as both.¹

In South Africa, and especially KZN, the clothing, textiles and footwear industries have faced uncertainty over the past two decades. The lowering of tariff barriers have resulted in a number of companies downsizing so as to compete with cheaper foreign goods.¹ However, companies have found innovative ways to compete; through specialised product lines, reduced production lines and small jobbing teams. The KZN Clothing and Textile Cluster (KZNCTC) was established in 2005 with the aim of boosting global competitiveness of the industry. It created a Sector Business Support Centre in Newcastle which regenerated the area's clothing and textile industry.¹

Plastics and chemicals

The chemical industry in KZN is based on the production of basic chemicals which are then used in various other applications; as building-block materials and as processing aids in the production of other chemicals and non-chemical goods.¹ The growth of the South African chemicals industry has been driven by demand from a range of industries, including mining, automotive, agricultural and construction.¹

Plastics on the other hand are directly or indirectly produced from organic chemicals such as ethylene, propylene, butadiene, and benzene and used in the automobile, agriculture, and housing sectors. The greatest demand for plastic comes from the packaging and consumer industries and includes goods such as kitchenware, toys, sporting goods, medical products, pipes, conduits, fittings, transportation, furniture and furnishings, electronic appliances, electronic components, adhesives, inks and coatings.¹

KZN provides nearly a third of South Africa's plastic demand and uses 150 000 tons of polymer each year. The industry faces a number of challenges, most concerning is the cost of raw materials.¹

Petro-chemical industry

The largest crude oil refinery in southern Africa is located in the south of Durban, accounting for more than 1/3 of refining capacity in South Africa. SAPREF (a joint venture between Shell SA Refining and BP Southern Africa) processes 24 000 tons of crude oil per day, imported via an offshore platform called a single buoy mooring (SBM).² The SBM can easily be seen from the Bluff, especially whilst an oil tanker is in the process of discharging. SAPREF produces 2.7 billion litres of petrol per year, employs more than 700 staff and provides source material for a range of downstream industries.²

Paper and forestry products

The paper and forest products industry is well established in coastal KZN, making a significant contribution to the province's economy. A range of products are involved, from the manufacture of paper, packaging, and cellulose to wood products such as household and office furniture. Key wood and paper corporations operating in KZN include Mondi, Sappi, Nampak, Merensky, the R&B Timber Group and NCT Forestry Co-op Limited.¹ The wood, pulp and paper and associated industries accounted for some 29 000 formal jobs in KZN with the furniture sector employing a further significant number of people (2009 data).¹ However, in light of new technologies and the shift away from traditional paper-based communication, the growing use of recycled materials and a focus on environmental concerns make future demand uncertain, while wood products are seeing a shift to other engineered materials.¹ Nevertheless, one forestry product that remains of note is cellulose, derived from dissolved wood pulp and used in the manufacture of textiles, cellophane wrap, pharmaceuticals and a suite of other household products.

As the world's largest single site manufacturing specialised cellulose, the Sappi Saiccor Mill located at Umkomaas 50 km south of Durban, exports up to 800 000 tons of product annually. Established in 1951, Saiccor's development has benefited from having access to marine disposal of its considerable waste output.³

Environmental considerations

The progressive shift of industrial activity to the coast is to a large extent attributable to the improved port facilities of Durban and Richards Bay. Similarly, the waste disposal benefits

for companies in the paper, aluminium and a number of other industries provides a huge competitive advantage. However, many of these marine outfalls have been controversial and their environmental assimilative capacity seriously questioned. Examples include the Richards Bay mixed product pipeline and Saiccor's outfall close to the Aliwal Shoal MPA.

Both outfalls were initially of dubious standard but public pressure, research and technological advances have improved the management and quality control of these pipelines. However, much improvement is still possible and greater research, monitoring and ongoing vigilance is required. In particular there is concern about non-adherence to permit conditions as well as restricted access to monitoring data. Several industries operate their own pipelines under permit. For example AECl and SA Tioxide, with its very acidic effluent, are responsible for their own effluent water quality monitoring.

While several industries are “wedded” to the coast by virtue of port access and waste assimilation opportunities, it is equally important to avoid establishing high environmental impact industries in the sensitive coastal zone if they do not fundamentally require access and proximity to the coast. Hopefully, the integrated coastal management legislation will be sensibly applied in future years to plan accordingly. ■

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