

Introducing the Eastern Cape: A quick guide to its history, diversity and future challenges

A report by

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This report was compiled as part of background research into the Eastern Cape Province, a selected study area for the programme on 'Governance of Ecosystem Services under Scenarios of Change in Southern and Eastern Africa', which is led by the Stockholm Resilience Centre (SRC) and funded by the Swedish International Development Agency (SIDA).

The purpose of this report is to give a brief overview of past, present and potential future dynamics in the Eastern Cape Province. It is not an exhaustive account of the province's development, but rather aims to highlight important social-ecological events, trends and interactions that shape its landscape.

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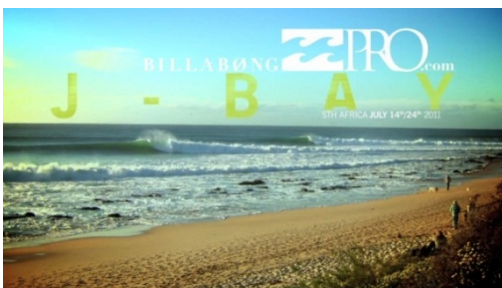
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An introductory tour



Fig.1 Main tourist regions and attractions in the Eastern Cape (www.sa-venues.com)

Coming from the West and passing through the lush Tsitsikamma Forest, the N2 enters the Eastern Cape via the Bloukrans Bridge, the world's highest commercial bungee jump. The road continues along the Langkloof, a fertile valley farmed since 1760 and full of deciduous fruit orchards. The next stop along the coast is Jeffrey's Bay, or J-Bay, as the cool kids call it. Nothing much happens here for most of the year, but in July the sleepy town becomes a hub of excitement as it hosts the largest surfing contest in Africa, the Billabong Pro. Just to the north of J-Bay lies the Baviaanskloof Nature Reserve, a World Heritage Site and beautiful landscape of sandstone rock formations and fynbos. Along with stunning scenery, this Eastern Cape Parks reserve boasts some large mammal species such as leopard and buffalo.



Continuing along the coast towards the east, we come upon Port Elizabeth (PE) – the ‘Friendly City’. It is the fifth largest in SA and the biggest urban centre on the coast between Cape Town and Durban, plus it sees more sunshine than any other coastal town in the country! It is aptly situated in the middle of the ‘Sunshine Coast’, which stretches from the Tsitsikamma National Park on the border of the Western and Eastern Cape all the way to East London. PE is part of Nelson Mandela Bay Metropolitan Municipality, which lies on the western side of Algoa Bay. Of note here are the Bird Islands, a cluster of four islands just 62km from PE. They are important seabird breeding grounds, home to southern Africa’s largest gannetry (about 65 000 breeding pairs of Cape Gannets) and over 10 000 African Penguins.



Bird Island

Dung beetle



These islands are also part of the newly extended Addo National Park, which now stretches from the southern coast over the Zuurberg Mountains to the semi-arid karoo area around Darlington Dam in the north. In this park you can see the Big 7: elephant, rhino, buffalo, lion, leopard, whale and great white shark, and the world-famous Addo flightless dung beetle! Parts of Addo National Park are covered by the so-called Albany Thicket, a type of

vegetation found mainly in the Albany region of the Eastern Cape, though it occurs throughout the province. It is a closed shrubland or low forest dominated by evergreen, sclerophyllous or succulent trees, shrubs and vines, many of which have stem spines – which makes it often almost impenetrable. Large parts of this biome have already been converted for agriculture or development, and it is vulnerable to overgrazing, especially by goats.



Thicket

To the west of PE the climate is dominated by winter rainfall, whereas to the east it changes to a summer rainfall regime. However, in the Great Karoo north of PE, it doesn’t rain much at all. ‘Karoo’ translates into ‘land of thirst’ (Khoisan), and rainfall in the Nama Karoo biome varies between 100 and 520mm per year. The vegetation is mostly grassy, dwarf shrubland, with weakly developed soils. Overgrazing by sheep and goats easily leads to soil erosion and a dominance of shrubs. Prickly Pear *Opuntia aurantiaca* and Mesquite



Prickly Pear

Prosopis glandulosa are major alien invasives in the Nama Karoo. The old town of Graaff-Reinet, the self-proclaimed ‘Gem of the Karoo’, lies on the N9 highway, and is surrounded by vast open areas of sheep and game farms, and plenty of dinosaur fossils.



Mesquite

Just north of Graaff-Reinet lies the small crafts village of Nieu Bethesda at the foot of the Compassberg, the highest peak in the Eastern Cape. It is part of the Sneeuberge mountain range, the second highest range in SA after the Drakensberg. Nieu Bethesda is famous for the work of artist Helen Martins who transformed her house with glass and cement into the 'Owl House', a popular tourist attraction.



Owl House Art

As we move towards the central part of the Eastern Cape that lies between the N9 and the N10, we enter 'Frontier Country'. This is a region of much past conflict between the Xhosa, Dutch, Boer and British, in various combinations. Now the landscape is dotted with Xhosa rondavel homesteads, and the small towns are a mix of Cape Dutch homes and stately Victorian buildings. Grahamstown is the centre of Frontier Country, and the home of Rhodes University. Once a year it comes alive for the National Arts Festival, which attracts over 50 000 people to Grahamstown for 11 days in early July. The Frontier Country landscape is varied, with many pineapple and chicory plantations. Large tracts of land are devoted to nature conservation, as lots of private nature reserves and game farms attract international visitors looking for comfortable, malaria-free Big 5 viewing.



Rondavel homestead

Hogsback forest



Further north we find the Amatola Mountains, rising up to 1800m above sea level. At the foot of the mountains lies Alice, home to the University of Fort Hare. This university was an important centre of learning for Africans in the early part of the 20th century, and amongst its alumni are famous African leaders such as Nelson Mandela, Desmond Tutu, Julius Nyerere and Sir Seretse Khama. High up in the mountains above Alice lies Hogsback, which attracts many curious visitors looking for elves and hobbits. The town claims a (rather spurious) connection to J.R.R. Tolkien, who apparently spent some time there during his childhood. The area boasts lovely indigenous forests with yellowwoods, white stinkwoods and Cape chestnuts, but also many exotic ornamentals that were most likely introduced by one of the early settlers, an English gardener called Thomas Summerton.

The Amatola Mountains are particularly interesting historically, as they were – like all of South Africa – originally home to the Khoisan hunter-gatherers. The Khoisan were displaced by the Nguni people (ethnically part of the Bantu) that migrated southwards with their large herds of Nguni cattle¹. The modern day Zulu and Xhosa are part of the Nguni peoples. In the 19th century, the Amatola region saw many battles take place between the Xhosa nation to the east, and the British Cape Colony to the west². Many of the region's towns started out as battle posts built by the British to protect their farmers from the Xhosa armies hiding in the Amatola mountains.



Nguni cow



Nongqawuse (right)

In an interesting aside, it was 1856 when a young Xhosa girl called Nongqawuse claimed she had seen the spirits of her ancestors while fetching water at the Gxara River. These spirits had told her that the Xhosa people should kill all their cattle and burn all their crops. In return, the spirits would sweep all the British settlers into the sea! Amazingly, the Xhosa Chief Sarhili ordered that the prophecy be obeyed, and it is estimated that 300 000 – 400 000 cattle were killed. Then, on D-Day, when the sun was supposed to turn red and all the settlers were to be swept into the sea...nothing happened. In fact, tens of thousands of Xhosa people died during the resulting famine, significantly weakening the Xhosa opposition to the British.

Travelling south-eastwards from Hogsback, we pass the Eastern Cape's capital city Bhisho, which used to be the capital of the Ciskei homeland. Bhisho lies on the Buffalo River (bhisho = buffalo in Xhosa), and houses the provincial legislature and many other government headquarters. From Bhisho the Buffalo River continues its way to the sea, and at its mouth lies East London – South Africa's only river port city. It used to be a restless town during the Apartheid era, as it was surrounded by homelands (the Ciskei to the west, the Transkei to the east).

East London



Coelacanth

The international sanctions in the 1980s saw East London's economy take a dip, but large investments in recent years have led to growth, especially in the motor industry. East London is also the site where the Coelacanth was rediscovered by fishermen in 1938, after it was believed to have been extinct for the last 65 million years!

¹ See page 8 under 'Pre-colonial times'

² See page 8 under 'British occupation'

Wild Coast



East of East London (and the N6) lies a region of lush grasslands on rolling hills, in what used to be the Transkei homeland. Here, people are dependent on cattle, maize and sorghum-farming. The coast is 'wild', with deep forested ravines cutting through the hills into the sea, and isolated beaches. It attracts many recreational anglers. To a large extent, the Wild Coast is protected from property development by groups of environmental activists, both foreign and local. However, the main issues at the moment are highway construction and strip mining. In August 2011, the proposed N2 toll road along the Wild Coast received the go-ahead of South Africa's Minister of Water and Environmental Affairs, Edna Molewa, after a long battle that has been going on for more than 10 years. Opponents of the project are concerned that the new section of this road will cut through and destroy parts of the Pondoland Centre of Endemism (a biodiversity hotspot) and will threaten the traditional way of life of the AmaPondo people that live in the area. In the case of mining, the issue involves granting licenses to dune mine base metal reserves along the coast to an Australian mining conglomerate, Minerals Commodities Limited, and the local Xolobeni Empowerment Company³.

Finishing off the introductory tour of the Eastern Cape we look to the north where, at the border with Lesotho and the Free State, lies the Ukhahlamba region. The Xhosa word means 'barrier of spears', and refers to the ragged Drakensberg Mountains that dominate the area. It is largely a sheep, cattle and goat farming country, with adorable little Victorian towns such as Lady Grey and Rhodes where people indulge in fly-fishing, hiking, and sitting in front of the fireplace in the cold (and snowy!) winters.



Drakensberg

³ See page 36 under 'Future Economic Development: Ecotourism?'

History of the Eastern Cape

Pre-colonial times

The earliest inhabitants of South Africa were the San hunter-gatherers, who lived in small nuclear families and hunting bands of twenty to fifty people. About 2500 years ago, San in the northern parts of present-day Botswana started keeping sheep and cattle, and their descendants became the more settled, pastoralist Khoi. The Khoi settlements were generally larger, and they developed more hierarchical political structures than the San. By 1600, most Khoi lived along the southwest coast of the Cape, whereas most San lived further inland in areas including the present-day Northern Cape Province, Botswana, Namibia and southern Angola.

About 1500 years ago, Bantu-speaking Africans from West Central Africa crossed the Limpopo River and started moving southwards into present-day South Africa. These were cattle-keeping people with knowledge of slash-and-burn farming and metal-working. The accumulation of herds and cultivation of large fields meant that the Bantu-speakers concentrated in larger communities with more social stratification than their San or Khoi neighbours. Distinct settlement patterns emerged between Bantu communities that settled inland and those on the coast. The inland Bantu speakers were termed Sotho-Tswana and established large settlements around water sources and trading towns, and were ruled by powerful hereditary chiefs from the capital, Taung. On the other hand, the Bantu that settled between the Highveld and the Indian Ocean were called Nguni, and lived in much smaller communities with less hierarchical political structures. So by 1600 all of what is now South Africa had been settled: by Khoisan peoples in the west and the southwest, by Sotho-Tswana in the Highveld, and by Nguni along the coastal plains.

European settlers first arrived in 1652 under command of Jan van Riebeeck, sent by the Dutch East India Company with instructions to build a supply station for Dutch trading fleets in Table Bay. Within two months of the establishment of the Cape settlement van Riebeeck concluded that slave labour would be necessary, and so slaves began to be shipped to the Cape mainly from East Africa, Mozambique, Madagascar and South and Southeast Asia until the British stopped slave trade in 1807. Five years after van Riebeeck's ships landed in Table Bay, the first Dutch East India Company men were released from their service to become farmers. This was the start of an influx of mainly Dutch, German and French farmers (later known as Boers) into the Cape and the expansion of the European settler community from the Cape into other parts of South Africa.



The Landing of Jan van Riebeeck, by Charles Bell

British occupation

In 1795 the British seized the Cape from the Dutch East India Company, but returned control to the Dutch government in 1803 – only to reclaim it 3 years later with the beginning of the Napoleonic Wars, in order to protect their sea route to Asia. The European farmers expanding eastwards had

predictably run into trouble with the already established Khoi pastoralists and Bantu farmers, most notably the Xhosa people living in the present-day Eastern Cape. Land wars became more militarized when the British sent imperial armies to aid the Boers at the Eastern Frontier of the Cape in the early 1800's. The ongoing war with the British brought much destruction to the Xhosa. The final blow came in 1856 when the 'cattle killing' led to the starvation and death of thousands of Xhosa people, reducing their number from 105 000 to 37 200 persons within six months⁴. This effectively ended the Xhosa armed resistance to European Colonialism aside from one or two brief revolts.

Also during this period, the Boers developed a strong independent consciousness and wish for autonomy, and tensions between the British and the Boers remained high. In an attempt to escape British control, around 6000 Boer men, women and children (along with an equal number of Black Africans) moved northwards into the Highveld in the 1830s. The path eastwards was still blocked by the Xhosa. This Great Trek by the so-called Voortrekkers resulted in the establishment of two Voortrekker Republics – the Orange Free State (capital Bloemfontein) and the South African Republic (capital Pretoria).

Union of South Africa & the beginnings of Apartheid

Decades of tensions between the British wanting to establish their hegemony in South Africa and the Boers (or Afrikaners) wanting autonomy, plus the conflict over control of the newly discovered gold and diamond mines finally resulted in the South African War (1899-1902). Ninety thousand Afrikaners fought against a British army of almost 500 000. Adopting a scorched-earth tactic, the British defeated the Afrikaners in 1902, but British antipathy in the country was



The Battle of Spion Kop, 1900

too great to hold onto direct control for long. So in 1910, the Union of South Africa was established as a dominion of the British Empire. Its government supported the discriminatory laws put into place by the British to ensure cheap labour for the gold mining industry (eg. denying most Blacks the vote & pass laws). In the following years, more laws were passed which heightened racial discrimination, most notably the Natives Land Act of 1913 which separated South Africa into areas in which either Blacks or Whites could own freehold land: Blacks, constituting two-thirds of the population, were restricted to 7.5% of the land; Whites, making up one-fifth of the population, were given 92.5%. The act also stated that Africans could live outside their own lands only if employed as labourers by Whites.

It was opposition to this act that led to the formation of the South African Native National Congress (renamed the African National Congress [ANC] in 1923). Several hundred members of South Africa's educated African elite met at Bloemfontein on January 8, 1912, and established a national organization to protest racial discrimination and to appeal for equal treatment before the law.

⁴ See page 6 for more info

However, over the next decades the path of racial discrimination and segregation led to further legislation separating Blacks from Whites and the establishment of the Apartheid state in 1950.

Homelands of the Eastern Cape

One of the Apartheid government's acts of segregation was the Bantu Authorities Act of 1951, which legalized the deportation of Blacks into designated homelands or 'bantustans'. In the area of the Eastern Cape, two such homelands were created: the Transkei (in 1951) and the Ciskei (in 1961). Then in 1963 the Transkei became the first homeland to be granted the status of 'self-governing territory within the Republic of South Africa', with the Ciskei following suit in 1972.

Kaiser Matanzima, who supported the Apartheid concept of separate development, became the first Chief Minister of the Transkei in 1963, and Prime Minister in 1976 when the Transkei was granted independence. Matanzima had the support of a majority of the government appointed chiefs, and ruled as a puppet-state dictator. Throughout his time in office, his main opposition came from the Paramount Chief of the Tembu, Sabata Dalindyebo, who was a popular leader but was forced to flee the Transkei in 1980. When, between 1978 and 1980, Matanzima broke diplomatic ties with the Apartheid government over a land dispute, he threatened to end the 'non-aggression pact'. However, within weeks of the break, the homeland was bankrupt, and had to accept a large bail out from the SA government. Economic failure and corruption further depleted the homeland's funds, with the result that the SA government took control of the Transkei budget in the 1980s.

In 1985 the Apartheid social engineers planned to merge the Transkei and the Ciskei, to create a 'united nation of Xhosa speakers' which would support the SA government and would eradicate social unrest in the Eastern Cape. The Ciskei had gained independence in 1981 under the presidency of Lennox Sebe. Matanzima wanted to rule such a united territory, and supported the plan, including the assassination of President Sebe. The plan was foiled when it was leaked to General Bantu Holomisa, the leader of the Transkei Defense Force. Support for Matanzima faltered, and he resigned in 1986. Bantu Holomisa staged a bloodless coup in January 1988, becoming Head of State. He unbanned all the anti-apartheid parties that had been suppressed by Matanzima, and entered into a (sometimes uneasy) alliance with the ANC.

In the Ciskei, Lennox Sebe was deposed by Oupa Gqozo in 1990, who strongly opposed the ANC's efforts to reintegrate the homelands into South Africa. When ANC supporters demanded the removal of Gqozo at a public gathering outside the sports stadium in Bisho on 7 September 1992, the Ciskei Defense Force fired into the crowd, killing 28 people and injuring hundreds in what is now known as the Bisho massacre. Gqozo's anti-change stance became unsustainable in March 1994, when wide-spread demonstrations and police mutinies led to his resignation on 22 March. The SA government took control of the homeland until the first democratic elections one month later, after which the Ciskei and all the other homelands were reincorporated into South Africa.

The downfall of Apartheid

In the 1950s, as a response to the Apartheid regime, the ANC established the Congress Alliance, which included the Coloured People's Congress (CPC), the South African Indian Congress (SAIC), the Congress of Democrats (COD, made up of white oppositionists), and the South African Congress of Trade Unions (SACTU). The Congress Alliance played an important role in drawing up the Freedom Charter, which was then ratified at the Congress of the People – a mass rally held in Soweto in June 1955. In the following years many leaders of the Congress Alliance were arrested, including Nelson Mandela who was charged with treason and sabotage, and sentenced to life imprisonment at the Rivonia Trials in 1964. He became a worldwide symbol for the resistance to Apartheid. The 1970s were marked by youth revolts, particularly the Soweto Uprising of 1976, where students protested against the introduction of Afrikaans as the language of instruction at school. The revolt was met with police violence, and many people were killed. The 1980s saw the beginning of the end of Apartheid, as internal and international opposition grew and reforms did nothing to quell resistance amongst the black majority. In 1990, President F.W. deKlerk announced the release of 71 year-old Nelson Mandela from prison, and in the following years negotiations to end Apartheid took place against a backdrop of continued violence in the country. The negotiations culminated in South Africa's first multi-racial elections in 1994, which were won by the ANC. Nelson Mandela became the new president of the country.

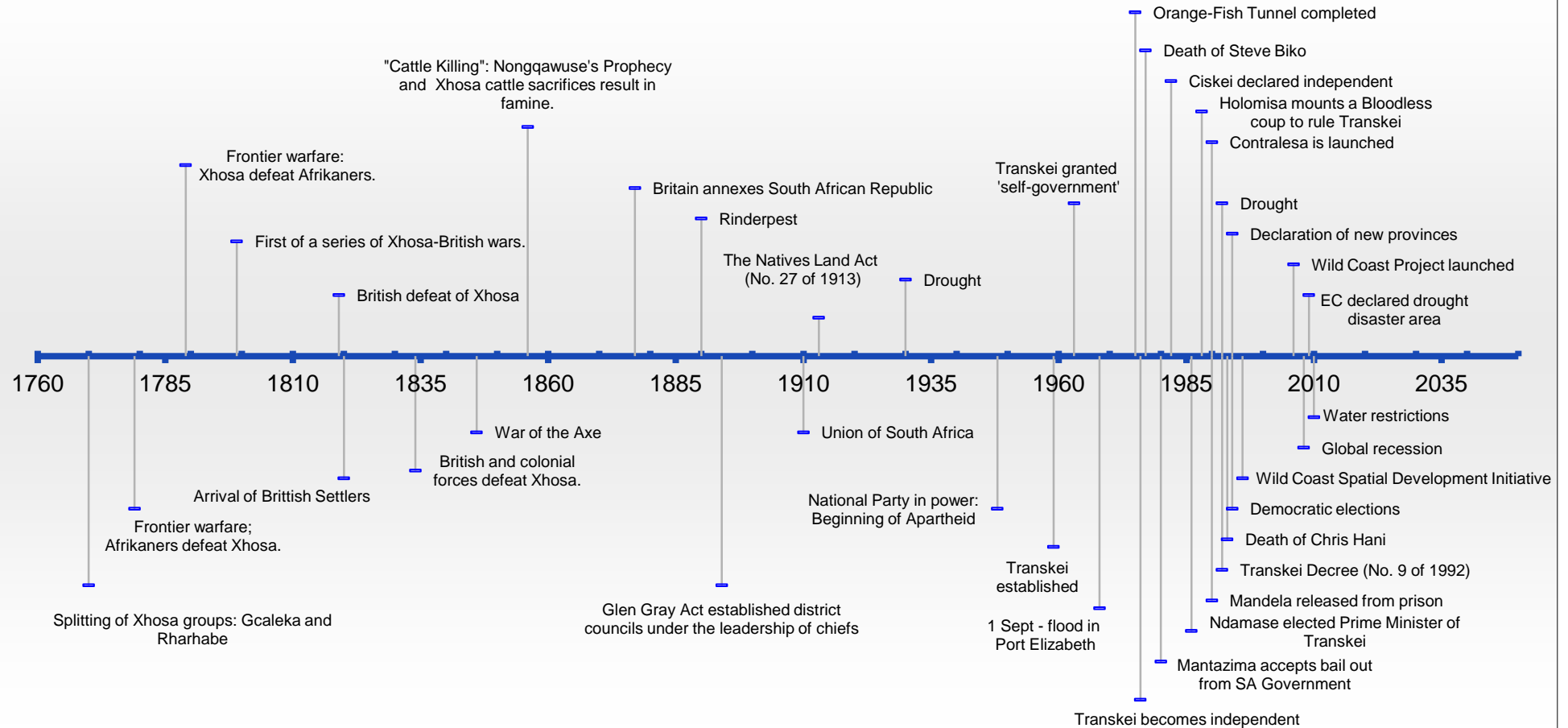


Legacy

The Transkei and Ciskei became part of the new Eastern Cape Province. Apartheid policies, economic failure and corruption meant that very little economic and infrastructural development took place in the homelands. This has resulted in spatial dualities and inequalities within the Eastern Cape Province, such as urban industrial areas versus marginal rural areas (often locked into dependence on social grants and remittances from migrant labour), and the well-developed commercial farming sector contrasted with struggling subsistence farming. These issues are discussed in more detail in the following chapters.

(main sources: www.sahistory.org.za; www.countrystudies.us/south-africa/).

Timeline of Important Historic Events in the Eastern Cape



The Eastern Cape Today

The following section is a collection of maps that represent various biophysical and social variables in the Eastern Cape. In some cases the maps have a national extent, which allows comparison of the Eastern Cape with other provinces of South Africa.

Political boundaries

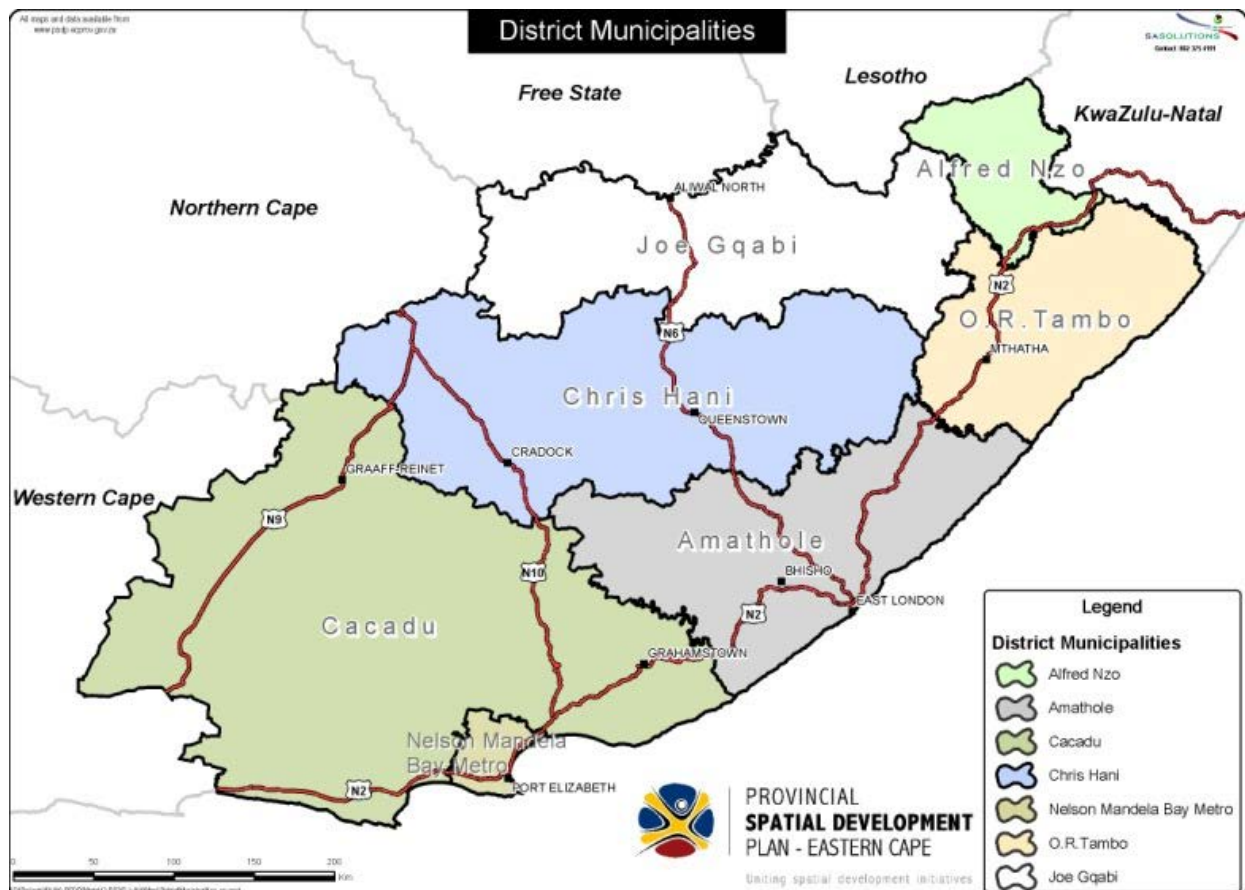
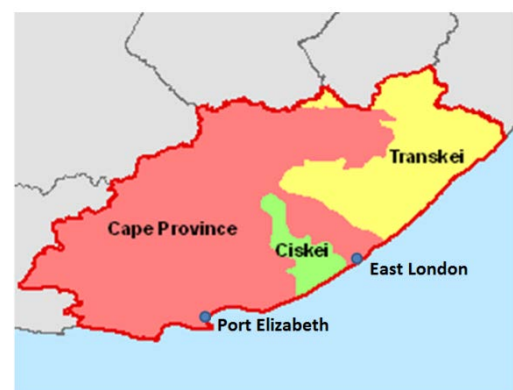


Fig.2 District municipalities in the Eastern Cape (source: EC provincial spatial development plan)

The Eastern Cape Province covers an area of close to 169 000 sqkm (13.9% of SA's land area), making it the second largest province in SA after the Northern Cape (StatsSA). It is divided into one metropolitan municipality, 6 district municipalities, and 38 local municipalities (Fig.2). Bisho in the Amathole District is the capital of the Eastern Cape. The current premier of the province is Noxolo Kiviet of the ANC.



Former 'black' homelands and the 'white' Cape Province

Topography & Climate

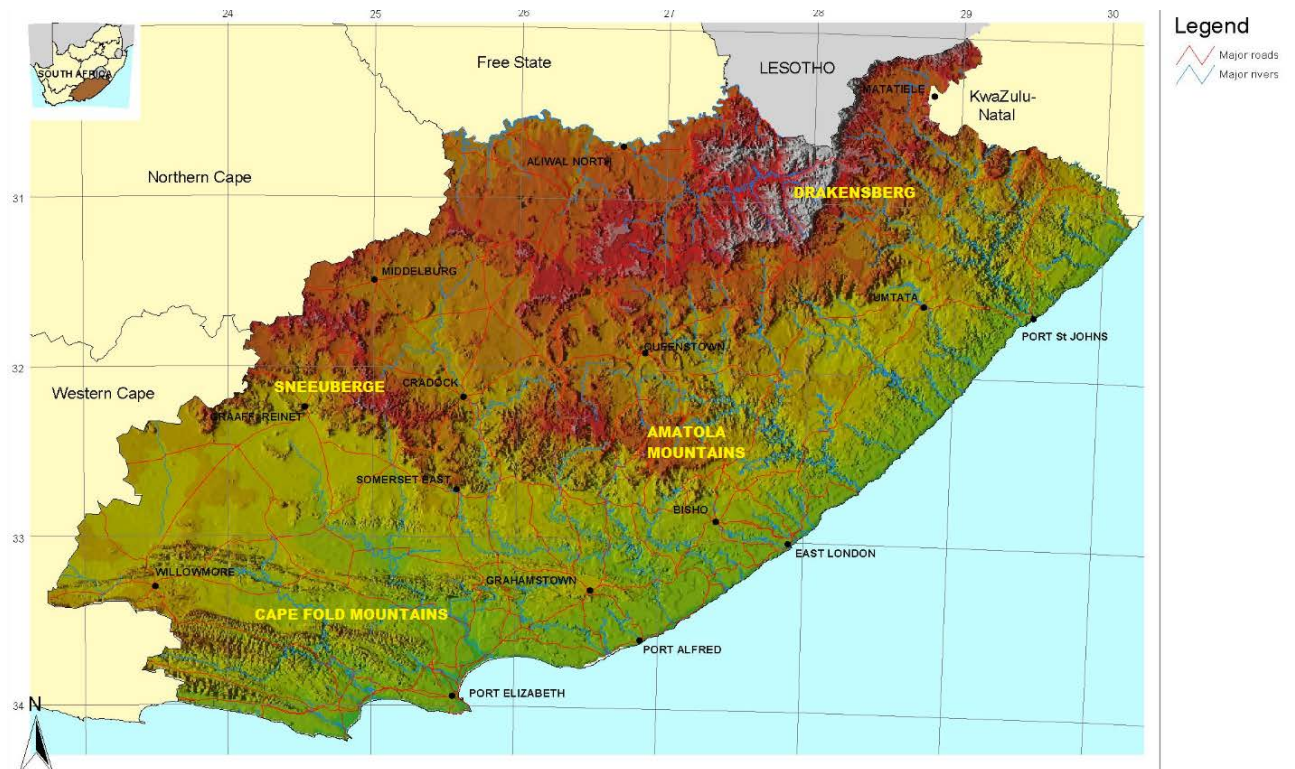


Fig.3 Topography of the Eastern Cape (source: environment.gov.za)

The mountainous areas in the north of the province form part of the Great Escarpment (called the Drakensberg Mountains in this area). Further south the Cape Folded Mountains start between East London and Port Elizabeth, and continue westwards into the Western Cape. The coast north of East London is characterised by many short, deeply incised rivers flowing parallel to each other out to sea (Fig.3).

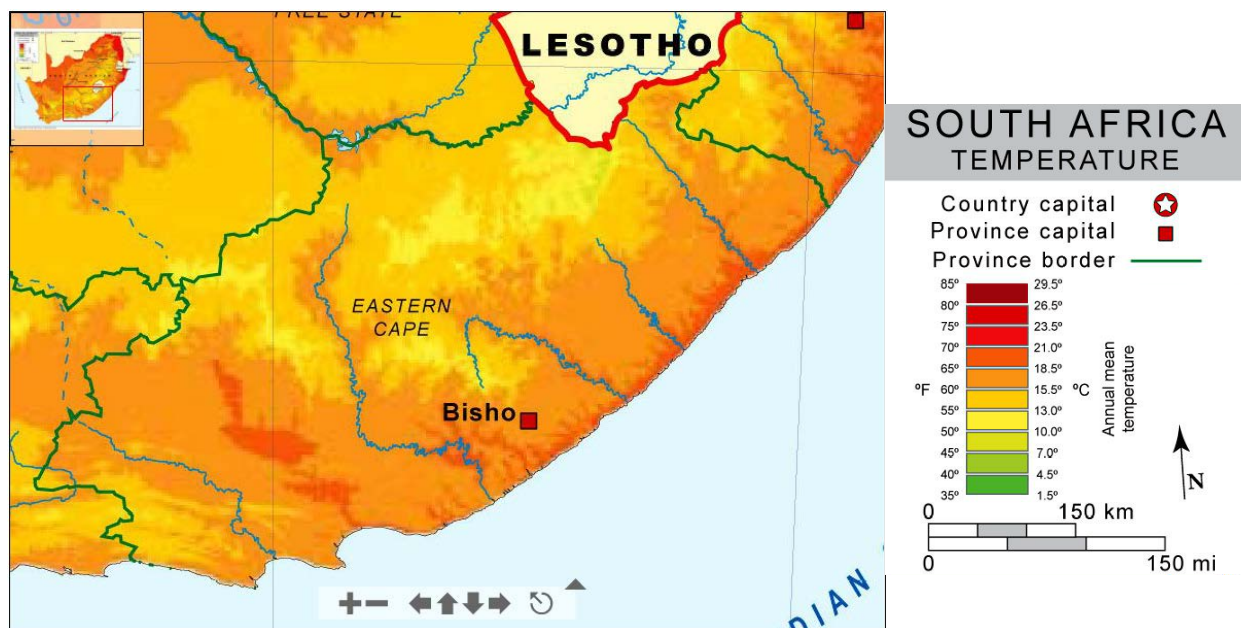


Fig.4 Mean annual temperature (source: www.bestcountryreports.com)

The climatic conditions of the EC's coastal areas lie between the subtropical conditions prevalent in KwaZulu-Natal and the Mediterranean climate of the Western Cape. The Karoo in the west experiences long hot summers and moderate winters, whereas the high altitudes of the Great Escarpment towards Lesotho and the Free State regularly experience snow in winter (see Fig.4).

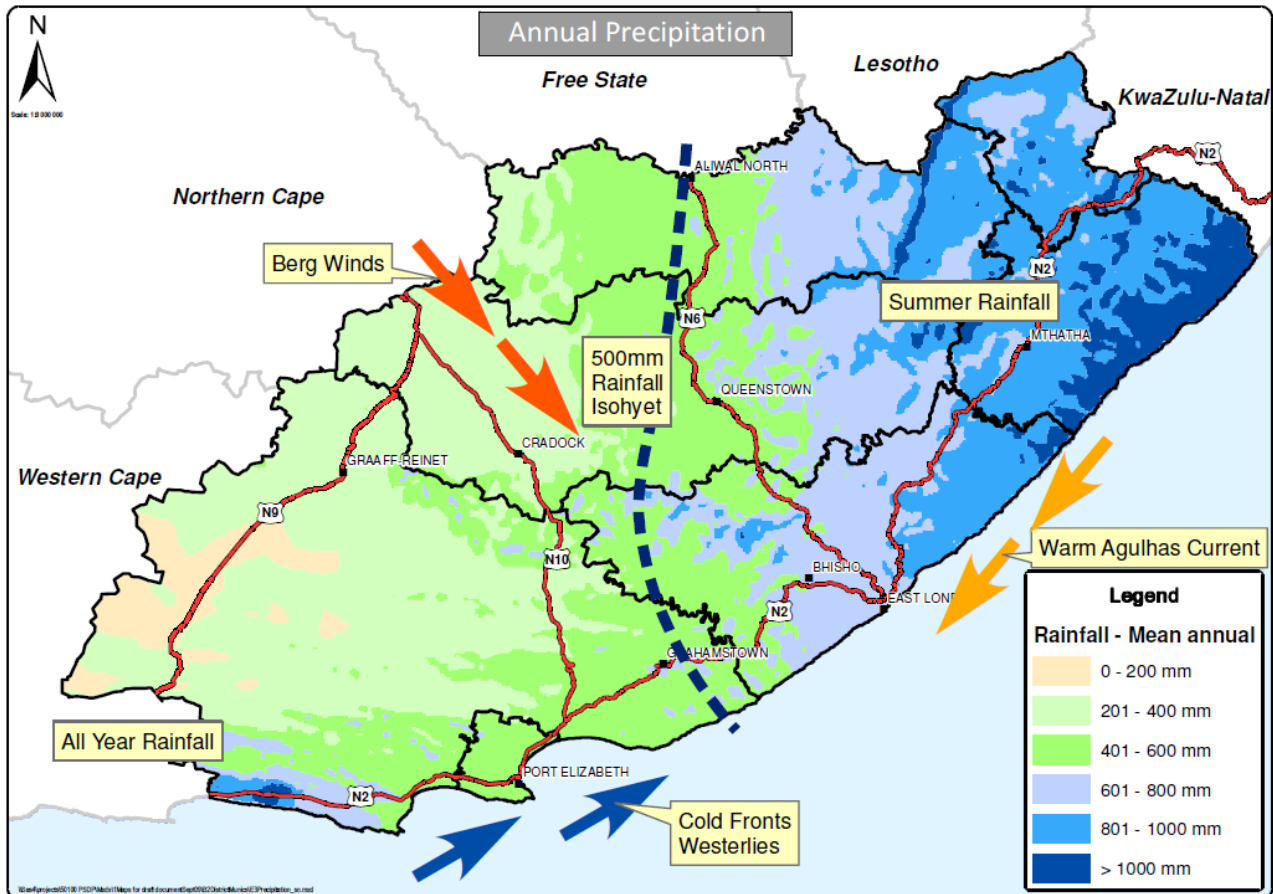


Fig.5 Mean annual rainfall (source: EC Spatial Development Plan)

The Eastern Cape exhibits a bimodal rainfall pattern, with a winter rainfall (or all year rainfall) zone in the west, and a summer rainfall zone in the east (Fig.5). Because of the varying rainfall seasons, growing periods also vary. In the north, east and along the coastal belt, summer seasonality encourages C4 grass production and the main focus is cattle and sheep production. In the semi-arid central and western regions C3 grasses and shrubs predominate, and this favours sheep and goat production.

Biodiversity and Ecosystems

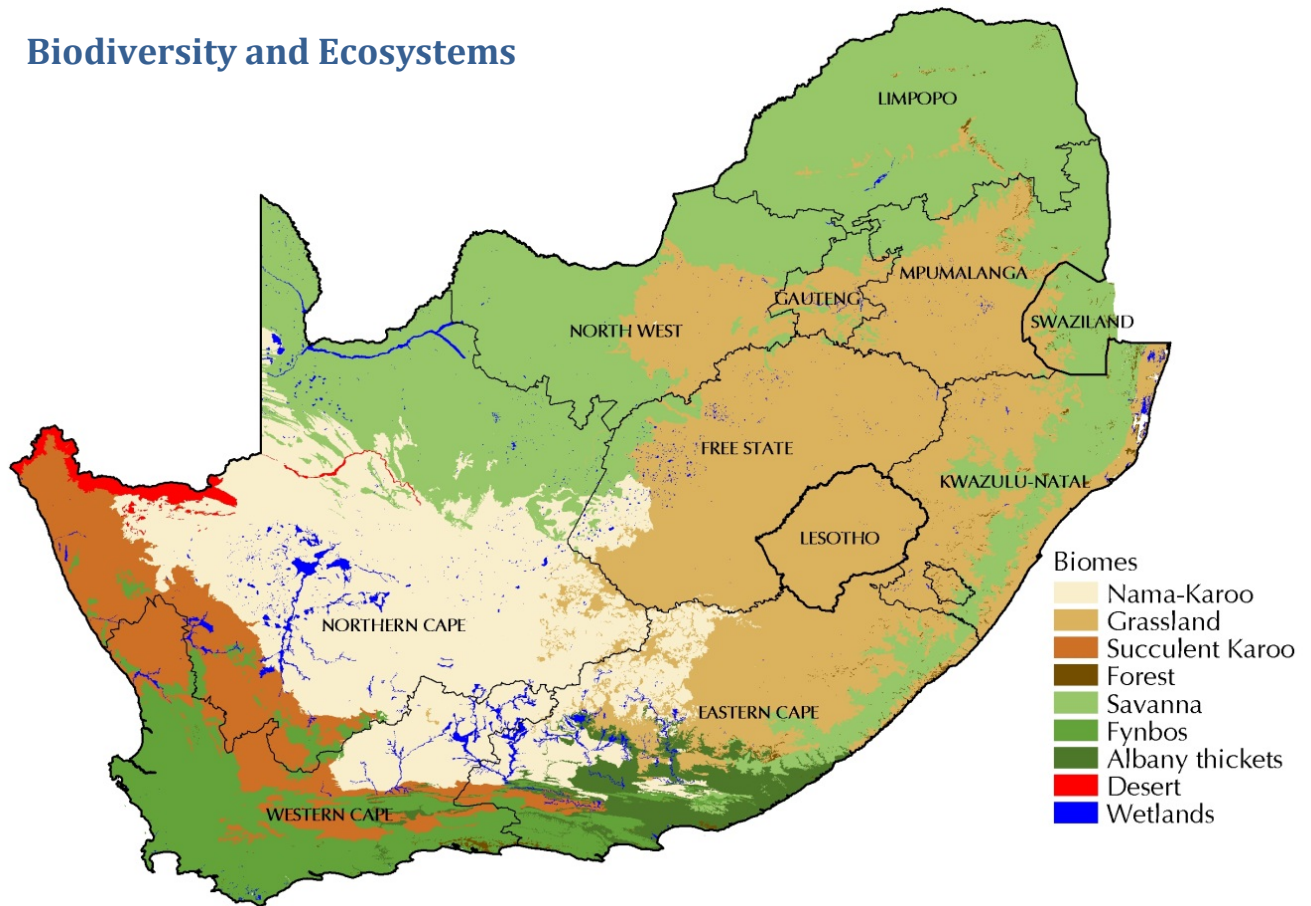


Fig.6 Biomes of South Africa (source: State of the Environment, Department of Environmental Affairs)

All of South Africa's biomes occur in the Eastern Cape, except for Desert (Fig.6). The Grassland, Nama Karoo, Thicket and Savanna biomes are the most extensive. Two global biodiversity hotspots converge in the Eastern Cape around Port Elizabeth (see Fig.7 below).

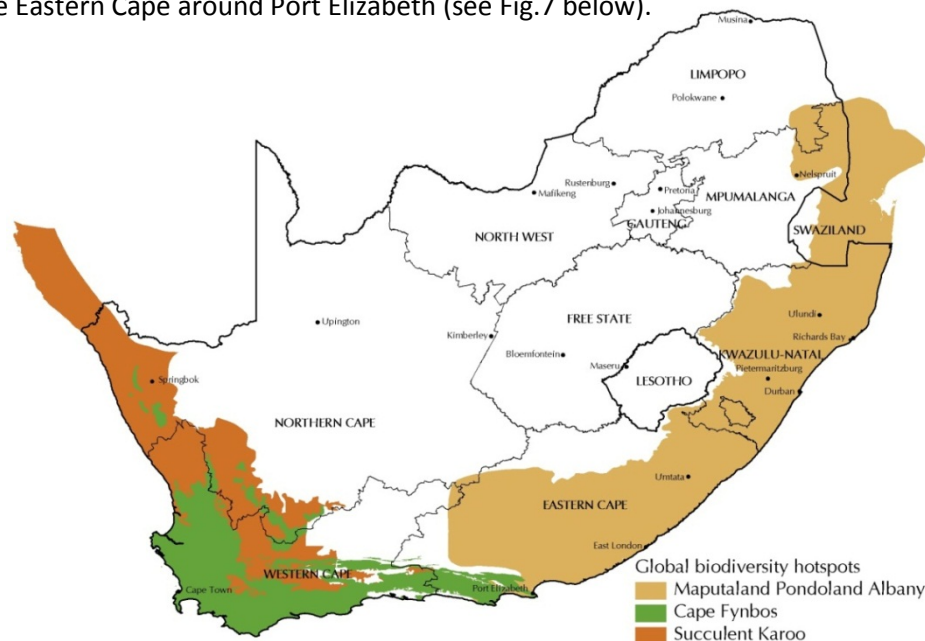


Fig.7 Biodiversity hotspots in South Africa (source: State of the Environment, Department of Environmental Affairs)

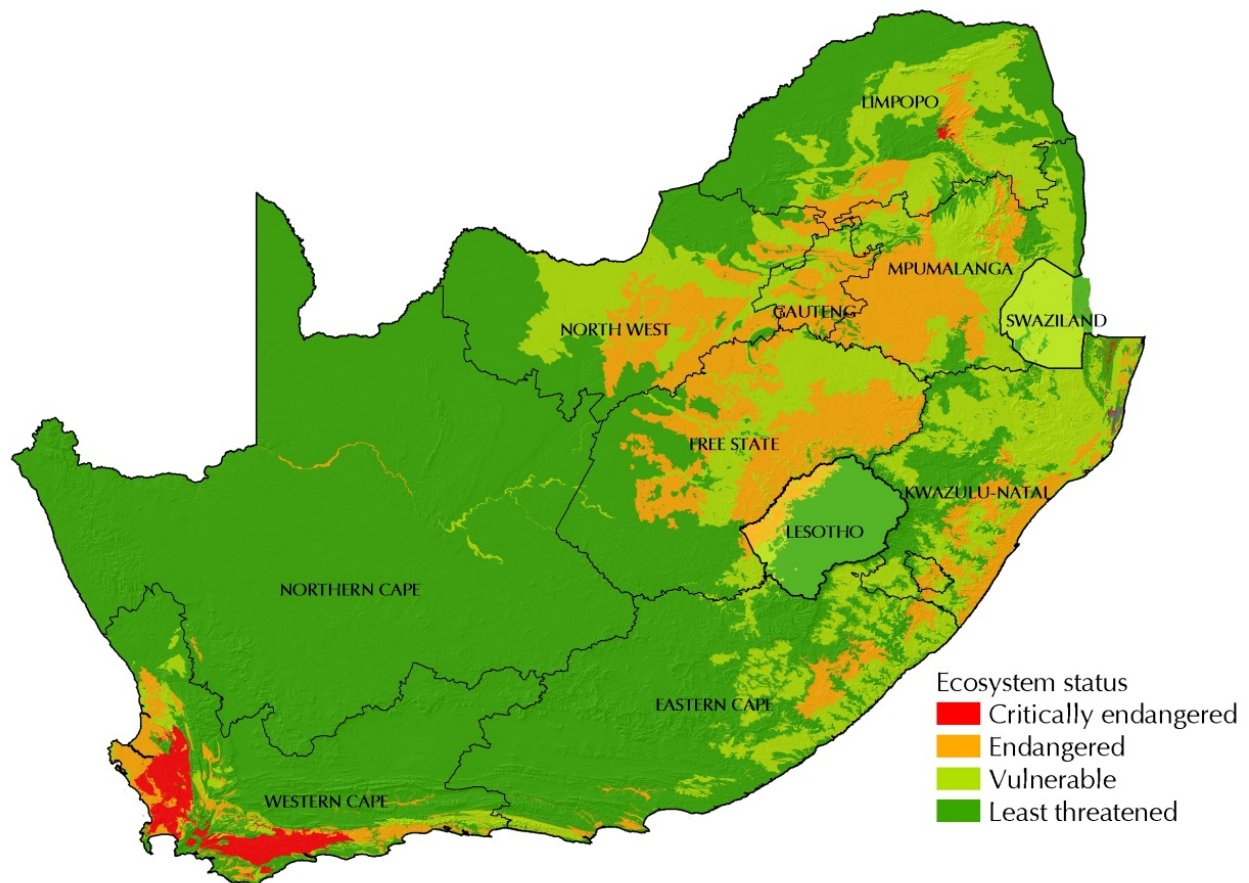


Fig.8 Terrestrial ecosystem status in South Africa (source: State of the Environment, Department of Environmental Affairs)

Ecosystem status is based on how much of an ecosystem's original area remains intact. Least threatened ecosystems are still largely intact; vulnerable ecosystems are reasonably intact, but are nearing the threshold beyond which they will start to lose ecosystem functioning; endangered ecosystems have lost significant amounts of their natural habitat, impairing their functioning; critically endangered ecosystems have so little natural habitat left that not only has their functioning been severely impaired, but species associated with the ecosystem are also being lost.

There are a number of endangered ecosystems in the Eastern Cape, though none are classified as critically endangered (Fig.8). A total of 316 threatened plant species are found in the province, more than one fifth occurring in the Thicket biome. The Forest and Fynbos biomes contain the highest number of threatened plants per unit area. In addition, the province is home to 4 endemic freshwater fish species, 8 threatened marine fish species, 6 threatened frog species (4 of which are endemic), and 19 threatened reptile species (18 of which are endemic).

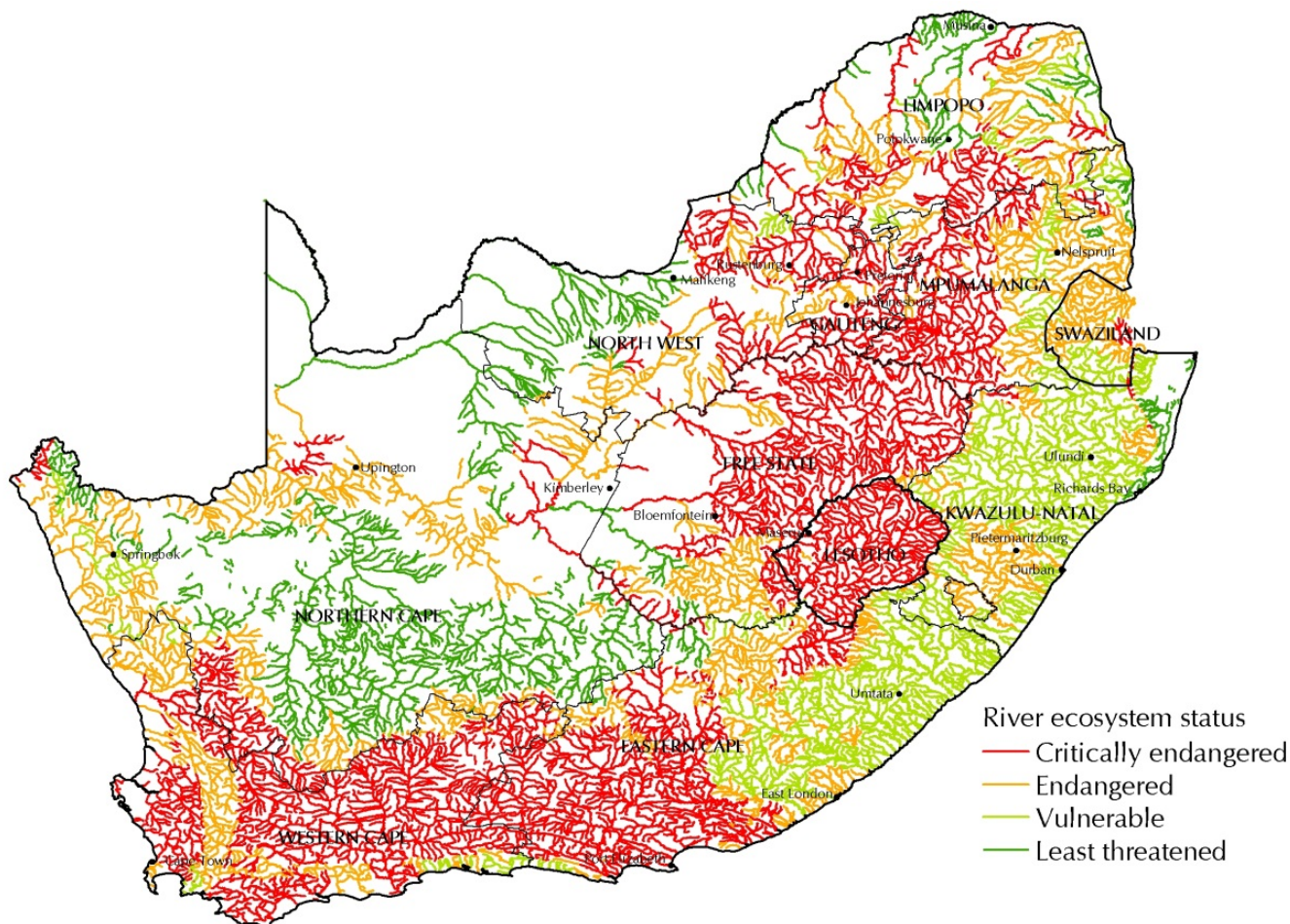


Fig.9 River ecosystem status in South Africa (source: State of the Environment, Department of Environmental Affairs)

Overall, the province's rivers are in a worse state than its terrestrial ecosystems (Fig.9). River ecosystems are under a lot of pressure, especially in the semi-arid western parts of the province where demands on limited water resources are high.

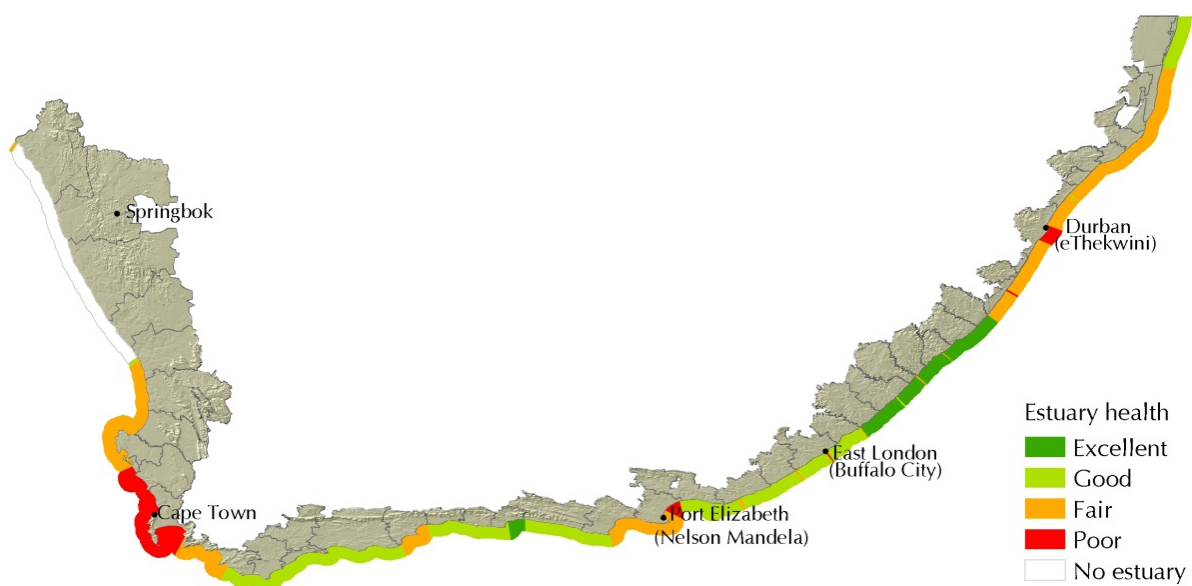


Fig.10 Estuary health in South Africa (source: State of the Environment, Department of Environmental Affairs)

Estuaries in the Eastern Cape are generally healthy, except around Port Elizabeth (Fig.10). The Eastern Cape has more estuaries than any other province. Estuaries are important nursery and feeding areas for a wide range of fauna and flora, as well as important recreational sites for tourists and residents. The estuarine health index provides an overall assessment of the condition of estuaries by considering three aspects, namely the status of fish assemblages, water quality and the aesthetics of the estuary. The indicator thus assesses the level of urbanisation and development as well as the ecosystem health.

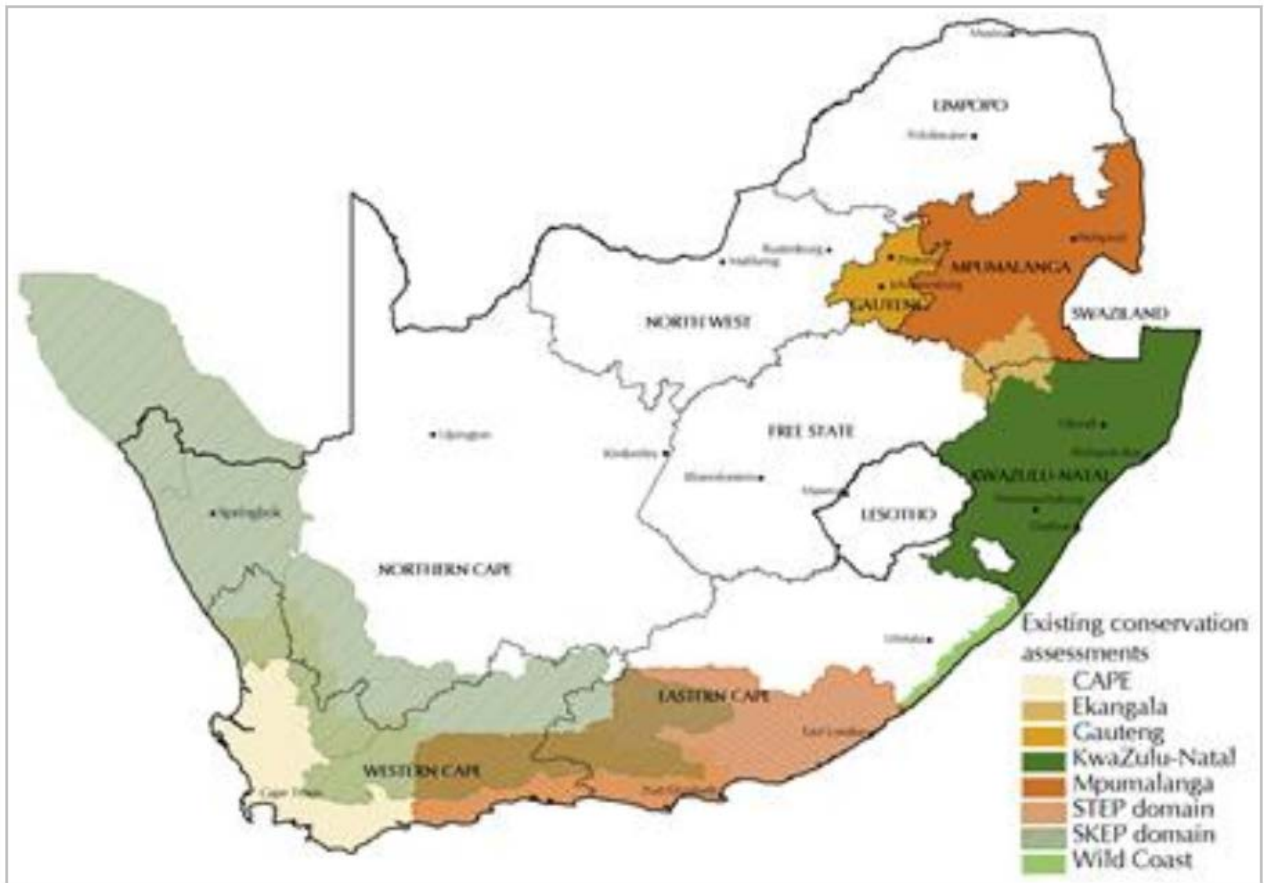


Fig.11 Major conservation assessments in South Africa (source: State of the Environment, Department of Environmental Affairs, no higher quality image available)

The western parts of the Eastern Cape have been included in three different conservation assessments spanning multiple provinces (Fig.11): The Cape Action for People and the Environment (CAPE), the Succulent Karoo Ecosystem Programme (SKEP) and the Subtropical Thicket Ecosystem Planning project (STEP). An assessment was also done of the Wild Coast in 2005. In addition, a province-wide biodiversity conservation plan was developed in 2007 on behalf of the provincial Department of Economic Development and Environmental Affairs and the national Department of Water Affairs and Forestry (now DAFF, see below).

Formal Environmental Governance

At a national level environmental jurisdiction lies with the Department of Environmental Affairs (DEA), and the Department of Agriculture, Forestry and Fisheries (DAFF). The provincial mandate for environmental issues lies with the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT). At the district level, only the metropolitan district of Nelson Mandela Bay has a branch for environmental services. Local municipalities may or may not

have dedicated environmental staff. However, the inclusion of environmental management has been identified as a priority issue at the local government level (2004 Eastern Cape State of the Environment Report).

Demographics

(The information for the following sections was taken mainly from a recent (2010) report by the Research and Population Unit of the Eastern Cape Department of Social Development, titled 'The people matter – the state of the population in the Eastern Cape', and the Provincial Spatial Development Plan 2010)

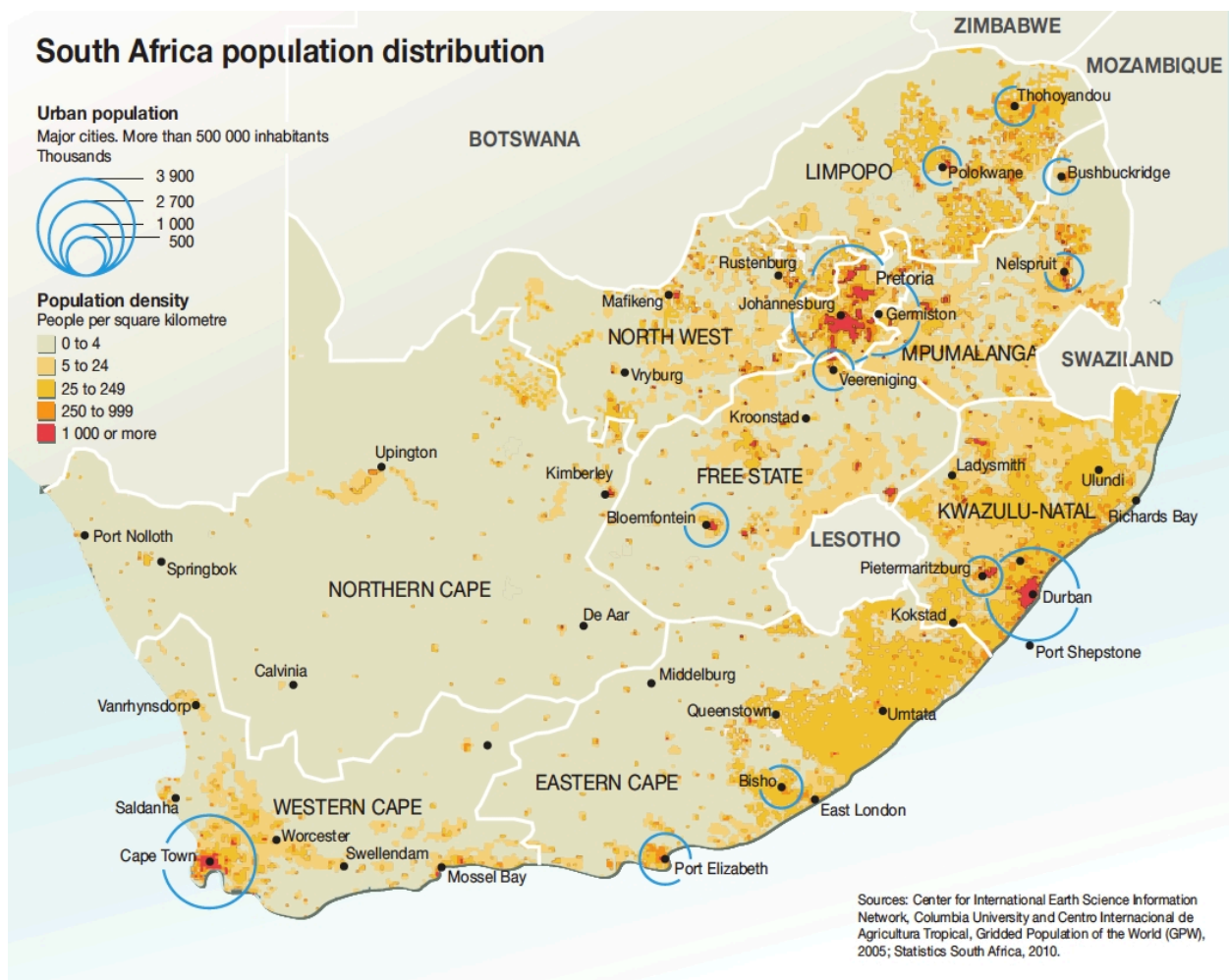


Fig.12 Population density in South Africa

General statistics

The population of the Eastern Cape has increased from 6.1 million in 1996 to 6.74 million in 2010. The province's inhabitants make up 13.5% of South Africa's total population. Of the Eastern Cape's population, 67% live in former homelands, though they only make up 30% of the province's area. Population density is therefore highest in these areas (and the urban centres) (see Fig.13).

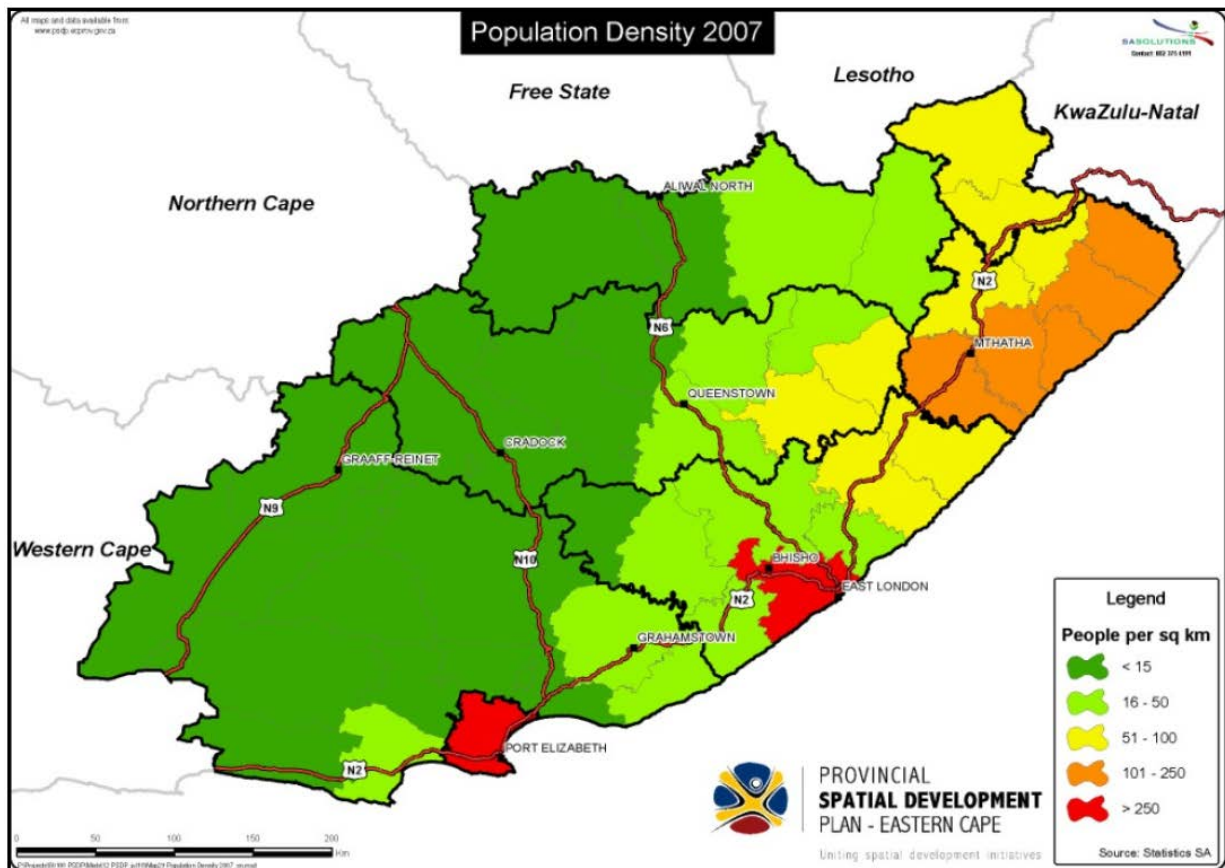


Fig.13 Population density in the Eastern Cape

Women outnumber men, making up 53% of the population in 2007. This imbalance can be attributed to a sex-selective pattern of migration out of the province in young people, and gender differences in mortality rates at older ages. Most migrants are males between the ages of 25 and 39 years, heading for Cape Town, Johannesburg, or other urban centres in Gauteng. It is estimated that between 2006 and 2011 the net migration was 215 000 people out of the province (StatsSA, 2011).

The population is 87.6% African, 7.5% Coloured, 4.7% White and less than 0.3% Indian. The home language of 83% of the population is isiXhosa, while fewer people speak Afrikaans (9%) and English (4%) (Fig.14). Xhosa is the name given to the group of cultures who speak isiXhosa. Xhosa cultural practices include governance by chiefs, rituals, and initiation ceremonies. However, many Xhosa people do not practice all of these aspects of Xhosa culture anymore. Missionary influence in the Eastern Cape has led to the integration of Christian beliefs into Xhosa culture and worldviews, and God may be approached through the ancestors (www.sahistory.org.za).

Concerning education, just over 15% of over 20-year-olds in the province cannot read, and the same proportion cannot write. There are big differences in educational achievements among different population groups in the province. The percent of Africans aged 20 years or older with at least matric level education in 2007 was just 30%, compared to 74% for their White counterparts and 34% for Coloureds.

HIV prevalence was 15.2% in the general population in 2008, with higher levels among people of low socio-economic status and African women of reproductive age. The Human Sciences Research Council estimates that women aged 24-34 are the most at-risk population group in South Africa,

with a HIV prevalence of 32% in 2008. Almost 42% of all deaths in the Eastern Cape for 2009 were estimated to be due to AIDS. The good news is that the trend of HIV prevalence is declining among the youth in the province. In general, life expectancy at birth was 54.8 years in the period of 2006-2010.

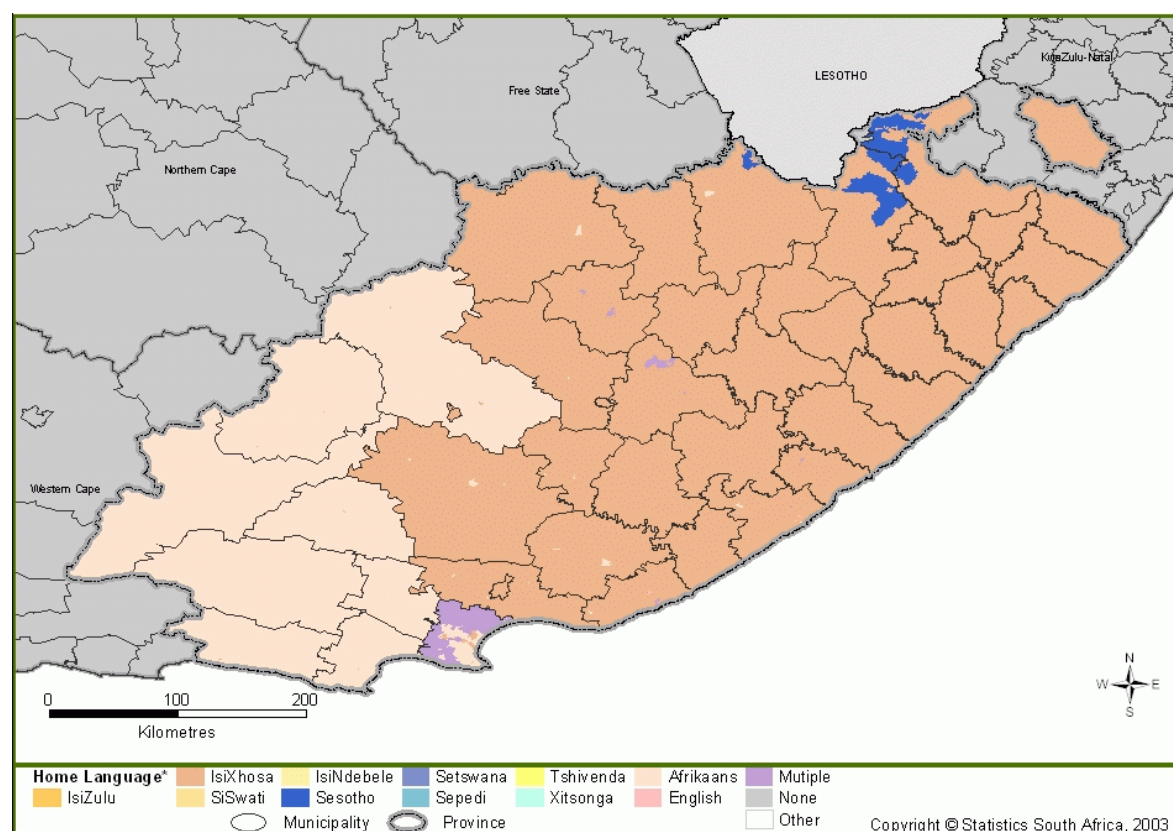


Fig.14 Home language distribution in the Eastern Cape (source: Statistics South Africa's Census 2001)

Human Settlement Patterns

Migration is an important process shaping the human landscape of the Eastern Cape, and takes the form of both permanent and temporary migration. The province has the highest rate of permanent net out-migration of any province in South Africa. The destination for 41% of all emigrants between 2001 and 2007 was the Western Cape, followed at a distance by Gauteng and KwaZulu-Natal. 73% of black Africans living in the Western Cape were born in the Eastern Cape, and about 2/3 of these were born in the former Transkei. This reflects a country-wide trend of long-term outward migration from poorer provinces to the three main urban and economic centres of South Africa.

Temporary migration, aka labour migration, is seen as a way of accessing income to support the rural household in the face of poverty. It links rural areas with larger settlements, and continues the legacy of Apartheid in which the homelands functioned as reserves for labourers who sent a large proportion of their earnings back home. During the 1980s, 70% of the Transkei's GNP was made up of remittances from people working in South Africa. Still today, there is a heavy reliance of many of Eastern Cape households on remittances and social grants.

Within the province, people are increasingly moving from rural areas with few prospects to towns and cities that are perceived to have better prospects, leading to peri-urban sprawl and informal settlement. In addition, many high density rural communities in the former homelands are undergoing 'in situ urbanization', where these communities begin to function more like suburbs of the urban centres in their vicinity. The links between villages and towns are growing – urban and rural distinctions are disappearing. The Amathole District decided to act upon these trends and in 2005 proclaimed many rural villages in the former Ciskei as formal townships, with the full range of urban services and associated development plans.

Figure 15 below summarizes the main migration trends in different parts of the province. In the western parts, the decline of commercial livestock farming and consequent farm labour lay-offs have resulted in out-migration to the large cities in other provinces (Cape Town or Johannesburg), or movement to the provincial coastal centres of industry (Port Elizabeth and East London). In the central and eastern regions, de-industrialization (especially in the textile and mining sectors) has led to high unemployment. Here, employment is sought in the coastal resorts and the regional urban centres, again resulting in extensive peri-urban sprawl (especially around Umtata). Not mentioned in the EC spatial development plan, but highlighted in the 'The People Matter' report by the province's department of social development, is a regional migration from 'the poorer eastern part to the relatively more prosperous western part of the province'.

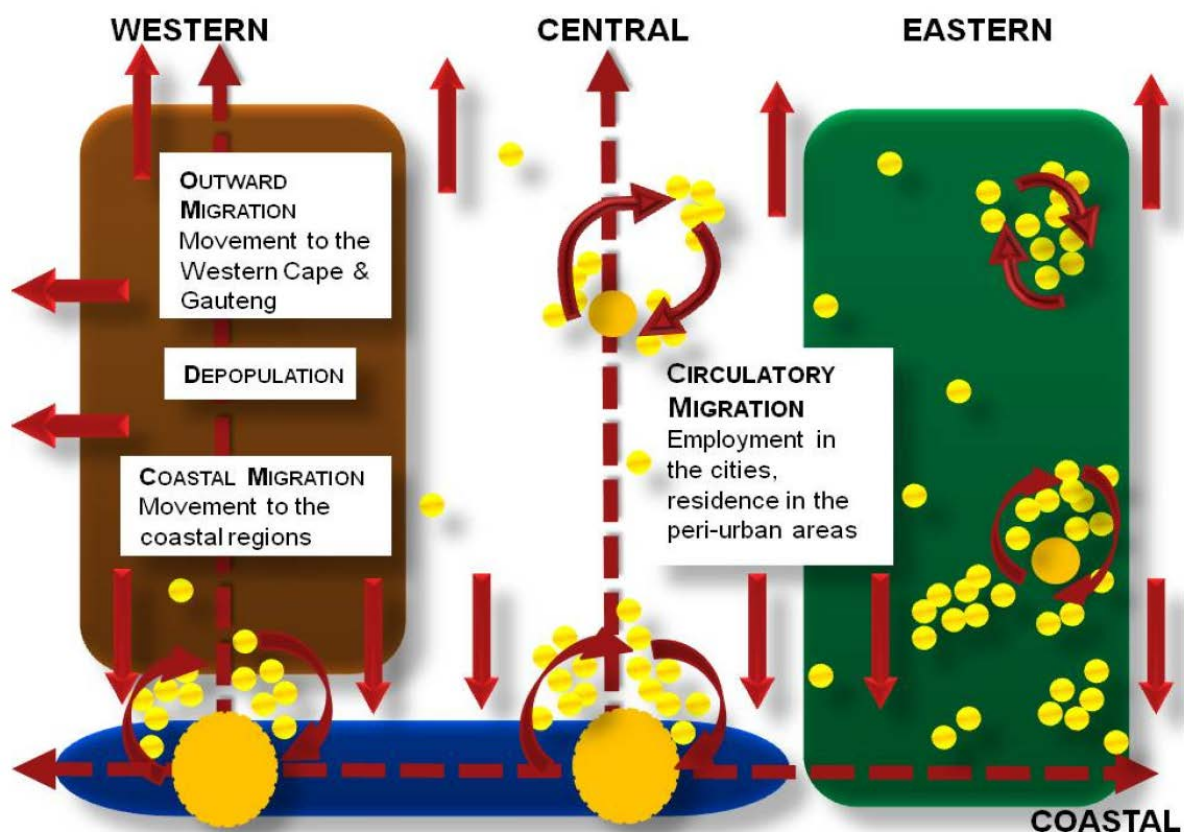


Fig.15 Migration trends in the Eastern Cape (source: EC Spatial Development Plan)

Economy

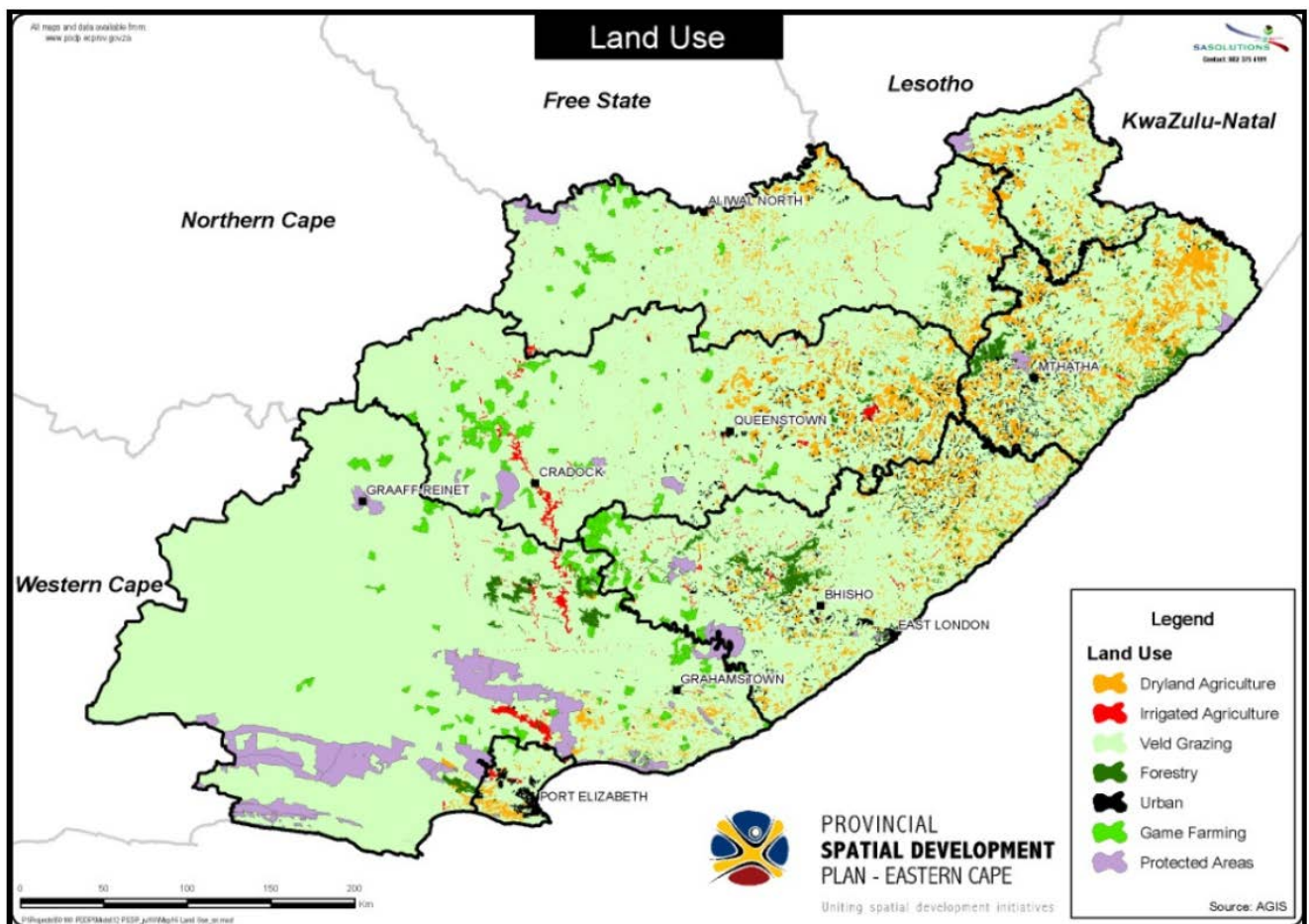


Fig.16 Land use in the Eastern Cape

The dominant land use in the majority of the Eastern Cape is grazing, along with dryland agriculture in the eastern section of the province (Fig.16). More than 10% of Eastern Cape's surface area is conserved in some way, but only 4.3% is formally protected as National Parks or Provincial conservation areas. The distribution of protected areas is skewed, with almost half of the Local Municipalities having no protected areas even though they may contain rare, threatened or vulnerable species. Those municipalities with few rare, threatened or vulnerable species are well covered by protected areas.

Agriculture in the Eastern Cape (Fig.17) is dominated by intensive beef and fruit farming in the south-western parts, and subsistence farming (mainly of cattle, maize and sorghum) in the north-eastern regions. The southern coastal area is conducive to forestry. Pineapples are cultivated around East London. In the inland areas of the Karoo, the harsh climate limits agriculture to sheep farming. Around Grahamstown and Alexandria one finds chicory and dairy farms.

The industrial centre around Port Elizabeth and Uitenhage is the province's largest employer, specializing in vehicle manufacturing. In addition, a multi-billion Rand industrial development zone (IDZ) and deep water port are being developed in Coega (22km outside PE) to boost investment in export-oriented industries. Tourism is varied, depending on the different regions' attractions (see Fig.18).

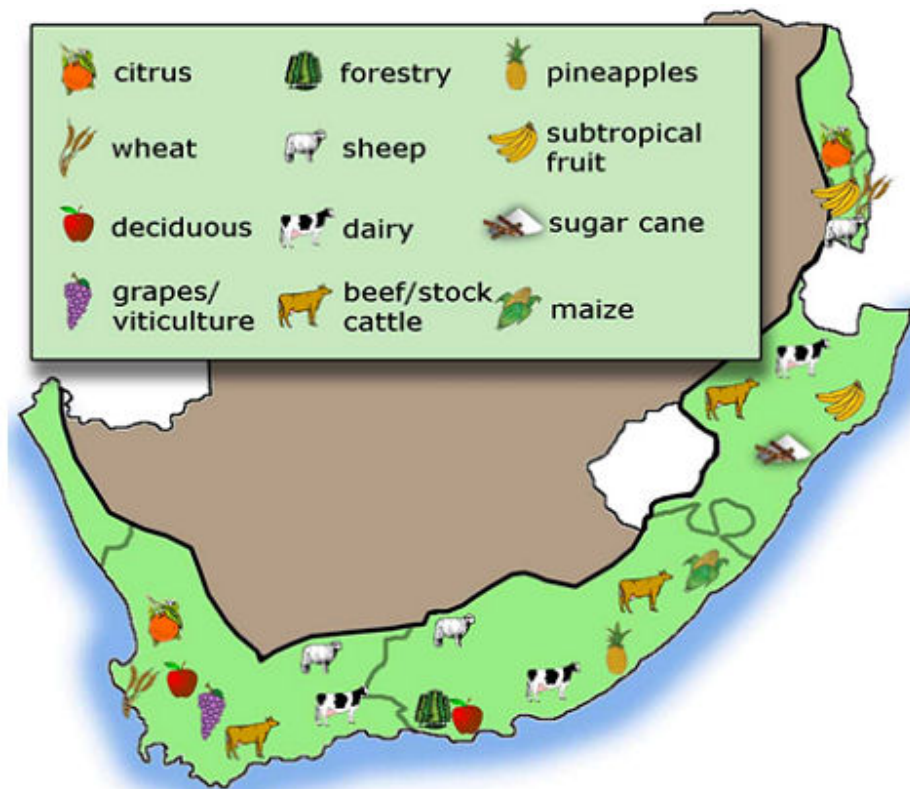


Fig.17 Main agricultural products in the extended coastal belt of South Africa (source: www.myfundi.co.za)

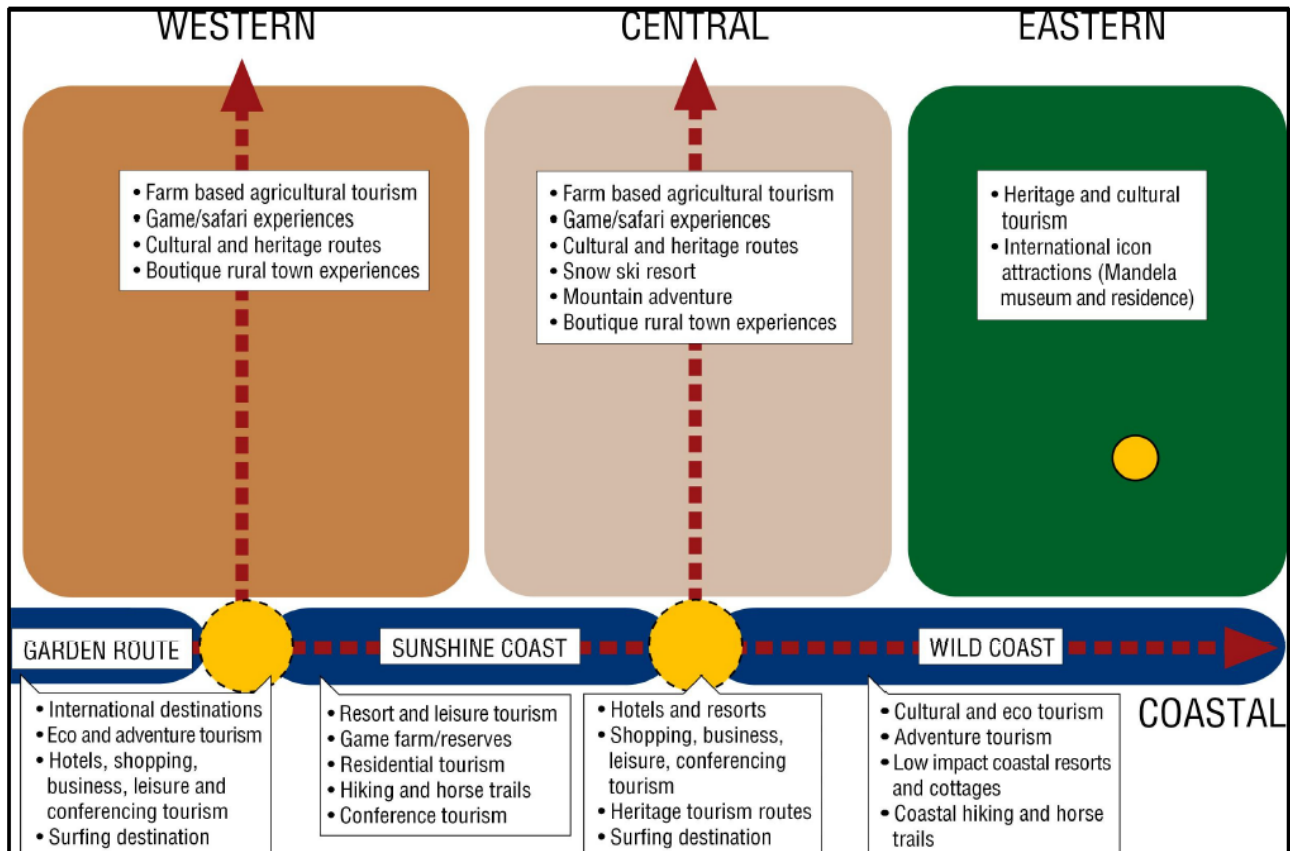


Fig.18 Main tourism attractions in the Eastern Cape (source: EC spatial development plan)

Overall, the Eastern Cape contributes only 7% to South Africa's GDP despite making up approximately 13.5% of the population. The economy has a lower contribution of the primary sector than other provinces due to the absence of a mining sector found elsewhere in the country. The primary sector (which includes agriculture, forestry, and to a lesser extent fishing and aquaculture) constitutes 7% of per capita gross value added (GVA) whereas the tertiary sector is proportionally larger than in other provinces, accounted for by the public sector services in the province (PGDP, 2004). The secondary sector is dominated by the transport equipment sub-sector but includes other industries such as food, beverages and tobacco products, textiles, and fuel, petrol, chemical and rubber products (PGDP, 2004).

Environmental & Social Challenges

Environmental threats

The Eastern Cape faces a number of environmental threats, chiefly among them land degradation (Fig.19). The province is one of the three most degraded provinces in South Africa (together with Limpopo and KZN). It exhibits high levels of soil degradation, particularly in commercial farmland areas. In other areas, the thicket biome is threatened by invasive alien species and overgrazing by domestic herbivores.

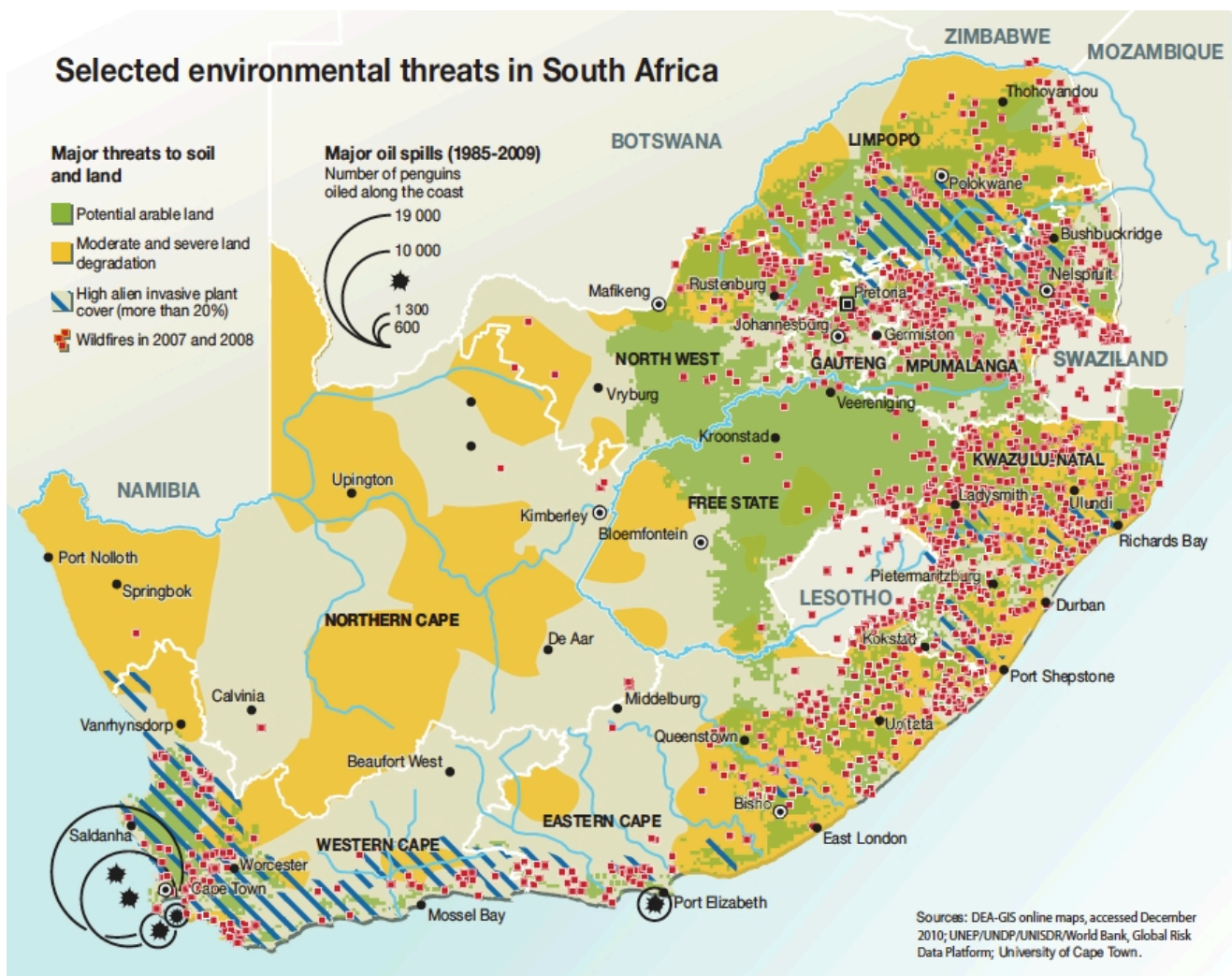


Fig.19 Environmental threats in South Africa

Pressure on groundwater in the western parts of the province is high (see Fig.20). The main use of water in the province is irrigation, which accounts for almost two thirds of water resources required in the Eastern Cape.

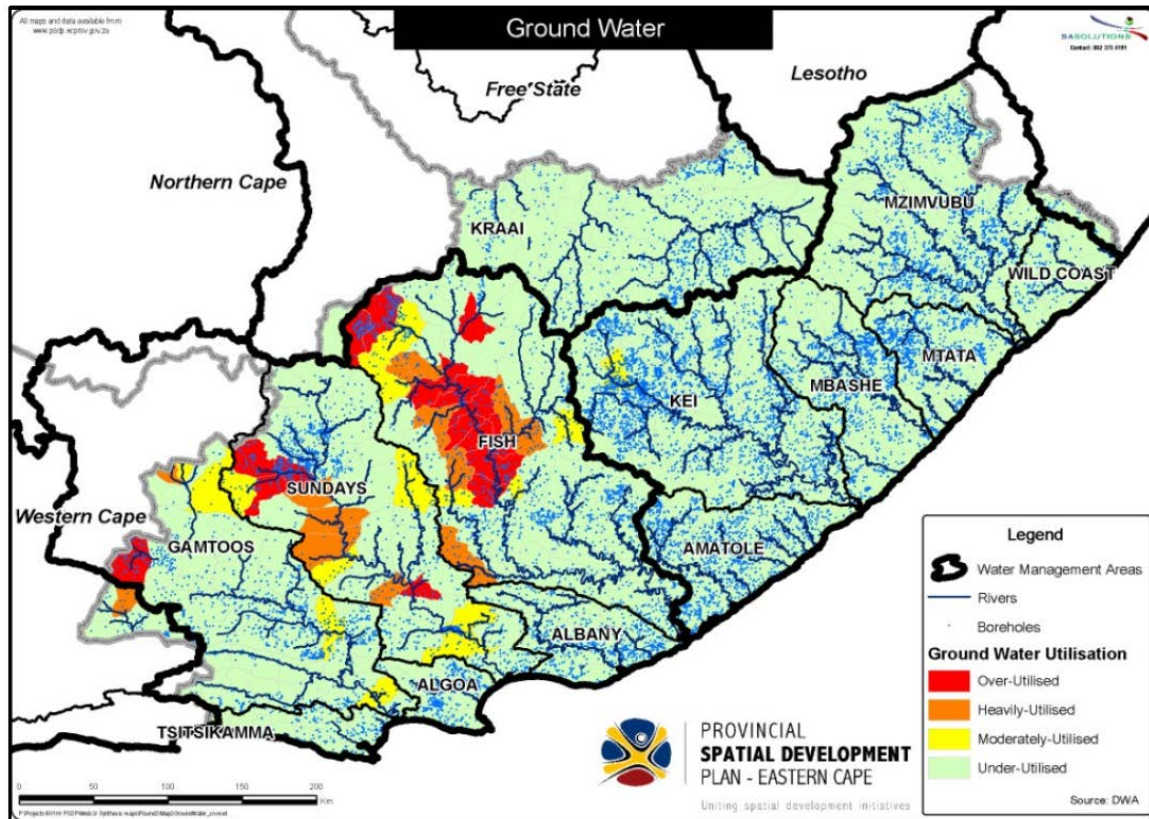


Fig.20 Ground water utilisation levels in the Eastern Cape

The 60-100km wide coastal belt, especially in the central and western parts of the province, is under pressure from coastal resort developers and the wealthy property market. This has led to pressure on coastal environments and the water and sanitation infrastructure. The Wild Coast has not seen the same development interest, mainly due to complexities and insecurities of land tenure in this area. Here, the problem has been restricted to the establishment of illegal cottages.

Poverty

Despite progress in the provision of housing and basic services by the government since 1994, the Eastern Cape still has some of the highest rates of poverty and unemployment in the country. In 2004, 72% of the EC population was living below the poverty line (which varies with household size and is based on the Bureau of Market Research's Minimum Living Level; see Fig.21). The rate of unemployment in the province by the middle of 2010 was 27.7%. Overall the biggest differences in unemployment in the province are between Whites and other population groups. The unemployment rate among Whites was 4% compared to 30% and 31% for Africans and Coloureds respectively.

The most important direct anti-poverty programme in the country is the social security system that provides a variety of non-contributory grants to qualifying individuals. During 2007, 30.5% of all households in the Eastern Cape received social grants. The province has the widest coverage of social assistance in the country: Although the population in the Eastern Cape accounted for 13.5% of the national population, it received an estimated 17.5% of all grants disbursed by the beginning of 2010. The two biggest types of grants disbursed in the province are the Child Support Grant and the Old Age Grant.

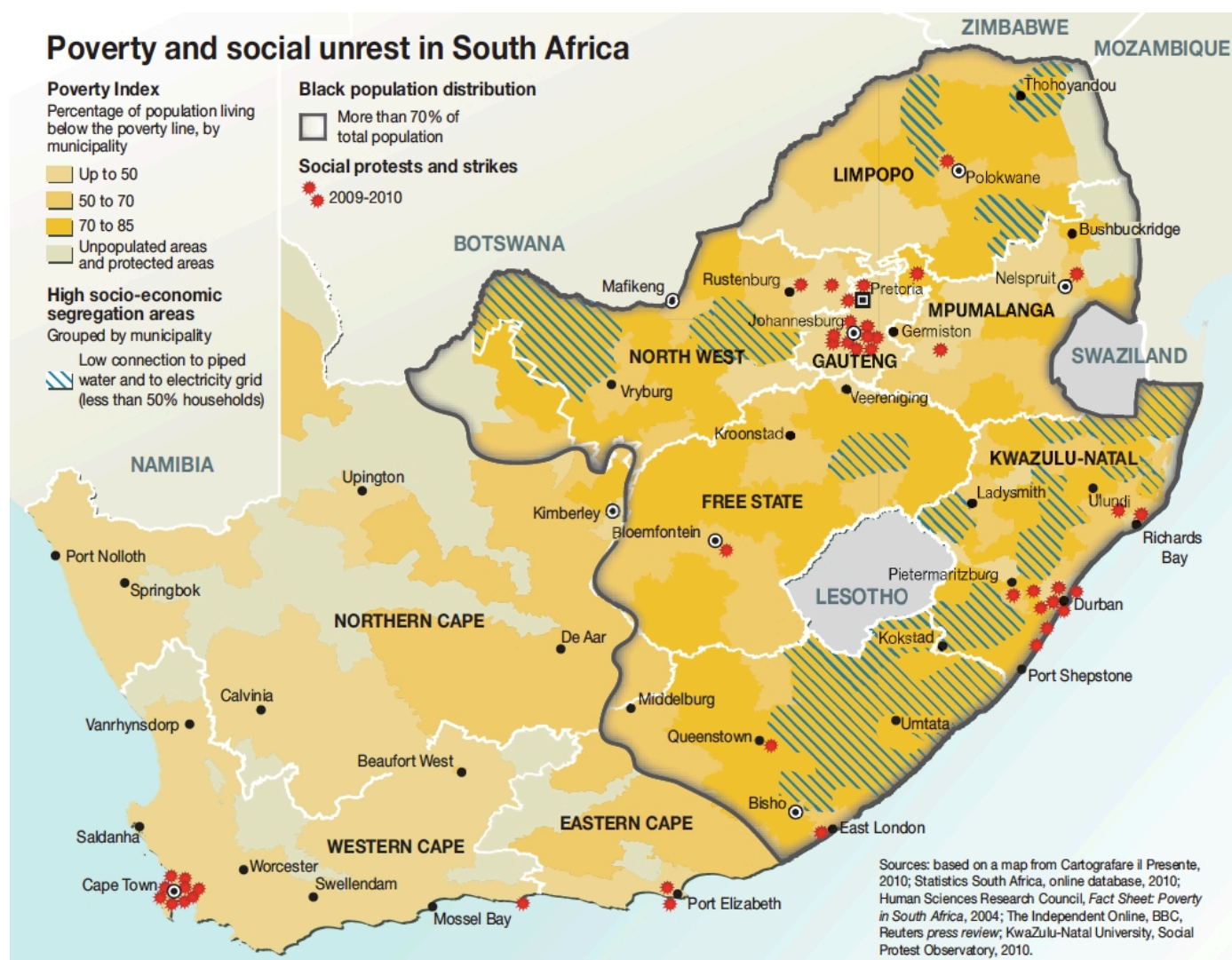


Fig.21 Poverty levels and distribution of major incidents of social unrest in South Africa

Service delivery is challenged by low levels of centralization and the dispersed nature of rural homesteads in the former homelands. Especially areas in the former Transkei still show the lowest percentages of households with access to piped water (Fig.22), and a high dependence on wood for heating purposes (as opposed to electricity; see Fig.23). Only 37% of people receive piped water to their dwelling and 31% of the population relies on natural sources of water. The provincial average for households without sanitation is high at 30%, and on average only 49% of the province is electrified (PGDP, 2004).

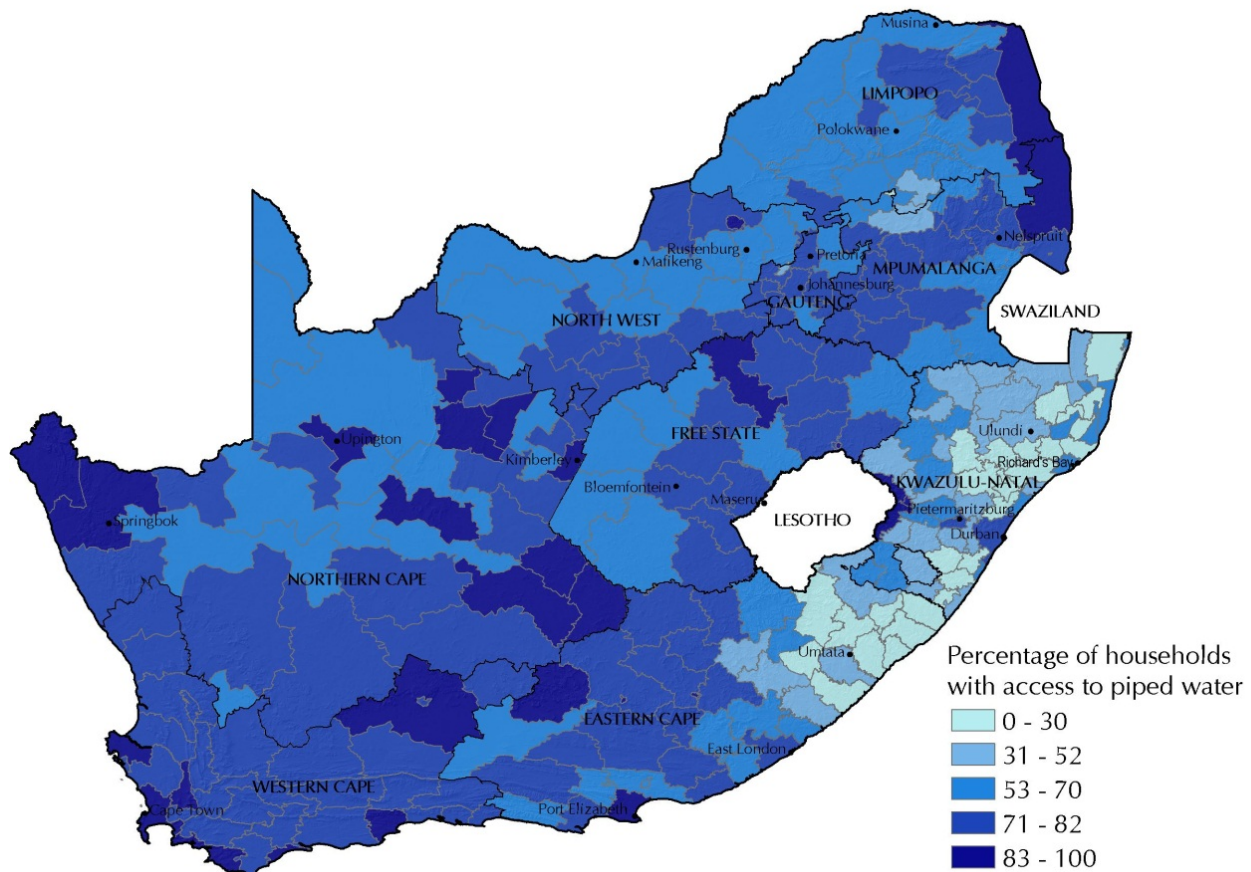


Fig.22 Acces to piped water in South Africa (source: State of the Environment, Department of Environmental Affairs)

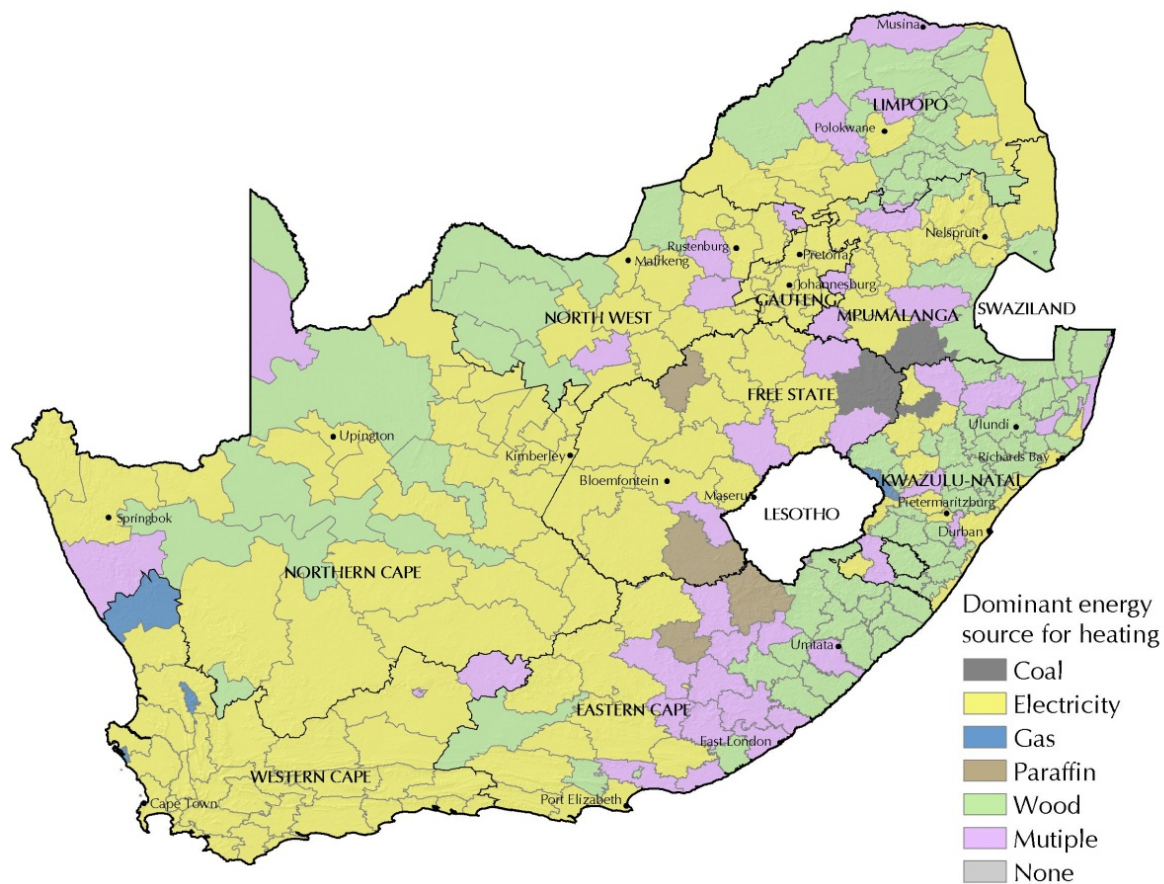


Fig.23 Source of heating energy in South Africa (source: State of the Environment, Department of Environmental Affairs)

Looking Ahead: Important Issues and Trajectories of Change

In the section that follows we focus in on a selection of particular issues of environmental change and governance of resources that we have identified as important for the future of the province. This discussion is not exhaustive; it represents research that we have come across thus far, but it provides a starting point for discussing drivers of change in the province.

Land tenure changes: the tension between national government and traditional authorities

The former Bantustans within the present-day Eastern Cape, i.e. the Transkei and the Ciskei, have been subject to land reform changes and the accompanying tensions that surround governance and ownership of land (see Fig.24 for overview of present-day land characteristics). Land in the former Bantustans was owned by the state and the Development Trust but land tenure was characterized by the 'permission to occupy' (PTO) system, as set out in the 1936 Native Land Act (Ntsebeza 1999). While a PTO granted rural inhabitants the right to permanently occupy land, the system did not provide a secure land title and thus people were vulnerable to being forcibly removed from land without being consulted (Ntsebeza 1999). Traditional leaders, who were not elected, and were unaccountable, allocated and managed land and were often corrupt in doing so (Ntsebeza 1999, 2003). There were no municipalities in the former Bantustans. However when popular resistance to Apartheid spread from urban areas to rural areas in the 1980s and 1990s, Tribal Authorities were challenged and land administration in the former Bantustans began to collapse (Ntsebeza 1999).

In the transition to democracy, land tenure reform has been slow to emerge. The government's approach to land reform has three facets (www.etu.org.za):

- (i) Land Restitution to restore land or provide financial compensation for people dispossessed of the land after 1913;
- (ii) Land Redistribution through programmes such as The Settlement Land Acquisition Grant (SLAG) which ended in 2000 and the Land Re-distribution for Agricultural Development (LRAD) which replaced SLAG; and
- (iii) Land Tenure reform.

Of particular interest to the Eastern Cape is land redistribution through LRAD and land tenure reform; therefore these will be briefly discussed. LRAD aims to help previously disadvantaged groups to become effective farmers on their own land, to help to improve the standard of living and to decrease the density of overcrowded former homeland areas and provide opportunities to women and youth in rural areas (www.etu.org.za). Previously disadvantaged persons (or groups) who are serious about farming, are enabled to approach the Department of Land Affairs for a grant to purchase land to farm. Agriculture in communal areas, equity schemes and food safety-net projects are also supported by LRAD (www.etu.org.za).

Land tenure reform has been a long process. Legislation for communal land tenure reform was drafted and redrafted but never passed, until the gazetting of the Communal Land Rights Bill in 2002

(Ntsebeza 2003). The slow emergence of this type of legislation is due to the ambivalent position of the government and the resistance of Tribal Authorities (Ntsebeza 2003). The post-1994 democratic government aimed to decentralize and democratize land tenure and governance in the former Bantustans. It has done this by attempting to dismantle the Tribal Authorities by giving some of their land and government responsibilities to democratically elected organizational structures at magisterial district level: transitional rural councils, or transitional representative councils (Ntsebeza 2003). However, tension was created through the fact that government recognizes the hereditary institution of traditional authorities but with no clarity on their role in the new democracy (Ntsebeza 2003).

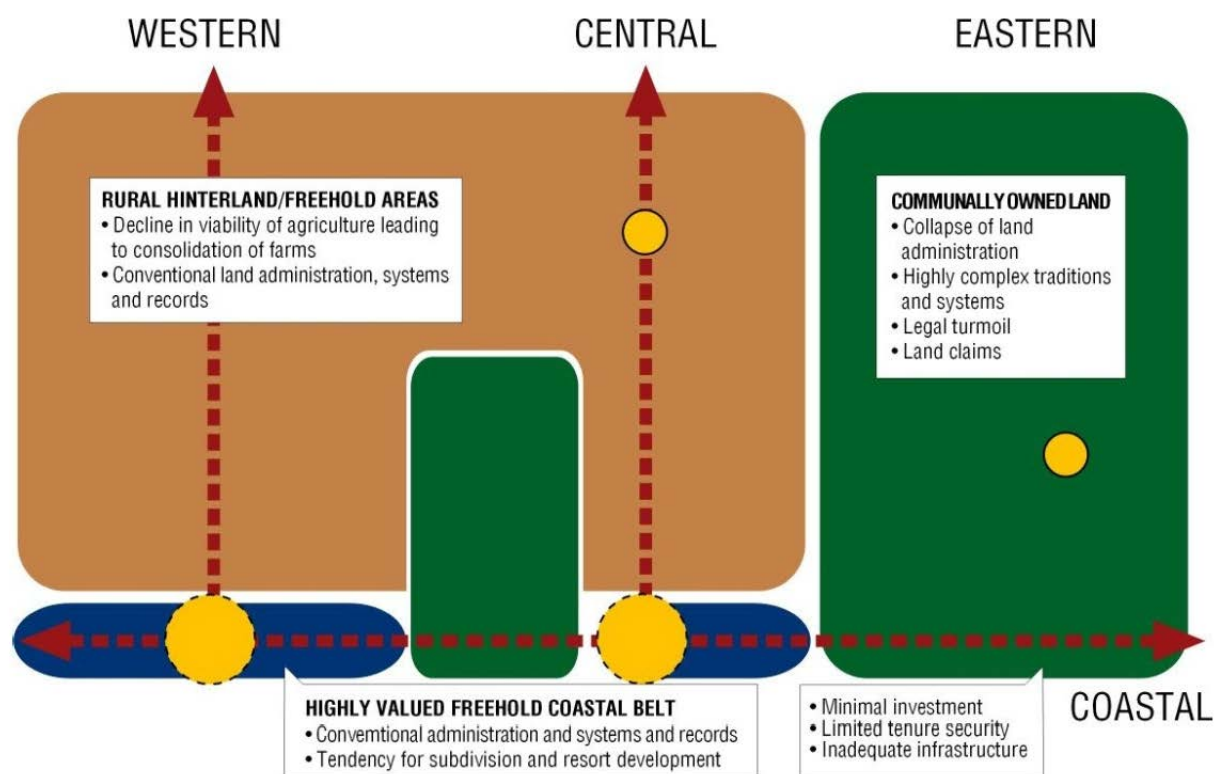


Fig.24 Land characteristics in the Eastern Cape (source: EC Spatial Development Plan)

These issues are still very much under debate in the Eastern Cape and South Africa. The Communal Land Rights Act (Act No. 11 of 2004) was passed in 2004, only to be deemed unconstitutional in May of 2010 demonstrating that the process by which it was drafted did not include sufficient participation from the provinces, and that the Act resembles old Apartheid structures and legislation (Mnisi, 19 May 2010, Business Day).

Management through local knowledge and institutions

Norms, practices and institutions of rangeland management and environmental change may draw on both traditional and the modern 'ways of doing'. Communities may respond to changes in the environment in a rational way drawing on experience and institutional memory, for example, shifting land use practices, and food sharing during droughts that occurred in communities that surround the Mt Coke State Forest (Cundill 2005). Alternately, in the face of a new type of environmental or political change, the lack of institutions and experience to effectively deal with the

situation may result in seemingly irrational responses, such as the degradation of the resource base and abandoning arable fields during a time of food insecurity and drought around 1990 (Cundill 2005).

Practices of land management have also been influenced by government policies during Apartheid and the policies of the new democratic government. The tensions and issues that surround communal land tenure and land restitution (see above), result in a multitude of institutions created by the state to govern access to common resources. Institutions that restrict access to resources in areas of communal property such as the Land Trust, the Communal Property Association, and traditional authorities have conflicting agendas in some cases, and can prevent communities from receiving livelihood benefits from communally owned land (Ntshona et al. 2010). For example, at Mt Coke, state-lead land use planning intervention has had the undesired effect of interfering with local level institutions and weakening their ability to effectively govern communal lands. This in turn means that the ability of the social-ecological system to respond to changes is diminished (Cundill 2005).

Additionally, the historical diversity of the Eastern Cape's socio-economic landscape has resulted in the fact that institutions that control access to rangeland differ from place to place e.g. tribal authorities are strong in certain areas, but are non-existent in others (Moyo et al. 2008). Basic sets of rules around land tenure in communal grazing areas exist with practical variations in access to land (which are related to kinship, friendship, membership of churches, employment or clientele relationships, etc.). Villages located in old communal areas (and that were governed by chiefs) had rules governing access to rangeland as opposed to villages situated on old farms where there were no rules. Farmer associations have also taken over authority in some villages, further weakening traditional authorities. Naturally, the conflicts in authority over land administration does not incentivize adherence to local rules and sustainable use of rangelands (Moyo et al. 2008).

In terms of local ecological knowledge, knowledge about veld practices in communal lands was found to be low (only 9% of people claimed to have high levels of knowledge about veld management) in a survey conducted in villages in the Amathole, Chris Hani and Ukhahlamba (renamed Joe Gqabi) districts (Moyo et al. 2008). Conversely, local knowledge of experts about ecosystem function and landcover changes in the Xhosa communities on the Wild Coast of the Eastern Cape has been shown to be nuanced and detailed, adding value to scientifically based management (Chalmers and Fabricius 2007). However, in Xhosa communities where development has altered traditional lifestyles, local ecological knowledge may be unevenly distributed within the community (Chalmers and Fabricius 2007). This diversity of local ecological knowledge and the role that it plays in agriculture and rangeland management warrants consideration in the rapidly changing socio-ecological landscape of the Eastern Cape.

Co-management of protected areas

In terms of protected areas, the People and Parks strategy of the Eastern Cape Parks and Tourism Agency (ECPTA) recognizes the inextricable link between sustainable biodiversity conservation and socio-economic development. The ECPTA is involved in the following activities, amongst others (Eastern Cape Parks and Tourism Agency 2009; Liebenberg 2010):

- Protected area expansion through stewardship agreements;
- Environmental education and capacity building;

- Infrastructure development, thicket restoration, and alien plant clearing through the Extended Public Works Programme;
- Local economic development through community public private partnerships; and
- Strategic support in land claims in which communities are claiming land that is protected.

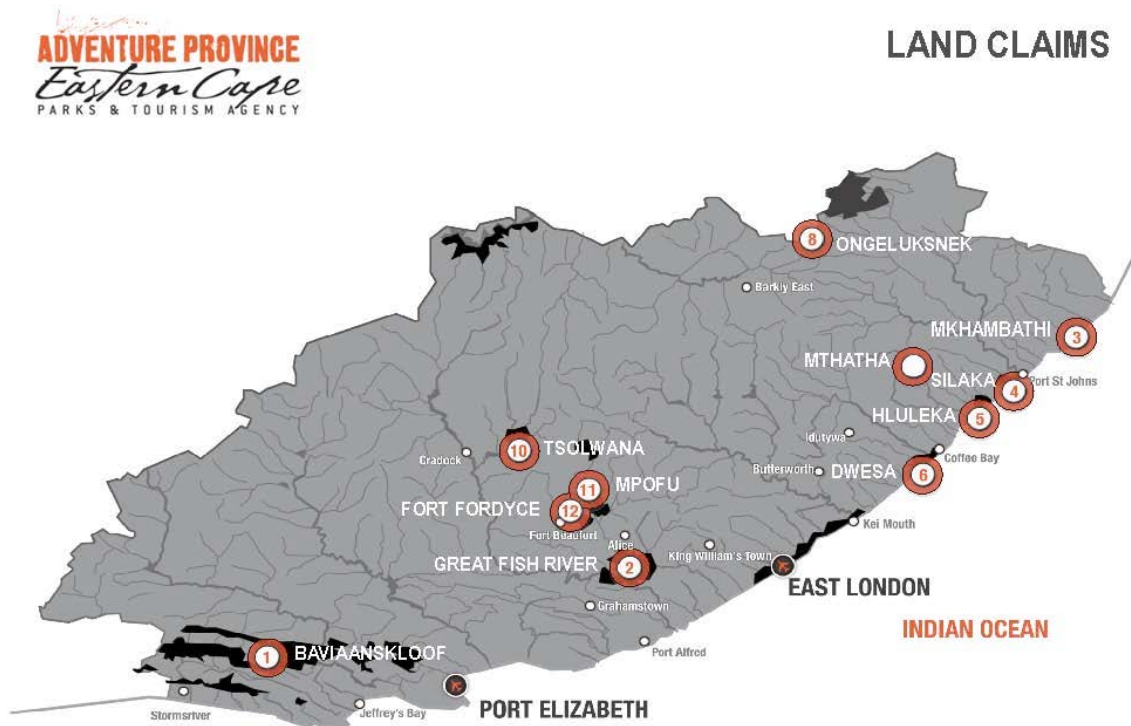


Fig.25 Land claims on protected areas in the Eastern Cape (Liebenberg 2010)

The processes of land reform and land restitution have seen the formation of land trusts, and Community Property Associations in many of the former homelands of South Africa. Land restitution through land claims is limited by slow processing and post-settlement implementation (Eastern Cape Parks and Tourism Agency 2009; Liebenberg 2010). Following the Restitution of Land Rights Act, 1994, an inter-ministerial Memorandum of Agreement on land claims in protected areas in 2002 described a process for land claims on protected land, and made it feasible for this land to be restored to claimants without physical occupation by restitution beneficiaries (Eastern Cape Parks and Tourism Agency 2009). The land is now managed in partnership by the restitution beneficiaries and resources users and the ECPTA. However, the ECPTA have stated that co-management can't be confined to land claimants, because other interest groups e.g. resource users should also benefit from protected areas (Eastern Cape Parks and Tourism Agency 2009). Successful protected land claimant communities are those of Silaka, Dwesa and Mkhambathi (Fig.25). The communities of Hluleka, Ongeleksnek, and Double Drift are in the advanced stages of land claims and the following communities have land claims pending: Formosa, Cockscorn, Baviaanskloof, Mpofo, Tsoelwana, Sam-Knott, ELCNR and Nduli-Luchaba (Liebenberg 2010).

There has been mixed success of co-management of protected areas as is shown by the discontent displayed by communities involved in the successful land claim at Dwesa Nature Reserve (Ntshona et al. 2010). In this area, an agreement that was part of the land claim settlement should allow the local communities regulated access to resources in the reserve, but this is not being effectively implemented due to conflicting institutional arrangements such as the Land Trust, the Communal Property Association and the traditional authorities (Ntshona et al. 2010). Therefore, the strategies for effective co-management of protected areas so that communities gain access to resources and ecotourism benefits, and result in biodiversity conservation must be a priority.

The value of natural resources (including non-timber forest products) as provisioning and cultural ecosystem services

Many rural and peri-urban dwellers in the Eastern Cape rely on natural resources either to supplement their income or for their subsistence. The importance of non-timber forest products (NFTPs) to rural households in the Eastern Cape is shown through the use of local species to supplement food resources, for firewood, for construction (Shackleton and Shackleton 2001), and for subsistence fishing (Mniki 2009). Reliance on natural resources can lead to degradation of resources. However, Hajdu (2009) describes two villages where natural resources are used (subsistence farming, animals and firewood harvesting) but do not make up a large percentage of income and therefore, do not appear at risk of overexploitation. Hajdu (2009) suggests that the reasons for low reliance on natural resources and agriculture are related to land tenure insecurity, the high start-up capital required for agriculture and the high status of money and jobs within the communities.

It must also be noted that patterns of natural resource use differ within the communities (Cocks et al. 2008; Dovie et al. 2008) and among communities (Cocks et al. 2008). Resource use differs between households of different incomes. Although it is commonly thought that poor households use more natural resources, it has been found that wealthier households use a greater range of natural resources but these included luxury items. Poor households relied more heavily on essential natural resources such as wild herbs and fruit (Twine et al. 2003; Cocks et al. 2008). Therefore, the reliance on natural resources and the piecing together of livelihoods in the former homelands, is complex and varies with local factors.

One underestimated ecosystem service in the Eastern Cape is the cultural value of plants. In the Eastern Cape 500 tons of medicinal plants valued at R27 million are harvested annually (Cocks et al. 2003). Approximately 30% of plant species traded are used exclusively for cultural purposes e.g. *iyeza lokuhlamba* or 'medicine for washing' which is used to bring good fortune and cleanse oneself before traditional rituals (Cocks et al. 2003). This hidden industry contributes to human health, and to the income of vulnerable groups such as poor black middle-aged women (Cocks et al. 2003). Many Eastern Cape households (e.g. 67% of households in Peddie District) take part in traditional rituals for communing with the ancestors. These rituals involve the use of specific culturally significant plant species and the slaughter of an ox or a goat (Cocks et al. 2003). The cultural importance of livestock should also not be underestimated as they are used as dowry and in ritual sacrifice (Beinart, 2009). These rituals also require substantial amounts of fuel wood from 20 culturally appropriate species (Cocks et al. 2003). Local wood species are also used in the construction of kraals and wood stockpiles which are used for rituals even by households who do not own livestock and to confer status in the community (Cocks et al. 2003). However, many of these resource use patterns are

unsustainable, shown by the fact that 93% of medicinal plants surveyed by Cocks et al. (2008) were harvested unsustainably and 34 of these species have been prioritized for conservation.

Interestingly, the use and sale of non-timber forest products may serve to make livelihood strategies more resilient through the mechanism of a safety net (Shackleton and Shackleton 2004). In times of hardship or shocks, NTFPs contribute to livelihood security in two main ways. The first is through cost savings which is indicated by the annual direct-use value of all natural resources across South Africa which varies from under R1000 to over R12 000 and clearly represents a significant saving for rural households (Shackleton and Shackleton 2004). The extraction of NTFPs contributes to the direct provisioning of needs such as fuel wood, wood for construction and wild fruit (Cocks et al. 2008). Secondly, there are opportunities for generating supplementary income from NTFPs illustrated by the sale of medicinal plants (Dold and Cocks 2002; Cocks et al. 2003) or the sale of reed-based crafts which contribute to the livelihoods of vulnerable women in Transkei villages, on average 26 per cent of annual household cash income, over 40 per cent for the poorest households (Pereira et al. 2006). The wide range of products and consequent diversification of income and livelihood strategies function as a safety net (Shackleton 2001; Shackleton and Shackleton 2004) or a buffer (Hunter et al. 2007) against shocks in times of hardship such as the death of a breadwinner or retrenchment.

Shift from pastoralism to game farming

Since the 1980's there has been a noticeable shift from stock farming to game farming in the Eastern Cape, with a particularly rapid increase in the number of game farms since 1996 (Smith and Wilson 2002). In some cases, farmers have diversified their land-use to include both game and stock farming, whereas in other cases they have abandoned stock farming and converted all of their land to game farming. The main income on these farms is hunting, and to some extent eco-tourism (Smith and Wilson 2002). Some of the reasons for conversions are the high labour costs of stock farming, increased stock theft and losses, droughts and decades of overgrazing reducing livestock production, and good earning potential of hunting and tourism. The attitude of farmers to conservation is positive, but many are applying stock farming principles to game farms, i.e. a production-oriented rather than ecology-oriented approach. "Alien" species have been introduced due to the belief that diversity of species is more important for business than the ecology or biogeography of an area (Smith and Wilson 2002).

Some of the effects of the shift from farming to ecotourism have been very beneficial to the province with private game farm ecotourism revenue contributing more than \$11.3 million annually to the regional economy in the Eastern Cape and protecting species diversity (Sims-Castley et al. 2005). The total number of employees on the ten game reserves surveyed increased by a factor of 4.5 since changing from farming to game-based eco-tourism (Langholz and Kerley 2006). On these farms, the wage bill and the average salary per full-time employee increased substantially too (Sims-Castley et al. 2005; Langholz and Kerley 2006). However, it has also come to light that although more jobs are created on game farms, these are mostly jobs requiring hospitality and game ranging skills, thus leaving farm labourers optionless (M Spierenburg *pers comm.*, 2011). Additionally, private game reserves are often consolidated from a number of smaller farms and this may be inflating the statistics of employment benefits of ecotourism mentioned above (M Spierenburg *pers comm.*, 2011).

Desertification of the thicket biome and degradation

Land tenure and associated land management practices have a strong effect on vegetation degradation, with traditional villages in the Peddie District exhibiting much higher vegetation degradation than commercial farms in the same area between 1938 and 1988 (Kakembo 2001). Additionally, intense goat pastoralism in the Eastern Cape has transformed dense semi-arid closed thicket (dominated by *Portulacaria afra*) into an open savanna landscape dominated by grasses and shrubs (Mills et al., 2005). The implications of this are a decline in carbon storage in both soil and vegetation, and increased runoff and erosion. However, restoration of thicket vegetation has the potential to recover carbon storage services of more than 80 t C ha⁻¹ (Mills et al., 2005).

Unfortunately degradation narratives have dominated the discourse around natural resource management in the Transkei and other former homelands. The predominant narrative is that Apartheid government policies forced too many people to live on too little land which led to overutilization of resources and therefore degradation (Hajdu, 2009). For many areas this was true in certain areas but the establishment of Apartheid as the cause of environmental degradation meant that it has been taken for granted that erosion, degradation of grassland, and deforestation that occur in some areas, occur in the entire Transkei (Hajdu, 2009). This has led to unnecessary restrictions on natural resource use in certain areas. However, recently, authors have voiced their concerns and pointed to evidence that shows areas which do not exhibit signs of degradation and overuse (Hajdu, 2009) and that grassland has dominated in areas of the Eastern Cape such as Pondoland for thousands of years (Kepe & Scoones, 1999). Traditional practices such as the burning of grass (regarded as highly detrimental) have been shown to have important ecological and social functions (Hajdu, 2009).

Future economic development: ecotourism?

After 1994, the government fast-tracked development in previously disadvantaged areas through the inception of thirteen Spatial Development Initiatives (SDI) around the country. SDI's in South Africa exist to attract capital investment to previously neglected areas by focusing on the development potential of the particular areas, creating jobs and small, medium and micro enterprises (Cousins and Kepe 2004). In 1996, the Wild Coast was made one of the focal points of the national government's SDI programme, chosen for its extreme poverty and natural beauty which would encourage tourism investments (Simukonda and Kraai, 2009). The hope was that investment in ecotourism through the provision of infrastructure and jobs at specific nature reserves within the SDI would encourage other economic activities within the area (Cousins and Kepe 2004). One of these nodes is the Mkambati ecotourism project which has been marred by conflicts among communities in the area about who will benefit from the project (Cousins and Kepe 2004).

However, the direction of economic development in the province is a source of tension between the different planning bodies. The DEA (previously DEAT) has invested its efforts towards ecotourism as a flagship economic activity in the Wild Coast region; the Department of Land Affairs to redistribution of land ownership to those who suffer from land tenure insecurity; and the Departments of Trade and Industry, Minerals and Energy and Public Works towards mineral exploration and extraction (such as titanium mining at Xolobeni) and the construction of the Wild Coast N2 Toll Road (Simukonda and Kraai, 2009).

These tensions between ‘wilderness’ and ‘extractive’ economic developments play out particularly on the underdeveloped but naturally beautiful and diverse Wild Coast. One interesting case is that of Xolobeni in the northern part of the Wild Coast, where the development of ecotourism projects are opposed to extractive interests of an Australian mining company who are interested in the ilmenite, zircon, rutile, and leucoxene reserves in the area (Dellier and Guyot, 2009). The N2 toll road is proposed to run through this area too and all of these activities will have implications for subsistence livelihoods in the area (Dellier and Guyot, 2009). The construction of the contested N2 through the Wild Coast is put forward by some as necessary to catalyze economic development and achieve the objectives of the SDI in this area of extreme poverty (Simukonda and Kraai, 2009). Access to rugged and mountainous terrain has been limited and this has cut off areas from development opportunities (Simukonda and Kraai, 2009). However, local residents have raised concerns about the N2 and mining developments in the area – apart from environmental concerns about their impacts on vulnerable and unique fauna and flora in the region, there are also concerns about crime levels and speeding motorists.

Conclusions

In the Eastern Cape, change is driven by a complex mix of political, economic, legislative, environmental and social forces that act on a local, regional, national and even international level. Years of democracy and consistent economic growth since the end of Apartheid have helped the province prosper in some parts, while other areas have stagnated in poverty and underdevelopment. Large scale growth and development plans like the Wild Coast SDI and the Coega IDZ, together with luxury coastal resorts and a flourishing ecotourism industry are juxtaposed with rural areas without sanitation and electricity. Land degradation, droughts and the downturn in livestock farming reinforce human migration patterns to overflowing urban centres and a dependence of rural communities on grants and remittances. Conflicting interests of government, traditional leaders and the poor further impede progress. It is truly a land of diversity, steeped in history, with all the challenges and opportunities that come with such heritage.



References

- Chalmers N, Fabricius C. 2007. Expert and Generalist Local Knowledge about Land-cover Change on South Africa 's Wild Coast : Can Local Ecological Knowledge Add Value to Science? *Ecology and Society* 12: 10.
- Cocks M, Bangay L, Shackleton C, Wiersum F. 2008. 'Rich man poor man' - inter-household and community factors influencing the use of wild plant resources amongst rural households in South Africa. *International Journal Of Sustainable Development* 15: 198-210.
- Cocks M, Dold T, Wiersum F. 2003. The Cost of Culture: the role of natural resources in maintaining Xhosa customs in the Eastern Cape. *Veld & Flora* 89: 146-149.
- Cousins B, Kepe T. 2004. Decentralisation when land and resource rights are deeply contested: A case study of the Mkambati eco-tourism project on the wild coast of South Africa. *The European Journal of Development Research* 16: 41-54.
- Cundill G. 2005. Institutional Change and Ecosystem Dynamics in the Communal Areas around Mt Coke State Forest , Eastern Cape , South Africa. MA thesis, Rhodes University.
- Dellier J, Guyot S. 2009. The Fight for Land Rights Versus Outsider's 'Appetites': Wild Coast Eco Frontier Dynamics, in S. Guyot and J. Dellier (eds). *Rethinking the Wild Coast, South Africa: Eco-frontiers vs livelihoods in Pondoland*. Saarbrücken: VDM Verlag.
- Dold T, Cocks M. 2002. The trade in medicinal plants in the Eastern Cape Province, South Africa. *South African Journal of Science* 98: 589-597.
- Dovie D, Witkowski E, Shackleton C. 2008. Knowledge of plant resource use based on location, gender and generation. *Applied Geography* 28: 311-322.
- Eastern Cape Parks and Tourism Agency. 2009. People and Parks Strategy: April 2009 - March 2011 & Two-year Action Plan April 2009-March 2010. http://www.ecparks.co.za/conservation-focus/ECPB_Strategy&ActionPlan_PeopleandParks.pdf
- Eastern Cape Provincial Spatial Development Plan. 2010. <http://www.psdpcaprov.gov.za>
- Eastern Cape State of the Environment Report. 2004. http://www.environment.gov.za/soer/ecap/download_report.htm
- Hunter L, Twine W, Patterson L. 2007. 'Locusts are now our beef': Adult mortality and household dietary use of local environmental resources in rural South Africa. *Scandinavian Journal of Public Health* 35: 165-174.
- Kakembo V. 2001. Trends in Vegetation Degradation in Relation to Land Tenure , Rainfall , and Population Changes in Peddie District , Eastern Cape , South Africa. *Environmental Management* 28: 39-46.
- Kepe T, Scoones I. 1999. Creating grasslands: social institutions and environmental change in Mkambati area, South Africa. *Human Ecology* 27: 29-53.

- Langholz J, Kerley G. 2006. Combining conservation and development on private lands: an assessment of ecotourism-based private game reserves in the Eastern Cape. A report of the Centre of African Conservation Ecology, Nelson Mandela Metropolitan University. <http://www.nmmu.ac.za/documents/ace/ACE%20Report%20%2056.pdf>
- Liebenberg S. 2010. Provinces and Management Authorities progress on the implementation of the People and Parks Action Plan: Eastern Cape Parks and Tourism Agency. Presentation at the 4th People and Parks National Conference, South Africa. <http://www.peopleandparks.com/sites/default/files/2010presentations/Plenary%20Session%203%20-%20Eastern%20Cape%20Parks%20and%20Tourism%20Agency.pdf>
- Mills A, Cowling R, Fey M, Kerley G, Donaldson J, Lechmere-Oertel R, Sigwela A, Skowno A, Rundel P. 2005. Effects of goat pastoralism on ecosystem carbon storage in semiarid thicket, Eastern Cape, South Africa. *Austral Ecology* 30: 797-804.
- Mnisi S. 2010. Let rural ruling be the start of new tradition. *Business Day*, 19 May 2010. <http://www.businessday.co.za/articles/Content.aspx?id=109335>.
- Moyo B, Dube S, Lesoli M, Masika P. 2008. Communal area grazing strategies: institutions and traditional practices. *African Journal of Range & Forage Science* 25: 47-54.
- Ntsebeza, L. 1999. Land tenure reform in South Africa : An example from the Eastern Cape Province. DFID workshop on land rights and sustainable development, Berkshire, UK.
- Ntsebeza, L. 2003. Local Governance, Power and Natural Resources: A Perspective from the Rural Areas of South Africa's Former Bantustans. Working Paper #14, Environmental Governance in Africa, Working Paper Series, World Resources Institute.
- Ntshona Z, Kraai M, Kepe T, Saliwa P. 2010. From land rights to environmental entitlements : Community discontent in the 'successful ' Dwesa-Cwebe land claim in South Africa. *Development Southern Africa*: 37-41.
- Pereira T, Shackleton C, Shackleton S. 2006. Trade in reed-based craft products in rural villages in the Eastern Cape, South Africa. *Development Southern Africa* 23: 477-495.
- PGDP. 2004. Eastern Cape Provincial Growth and Development Plan 2004-2014. Section 2 Socio-economic profile. <http://www.ecdc.co.za/files/documents/110608162407.pdf>.
- Research and Population Unit of the Eastern Cape Department of Social Development. 2010. The people matter – the state of the population in the Eastern Cape. http://www.hsrc.ac.za/Research_Publication-22202.phtml
- Shackleton C, Shackleton S, Cousins B. 2001. The role of land-based strategies in rural livelihoods: the contribution of arable production, animal husbandry and natural resource harvesting in communal areas in South Africa. *Development Southern Africa* 18:581-604.
- Shackleton C, Shackleton S. 2004. The importance of non-timber forest products in rural livelihood security and as safety nets: a review of evidence from South Africa. *South African Journal of Science*, 100:658-664.

- Sims-Castley R, Kerley G, Geach B, Langholz J. 2005. Socio-economic significance of ecotourism-based private game reserves in South Africa's Eastern Cape Province. *Parks* 15: 6-17.
- Simukonda N, Kraai M. 2009. The Wild Coast: the Contested Territory, in S. Guyot and J. Dellier (eds). *Rethinking the Wild Coast, South Africa: Eco-frontiers vs livelihoods in Pondoland*. VDM Verlag, Saarbrücken.
- Twine W, Moshe D, Netshiluvhi T, Siphugu V. 2003. Consumption and direct-use values of savanna bio-resources used by rural households in Mametja, a semi-arid area of Limpopo province, South Africa : research letter. *South African Journal of Science*. 99: 467-473.
- Smith N, Wilson SL. 2002. Changing land use trends in the thicket biome: pastoralism to game farming. *Terrestrial Ecology Research Unit Report 38*, University of Port Elizabeth. www.nmmu.ac.za/documents/ace/TERU%20Report%2038%20.pdf

Websites (accessed Dec 2011):

- Byrnes R, ed. 1996. *South Africa: A Country Study*. Washington: GPO for the Library of Congress. <http://www.countrystudies.us/south-africa/>
- Education & Training Unit for Democracy and Development. <http://www.etu.org.za> or <http://www.etu.org.za/toolbox/docs/government/land.html>
- South Africa Explored. <http://www.sa-venues.com/>
- South African History Online. <http://www.sahistory.org.za/>

Bibliography

- Hebinck P, Shackleton C. (eds). 2001. *Reforming Land and Resource Use in South Africa: Impact on Livelihoods* (Routledge ISS Studies in Rural Livelihoods). Taylor and Francis, Abingdon, Oxon.
- Ruiters G. 2011. *The Fate of the Eastern Cape*, University of KwaZulu Natal Press, Scottsville.