

6.2 Infrastructure and Utilities

The coastal environment is vital for economic growth in KZN as it offers an array of tourist activities, fisheries resources, shipping services and real estate development potential. Therefore, critical to economic growth is the need for supporting infrastructure and utilities along the coast.

General transport

In KZN, as with most of South Africa, much of the population is reliant on walking or public transportation, with 31% of KZN's population commuting on foot. While this figure is similar to the national average, it is significantly lower than in the Limpopo (43%), Eastern Cape (38%) and Free State (36%) Provinces. There are less people who commute on foot in the coastal municipalities (24%) of KZN than in the province's inland municipalities (38%), which can largely be attributed to

the well-established public infrastructure of the Durban Metropolitan area. This is evidenced by the higher use of minibus taxis (7%) and buses (6%) by the people in coastal municipalities compared to only 3% and 2% respectively in the inland municipalities.¹

In KZN, only 4% of the population use their own transportation, while a further 4% are passengers in owner-driven vehicles. Again, this is notably higher in the coastal municipalities (6% for both), than in inland municipalities, where these figures are only 2% and 3% respectively.¹

Road transport

The total length of roads in KZN is estimated at 25 600 km, of which 1 138 km is made up of national routes.² Only 26% (6 656 km) of the roads are surfaced, with the remaining 74%

Highly developed coast, Umhlanga Rocks.



Photo: ORI



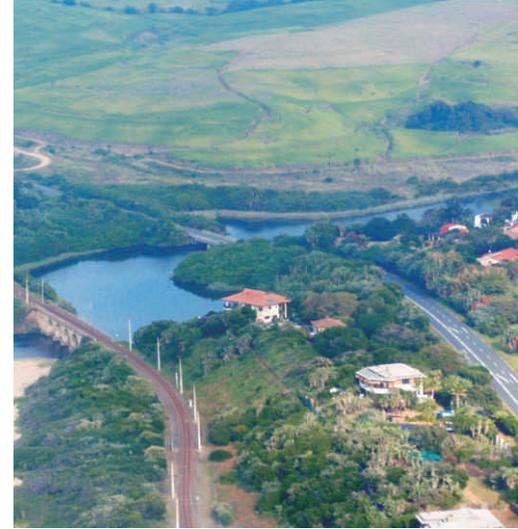
Photo: Blue Flag



Photo: Omar Parak



Photo: Bronwyn Goble



Left to right: Runoff from stormwater pipe; infrastructure inappropriately located in the coastal zone; strategic infrastructure within the coastal zone.

(18 943 km) being gravel. The main national routes in the province are the N3 (Durban to Gauteng), the N2 South (Durban to Kokstad) and the N2 North (Durban to Pongola).² The N3 to Gauteng is considered to be the busiest road freight corridor in South Africa, handling approximately 27.5 million tons of road freight per annum. The section between Durban and Pietermaritzburg alone carries a volume of over 1.5 million vehicles per year.² The N2 corridor route from Richards Bay to Mpumalanga is an important route for timber, coal and other commodities. South of Durban, the N2 corridor serves as an important link between KZN and the Eastern Cape and southern regions of South Africa.

The section of the N2 that passes through KZN is 685 km long, and predominantly runs parallel to the coast. As a result, access to the KZN coast via national and regional roads is high, with both the south and north coast being accessible via the N3/N2. This has in turn resulted in high domestic tourist numbers visiting the KZN coast, primarily from the hinterland (*Section 8.1*).

In recent years there has been a shift in the transportation of cargo from rail to road, driven by the commercialisation of the railways, national deregulation of road transport and the increased legal axle-mass loads and gross combination mass of heavy vehicles on roads. While this may be more cost-effective for the movement of goods, it results in increased road damage, accidents, congestion and gas emissions.³ Accident estimates for 2010 show that there were 229 fatal accidents on KZN roads, the highest of all the provinces,⁴ partly as a result of the poor conditions of the roads.³

Rail transport

In KZN, the railway network provides a vital link and export function for goods between the Ports of Durban and Richards Bay and the hinterland.²

The railways have a long history in the province, with the first railway line developed in the 1860s. KZN now has six Main Freight Rails, for the transportation of imported goods from the harbour, which together transport 104 320 651 tons of freight.² The main lines are:

1. Durban-Empangeni-Golela (and Swaziland) Secondary Main Line
2. Durban-Kelso-Port Shepstone-Simuma Secondary Main Line
3. Durban-Ladysmith-Volksrust (and beyond, to Union in Gauteng)
4. Glencoe-Dundee-Vryheid Main Line
5. Ladysmith-Van Reenen (and the Free State) Main Line
6. Richards Bay-Vryheid East-Piet Retief-Ermelo (the Coal Line)

Air transport

There are currently 130 airstrips in KZN, with four nationally important airports, namely: Durban (King Shaka International), Pietermaritzburg, Richards Bay and Margate Airports.^{2; 3}

However, the main movement of passengers and airfreight is confined to operations at the new King Shaka International Airport, with the other three serving as minor movement routes. King Shaka International Airport saw the arrival and

departure of 1 404 international flights, carrying in the region of 20 1037 passengers during the 2011/2012 year, and a further 50 491 domestic flight departures and arrivals, carrying some 482 8631 passengers for the same period.⁵

Notably, the Airports of Margate, Richards Bay, the defunct Durban International airport and the new King Shaka International Airport are all located within 5 km of the coast, making the KZN coast highly accessible for tourism and associated activities.

Energy

The dominant source of energy in KZN for cooking, heating and lighting is electricity, to which 78% of households have access.⁶ Electricity consumption is higher in the coastal municipalities than in inland municipalities. In the coastal municipalities electricity is used by 66% of people for cooking, 66% for heating and 76% for lighting. Inland, these figures are significantly lower, being 29%, 27% and 46% respectively.¹

Water supply

Within KZN, potable water is delivered to communities via 187 drinking water supply systems, supported by 14 water service authorities. The Umgeni Water Board and Uthukela Water Board are the main providers. They are responsible for the abstraction, treatment and feeding of drinking water to various municipal networks.⁷ Some 62% of KZN households receive water via regional or local water supply schemes,¹ which is the third lowest of all the provinces in South Africa. The Western Cape and Gauteng have more than 90% of their water supply provided for via these schemes.

The second most common source of household water in KZN is that of rivers and streams; second only to the Eastern Cape when compared to the rest of the South African provinces. The use of this source of water is more prominent in KZN's inland local municipalities.

Within KZN, 86% of households have access to water from one source or another, but only 46% have piped water inside the dwelling.⁶ This is significantly higher for the coastal municipalities (43%) than for the inland municipalities, of which only 15% have access to piped water inside their dwellings.¹ This can be attributed to the urban nature of much of the KZN coastal area.

Sewerage

In the KZN province, less than 40% of the population has access to flush toilet facilities that are connected to a sewerage system, while a small proportion utilise septic tanks (4%). The availability of flush toilet facilities is higher along the coast, with approximately 52% of households in coastal municipalities utilising these facilities, in contrast to 24% in non-coastal municipalities. One again, this difference can be attributed to the urbanised nature of the coastal zone, while much of the interior remains rural.

A major environmental concern with the use of pit latrines, which are used by almost 30% of households in KZN coastal municipalities and 40% in non-coastal municipalities, is the potential contamination of ground water. Ground water acts, directly and indirectly, as a significant source of water used by the KZN population (approximately 33%).

Pipelines

The pipeline system in South Africa was created primarily to serve the country's petroleum industry. Pipelines are the safest, most efficient and cost effective means of transporting large quantities of liquids and gases over long distances. There are approximately 3 000 km of high pressure pipelines in South Africa, which transport gas, crude oil, aviation turbine fuel, diesel, alcohol and various grades of petrol.²

Durban is the main import point for crude oil and the main centre of pipeline activity on the KZN coast.²

Telecommunications

Telkom SA and SEACOM operate submarine fibre-optic telecommunication cables in South African waters. In KZN, these cables land on the beach at Mtunzini and deliver today's best possible Internet, e-commerce, data, video and voice services.

Infrastructure supports a range of social and economic activities in the KZN coastal environment. However these need to be carefully maintained in order to prevent any adverse effects on the coast. ■

