



SA YEARBOOK 2009/10
AGRICULTURE, FORESTRY AND FISHERIES



Following the general election in 2009, a new administration took over that saw several changes to government. These included, among other things, adding the functions of fisheries and forestry to the Department of Agriculture.

Agricultural economy

About 8,5 million people are directly or indirectly dependent on agriculture for employment and income. The Department of Agriculture, Forestry and Fisheries is responsible for production and resource management; agricultural support services; trade and economic development; food safety and biosecurity; forestry; and marine aquaculture.

The total contribution of agriculture to the economy increased from R38 billion in 2002 to R68 billion in 2008. South Africa's dual agricultural economy comprises a well-developed commercial sector and a predominantly subsistence-oriented sector in the rural areas.

About 12% of South Africa's surface area can be used for crop production. High-potential arable land comprises only 22% of total arable land. Some 1,3 million ha are under irrigation. This amounts to about 1,5% of South Africa's agricultural land.

The most important factor limiting agricultural production is the availability of water. Rainfall is distributed unevenly across the country. Almost 50% of South Africa's water is used for agricultural purposes.

The country can be subdivided into a number of farming regions according to climate, natural vegetation, types of soil and the type of farming practised.

Agricultural activities range from intensive crop production and mixed farming in winter-rainfall and high summer-rainfall areas, to cattle ranching in the bushveld and sheep farming in the more arid regions. Owing to its geographical location, some parts of South Africa are prone to drought.

Primary commercial agriculture contributes about 3% to South Africa's gross domestic product (GDP) and about 7% to formal employment. However, there are strong backward and forward linkages into the economy, so that the agro-industrial sector is estimated to comprise about 12% of GDP.

Although South Africa has the ability to be self-sufficient in virtually all major agricultural

products, the rate of growth in exports has been slower than that of imports.

The only increase in agricultural export volumes occurred during the period of exchange-rate depreciation in 2002 and came to about nine million tons (mt). Major import products include wheat, rice, oil cakes, vegetable oils and poultry meat.

Despite the farming industry's declining share of GDP, it remains vital to the economy and the development and stability of the southern African region.

For the past five years, agricultural exports have contributed on average about 6,5% of total South African exports. Exports increased from 5% (1988) to 33% (2008) of agricultural production. However, South Africa is losing on its net trade balance on processed goods, owing to the growth in imports of processed goods. The estimated value of imports in 2008 came to R38,4 billion, while exports totalled R44,3 billion in 2008.

The largest export groups are wine, citrus, sugar, grapes, fruit juice, wool and deciduous fruit such as apples, pears and quinces. Other important export products are non-alcoholic beverages, avocados, pineapples, groundnuts, preserved fruit and nuts, as well as hides and skins.

Genetically modified organisms (GMOs)

The GMO Act, 1997 (Act 15 of 1997), which was implemented on 1 December 1999, provides for the regulation of GMO activities in South Africa, particularly that biosafety assessments should be conducted for every proposed GMO activity.

It defines genetic modification (GM) as the development of an organism of which the genes or genetic material has been modified in a way that does not occur naturally. In terms of the Act, permits are issued for a specific GMO activity, such as trials for commercial release in the country. The permits may also specify conditions under which a particular activity with GMOs should take place.

The objective of the Act is to promote the responsible application of GMOs in South Africa without impacting negatively on human or animal health, the environment or biodiversity. In terms of the GMO Act, 1997, the Advisory Committee (AC), comprising scientific experts, evaluates risk assessments to determine if a particular GMO is safe for humans, animals and the environment.

**Gross value of agricultural production,
2008 (R'000)**

Field crops	
Maize	18 592 005
Wheat	4 759 004
Hay	2 483 645
Grain sorghum	458 224
Sugar cane	4 118 551
Groundnuts	675 156
Tobacco	194 742
Sunflower seed	3 320 212
Cotton	113 077
Other	2 608 718
Total	37 323 334
Horticulture	
Viticulture	3 037 520
Citrus fruit	5 406 395
Subtropical fruit	1 843 832
Deciduous and other fruit	6 931 413
Vegetables	5 749 887
Potatoes	3 491 404
Other	1 656 145
Total	28 116 596
Animal products	
Wool	1 499 505
Poultry and poultry products	22 489 165
Cattle and cattle products	12 218 500
Sheep and goats slaughtered	2 818 915
Pigs slaughtered	2 592 813
Milk	9 279 426
Other	2 577 268
Total	53 475 592
Grand total	118 915 522

Source: Department of Agriculture, Forestry and Fisheries
Directorate: Agricultural Statistics

The Executive Council (EC) consists of members from six government departments, namely agriculture, forestry and fisheries; health; environmental affairs; science and technology; trade and industry; and labour; and the chairperson of

the AC. The EC considers the recommendations of the AC, comments from members of the public or interested parties, and compliance with various policies before taking a decision to permit or exclude an activity or not.

South Africa has commercialised three different GM crops, namely maize, cotton and soya beans.

In 2008, white GM maize plantings totalled 891 000 ha, a decrease of 14% compared to 2007, representing a market share of about 56%; yellow maize plantings totalled 724 000 ha, an increase of 21% compared to 2007, representing 72% of the total yellow maize crop; GM soya-bean plantings increased to 184 000 ha, representing 80% of the total soya-bean crop; and GM cotton plantings increased to 12 000 ha, representing 90% of the total cotton crop.

Sustainable resource management and use

South Africa is generally able to meet its own food requirements. The Agricultural Research Council's (ARC) Institute for Soil, Climate and Water has compiled an inventory of soils, terrain forms and climate (land types). The *National Land Type Survey* assists and informs land-use planning and decision-making at national level. All natural-resource information is integrated into the comprehensive Agricultural Geo-Referenced Information System (AGIS) that is accessible via the Internet.

The AGIS also has information on agricultural potential and land capability.

Although it is generally recognised that soil degradation is a problem, little reliable data has been collected systematically over time. Soil degradation is largely related to the decline in soil organic matter.

Monoculture cereal production, intensive tillage, short-to-no fallow periods and limited crop rotation have contributed to this in the commercial sector.

Excessive fuel-wood collection, inappropriate land use, population density and overgrazing are the main causes of soil degradation in communal areas. In addition, it is estimated that about 60% of the cropland area is moderately to severely acidic, and probably at least 15% is affected by subsoil acidity. The Agricultural Fires Information System that tracks all outbreaks of fire in the Southern African Development Community (SADC) region, has been implemented and can be viewed at www.agis.agric.za.

Soil degradation

It is calculated that the area of land with a high to extremely high erosion risk totals 1,5 million ha (around 1% of the land surface). More than 11 million ha (9%) are classified as having a moderate erosion risk and 17% is classified as very low to low risk.

It is estimated that 25% of South Africa is covered by soils that are also potentially highly susceptible to wind erosion. These include the sandy soils in the western half of the “maize quadrangle” in the North West and north-western Free State – the areas that produce 75% of the country’s maize.

South African soils are extremely prone to serious soil compaction, particularly under intensive mechanised cultivated agriculture, both dryland and irrigated. It is a problem throughout the country and much more widespread and serious than the global norm.

Large areas of South Africa are covered with soils that are extremely prone to serious crusting (surface sealing). The extent of crusting, as well as awareness of it, have increased sharply during the last two decades. Switching to overhead and microregulation systems and the widespread problems associated with these on crusting-prone soils greatly contributed to this.

Human-induced soil acidification is a major problem in South Africa. Its impact is serious, because it affects scarce, arable land, especially high-potential land. More than five million hectares of cultivated land have already been seriously acidified, mainly owing to injudicious fertiliser practices and inadequate lime applications. In the high-potential areas of Mpumalanga, opencast and strip-coal mining also cause soil acidification.

Soil fertility degradation is a matter of concern. In commercial agriculture, there has been a tendency of “nutrient capital-building” for some nutrients, especially phosphorus and zinc. In some cases, phosphorus has been built up to excessive levels, where it starts to reduce yields.

Statistics for the last 20 years indicate that trends in P-levels for these key nutrients follow two opposite directions: in a significant proportion of commercial croplands, P-levels are declining from adequate to deficient, whereas in other cases, the levels are increasing from adequate to excessive levels owing to overfertilisation.

Water use

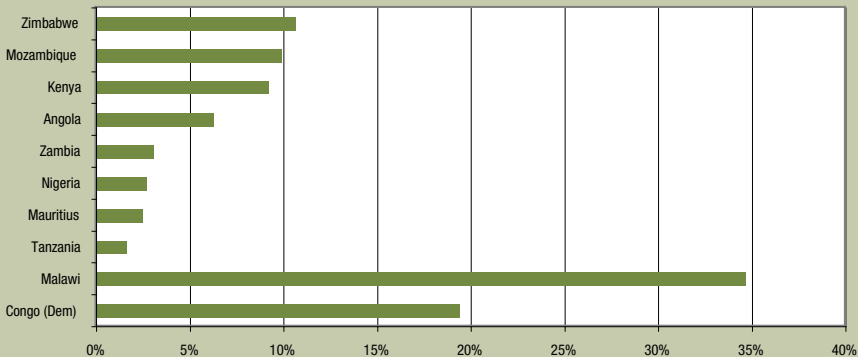
Irrigation is by far the biggest single user of run-off water in South Africa and has substantial potential to make a significant socio-economic and social impact on rural society. Irrigation is an important factor in the South African economy. Irrigated agriculture contributes more than 30% of the gross value of the country’s crop production.

About 90% of the country’s fruit, vegetables and wine is produced under irrigation. The Department of Agriculture, Forestry and Fisheries has identified irrigation development as one of the five priority areas of the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) and aims to expand irrigation by 50%.

This goal will be achieved by:

- increasing the water-use efficiency of irrigation systems and future irrigated land
- revitalising underutilised irrigation schemes/ areas based on a sustainable and area-wide planning approach
- promoting mini-scale irrigated agriculture for household- and community-level food security through efficient irrigation technologies

South African agricultural imports from Africa (Quarter 4, 2008)



Source: Directorate: Agricultural Statistics

- identifying and developing new commercial irrigation areas in cooperation with the departments of water and of environmental affairs.

Production

The total gross value of agricultural production (total production during the production season valued at the average basic prices received by producers) for 2007/08 is estimated at R118 916 million, compared to R91 270 million the previous year – an increase of 30,3%. This increase can be attributed mainly to a significant increase in the value of field crops.

Prices

Producer prices of agricultural products increased, on average, by 14,3% from 2007 to 2008, compared to an increase of 24,6% during the previous year. In 2008, the producer prices of field crops rose by 22,4%, against an increase of 44% the previous year. This increase was mainly the result of a 48,3% increase in the price of summer grains, and increases of 33,4%; 32,7%; and 30,4% in the prices of tobacco, cotton and oil seeds, respectively.

Producer prices of horticultural products increased by 5,8% in 2008 compared to 2007. Prices of vegetables increased, on average, by 2,6% during 2008, while the prices of fresh fruit increased by 15,2%.

The producer prices of animal products were 14,5% higher in 2008 than in 2007.

Prices received for pastoral products increased by 2%. The price farmers received for milk was 21,3% higher. Prices received for poultry products rose by 10%.

Farm income

The gross income of producers (the value of sales and production for other uses plus the value of changes in inventories) for 2008 amounted to R126 887 million, compared to R97 962 million in 2007 – an increase of 29,5%.

In 2008, the gross income from field crops increased by 72,4% to R39 100 million, compared to R22 680 million in 2007. This was mainly because of the higher prices that farmers received for summer crops during 2007.

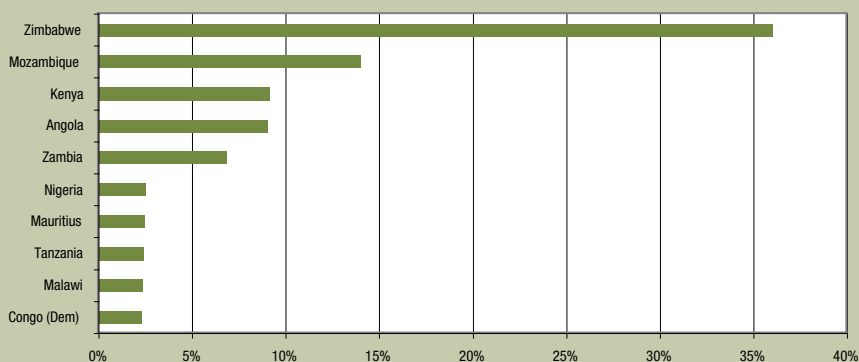
Gross income from horticultural products increased by 19,2%, from R25 597 million in 2007 to R30 499 million in 2008.

Income from deciduous and other summer fruit increased by 19,1% to R7 271 million, while that of citrus fruit increased by 26,7% to R5 800 million. The income from vegetables amounted to R10 623 million – an increase of 21%. Income from potatoes, which made a contribution of about 34,1% to the gross income from vegetables, increased by 6,3%, from R3 405 million in 2007 to R3 621 million in 2008. Gross income from animal products was 15,3% higher and amounted to R57 288 million. Producers earned R12 634 million from slaughtered cattle and calves – representing an increase of 2,6%. Income from slaughtered sheep increased by 12,7% and amounted to R3 072 million. Income from poultry amounted to R18 624 million – resulting in an increase of 15,5%. Income from milk increased by 25,7% to R9 639 million.

Field crops and horticulture

The largest area of farmland planted with field crops is maize, followed by wheat and, to a lesser extent, sugar cane and sunflowers.

South African agricultural exports to Africa (Quarter 4, 2008)



Source: Directorate: Agricultural Statistics

The grain industry is one of the largest in South Africa and is a very strategic one.

According to the *Economic Review of the South Africa Agriculture*, the gross income from field crops increased by 72,4% to R39 100 million for the year ended 31 December 2008.

Maize

Maize is the largest locally produced field crop, and the most important source of carbohydrates in the SADC for animal and human consumption.

South Africa is the main maize producer in the SADC, with an average production of about 9,2 mt a year over the past 10 years. It is estimated that more than 8 000 commercial maize producers are responsible for the major part of the South African crop, while the rest is produced by thousands of small-scale producers.

Maize is produced mainly in North West, the Free State and Mpumalanga. A total of 13,2 mt of maize was produced in 2007/08 on 3,3 million ha of land (developing agriculture included).

Wheat

Wheat is produced mainly in the winter-rainfall areas of the Western Cape and the eastern parts of the Free State. In 2008, 2,1 mt was produced on 748 000 ha of land.

Barley

Barley is produced mainly on the southern coastal plains of the Western Cape. The area of barley planted totalled 68 245 ha in the 2008 production season. Production totalled 192 900 t.

Groundnuts

Groundnuts are grown mainly in the Free State, North West and the Northern Cape. Groundnut

plantings increased by 33% from 40 770 ha in 2006/07 to 54 200 ha in 2007/08. Production for the 2007/08 production season also increased by 53% to 88 800 t.

Sunflower seeds

South Africa is the world's 12th-largest producer of sunflower seeds, which is produced in the Free State, North West, on the Mpumalanga Highveld and in Limpopo.

An area of 564 300 ha was planted in 2007/08, producing 872 000 t.

Sorghum

Sorghum is cultivated mostly in the drier parts of the summer-rainfall areas such as Mpumalanga, the Free State, Limpopo and North West.

In 2007/08, an estimated 86 800 ha were planted with production totalling 255 000 t.

Soya beans

Soya beans are mainly produced in Mpumalanga, the Free State and KwaZulu-Natal. Small quantities are produced in Limpopo, Gauteng and North West.

Canola

Canola is an oilseed crop that is mainly grown in the Western Cape. However, since the 2001 production season, smaller quantities have also been planted in the northern production areas, North West and Limpopo.

Canola competes with other oilseeds such as sunflower seeds and soya beans on the local market. For the 2008 production season, the canola crop was estimated at 30 800 t on an area of 34 000 ha.

Dry beans

Dry beans are produced mainly in Mpumalanga, the Free State, Gauteng and North West. Small quantities are reported to be produced in KwaZulu-Natal, Limpopo, the Western Cape and Northern Cape.

Local demand is substantially higher than local production and therefore large quantities of dry beans are imported each year. In 2008, about 65 000 t of dry beans were produced.

Sugar

The South African sugar industry is one of the world's leading cost-competitive producers of high-quality sugar. It is a diverse industry, combining the agricultural activities of sugar-cane cultivation with the industrial factory production

Unilever and the Development Bank of Southern Africa (DBSA), which had invested R11,4 million to be disbursed over three years mostly for training in agricultural and business matters, launched a multimillion-rand paprika-farming project in the small farming community of Keiskammahok, one of the poorest corners of the Eastern Cape. By March 2009, about two million seedlings of paprika took root during the first phase on 60 hectares of land. This will be increased to four million within three years, which is expected to bear a crop of 300 ton. Sidalukukhanya is just one of several short-, medium- and long-term projects initiated by the DBSA to provide poor communities, particularly in rural areas, with income-generating opportunities.



of raw and refined sugar, syrups and specialised sugars, and a range of by-products.

The South African sugar industry makes an important contribution to the national economy, given its agricultural and industrial investments, foreign-exchange earnings, its high employment rates and its linkages with major suppliers, support industries and customers.

Direct employment within the sugar industry totals about 85 000 jobs. Direct and indirect employment is estimated at 350 000 jobs, including employment in rural areas. The South African Cane Growers' Association and the milling companies undertake development projects and are involved in Black Economic Empowerment (BEE) through a range of initiatives.

About 47 000 registered sugar-cane growers annually produce on average more than 20 mt of sugar cane from 14 mill-supply areas, extending from northern Pondoland in the Eastern Cape to the Mpumalanga Lowveld.

Deciduous fruit

In 2008, the gross income from horticultural products increased by 16,8% to R29 879 million.

Deciduous fruit is grown mainly in the Western Cape and in the Long Kloof Valley in the Eastern Cape. Smaller production areas are found along the Orange River and in the Free State, Mpumalanga and Gauteng.

In 2008, income from deciduous and subtropical fruit rose by 19,8% and 20,1% to R6 886 and R2 022 million, respectively.

Production of important field crops and horticultural products, 2008 ('000 t)

Maize	20 965
Wheat	5 605
Sugar cane	4 458
Grain sorghum	511
Groundnuts	567
Sunflower seed	3 873
Deciduous and other soft fruit	7 342
Citrus fruit	5 830
Subtropical fruit	2 022
Vegetables	6 267
Potatoes	3 621

Source: Directorate: Agricultural Statistics, Department of Agriculture, Forestry and Fisheries

The industry is relatively organised through the umbrella body, Fruit South Africa, and its four shareholders: the Fresh Produce Exporters' Forum (FPEF), the Deciduous Fruit Producers' Trust, the Citrus Growers' Association and the South African Subtropical Growers' Association. The FPEF is a Section 21 company that represents more than 70 out of about 300 fresh-fruit export companies in South Africa. The FPEF played a significant role in stabilising and unifying the export sector, particularly in the latter half of deregulation.

Wine

South Africa is the ninth-biggest wine producer in the world, with 102 000 ha cultivated to vine, representing 3% of global output. For the 12 months to April 2009, the country exported just more than 403,3 million litres (Ml) of wine to reflect a year-on-year growth of 17%.

Sales to the country's biggest markets all increased, namely, to the United Kingdom (UK) by 27%, Germany by 12% and Sweden by 26%.

South Africa remains the fastest-growing segment in the UK, occupying fifth position with a 10% share of the market, and is the fourth-biggest player in Germany and the biggest in Sweden.

Citrus and subtropical fruit

Citrus production is largely limited to irrigation areas and takes place in Limpopo (16 255 ha), Mpumalanga (11 681 ha), the Eastern Cape (12 923 ha), KwaZulu-Natal (4 004 ha), the Western Cape (9 524 ha) and Northern Cape (639 ha).

In 2008, income from citrus showed an increase of 27% that amounted to R5 830 million.

Pineapples are grown in the Eastern Cape and in northern KwaZulu-Natal. Other subtropical crops such as avocados, mangoes, bananas, litchis, guavas, papayas, granadillas, and macadamia and pecan nuts are produced mainly in Mpumalanga and Limpopo and in the subtropical coastal areas of KwaZulu-Natal and the Eastern Cape. In 2008, South Africa produced 734 772 t of subtropical fruit, which was 46 896 t or 6,8% more than in 2007.

Potatoes

North West recently started with the production of seed potatoes. The Northern Cape is one of the six largest seed-potato production areas in South Africa. The South African varieties Darius and Eryn constitute a large percentage of the seed grown in this region.

The KwaZulu-Natal Midlands form the centre of the seed-production area in this province. Some

The Food and Agricultural Organisation of the United Nations declared 2009 the International Year of Natural Fibres. The Council for Scientific and Industrial Research (CSIR) has an entire research group dedicated to the study of natural fibres. In South Africa, there are a number of lucrative natural fibre industries, such as that of *Agave americana* – better known as the plant used in the manufacture of tequila. The agave is indigenous to Mexico and was introduced to the dry Karoo region of South Africa a century ago, where it adapted readily.

The CSIR focuses on finding interesting and novel uses for age-old natural fibres, and on ways to improve their properties. The organisation also studies and develops natural fibre-reinforced composite material for use in the building, automobile and aerospace industries. A composite material comprises two dissimilar components, such as plywood and concrete, which form a new material with better properties when mixed.

The CSIR also investigates better planting and harvesting methods and the best strategies to sustain the various natural fibre industries. Much of the research centres on non-woven fibres.

Other areas of research involve the processing of fibre (preparation, spinning, winding, weaving and knitting technologies), fibre modification (changing the properties of fibre) and clothing technologies (enhancing comfort, sizing, fit and automation processes). This research will enable the South African clothing and textile industries to become more competitive globally.



seed is also produced in the north, near Louwsburg, a traditionally virus-free area. This region is one of the largest seed-producing areas in South Africa.

About 40% of the country's potato crop is grown in the high-lying areas of the Free State and Mpumalanga, Limpopo, and the Eastern, Western and Northern Cape.

The high-lying areas of KwaZulu-Natal are also important production areas. Nearly two thirds of the country's total potato crop are produced under irrigation.

Of the total crop, 50% is delivered to fresh-produce markets and a further 19% is processed. The South African potato-processing industry has shown tremendous growth over the past few years. This growth took place primarily in the crisps, chips and French fries sectors. Frozen French fries comprise 39% of total processed potato products in South Africa.

In terms of gross income to the grower, potatoes are by far the most important vegetable crop, contributing 39% to the total income derived from vegetables. This is almost equal

to the 40% derived collectively from the next four major crops, namely, tomatoes, onions, green mealies and sweetcorn. During 2007/08, 1 853 000 t of potatoes were produced.

Tomatoes

Tomatoes are produced countrywide, but mainly in Limpopo, the Mpumalanga Lowveld and Middleveld, the Pongola area of KwaZulu-Natal, the southern parts of the Eastern Cape, and the Western Cape. In 2008, 459 217 t of tomatoes were produced.

Onions

Onions are grown in Mpumalanga; in the districts of Caledon, Ceres and Worcester in the Western Cape; and at Venterstad and adjoining areas in the southern Free State.

Onions have an estimated planting of 6 500 ha to 7 000 ha and a retail value of R200 million a year. In 2008, 417 579 t of onions were produced.

Exports from South Africa (8 000 t a year) to Europe are relatively small compared to exports such as those of New Zealand (106 000 t a year), Australia and Tasmania (80 000 t a year) and Argentina (20 000 t a year).

Cabbages

Cabbages are grown countrywide, but are concentrated in Mpumalanga and the Camperdown and Greytown districts of KwaZulu-Natal. In 2008, 138 161 t of cabbages were produced.

Cotton

Cotton is cultivated in Mpumalanga, Limpopo, the Northern Cape, KwaZulu-Natal and North West. It constitutes 74% of natural fibre and 42% of all fibre processed in South Africa.

Cotton is grown under irrigation as well as in dryland conditions.

Since 2004, about 60% of cotton has been produced under irrigation. During 2007/08, 13 646 ha were dedicated to cotton in South Africa, with 72,9% ha under irrigation.

Production was the lowest in the Eastern Cape with 132 bales of cotton lint (each bale weighs 200 kg). About 75% of local production is harvested by hand. In 2007/08, cotton to the value of R113 million was produced.

Tobacco

Virginia tobacco is produced mainly in Mpumalanga, Limpopo and North West. The production of Oriental tobacco ceased in 2001.

Flue-cured leaf tobacco contributes more than 80% of total production, with hectares cultivated

for flue-cured tobacco being about six times the land cultivated for air-cured leaf tobacco. In 2008/09, 8 000 t of flue-cured tobacco were produced on 5 000 ha.

A total of 10 200 t of tobacco were produced.

Tea

Honeybush tea grows mainly in the coastal and mountainous areas of the Western Cape, and also in certain areas of the Eastern Cape. Honeybush tea has grown into a commercial crop, with 2006 production exceeding 300 t of processed tea.

The area planted with honeybush exceeds 230 ha, with about 10 commercial farmers contributing some 30% to the total annual production. It is estimated that honeybush grows on about 30 000 ha in South Africa.

Rooibos tea is indigenous to the Cederberg area of the Western Cape, which is about 200 km north of Cape Town. Although the main centre for tea production remains in this area, recent developments have seen production expanding to other regions. Rooibos tea is only produced locally and efforts to keep it this way are ongoing.

Rooibos provides income and employment to more than 5 000 people and earns an estimated R500 million a year. On average, about 12 000 mt of Rooibos are produced in South Africa a year.

South Africans consume 4 500 to 5 000 t and the rest is exported. The increasing global demand for Rooibos pushed exports up to more than 6 000 t a year. Rooibos is exported to more than 30 countries across the globe. Germany, the Netherlands, Japan, UK and the United States of America (USA) are the biggest importers of Rooibos.

Floriculture

The South African floriculture industry has the opportunity to develop into a significant player on the international stage. The total floriculture industry employs about 17 500 people. In terms of products and markets, there is a strong demand for South African floriculture worldwide. In particular, Germany, the UK, Japan and the Netherlands represent the greatest opportunities in the short term.

South Africa's indigenous flowers such as gladioli, nerine, freesias and gerberas, have undergone many years of extensive research in Europe, and have become major crops worldwide.

South Africa is the leading exporter of protea cut flowers, which account for more than half of the proteas sold on the world market. South African proteas and so-called Cape greens (fynbos) are marketed in Europe and are mainly concentrated in the Western Cape.

Recent developments in the Fynbos and Protea families have added value to the country's efforts on the international cut flower market.

Livestock

Nearly 80% of agricultural land in South Africa is suitable for extensive livestock farming. Livestock are also kept in other areas, usually in combination with other farming enterprises. Numbers vary according to weather conditions.

Stockbreeders concentrate on developing breeds that are well adapted to diverse weather and environmental conditions.

The livestock sector contributes up to 49% of agricultural output. South Africa generally produces 85% of its meat requirements, while the remaining 15% is imported from Namibia, Botswana, Swaziland, Australia, New Zealand and Europe. The livestock industry is the largest national agricultural sector.

National Livestock Development Strategy (NLDS)

The NLDS aims to enhance the sustainability of animal agriculture in South Africa across the entire production, processing and supply chain.

Implementation includes establishing sector working groups, mobilising rural stock owners and keepers towards economic production and supporting systems for the conservation of veld and livestock resources through sustainable use.

Dairy farming

Dairy farming is practised throughout South Africa, with the highest concentration of dairy farms in the eastern and northern Free State, North West, the KwaZulu-Natal Midlands, the Eastern and Western Cape, the Gauteng metropolitan area and the southern parts of Mpumalanga.

The ARC participates fully in the Multiple Across-Country Evaluation for all four major dairy breeds in South Africa, namely Holstein, Jersey, Guernsey and Ayrshire.

The primary sector consists of about 3 600 and 200 000 commercial and emerging farmers respectively, with an annual turnover of about R7,980 million.

Milk South Africa coordinates industry matters, including the information and research functions, and is financed by statutory contributions. Market forces determine prices. The dairy industry is an important employer, as some 3 850 milk producers employ about 50 000 farmworkers and indirectly provide jobs to some 38 000 people.

The 2008 milk production for commercial markets was estimated at 3 129 MI.

The National Recording and Improvement Scheme, managed by the ARC, ensures the efficient and economic sustainability of livestock production. It also provides scientific and technical assistance to participants to assist in making the right decisions.

The Dairy Recording and Improvement Scheme enables dairy farmers to record the genetic economically important traits of their animals. This information feeds into the Integrated Registration and Genetic Information System (INTER-GIS), South Africa's national farm animals recording database. Through INTER-GIS, raw data is processed and it also generates a range of reports that enable dairy farmers to select and identify the productivity of individual animals and farming enterprises.

Beef cattle farming

Cattle ranches are found mainly in the Eastern Cape, parts of the Free State and KwaZulu-Natal, Limpopo, North West, Mpumalanga and the Northern Cape. The indigenous Afrikaner and Nguni and the locally developed Bonsmara and Drakensberger are popular beef breeds.

The Angus, Hereford and Sussex; Charolais, Simmentaler and Brahman; and Santa Gertrudis breeds are respectively from Europe and America, and are maintained as pure breeds or used in cross-breeding.

Small stock (sheep and goat) farming

Sheep farming is concentrated mainly in the arid and extensive grazing areas of the country. As a result, most of the 25 million sheep in South Africa are found in the Eastern Cape, followed by the Northern Cape, Free State, Western Cape and Mpumalanga. Most sheep (18 million) are woolled or dual-purpose sheep.

The sheep breed with the highest wool production per head in South Africa is the South African Merino, followed by other dual-purpose Merino breeds, of which the Dohne Merino, South African Mutton Merino, the Afrino and Letelle are the most popular. Dual-purpose breeds are bred with the specific aim of maximising wool and mutton income. These breeds have better body conformation than the Merino, but produce slightly less wool per kilogram of body weight.

Average Merino fleece weights vary from 4 kg to 5 kg a year in the semi-arid regions, and up to 8 kg a year from sheep grazing on cultivated pastures.

Mutton sheep are mostly found in the semi-desert areas of the Northern and Western Cape.

The most popular mutton breed is the locally developed Dorper. Limited numbers of indigenous fat-tailed and Karakul sheep are still found.

A large proportion of the goats in South Africa occur in communal grazing areas. The Eastern Cape has the largest number of goats (39%), followed by Limpopo (17%).

The indigenous meat-producing Boer goat accounts for about 40% of all goats in South Africa. Almost all of South Africa's Angora goat (mohair) farmers are located in the Eastern Cape, where they farm with about a million Angora goats. The South African mohair clip of four million kilogram accounts for 60% of the world's mohair production. About 63% of all goats in South Africa are so-called indigenous goats.

Poultry and pig farming

The poultry and pig industries are more intensive than the sheep and cattle industries, and are dominant in almost all the provinces. The predominant pig breeds are the South African Landrace, the Large White, Duroc and the Pietrain. Some 2,6 million pigs were slaughtered between August 2007 and August 2008.

South Africa's annual poultry meat production is estimated at 930 000 t. Broiler production contributes nearly 80% to total poultry-meat production, with the rest made up of mature chicken slaughter (culls), small-scale and backyard poultry production, ducks, geese, turkeys and other specialised white-meat products.

Commercial producers slaughtered an estimated 1,421 mt broilers in 2008.

South Africa accounts for 68% of world sales of ostrich products, namely leather, meat and feathers. The income from these products was about R370 million in 2007/08 and is derived as follows: leather (50 – 70%), meat (20 – 30%) and feathers (20 – 30%).

Aquaculture industry (freshwater and marine)

South Africa is still in the developing phase of aquaculture, which is an underdeveloped market with great potential for job creation and food security. The total aquacultural production from South Africa is insignificant compared to African and global production.

The growth in aquaculture and aquaculture interest in South Africa is likely to lead to the rapid expansion of the sector during the next decade. This expansion depends on the integrated use of natural resources, funding, government support,

technology and human-resource development to ensure sustainable and equitable development.

A number of aquaculture developments and public facilitation initiatives are taking place, such as initiatives by the Provincial Development Corporation in the Western Cape to develop a growth-centred policy for the province; the ongoing developmental work by the Department of Science and Technology; various activities by the Eastern Cape Development Corporation; a best management practice guideline by the Department of Agriculture, Forestry and Fisheries; and projects by the Marine and Coastal Management (MCM) Branch of the Department of Environmental Affairs. The MCM projects include workshoping and finalising the abalone ranching guidelines, the selection of land-based and offshore marine aquaculture sites, developing pilot projects and new environmental impact assessment guidelines for aquaculture and establishing an implementation plan to cover the main objectives of the policy – these being the creation of an enabling environment, research, environmental matters and transformation.

Game ranching

Game ranching in South Africa is one of the fastest-growing sectors of the agricultural industry.

Since the 1970s, there has been a huge shift from cattle farming to game ranching. Provided they observe approved game-fencing rules, registered game ranches have permission to hunt throughout the year.

Some 49,04% of registered game ranches with an area of 3 325 652 ha are found in Limpopo. The Northern Cape has the second-highest number of game ranches (19,48%), covering 4 852 053 ha.

The Eastern Cape has 12,33% of the total game ranches, covering 881 633 ha.

The Western Cape has the fewest game ranches (1,62%, extending over 265 205 ha).

Owing to the expansion of game ranches, the total area covered by these privately owned ranches exceeds that of all national parks and provincial nature reserves put together. Game ranches also have growing numbers of game.

In terms of game ranching, game is considered to be an agricultural product as defined in the Marketing of Agricultural Products Act, 1996 (Act 47 of 1996).

The South African game-farming industry incorporates various subsectors, ranging from extensive wildlife ranching (with minimal human intervention) to intensive wildlife ranching (with supplementary feeding), wildlife breeding and ecotourism.

The Directorate: Animal Production of the Department of Agriculture, Forestry and Fisheries has, as its primary objective, the sustainable management, use and ecological protection of range and forage resources, as used by both livestock and wildlife (game) production systems, across provincial boundaries.

The National Game-Farming Policy aims to:

- support the effective management of viable game-farming systems
- ensure the sustainable management of natural resources
- facilitate the development of norms and standards for sustainable game farming
- promote and support equitable access to health management
- establish a national game-farm and animal database
- facilitate promotion and marketing
- deal with relevant food-safety issues
- promote research, training and support services.

The National Game-Farming Working Group consists of all relevant stakeholders in the game-farming industry to ensure that all the parties concerned are represented and participate fully.

Beekeeping

The honey industry in South Africa has an average annual turnover of R3,2 billion and produces 2 000 t a year. Government investment in KwaZulu-Natal aims to increase national production to 100 000 t and employ over 100 000 people. In addition to producing honey, beekeepers play a critical role in agriculture, contributing to crop pollination and the development of products worth billions of rands.

Indigenous food crops

The Directorate: Plant Production of the Department of Agriculture, Forestry and Fisheries has developed the Draft Policy on Indigenous Food Crops. The policy was approved by the Depart-

Since 1994, the Farmworkers Development Programme of the then Department of Agriculture funded 68 projects at a cost of R12,3 million, benefiting more than 150 000 farmworkers.

Between 2004 and 2008, the department instituted a comprehensive Agricultural Support Programme consisting of 450 projects, some 20 701 beneficiaries and costing R120 million. The department supported 93 461 emerging farmers. Of these, 11 815 were women, 37 408 were youth and 266 were people with disabilities.



mental Executive Committee and recommended for consultation with various stakeholders.

Veterinary services

The State Veterinary Services constantly guards against the introduction of animal diseases from outside South Africa. Existing animal diseases, which may be detrimental to South Africa's economy and to human and animal health, are also monitored, controlled and combated.

Livestock in the high-risk areas are inspected at short intervals.

The Directorate: Veterinary Services of the Department of Agriculture, Forestry and Fisheries sets norms and standards for the delivery of veterinary services in South Africa.

Legislation provides the necessary powers to control diseases such as foot-and-mouth disease (FMD), swine fever, rabies and anthrax. South Africa, excluding the Kruger National Park and surrounding game reserves, is recognised as an FMD-free zone by the *Office International des Épizooties* (OIE), the world animal-health organisation.

The Department of Agriculture, Forestry and Fisheries has created a biosafety and biosecurity unit and a branch to deal with all emerging diseases and improve on biosecurity and food-safety measures.

Animal-disease control is an important factor in ensuring the productivity of the livestock sector and in promoting international trade in agricultural products.

Surveillance systems are in place to ensure that all animal products entering and leaving the country are disease-free, or offer a negligible risk, and therefore pose little risk to the animal-disease status of the country and are also safe for human consumption.

All commercial ports are thoroughly monitored to ensure that imported and exported goods are disease-free.

Particular emphasis is placed on the control of borders with neighbouring countries to prevent the introduction of FMD.

Onderstepoort Biological Products (OBP)

OBP is a state-owned public company established in terms of the OBP Act, 1999 (Act 10 of 1999), with the capacity and technology to produce veterinary vaccines and related biological products for local and international markets. OBP is the

sole or main producer of a number of vaccines against animal tropical diseases with the potential to cause serious economic disasters.

The last few years have seen OBP participating in projects to alleviate poverty and improve human health by providing millions of doses of vaccines against zoonotic diseases such as Rift Valley fever.

OBP contributes expert advice and vaccines to control other transboundary animal diseases such as contagious bovine pleural pneumonia, lumpy-skin disease, African horse sickness and anthrax that affect most African countries.

Over the years, OBP has been participating actively in workshops and conferences arranged by organisations such as the Pan-African Vaccine Network, World Organisation for Animal Health, SADC and the Food and Agriculture Organisation (FAO) to share and gain technology in improving its services.

Through collaboration with the FAO and the European Union (EU), OBP has also been involved in projects to provide both technical support and vaccines to countries such as the Democratic Republic of Congo, Zimbabwe, Lesotho and Angola.

OBP interacts both with national and international research and academic institutions to introduce new, improved and affordable products.

Animal identification

The Animal Identification Act (Aida), 2002 (Act 6 of 2002), administered by the Directorate: Veterinary Services in the Department of Agriculture, Forestry and Fisheries, regulates the registration of unique markings for all declared animal species.

Under the Act, the Minister of Agriculture, Forestry and Fisheries declares animals for compulsory identification. The national register is available to the South African Police Service through State Information Technology Agency links to trace ownership of individual animals to their owners.

However, this can only be implemented successfully if all cattle, goats, pigs and sheep are marked in accordance with the Act.

The directorate is also transferring knowledge to rural communities in consultation with the provincial departments of agriculture on various themes, for example, the Aida, 2002; animal management; preserving fodder; feeding of animals; preventative activities; first aid to injured

animals; marketing/harvesting of animals and their products; hygienic activities for meat; and milk handling.

The Epidemiology Section is responsible for monitoring animal diseases in the country for both disease-control purposes and as an early warning system.

Pest control

The South African Pest Control Association (Sapca) is the official representative of the pest-, termite- and woodborer-control industries. All Sapca-qualified inspectors have to register with the Department of Agriculture, Forestry and Fisheries.

South Africa liaises with other countries and international organisations to ensure the transfer of pest-control technology.

Migratory pest control

In terms of the Agricultural Pests Act, 1983 (Act 36 of 1983), the Department of Agriculture, Forestry and Fisheries is obliged to control the registered national pests, namely, red-billed quelea, locust and blackfly. These are migratory pests and individual farmers cannot be expected to control these to prevent damage in areas away from their own farms.

The ARC provides research support to the department to optimise control procedures in terms of efficacy, cost and environmental considerations.

An international communication network has been established with neighbouring countries concerning migratory pest control. By providing early warning information on cross-border invasions of migratory pests, such as army worm, locust and red-billed quelea, the Information Core for Southern African Migrant Pests enhances the forecasting efficiency of control organisations, thereby assisting national crop-protection agencies to ensure food security.

Marketing

The Marketing of Agricultural Products Act, 1996 (Act 47 of 1996), has changed agricultural marketing policy and practice dramatically to ensure that it occurs in a free environment.

The deregulation process was aimed at ensuring that farmers and agribusinesses position themselves as players in the globally competitive environment.

The deregulation process entailed dissolving agricultural marketing boards, phasing out import- and export-control measures, eliminat-

ing subsidies and introducing tariffs to protect the domestic agricultural industry value chains against unfair international competition.

The Directorate: Marketing of the Department of Agriculture, Forestry and Fisheries works closely with the National Agricultural Marketing Council (NAMC) on agricultural marketing matters.

The directorate develops, promotes and facilitates the implementation of programmes and measures aimed at supporting equitable access to competitive and profitable agricultural markets on a sustainable basis. This broad mandate is achieved by:

- administering market-access measures in the form of issuing trade permits (import and export permits)
- facilitating fair, open, efficient and competitive domestic markets
- developing policies and strategies aimed at enhancing market access, and facilitating the implementation of programmes and measures to promote equitable access to mainstream markets
- liaising with other government departments and relevant parties to enhance the efficiency of the agricultural marketing value chains.

The directorate comprises three subdirectorates, namely Marketing Administration, Commodity

The Food Agriculture and Natural Resources Policy Network launched the Women Accessing Realigned Markets (WARM) Project in July 2009, after a funding agreement was signed with the Gates Global Development Foundation in June.

The project will use community theatre to give female farmers stronger influence in agricultural policy-making in South Africa. WARM's main objective is to provide a platform for rural female farmers to express their specific needs and to raise issues that help realign policy research agendas to meet them.

Women farmers are often marginalised in business relations and have little control over access to land, seed and fertiliser as well as credit and technology.

Women constitute 70% of the total agricultural workforce in sub-Saharan Africa. They are responsible for 100% of the processing of basic foodstuffs, according to Food and Agricultural Organisation statistics.

The project's planned interventions include providing the participants with access to credit and research services, technology and input and output markets while also boosting their participation in policy-making processes at community and national level through active involvement in agricultural organisations



Marketing, and Marketing Development and Support.

The Subdirectorate: Marketing Administration administers the issuing of import and export permits to enhance trade and market access. It also facilitates the participation of new entrants in the trading environment.

The Subdirectorate: Commodity Marketing profiles key agricultural commodity marketing value chains and undertakes further analyses of market structures to determine market-access qualifiers.

It further investigates the behaviour of commodity and non-commodity markets to recommend policy options, thereby ensuring equitable access to mainstream markets by all.

The Subdirectorate: Marketing Development and Support implements programmes and measures to enhance the development of a vibrant domestic market. It implements projects such as marketing, infrastructure support and marketing training and provides agricultural marketing information.

National Agricultural Marketing Council

The NAMC was established in terms of the Marketing of Agricultural Products Act, 1996. The council provides the Minister of Agriculture, Forestry and Fisheries with strategic advice on all agricultural marketing issues to improve market efficiency and access for all participants, optimise export earnings and improve the viability of the agricultural sector.

The council has developed an economic and market research programme that tracks economic trends and provides market information that is aimed at improving South Africa's position in future global agricultural markets.

The NAMC's Food Price Monitoring initiative is a continuation of the Food Price Monitoring Project, which assists government in understanding the impact of high food price inflation on the poor.

Land settlement

The overall goal of the Directorate: Land Settlement is to provide support to farmers through land-reform programmes with the intention to develop viable and sustainable agricultural ventures.

The directorate develops and provides guidelines for the implementation of policies and programmes supporting land and agrarian-reform beneficiaries. It also facilitates the implementation of land and agrarian-reform projects and promotes sustainable agriculture for improved

livelihoods. Furthermore, the directorate facilitates the effective administration and disposal of state agricultural land.

The directorate ensures farmer support by developing policies such as the Farmer-to-Farmer Mentorship Policy, implementing programmes such as the Comprehensive Agriculture Support Programme (CASP) and the Land Reform Revitalisation Programme.

The directorate manages and controls 125 227 ha of state land, called Financial Assistance Land Administration, which consists of:

- leased land: 57 154 ha
- vacant land: 13 811 ha
- land for restitution: 54 262 ha.

The CASP has been reprioritised to respond timeously to the demands of the Land and Agrarian Reform Project (LARP). The LARP is aimed at accelerating and aligning land and agrarian reform in South Africa.

The LARP focuses on the following objectives:

- redistributing five million hectares of white-owned agricultural land to 10 000 new agricultural producers
- increasing black entrepreneurs in the agribusiness industry by 10%
- providing universal access to agricultural support services to the target groups
- increasing agricultural production by 10% to 15% for the target groups, under the Ilima/Letsema Campaign
- increasing agricultural trade by 10% to 15% for the target groups.

The LARP is a joint project of the Department of Rural Development and Land Affairs; the Department of Agriculture, Forestry and Fisheries; provincial departments of agriculture; agricultural state-owned enterprises; and sector partners.

As part of the agrarian transformation drive, the department will consolidate all the national funding schemes into a single national facility for the funding of projects and rural businesses. This will support the department's efforts to promote the production of food, feed and fibre to create jobs and generate sustainable incomes.

Ilima/Letsema Campaign

The Ilima/Letsema Campaign seeks to increase agricultural economic activities by continuing the joint effort of stimulating food production through household and backyard activities, creating micro-enterprises through the use of communal land, ensuring productivity of all land lying fallow in the peri-urban and rural areas and converting

dormant agricultural assets into liquid income-generating assets.

The Ilima/Letsema Campaign continues to elevate agricultural activities; realise the LARP; be a mechanism of collaboration towards food security; and a developmental platform for appreciation of local and indigenous resources that will assist to continue the fight against high food prices.

The objectives of the campaign are to:

- invest in the improvement of the quality of livestock in communal areas such as the Nguni cattle, goats and chickens
- increase family and community production for household food and nutritional security
- develop an agricultural development corridor
- increase the percentage of land that is put to productive use
- activate fallow land in the former homelands
- rehabilitate to productive use degraded agricultural land
- rehabilitate and expand the existing irrigation schemes
- establish new irrigation schemes
- establish contract farming for high-value and feedstock products for biofuels, wine, essential oils, hemp, medicines, leather, juices, canning and dairy.

By mid-2009, a number of interventions had been introduced to strengthen food security. With the exception of the North West, all provinces had launched the Ilima/Letsema Campaign. This campaign also distributes agricultural starter-packs to poor households and support small-scale farmers.

Food security

The Integrated Food Security and Nutrition Programme (IFSNP) aims to achieve physical, social and economic access to safe and nutritious food for all South Africans. Its goal is to eradicate hunger, malnutrition and food insecurity by 2015.

The IFSNP recognises the broad regional food-security framework that the Regional Indicative Sustainable Development Programme highlighted and that prompted South Africa to respond to the humanitarian appeal by the United Nations (UN) World Food Programme for emergency food relief in the SADC region.

The Household Food Production Programme, which provides seedlings, seeds, fertiliser, pesticides and other production input to beneficiaries, assisted about 30 000 households in 2009. In the 2008 supplementary budget, the programme was expanded by an additional R76 million,

which assisted in reaching the targeted 70 000 households.

By March 2009, 6 503 schools in the country had vegetable gardens. School communities had also been trained in tree planting and were planting fruit trees at schools as part of the Plant a Million Trees Campaign.

Regional issues

South Africa participates in the Regional Advisory Committee (RAC) of the Regional Food Security Training Programme (RFSTP).

The RFSTP was developed over a five-year period as endorsed by the RAC. The activities of the RFSTP focus on three main areas: strengthening the supply of food-security training services, strengthening the effective demand for training and development and sustaining regional markets for food-security-related training services.

The SADC has instituted the Subcommittee for Plant Protection, which is tasked with harmonising phytosanitary requirements in southern Africa. South Africa is also a member of the Inter-African Phytosanitary Council, which was established in 1954. Regional plant-protection organisations such as these are able to provide valuable coordination of the activities and objectives of the International Plant Protection Convention (IPPC) at regional level. The Inter-Africa Phytosanitary Council is officially recognised as the Regional Plant Protection Organisation for Africa. The council came into being as the African Union's (AU) phytosanitary coordinating body.

The SADC ministers responsible for agriculture and food security met in May 2009 to review progress on the regional food-security situation and the implementation of the Regional Indicative Strategic Development Plan and the Dar-es-Salaam Declaration Plan of Action on Agriculture and Food Security. The ministers reviewed progress in the following key areas: food security, food availability, regional trade, disaster preparedness and climate change.

International issues

As a signatory to the Rome Declaration, South Africa has committed itself to the implementation of the World Food Summit Plan of Action. For this purpose, South Africa reports annually to the World Committee for Food Security. South Africa is also collaborating with the FAO on the implementation of the Special Programme for Food Security, within the context of the Integrated Sustainable Rural Development Programme.

South Africa is an active participant in other international standard-setting bodies that are vital to its global market share, such as the IPPC, OIE and Codex Alimentarius.

Risk management **Status of plans/policies**

The Department of Agriculture, Forestry and Fisheries' Executive Committee approved the Disaster Risk-Management Plan for stakeholder consultation during 2008/09. The department also worked on the following documents as appendices to the Agricultural Disaster Plan: agricultural floods, veldfire and cold spell management strategies; Agricultural Plant Pests; Diseases Strategy; Animal Disease Contingency Strategy; and Migratory Pests Strategy.

The disaster risk-reduction principles and post-disaster recovery and rehabilitation were implemented in parallel with policy development and monitoring. Policy review and evaluation were done on an ad hoc basis.

Climate change

Climate change has been identified as one of the major threats to agricultural production. Leading research experts have projected that agricultural production could drop by 50% in parts of southern Africa in the long term because of the increased likelihood of crop failures and livestock diseases, therefore negatively affecting food security.

In an effort to address issues pertaining to climate change in the agricultural sector, the Department of Agriculture, Forestry and Fisheries developed the Climate Change Sector Plan and Climate Change Programme.

The main aims of the plan are to respond to the South African National Climate Change Response Strategy and Cabinet's mandated action plans, which called for individual plans for all sectors and to ensure a sustainable, profitable agricultural sector in general.

The department supports research on the impact of climate change on agricultural production to better understand and plan for the likely impact.

The department is conducting research on the impact of climate change through various research and academic institutions.

Vulnerability, mitigation and adaptation are three key concepts relating to climate change and its manifestations are of critical importance to agriculture.

Early warning (disaster risk reduction)

Agriculture is affected by either or a combination of droughts, floods, cyclones and veldfires, among other hazards. The losses resulting from the impact of these natural hazards can be minimised, if not avoided at all, by establishing and strengthening an early warning system for all natural hazards.

The system communicates early warning information in the form of monthly advisories and daily extreme weather warnings to the sector for disaster risk reduction, mitigation and preparedness in accordance with the Disaster Management Act, 2005 (Act 27 of 2005).

The department assesses the uptake of the early warning information to evaluate the preparedness of all involved in disaster risk management to act upon warnings of natural hazards and the hazards themselves.

Disaster assistance

Main disasters that occurred in the country during 2008/09 included veldfires, drought in the Central Karoo area and floods in the Eastern and Western Cape. Assessments in the affected areas were conducted by the national and provincial departments of agriculture. With the assistance of organised agriculture, the departments also evaluated the impact that these disasters had on agriculture.

Funds had been made available to assist the eight provinces affected by veldfires. In 2008, about 21 400 farmers were assisted who suffered losses due to agricultural disasters.

Drought management

Climate variability has induced drought interspersed with flooding, resulting in lower average agricultural production yields. The Department of Agriculture, Forestry and Fisheries has completed two policy documents: the Agricultural Disaster Risk-Management Plan and Agricultural Drought Management Plan.

Credit and assistance

The six major sources of credit for farmers are banks (50%), agricultural cooperatives and agribusinesses (12%), the Land Bank (21%), private creditors (8%), other creditors and financial institutions (9%), and the State (1%). Government will:

- Increase the 450 cooperatives in agriculture, forestry and fisheries by 100. There are also 400 self-help groups that are based on sav-

ings mobilisation for the purpose of enterprise development.

- Train household members to establish vegetable tunnels for household food production and assist emerging farmers in rural communities.

Business and Entrepreneurial Development (BED)

The Directorate: BED in the Department of Agriculture, Forestry and Fisheries is mandated to ensure that emerging entrepreneurs and established enterprises have some synergy in the development of their agribusiness endeavours. The entire process addresses the strategic objectives of eliminating skewed participation and inequity; optimising growth, remunerative job opportunities and income; and ensuring efficient and effective governance. It further promotes and provides strategic support in the development of viable and empowered businesses, stimulating growth and promoting unity through partnerships and niches.

The ultimate aims are to:

- unlock the economic potential of idle-to-underused resources of emergent groups through empowerment efforts
- facilitate restructuring and the expansion of existing farming/agribusinesses to enhance their competitiveness and contribution to the sector and the economy at large.

The Business Development Unit within the directorate works closely with industries/commodity groups to develop inclusive, enhanced and harmonised commodity strategies and joint action plans.

It assists marginalised groups in creating, expanding and rehabilitating business to become profitable and sustainable in the long term, focusing on growth and wealth creation based on mutual gains in the sector. It also encourages

and facilitates win-win partnerships for niche enterprises at all levels in the agricultural value chains.

Through the directorate, the Department of Agriculture, Forestry and Fisheries has contributed towards the development of the National Emergent Red Meat Producers' Organisation's database, the Grain Industry Strategy, the Fruit Industry Plan and the implementation of the Cotton Industries Strategy.

The directorate renders support and guidance to the cotton, grain and fruit industries in the implementation of their developed strategies. It is facilitating and supporting the potato industry in developing an industry strategy.

The unit has facilitated, jointly with industry role players, the initial roll-out and implementation of the AgriBEE Entrepreneurial Programme in floriculture. The aim is to develop market/business opportunities for BEE enterprises across the value chain to grow and become globally competitive and sustainable, contributing to shared growth and employment creation.

Through joint internal actions in the department, activities are being mainstreamed to further reach black farmer organisations and entrepreneurs, accelerating their participation into commodity groups through farmer-mobilisation interventions.

The unit is aligned with the objective of AgriSA and supports Operation Gijima, Women in Agriculture and Rural Development and National Movement for Rural Women projects, as well as programmes involving people living with disabilities, youth and farmworkers.

It is facilitating and supporting the industry in developing a floriculture industry strategy aligned to the sector plan.

It collaborates with other tiers of government and sectors in rendering advice, support and guidance to agricultural value-chain projects owned by land-acquisition beneficiaries, designated groups and other departmental grant-funded projects.

The Entrepreneurial Development Unit is responsible for initiating and rolling out the Small, Medium and Micro-Enterprise (SMME) Excellence Model in collaboration with partners within the provinces. These interventions focus on entrepreneurial development, increased agricultural enterprises' performance and job-creation activities, especially in rural development nodes.

The BEE Unit leads in the formulation of BEE policy, norms and standards in the sector in terms of the AgriBEE Charter Gazette and the Broad-Based BEE Act, 2003 (Act 53 of 2003).

The Agri Black Economic Empowerment Project was launched in February 2009. This multimillion rand investment project is a partnership between black emerging farmers, represented by the National African Farmers Union, Women in Agriculture and Rural Development, Youth in Agriculture and Rural Development and white commercial farmers. Its main objective is the transfer of skills from commercial farmers through training and mentorship and the establishment of sustainable commercial farms for emerging black farmers.

The centre will kick-start its training in dairy farming and piggeries and later advance to other enterprises such as vegetable and crop farming.



Through AgriBEE implementation, the goals of access to existing resources and opportunities, enhanced participation and ownership by designated groups (women, youth, people living with disabilities and labour) will be targeted.

LandCare Programme

The LandCare Programme is a community-based and government-supported approach to the sustainable management and use of agricultural natural resources.

The vision of the LandCare Programme is for communities and individuals to adopt an ecologically sustainable approach to the management of South Africa's environmental and natural resources, while improving their quality of life. It implies that cultivation, livestock grazing and the harvesting of natural resources should be managed in such a manner that no further degradation (such as nutrient loss, soil erosion, loss of components of the vegetation and increased run-off) occurs.

The overall goal of the LandCare Programme is to optimise productivity and sustainability of natural resources, resulting in greater productivity, food security, job creation and better quality of life for all. The LandCare Programme has been expanded into additional subprogrammes. The department has initiated the integrated Soil Protection Strategy (SPS) in support of growth and sustainable development in the agricultural sector.

The project aims to improve agricultural productivity and contribute to economic growth by focusing on erosion, declining soil acidity, soil fertility and organic matter, and veld rehabilitation.

The SPS focuses on high- to moderate-potential agricultural land with high erosion status (about three million hectares) and will initially identify three priority tertiary catchment areas.

The Department of Agriculture, Forestry and Fisheries will broaden and strengthen partnerships with organised agriculture, including subsistence and new farmers as well as cooperatives in agriculture, forestry and fisheries.

The latter includes 450 cooperatives ranging from producer input supply, live stock and commodity groups. The department was expected to increase this number by 100, based on a needs analysis, by the end of the 2009/10 financial year. There are also 400 self-help groups that are based on savings mobilisation for the purpose of enterprise development.



LandCare themes are grouped into two areas, namely focused investment (WaterCare, VeldCare, SoilCare, Eco-Technology Programme [ETP], Infield Rainwater Harvesting [IRWH] and Junior LandCare) and small community grants.

The Department of Agriculture transferred R46,7 million in 2007/08 to the nine provincial departments for LandCare projects. LandCare awareness was promoted through 120 projects with a total investment of R35 million since 1998.

The Fourth Biennial National LandCare Conference was held in Limpopo in 2009. It was attended by representatives from African countries, Australia and the Philippines.

Focused investment WaterCare

The WaterCare theme targets Limpopo in particular, because of water shortages and the importance of water for irrigation. This theme establishes a framework for managing land and preventing the silting up of dams for irrigation. WaterCare works in partnership with the community to develop action plans for managing and restoring irrigation schemes.

The rehabilitation of irrigation schemes increases water supply and household food security. WaterCare promotes the development of techniques for water-resource management and encourages opportunities for training in this field.

VeldCare

This theme promotes best grazing systems and erosion-prevention practices to improve production. It develops and maintains agricultural activities in accordance with the principles of ecologically sustainable development. Economic- and social-development opportunities are realised by improving grazing areas and maintaining viable grazing areas throughout rural communities.

SoilCare

The SoilCare theme encourages rural farmers in KwaZulu-Natal, the Eastern Cape and Mpumalanga to build innovative structures to combat soil erosion. This includes reducing the depletion of soil fertility and acidity. Through SoilCare, sustainable agricultural production systems such as diversification, management of input and conservation tillage are introduced.

Eco-Technology Programme

The objective of the ETP is to identify, adapt, demonstrate and spread promising and appropriate

eco-technologies locally (such as conservation, farming and water harvesting), which will provide resource-poor farmers with social, economic and environmental benefits. The expected outcomes of this theme are an increased number of promising and appropriate eco-technologies identified and evaluated on-farm; an increasing number of farmers adopting eco-technologies; and improved social, economic and environmental (e.g. employment) benefits.

ETPs will initially be implemented in presidential nodal areas where water is very scarce, such as KwaZulu-Natal (Umkhanyakude and Zululand) and Limpopo (Sekhukhune and Bohlabela).

Infield Rainwater Harvesting

IRWH technology, which improves the efficiency of water use and increases yields with a suitable choice of crop combinations under low and erratic rainfall conditions on low-potential clay soils, has been transferred with great success to numerous communities in the Free State and Eastern Cape.

Using IRWH in croplands, community members have increased maize and sunflower yields by between 26% and 40% compared with conventional practices. Socio-economic studies on vegetable gardens have shown that IRWH can ensure household food security for nine out of 10 years, compared to three out of 10 years using conventional cropping methods.

Transfer of technology, training and extension are used to implement IRWH, with consequent improvement of household livelihoods in rural communities where the majority of members live below the poverty line.

Junior LandCare

Junior LandCare encourages young people to develop a sense of responsibility towards the land and other natural resources, to conserve these for future generations.

The objectives of Junior LandCare are to empower previously disadvantaged youth by providing training in facilitation and leadership skills. This includes the promotion of food security at home and in schools, enhancing awareness of sustainable agriculture and stimulating the formation of youth clubs and projects that aim to promote other components of LandCare. Junior LandCare addresses the needs of young people in an integrated way and involves interdisciplinary approaches. This is done for youth both in and out of school.

Land and Agricultural Development Bank of South Africa (Land Bank)

The Land Bank is a key development finance institution providing access to credit in the agricultural sector. In July 2008, the administration of the Land Bank was transferred from the then Department of Agriculture to the National Treasury.

However, the operations and governance of the Land Bank have not been optimal. The capital adequacy ratio of the bank has fallen considerably, mainly due to the writing off of some large non-performing loans.

Key components of the Land Bank's turnaround strategy to ensure that it delivers on its mandate include a focus on promoting previously disadvantaged individuals and sustainable development and BEE in the agricultural sector. The bank's support to previously disadvantaged communities should help government with the redistribution of 30% of agricultural land by 2014 and other land-reform objectives.

The Land Bank is refocusing its strategy on development as core to its business to address its business challenges. The new focus will be on improving its financial position and realigning the bank's operations with its mandate.

Government has reaffirmed its support to the Land Bank by extending a capital guarantee of R1,5 billion and a further cash injection of R700 million to support its turnaround strategy and to provide a prudent level of capital adequacy to ensure that the bank fulfils its mandate.

Micro-Agricultural Financial Institutions of South Africa (Mafisa)

The former Department of Agriculture introduced a microfinance scheme, known as Mafisa, to assist emerging farmers and agribusinesses with production credit and to facilitate savings mobilisation among communities through self-help groups and cooperatives.

This scheme is implemented through a variety of financial institutions, which have to be accredited by the department and subsequently sign participation agreements.

The scheme was first implemented on a pilot basis during which more than 5 000 clients received loans. Some 2 000 clients also received funding from Mafisa beyond the pilot phase.

Following the conclusion of the pilot phase, full roll-out commenced. The full roll-out activities include increasing participating institutions through which the products and services of this scheme would be accessed.

While the pilot phase only used state-owned entities, the full roll-out includes both private and public entities.

The department, in partnership with Khula Enterprise Finance, has established a credit-portfolio indemnity scheme known as the Khula-Mafisa Fund. The purpose of the scheme is to encourage financial institutions to provide credit to emerging agricultural entrepreneurs with viable enterprises but that lack collateral.

For the 2009/10 financial year, R150 million was allocated for expanding the Mafisa scheme. Mafisa has committed a total of R545 million to fund emerging farmers. The Khula-Mafisa initiative has managed to leverage R116 million from commercial banks to provide funding to those emerging farmers who are able to repay loans but may not necessarily have sufficient security.

Mafisa has identified savings mobilisation as one of the products that could enable cooperatives, self-help groups and farmer organisations to become sustainable and self-reliant financial intermediaries and to use the savings strength to access credit as most of the poor households do not have security/collateral to get a loan.

The strategy on savings mobilisation was developed to provide a broad framework to promote and encourage the culture of savings to build assets, income generation and wealth creation for sustainable development among the rural working poor.

The department is also responsible for agricultural cooperative development. Subsequent to the relocation of the cooperative function from the Department of Agriculture, Forestry and Fisheries to the Department of Trade and Industry, the Cooperative Development Policy and Strategy for South Africa was developed. These documents served as the basis for sector departments in the development of their own cooperative policies and strategies.

Agri South Africa

Agri SA was established in 1904 as the South African Agricultural Union. It serves some 70 000 large and small commercial farmers.

Agri SA promotes, on behalf of its members, the sustainable profitability and stability of commercial agricultural producers and agribusinesses through its involvement in and input at national and international levels. Agri SA is structured into three chambers, namely the General Affairs Chamber, which deals with general agricultural policy matters on behalf of nine provincial affiliates; the Commodity Chamber, which deals with subsector policy issues on behalf of 25 commodity organi-

sations; and the Agricultural Business Chamber (ABC) with 65 agribusinesses as members.

Agri SA's annual congress, representative of its affiliates, is its highest decision-making body and also elects the organisation's president, deputy president and chamber vice presidents.

Agri SA is a member of Business Unity South Africa, the International Chamber of Commerce, the International Federation of Agricultural Producers, the Southern African Federation of Agricultural Unions and the Cairns Group Farm Leaders.

Agri SA participates in the Presidential Commercial Agriculture Working Group that deals with policy matters, specifically in terms of the Strategic Plan for South African Agriculture.

Agri SA's policy advocacy includes work on trade negotiations, industrial policy, labour laws, training, taxation, financing, land reform, farmer development, environmental affairs, water rights, farm safety, law and order, infrastructure, technology development and transfer, statistical information and local government matters.

It publishes a bimonthly magazine and a weekly electronic newsletter, and also runs a regular radio programme in collaboration with the South African Broadcasting Corporation.

Agricultural Business Chamber

The ABC is a sectoral body representing an important component of South Africa's business sector.

ABC members operate more than 2 000 service centres countrywide with more than 100 000 employees. In many rural areas, members of the ABC form the business hub of the community and make a key contribution towards maintaining rural infrastructure. The ABC is an integral part of the Agri SA Group, and is associated with Business South Africa, various international bodies and the International Agribusiness Management Association. Agricultural businesses play a significant role in the economy of South Africa as handlers, processors and marketers of agricultural products, and as suppliers of production input and services.

Transvaal Agricultural Union South Africa (TAU SA)

TAU SA was established in 1897 as the Transvaal Agricultural Union. In 2002, the union reorganised to become a national agricultural union serving commercial farmers. It also renders services to its members in terms of:

- property rights
- economic issues
- safety and security.

TAU SA conducts a variety of projects to enhance the concept of successful agriculture.

National African Farmers Union of South Africa (Nafu)

Nafu is an independent, non-governmental, voluntary organisation representing farmers in South Africa. The organisation was formed in 1991 with the assistance and support of the National African Federated Chamber of Commerce and Industries.

Agribusiness as an economic sector

Agribusiness can be divided into two categories: non-cooperative business ventures and cooperatives or transformed cooperatives.

Non-cooperative business ventures, also known as profit companies, are involved in the production and distribution of agricultural equipment and production requisites, and the marketing of agricultural products.

Cooperatives dominate the distribution of intermediate requisites and the handling, processing and marketing of agricultural products.

Agricultural cooperatives or agribusinesses are regarded as the farmers' own independent business organisations. They supply their members with production input such as seed, fertiliser, fuel and repair services. They also provide credit and extension services, and handle a large percentage of their members' produce.

Central cooperatives in the country aim to supply the primary cooperatives with specific services such as the processing and marketing of agricultural products, insurance services for crops, short-term cover and farming requisites.

The structure of agribusiness has changed substantially since the deregulation of the agricultural sector into a free-market economy in 1994. Many cooperatives have transformed into private companies, consolidations and mergers have occurred, international groups have entered South Africa, and agribusinesses have listed on the JSE Limited.

Training and research

South African agriculture has a strong research component. Many of the people involved are world leaders in their respective fields.

The ARC, an autonomous statutory body set up in terms of the Agricultural Research Act, 1990 (Act 86 of 1990), is the largest agricultural research organisation in Africa. The ARC provides research support to the Department of Agriculture, Forestry and Fisheries, and the nine provincial departments

of agriculture. ARC scientific expertise supports most of the Department of Agriculture, Forestry and Fisheries' regulatory directorates, such as the directorates for animal health, public veterinary health, agricultural production, agricultural resource cultivation and plant health.

The ARC also supports other agricultural institutions such as the Registrar of Livestock Improvement and Identification, the Registrar of Brands, the South African Veterinary Council and the Perishable Products Export Control Board. (See Chapter 20: *Science and technology*.)

South Africa has a number of specialised agricultural high schools and regular schools offering a comprehensive range of agricultural subjects. Prospective farmers can be trained at 11 colleges. Degree courses and B. Tech degrees are offered by the faculties of agriculture at various universities.

Veterinary surgeons are trained at the University of Pretoria's Faculty of Veterinary Sciences at Onderstepoort.

International relations

The Department of Agriculture, Forestry and Fisheries' Directorate: International Relations facilitates and coordinates international activities on both multilateral and bilateral bases.

The department is a member of the FAO; the Consultative Group on International Agricultural Research; the Food, Agriculture and Natural Resources Sector of the SADC; the International Seed-Testing Association; the Organisation for Economic Cooperation and Development's Seed Schemes; the Union for the Protection of New Varieties of Plants; World Organisation for Animal Health; the International Organisation of Vine and Wine (OIV); and the International Cotton Advisory Committee. Contributing to the political, social and economic development of Africa is an international priority for the department.

Agriculture continues to be the mainstay of African economies and is an important driver for socio-economic growth.

South Africa's agricultural engagement in Africa is guided by a clear sense of the huge potential for agricultural trade, training, research and technical cooperation opportunities existing on the continent.

The directorate developed the International Agricultural Strategy, which sets priorities for international engagement in the medium term. The strategy is guided by South Africa's foreign-

policy and economic-development objectives. The priorities are:

- consolidation of the African Agenda
- active participation in the AU
- active participation in and efficient implementation of the programme of the SADC food, agriculture and natural resources; and trade, finance and investment directorates
- sustainable development and poverty alleviation through the New Partnership for Africa's Development (Nepad)
- implementation of the Southern African Customs Union (Sacu) Agreement.

International trade

The Department of Agriculture, Forestry and Fisheries' Directorate: International Trade analyses international trade and related policies, advises on multilateral and bilateral agricultural trade policy, presents the interests of South African agriculture in various trade-negotiating initiatives and promotes trade-development initiatives, which are aimed at building the capacity of new and small-scale exporters to participate in international trade. The directorate works closely with the Department of Trade and Industry, and takes responsibility for the agricultural part of trade negotiations in the World Trade Organisation's (WTO) multilateral negotiations as well as in various bilateral trade-negotiating initiatives.

The directorate has reviewed the Agricultural Trade Strategy of 2000 to ensure that policies and implementation are aligned. In addition, the directorate continuously conducts strategic market research to inform the positioning of the agricultural export sector in the global trading environment. It investigates and evaluates export opportunities for agricultural products on world markets.

These include strategies to access markets where preferential trade agreements do not exist, such as China, India, Russia and some Middle-Eastern countries.

The directorate facilitates national capacity-building and the training of role players in the use of trade tools. This will increase the capacity of all role players (government at all levels and trade-promotion agencies) to support new agricultural exporters in their endeavours.

The directorate is responsible for implementing, monitoring and reporting on South Africa's commitments under the WTO Agreement on Agriculture. South Africa works with its alliance partners of the G20, the Cairns Group and the Africa Group.

The department's objectives are to:

- ensure policy space to support South Africa's developing agricultural sector with the programmes that new farmers need
- bring about a substantial reduction in trade and production-distorting subsidies and export subsidies given by developed countries
- improve the access of South African agricultural exports to other markets.

The overall objective is to establish a fair trading system in which South African agriculture can compete on a level playing field.

South Africa maintains bilateral free-trade agreements with countries in Africa, the EU and the European Free Trade Association.

South Africa and its four neighbours, Botswana, Lesotho, Namibia and Swaziland, form the Sacu.

This was created in 1910, and is the oldest customs union in the world. It provides for duty-free trade in goods among its member states. The directorate contributes towards the implementation of the agricultural aspects of the Sacu Agreement that came into effect in July 2004.

The SADC Trade Protocol was implemented in 2000. This provides for a free-trade area, which was launched in August 2008.

The South African-EU Trade, Development and Cooperation Agreement (TDCA), a comprehensive free-trade agreement, was implemented on 1 January 2000. The department has introduced a system for making full use of opportunities created by the agreement. This includes providing information to potential exporters, as well as the administration of export quotas granted to South Africa under the agreement.

The department issues export permits for various products such as wine, fruit juice, canned fruit, cut flowers, proteas, cheese and frozen strawberries to be exported to the EU at reduced levels of duty. With the enlargement of the EU from 15 to 27 member states, the agreement was extended to include the new members. A review of the TDCA is underway. The review of the trade chapter has been merged with the SADC-EU Economic Partnership Agreement negotiations, which are underway.

The Fixed Preferences Agreement, which includes 150 agricultural tariff lines, has been concluded between Sacu and Mercosur.

Negotiations between Sacu and India towards a preferential trade agreement, started in October 2007.

The Directorate: International Trade has consulted widely with the agricultural industry, and will endeavour, through its participation in these

negotiations, to open market-access opportunities for those products with export potential to this market.

Sacu is pursuing a trade, investment and development cooperation agreement with the USA. This framework enables a series of trade-enhancing agreements. South Africa also benefits from the US' Africa Growth and Opportunity Act, which offers non-reciprocal tariff preferences into the US market. Fruit juices, citrus fruit and wine exports are performing particularly well in that market.

International agreements and conventions

South Africa is a signatory to a number of international agreements and conventions, requiring that the matter of sustainable resource use and management be addressed in a responsible way.

Agenda 21 is an action plan and blueprint for sustainable development, and was one of five documents adopted by more than 178 governments at the UN Conference on Environment and Development in Rio de Janeiro in 1992. Specific to sustainable resource use is Chapter 14, which addresses the promotion of agriculture and rural development.

International conventions that apply to aspects of sustainable resource use include the Convention on Biological Diversity, the UN Framework Convention on Climate Change and the Convention to Combat Desertification (CCD). The CCD requires that South Africa should draw up a national action programme, which will be integrated into a regional programme for the SADC region. All these activities are receiving attention under the leadership of the Department of Environmental Affairs, involving all stakeholders, including the national and provincial departments of agriculture.

Import and export control

The Import Export Policy Unit of the Department of Agriculture, Forestry and Fisheries' Directorate: Animal Health aims to formulate and support policies to reduce sanitary (health) risks in the import and export of animals and animal products.

Import requirements vary according to the product and the animal-health situation in individual countries.

South Africa is an active member of the OIE. Disease reports are received from the OIE and through direct contact with veterinary administrations in exporting countries.

Trade in animals and animal products is based on a series of requirements considered appropriate by the importing country to prevent the entry of diseases.

The department is one of the key regulatory state departments with the authority to enforce laws enacted by Parliament to protect the South African consumer, producer and farmer; the environment; and other national interests.

The department's regulatory activities regarding plants and plant products are primarily enforced by the directorates agricultural products inspection services (APIS) and plant health.

In addition, the South African Revenue Service participates in this effort by detaining imported goods when requirements are not met.

The Directorate: APIS is involved in inspections and other related activities aimed at ensuring that imported luggage, cargo, mail, animals and plants and their products are free from quarantine pests and diseases, and comply with genetic resources and quality-assurance prescriptions and standards.

Border inspections are conducted by the Division: Ports of Entry Point Control at designated ports of entry. The directorate has introduced the use of detector dogs at the OR Tambo International Airport in Kempton Park. These dogs are trained to detect regulated agricultural products at international arrival halls. This has been one of the mechanisms that APIS is using to intensify regulated agricultural product inspections at points of entry.

Pre-border inspections are aimed at exports for compliance with international requirements of trading partners. Post-border inspections are intended for those regulated articles that were given extended detentions at inspected borders or escaped the border-control inspections.

These inspections, together with national control inspections, are conducted by the National Plants and Plant Products Inspection Services for compliance with plant-health, plant-improvement, genetic-resources and food- and quality-assurance legislation. The division also carries out various surveys around the country.

The Directorate: Plant Health's core mandates are to manage the risks associated with plant pests and diseases by developing and amending phytosanitary legislation and facilitating safe trade in plants and plant products.

Control measures are published to prevent or combat the spread of pests to other areas in the country. Import control is vital to prevent the introduction of potentially harmful foreign pests.

Prospective importers of plants and plant products have to apply for an import permit for those controlled goods mentioned in the Agricultural Pests Act, 1983.

The Pest Risk-Analysis (PRA) Division conducts scientific analyses of risks posed, based on scientific data and specific phytosanitary requirements set out according to the phytosanitary risk(s) involved. These are stipulated in the permit issued to the importer. Importers are obliged to present the material to the official inspection representative at the port of entry.

The Directorate: Plant Health's Division Plant Quarantine Services manages the risks associated with the importation of plant propagation material. This is achieved by prescribing a compulsory quarantine detention period for specific high-risk categories as determined by the PRA Division. The core function of Diagnostic Services is to prevent the introduction of harmful exotic plant pests by testing and auditing all imported plant material.

The Early Warning Division ensures sound plant health-risk management-implementation services through surveillance, detection and rapid response.

Early detection of economically important exotic pests prevents the spread of such pests, thereby maintaining pest-free areas in respect of specific pests. Closely linked to early detection is proper pest-awareness programmes to ensure the agricultural sector and the general public are kept informed. The International Standards Division aims to facilitate effective and efficient official phytosanitary communication between the Directorate: Plant Health and its international, regional and other national plant-health clients.

This is done through the management of national plant-protection contact points and participation in initiatives of external clients such as the WTO Committee on Sanitary and Phytosanitary Measures, the IPPC and its working groups and committees, the Inter-African Phytosanitary Council, other national plant-protection organisations or governments, research institutes, as well as any member of the international agricultural trade sector.

The Import/Export Protocols Division's core function is to ensure and maintain market access for South African plants and plant products. This includes exchanging plant-health information and expertise in terms of bilateral engagements, and maintaining bilateral export/import programmes in compliance with trading-partner requirements according to established protocols.

Food safety and quality assurance Policy on Animal Feeds

The Department of Agriculture, Forestry and Fisheries published the South African Policy on Animal Feeds on 30 April 2008. This document is intended to serve as a framework for the regulation and legislation of animal feeds in South Africa.

South African Pesticide Initiative Programme (Sapip)

The final evaluation of the Sapip was done from 10 February to 20 March 2008 by a consortium called Agri-Systems. In terms of the evaluation report, the programme is considered as an activity rather than results-directed and is regarded as extremely efficient in the implementation of activities.

The programme was generally regarded as having achieved its objectives.

However, there were areas which needed to be sustained, such as the Emerging Farmer Working Group, to ensure that issues affecting emerging farmers receive continuous attention; and the chemical maximum residue limit information hub, which was critical in setting up maximum residue limits for minor crops.

Food-control system

A task team, made up of representatives from the departments of agriculture, of health, and of trade and industry, succeeded in appointing a service-provider to compile a country profile, which will inform the strategy to be followed in implementing a comprehensive food-control system.

World Wine Trade Group (WWTG)

The WWTG is an informal grouping of industry and government representatives from wine-producing countries, founded in 1998. The group aims to share information, collaborate on a variety of international issues and create an environment for free trade in wine. The group consists of Argentina, Australia, Canada, Chile, Mexico, New Zealand, South Africa and the USA.

The Agreement on Mutual Acceptance of Oenological Practices and the Agreement on Requirements for Wine Labelling form the basis of the WWTG. These are enabling agreements to facilitate the trade of wine among signatory parties by recognising each other's wine-making and labelling practices as being in compliance with their own. This significantly improves trade flows among the signatory parties, thereby reducing transaction costs relating to exports.

In a short period of time, the WWTG has proven to be an important force in influencing the regulation of the international wine trade. Beginning with a shared vision and a commitment to open international trade, participating countries have begun to reshape the regulatory environment in which the international wine business operates.

Progress at the International Wine Office

Member states of the OIV met on 20 June 2008 in Verona, Italy, for the sixth General Assembly of the OIV.

Among other things, the General Assembly adopted by consensus the OIV *Guide on Environmentally Sustainable Viticulture*. This document is a guide to setting up environmentally sustainable production in the international sector, principally concerning production, the processing of grapes in addition to packaging of products, while taking into account the larger considerations of sustainable production.

National analytical services

The Department of Agriculture, Forestry and Fisheries' laboratories in Pretoria and Stellenbosch support the units within the department responsible for formulating and updating regulations regarding agricultural foods of plant origin and liquor products.

The laboratory in Stellenbosch uses state-of-the-art equipment (a liquid chromatography mass spectrophotometer) to detect low concentrations of compounds used in wine adulteration. Two projects have been completed:

- adulteration of Sauvignon Blanc wine with foreign methoxypyrazines
- investigation into the bromine content of South African wines.

Following the success of these projects, improved market access can be achieved by South African wine producers and confidence in South African wines among the international community will be gained.

The Pretoria laboratory also uses a liquid chromatography mass spectrophotometer to expand the scope of chemical residue tested for by the laboratory as recommended by the EU's Food and Veterinary Office.

Meat safety Food safety, quality-risk awareness and education programmes

The overall functions of the Directorate: Food Safety and Quality Assurance are carried out to

create an enabling environment for food-business operators along the value chain to ensure food safety and quality of agricultural products from farm to fork.

The directorate carries out its mandate in terms of the legislation, regulations, requirements, norms and standards for both local and export markets. To ensure industry compliance with food safety and quality standards, and to foster understanding of management decisions by clients, the directorate conducts food safety and quality education and awareness programmes. Through these programmes, the directorate reaches out to clients consisting of industry associations, farmers, exporters, retailers, manufacturers and beneficiaries of the LARP. The awareness programmes are also aimed at consumers and the general public to promote the consumption of safe, nutritious and quality food.

In terms of the Meat Safety Act, 2000 (Act 40 of 2000), no person may sell or provide meat for human or animal consumption unless the animal from which the meat is sourced has been slaughtered at a registered abattoir. The Directorate: Veterinary Services provides for regulations under the Meat Safety Act, 2000 and, in cooperation with the provinces, ensures that the essential national standards for abattoirs and meat safety required by the Act are implemented countrywide.

The directorate is responsible for monitoring standards at export abattoirs and for the safety of imported meat. It provides inspection services at a number of export abattoirs to ensure compliance with EU requirements.

Forestry

The forestry industry is one of the strategic economic sectors in South Africa with a significant contribution towards economic growth and job creation. The sector has been identified as one of the important contributors to AsgiSA as a result of its intensive operations, which involve the employment of people from the rural communities of South Africa.

In recognising the important role of the forestry sector in the economy of the country, and in line with the provisions of the Forestry Charter, steps have been taken by role players to ensure that there is continued and sustainable use of forestry land for timber production.

In 2009, the forestry responsibility of the then Department of Water Affairs and Forestry was moved to the Department of Agriculture, Forestry and Fisheries. With the new mandate, the department will make a significant contribution to eradi-

cating poverty through the Forestry Livelihoods Programme, by focusing on basic needs, saving of cash resources and a safety-net. Firewood, building poles, medicinal plants and edible fruits are all critical to the livelihoods of the rural poor.

The department will develop human resources through forestry-sector skills-development initiatives and promote employment through commercial forestry activities such as forestation and downstream activities. The integration of forestry programmes into provincial and municipal development plans will assist the Plant a Million Trees Campaign. Government and its partners aspired in 2009 to exceed the 1,8 million trees they planted in 2008.

The department will actively pursue the forestation targets of 10 000 ha and the implementation of the Forest Enterprise Programme. The focus will remain on encouraging cooperatives, simplifying and streamlining the regulatory environment, training and extension, supporting the implementation of rural credit and offering incentives for new entrants.

In terms of the economic growth and development that forestry offers, the Department of Agriculture, Forestry and Fisheries is working closely with other government structures in the Eastern Cape and KwaZulu-Natal to fast-track the afforestation licensing process, which involves support from a number of other provincial departments.

These new forestry areas will be singularly important in transforming and growing the forestry sector and, as such, afforestation forms an important part of the Forestry Broad-Based Black Economic Empowerment (BBBEE) Charter, which was signed in May 2008. The vision of the charter is that of:

- an inclusive and equitable forestry sector, in which black women and men fully participate
- a forestry sector that is characterised by sustainable use of resources, sustainable growth, international competitiveness and profitability for all its participants
- a forestry sector that contributes meaningfully to poverty eradication, job creation, rural development and economic value-adding activities.

Applicants for afforestation have been increasing rapidly. Under the charter, government aims to process about 15 000 ha per year for the next 10 years to get a net increase in forestry of about 10 000 ha per year.

The department has almost halved the original time of nearly 18 months to process a licence application, and has plans in place to further reduce

this time frame. It also plans to use the progressive provisions of the National Forests Act, 1998 (Act 84 of 1998), to provide direct support to communities in this and other forest-enterprise areas. Strategic interventions such as the establishment of the special-purpose vehicle AsgiSA Eastern Cape (Pty) Limited will assist in driving the implementation of the forestry programme in these key areas.

Afforestation will take place in rural areas where there are few other viable opportunities for job creation and economic activity. The development of these additional raw material resources will attract greater processing capacity in the form of sawmills, board mills, chipping plants and treatment plants. All these will lead to broad economic growth. For example, through this afforestation, an additional R500 million per year could be generated from these plantations in economic activity.

The forestry sector is an important contributor to GDP and employment. It employs about 170 000 people (107 000 in forestry operations and a further 63 000 in downstream processing plants) and contributes almost R18,5 billion annually to the South African economy. The impact of the sector is felt particularly in rural areas and there is significant scope for this sector to expand and thereby contribute towards uplifting those in the Second Economy.

Over the past few years, much work has been done in the forestry sector to improve yields, restructure institutions, provide community access and redefine government's role. The Forestry BBBEE Charter recognises the link between the transformation and growth of the sector.

The forestry programme also encompasses expanded greening and tree-planting projects. The programme prioritises work on fire-fighting programmes (for example, the Working on Fire Programme) and encourages the establishment of fire-protection associations (FPAs).

Indigenous forests are indispensable to the country's heritage, beauty, wildlife and environment, while commercial forests provide jobs and economic opportunities for many people, especially in rural areas. Forestry represents a substantial investment in the country and plays an important role in the Integrated Rural Development Programme.

Plantations cover about 1,3 million ha of South Africa. Over 80% of them are found in Mpumalanga, KwaZulu-Natal and the Eastern

Cape. They produced almost over 20 million m³ (or 17,8 mt) of commercial roundwood, worth R5,2 billion, according to a study conducted in 2007. They provide direct employment for about 107 000 people, of whom 67 500 are in formal employment, 30 000 are contract workers and 37 500 are small growers and their helpers.

Including the processed products, the total industry turnover was about R18,5 billion in 2007, including R9,8 billion worth of wood-pulp.

A pulp and paper log intake of about 13,9 million m³; mining timber of 842 000 m³; charcoal of 267 000 m³; 4,4 million m³ of sawlogs; and veneer logs and poles of about 417 000 m³ were transferred to processing plants in 2007.

The sales of timber from primary processors by volume in 2007 were as follows: sawn timber, 1,9 million m³; 2,2 mt pulp; 468 000 t mining timber; panel products, 820 000 m³; poles, 275 000 m³; charcoal, 12 000 t; chips/mill residues about 4,9 mt; and firewood, 25 000 t.

Between 390 000 and 560 000 people depend on plantation forestry for their livelihoods, particularly in the rural areas.

About half of the more than 1 700 indigenous tree and shrub species found in South Africa grow along the south and east coasts and on the southern and south-eastern slopes of inland mountains. The other half is spread over the interior plateaux.

Forestry initiatives

Two different trees of the year are nominated annually: a common variety and a scarcer, possibly endangered, species. The three trees of the year for 2009 were: *Acacia galpinii* (monkey thorn), *Halleria lucida* (tree fuchsia) and *Pterocarpus rotundifolius* (round-leaved teak).

National Arbour Week is celebrated annually at the beginning of September to encourage the greening of South Africa.

The objective of Arbour Week is to promote awareness of the need for planting and preserving indigenous trees throughout South Africa. It highlights the opportunities for sustainable economic development, community participation, poverty alleviation and job creation in forestry to create a better life for all. The theme for Arbour Week 2009 was *Plant Trees – Save Our Planet*.

The Arbour Week Campaign aims to:

- promote improved knowledge of trees, particularly indigenous trees, and their importance
- stress the necessity for everyone to contribute to the greening of South Africa by planting and caring for trees

- highlight the vital roles of trees in the natural environment
- contribute to the achievement of green, dignified and healthy environments in all parts of the country
- encourage the youth to participate in tree-planting activities and related environmental-education programmes.

It highlights the opportunities for sustainable economic development; community participation; poverty alleviation and job creation in forestry, thereby contributing towards growth, development and a better life for all. The target audience includes all South Africans but more specifically rural communities, municipalities and schools.

South Africa has a rich heritage of trees. The Champion Tree Project is aimed at identifying and protecting individual trees of national conservation importance under the National Forests Act, 1998. Trees can be nominated on the basis of their size, age, aesthetic value, cultural-historic value or importance for tourism. Only trees of national importance will be protected. In the long run, however, provincial and local authorities will be encouraged to develop their own local Champion Tree lists.

Individual and groups of trees were shortlisted as champion trees by a panel of experts from a list of proposed trees considered to be of national conservation importance and deserving national importance. Among the listed trees are:

- the famous Tsitsikamma big tree along the Garden Route
- the Post Office milkwood tree of Mossel Bay
- the Sagole baobab in Limpopo (one of the two largest trees in South Africa)
- camphor trees planted at Vergelegen Estate in the Western Cape three centuries ago.

Guidelines have been developed for the use of these trees to ensure their continued economic and ecological benefits to South Africans.

The Champion Tree Project led to the discovery of exceptionally large trees. In Aderne Gardens in Cape Town, officials measured an enormous Indian rubber fig with a trunk circumference of more than 11 m and a crown diameter of more than 44 m.

Applying the international formula for tree size that combines height, trunk size and crown diameter, it was discovered that this tree has a size index similar to the Sagole baobab in Limpopo. This means that the title for largest tree in the country is now shared by two trees at opposite ends of South Africa, one an indigenous tree in the far north and the other an exotic tree in the far south.

By August 2009, 44 trees had been declared national champion trees.

Contributing to socio-economic reform and growth

Government recognises that BEE will not be effective if it does not have the support of the private sector.

The BBBEE Charter for the Forest Sector will be instrumental in achieving the objectives of the scorecard as suggested by the Department of Trade and Industry.

Forestry enterprise development (FED) relates to the concept of using forests and forest-based resources as a vehicle for economic growth, employment and socio-economic upliftment that takes people from a subsistence livelihood system into a market economy. The concept is also central to the department's pro-poor agenda and a key component of BBBEE in the forestry sector.

The Department of Agriculture, Forestry and Fisheries supports FED. This includes transferring state forests, developing an afforestation strategy for the Eastern Cape and KwaZulu-Natal, and including forestry as a key sector in provincial growth and development plans.

The Directorate: Forestry Development supports the establishment of community projects through regional forestry staff.

Current projects include beekeeping, which is a partnership with the ARC, and establishing medicinal nurseries in partnership with various stakeholders.

Following restructuring, the commercial plantation forests of the South African Forestry Company Limited (Safcol) and the then Department of Water Affairs and Forestry were combined and packaged into five stand-alone special-purpose vehicles, operating as wholly owned subsidiaries of Safcol.

It is estimated that upwards of 50% to 60% of the current afforested area of commercial forestry plantations is subject to land claims. Given the importance of the industry in terms of its contribution to the South African economy and to the uplifting of rural communities, it is essential that these benefits are not undermined through unsustainable land-reform initiatives.

In recognition of this, the industry, through Forestry South Africa, has reached agreement with the Department of Rural Development and Land Reform and the Land Claims Commission on post-settlement support models that will be implemented on afforested land that is restituted to beneficiary communities.

These models represent a win-win situation for both land owners and new beneficiaries. Not only will the affected land be continued to be used for forestry on a sustainable basis, ensuring the economic survival of the forest products industry, but it will also enhance the skills base and financial well-being of those communities that are new owners of the land.

The Commission on the Restitution of Land Rights undertook to fast-track the settlement of all claims on forest land, with a target to settle 90% of the claims within five years of the signing of the charter.

The land includes planted forest areas as well as open areas valued at a total of R38,7 million.

The proposed model for settling claims on forest land provides for the State to purchase the land for the beneficiaries, excluding the trees. The community then leases the land to the forestry company for an agreed period, which is linked to the rotation of the trees.

A task team comprising representatives from government and Forestry South Africa has been established to deal with the execution of the framework for settling claims on forest land.

South African Forestry Company Limited

Safcol manages and develops state commercial forests. The company's activities include forestry management and timber harvesting and processing, both domestically and in neighbouring countries. The company's main subsidiary is Komatiland Forests (KLF), operating in Mpumalanga, Limpopo and KwaZulu-Natal.

Softwood saw timber is sold in South Africa, and soft and hardwood saw timber and pulp wood in Mozambique. KLF has an 80% shareholding in the Mozambican forestry company, Ifloma, while the Mozambican Government holds the remaining 20%.

Cabinet's decision on the role of Safcol and the privatisation of KLF was finalised in March 2007. Transaction guidelines were prepared to assist the board with the decision on winding down the

The Plant a Million Trees Campaign was launched in 2007. The Department of Agriculture, Forestry and Fisheries aims to promote the planting of one million trees a year, of which 70% should be fruit trees and 30% indigenous ornamentals. About 1,1 million trees were planted by various programme partners in the first three quarters of 2008/09.



activities of KLF by March 2009. The decision was revisited after the department realised that about 60% of the land on which KLF operates is subject to land claims, and that the land claims settlement process will affect the disposal of the assets by the target date of March 2009.

Due to the land claim status, the Minister of Public Enterprises extended the disposal of Safcol by five years to 2011/12, to allow for the resolution of the land claims. The company was subsequently mandated to develop a five-year business and corporate plan to maintain, and where possible, enhance the value of the business. The remaining shares held by Safcol in other companies, such as Singisi, Siyaqhubeka, Amathole and Mountains to Oceans, are also under review.

A process has been initiated with the Department of Rural Development and Land Affairs and the Department of Agriculture, Forestry and Fisheries to resolve the land claims.

Industry and exports

The industry was a net exporter of almost R3,5 billion worth of goods in 2008, of which more than 99,8% was in the form of converted value-added products.

The forest-product industry ranks among the top exporting industries in the country, having contributed 2,25% to total exports and 1,55% to total imports in 2008. Capital investment in the industry amounted to some R40 billion in 2008.

The value of forest-product exports grew by 166% over the past decade, from R5,6 billion in 1998 to R14,8 billion in 2008. In real terms (taking inflation into account), this growth was 50% or a compounded real growth of 4,1% per year over that period. However, the net trade balance in foreign trade in forest products increased from

1998 by 42% in nominal terms (minus 19,8% in real terms) to R3,5 billion in 2008.

In 2008, paper products were the most important (R6 139 billion or 42% of the total), followed by pulp (R4 643 billion or 31%), solid-wood products (R3 651 billion or 25%) and other products (R337 million or 2%). Woodchip exports, which are exported mainly to Japan, accounted for 71% (R2 597 billion) of total solid-wood product exports.

As with other export-based industries, the recent weakness of the Rand has had a positive effect on the Rand-value of forest-product exports during the past two years, with the total value of exports in 2008 being R2,6 billion more than in the previous year and some R3,6 million or 0,32% higher than its previous peak in 2002.

Stringent environmental codes of practice are implemented in all plantation and processing activities. The Chief Directorate: Forestry of the Department of Agriculture, Forestry and Fisheries promotes optimal development of forestry and arboriculture in South Africa. The National Forests Advisory Council (NFAC) was established in terms of the National Forests Act, 1998. It advises the Minister of Agriculture, Forestry and Fisheries on all aspects of forestry in the country.


The NFAC is actively involved in developing local criteria, indicators and standards for sustainable forest management (SFM), and makes recommendations on how public access to state-owned forests can be improved.

Achieving sustainable forest management

Apart from ecological considerations in determining where it is appropriate to grow trees, there are other ecological, social and economic considerations that must be addressed when growing trees.

These criteria, indicators and standards form the basis for monitoring the sustainability of forestry operations in commercial and natural forests. Managers and owners are required to report against these criteria, which also form useful guidelines for new entrants to the sector.

The commercial forestry industry in South Africa is committed to practising SFM and is a world leader in forest certification. Over one million hectares, or over 80% of the entire planted area of commercial forestry plantations in South Africa, is certified by the Forest Stewardship Council and the ISO 14001 certification schemes as being sustainably managed. By October 2007, 1 622 196 ha of plantation forestry land (planted and conservation areas combined) in South Africa



The R20-million Furniture Incubation Centre was launched in April 2009, at Mthatha in the Eastern Cape. The incubation centre will kick-start the redevelopment and growth of the furniture and wood industries in the region and the province. The project is envisaged to further diversify and expand the value chain of the forestry sector in the region. Business incubation is one of the many and important instruments that government uses in its commitment to tackle poverty and unemployment, and is in line with the country's National Industrial Policy Framework.

Nineteen local learners have completed training programmes in wood machining and upholstery, and subsequently established five small businesses.

was certified by the FSC, the second-largest area in the southern hemisphere after Brazil. There were no certified plantations in 1996.

Although large forestry companies do not own all the certified forests, having their own specialist environmental departments has helped the rapid expansion of certification, as they ensure that land is managed according to their own stringent environmental codes of practice. To promote transparency, members of the public are invited to join company staff when regular audits are carried out.

There has also been a large increase in the number of non-corporate growers who have become certified. This can be attributed to factors such as the FSC's acceptance of group-certification schemes and the availability of local FSC auditors, both of which have reduced the cost of certification considerably. The introduction of small, low-intensity managed forest audits enables small and community forestry schemes to be FSC-certified.

As part of its commitment to the practice of SFM, the forestry industry is also involved in the NFAC's Committee for SFM, which develops criteria, indicators and standards for SFM, tailored to meet South Africa's specific conditions. The industry, in conjunction with the Department of Agriculture, Forestry and Fisheries, is also involved in an FSC national initiative, the result of which will be the acceptance and use by FSC auditors of criteria, indicators and standards for SFM, which take into account South African conditions. These were field tested and finalised during 2009.

The indigenous forests of the southern Cape received FSC-certification – a first on the continent for high forests. It is a major step towards the sustainable management of the country's natural forests.

Legislation

The National Forests Act, 1998 reflects the vision for the future of forestry in South Africa. This vision emphasises SFM, and explains how people and communities can use forests without destroying them. The Act sets out rules for protecting indigenous forests, and ensures that the public has reasonable access to state-forest land for recreational, cultural, spiritual and educational purposes.

South Africa is richly endowed with more than 1 700 tree species. Some are threatened, and a total of 47 species are now protected under the Act.

Protected trees may not be cut, damaged or sold without a licence. The listing of protected trees is not primarily aimed at preventing the use of such trees, but at ensuring sustainable use through licensing-control measures.

The National Veld and Forest Fire Act, 1998 (Act 101 of 1998), bans open-air fires when the risk of veld blazes in an area is high. It also introduces the concept of voluntary FPAs formed by landowners. It further obliges the Minister of Agriculture, Forestry and Fisheries to operate a national fire-rating system in consultation with the South African Weather Service (SAWS) and fire associations. The Act also allows the minister to impose minimum fire-fighting requirements on landowners.

Protection of life and property is a basic human need and the department has been moving ahead in implementing the National Veld and Forest Fire Act, 1998. Owing to the high incidences of fires during extreme weather conditions, it is a priority for the department to ensure registration of FPAs. The department advised and assisted FPAs in compiling business plans, including the principles of risk assessment. The department plans to review FPAs' performance regularly. There is also ongoing awareness-raising and information-provision on policy matters. The department's *Veldfire Bulletin* is produced quarterly. Special bulletins are also produced occasionally, depending on the need, such as the special *Veldfire Bulletin on FPAs*.

The National Fire Danger Rating System is an early warning system for veldfires. The SAWS operates the system and issues daily veldfire warnings as it does with other weather information. Warnings are communicated to FPAs, the departmental fire advisers, Disaster Management, Department of Cooperative Governance and Traditional Affairs and other role players.

By June 2008, 20 FPAs had been established.

Indigenous forests

There are around 530 000 ha of indigenous or natural forests in the country, which occur mainly along the southern and eastern escarpment, the coastal belt and in sheltered kloofs or ravines.

Natural forest cover is slow, which has led to the development of the commercial forest sector in South Africa over the last 100 years. Nonetheless, natural forests have continued to play a major role in the livelihoods and well-being of many rural communities.

There has been an increase in the use of natural forests as sources of medicine, building

material, fuel wood and food. An estimated 80% of South Africa's population still uses medicinal plants, most of which are sourced from natural forests. South Africa now has a detailed inventory of all its natural forests, which is used to accurately monitor changes in forest areas.

The then Department of Water Affairs and Forestry also completed a forest-type classification for natural forests, which are represented by 24 broad forest types. The Natural Forests Protected Areas System, completed for all forests in 2004, guides the setting aside and demarcation of natural forests as protected areas.

Systematic timber harvesting occurs in areas of the production-management class. Harvesting is concentrated on overmature trees, with logs being sold by tender and/or on public auction. On average, 3 750 m³ of round logs are harvested annually (150 m³ of stinkwood, 750 m³ of yellowwood, 2 500 m³ of Australian blackwood and 350 m³ of other species). Another valuable product of the indigenous forests of South Africa is the seven-week fern (*Rumohra adiantiformis*), which is harvested in the Knysna and Tsitsikamma forests.

The South African market for this fern is considerable and reaches its peak in September, when sales exceed 420 000 bunches.

Woodlands

Woodlands can be defined as vegetation formation dominated by trees, but not to the extent that the canopies are continuous and overlapping. Woodlands cover 29 million ha, constituting 21% of land cover.

This vegetation covers extensive areas in the low-lying, drier areas of Limpopo, KwaZulu-Natal and Mpumalanga. Woodlands have thousands of species (5 900 plants, 175 mammals and 540 birds), of which the majority are used for one purpose or another.

In November 2008, a pair of professional tree climbers scaled the two tallest trees in Africa, also considered to be the tallest planted eucalyptus trees in the world. Recently dubbed the "Twin Giants of Magoebaskloof", these *Saligna* gum trees, part of a magnificent stand of tall trees on the Woodbush State Forest near Haenertsburg in Limpopo, were planted in 1906. The two trees were measured at 79 metres (259 feet) and 78,5 metres (257 feet) respectively, thus crowning the Twin Giants of Magoebaskloof as the tallest measured trees in Africa.



Woodlands are the most extensive vegetation type in southern Africa and dominate Africa as a whole. Globally, woodlands cover between an eighth and a sixth of the Earth's land surface.

The woodlands are, however, a valuable source of fuel, building material, craft-timber and a variety of non-timber products. These include fruit, fodder, medicinal compounds, honey, meat and mushrooms, and form the backbone of the livelihoods of millions of people. The annual Marula-fruit (*Sclerocarya birrea*) harvest is worth some R1,1 million a year to rural communities.

Commercial forests

During the 1930s, government started establishing extensive plantations to make South Africa self-sufficient in its timber requirements, and to provide more job opportunities in a diversified economy during the depression. Commercial plantations of exotic species proved to be a sound investment and the private sector established large plantations of pine, eucalyptus and wattle trees. By mid-2007, the private sector owned 1 051 222 ha (or 83%) of the total plantation area of 1 266 194 ha, and virtually all the processing plants in the country.

The remaining 17% (214 972 ha) was under public ownership, although this figure includes KLF, the remaining Safcol package. The extent of public ownership has decreased significantly because of restructuring. In 2008, capital investment in these plantations stood at R20 billion, 54% of which was attributable to investment in trees. A further 21% was tied up in land, 16% in roads, 7% in fixed assets and 2% in machinery and equipment.

Plantation yields

Of the 1 266 194 ha of plantations in 2007, 54% were softwood species and 46% hardwood species. Some 36% of the plantation area was managed mainly for sawlog production, 55% for pulpwood and 5% for mining timber, while the balance of 4% was grown for the production of poles, matchwood (poplar) and other minor products.

Plantation yields vary from an average of 16 m³ per ha per year for softwood, to 21 m³ per ha per year for eucalyptus and 10 m³ per ha per year for wattle (timber and bark). Likewise, the rotation ages vary from a maximum of 30 years in the case of pine sawlogs, to six to 10 years in the case of eucalyptus pulp and mining timber. Production from plantations amounted to over 20 million m³ (or 17,8 mt) in 2007.

Primary wood-processing

South Africa has 178 primary wood-processing plants, 174 of which are owned by the private sector and four of which are owned by local and state authorities. Of these, 102 are sawmills; 13 are mining-timber sawmills; 38 pole-treating plants; 20 pulp, paper and board mills; one match factory; and four charcoal plants.

The total roundwood intake into these processing plants in 2007 was 19,8 million m³, valued at R5,2 billion. The value of sales of timber products produced by these primary processing plants totalled R18,5 billion. Some R15,8 billion was invested in primary roundwood-processing plants (at book value). At market value, this increased to an estimated R40 billion.

The pulp industry in South Africa is dominated by two main pulp-and-paper manufacturing companies, Sappi and Mondi. They rank among the largest in the southern hemisphere, own assets in many parts of the world and are internationally listed.

The sawmilling industry produces sawn timber, which is used in producing solid-wood products, such as lumber for roof trusses and flooring, and consumer products, such as furniture. The furniture industry consumes about 305 000 m³ of mainly industrial timber.

A large number of companies operate in this sector, with the five biggest companies contributing 51% of total production. Some 49% of total sawn timber is produced in Mpumalanga.

Research and training

South Africa has world-class forestry-research infrastructure and personnel, with almost 2% of the forestry industry's turnover (private and public sectors) devoted to research. The priority fields of research include tree-breeding through applied silviculture, climate and soils, environmental impact and management solutions, forest biology, hydrology and forest protection.

The major institutes servicing the research needs of the industry are the Institute of Commercial Forestry Research in Pietermaritzburg, the Forestry and Agriculture Biotechnology Institute, and the Council for Scientific and Industrial Research in Pretoria. The South African National Biodiversity Institute also plays an important role in terms of species protection.

The total annual forest-sector research and development investment in South Africa is approximately R163 million, more than 80% of which is funded by the commercial forest industry.

The faculties of agricultural and forestry sciences at the universities of Stellenbosch, KwaZulu-Natal and Venda offer forestry degrees. The Nelson Mandela Metropolitan University (George Saasveld Campus) offers diplomas and limited degree courses in forestry disciplines. The Natal University of Technology offers a diploma in Pulp and Paper Technology, and the Fort Cox College of Agriculture and Forestry a diploma in Social Forestry.

Skills training is provided by a number of industry-sponsored and in-house training centres. Industry-sponsored bursaries are available, as are company-sponsored bursaries for study at these institutions.

The Forest Industries Education and Training Authority (Fieta) is, among other things, responsible for ensuring that the training undertaken by the industry meets certain quality standards.

It also manages the distribution of training grants to employers and to Fieta-sponsored projects which will help meet the goals of the National Skills Development Strategy within the sector.

The department, together with Fieta, has been offering bursaries to students who choose to study in the forestry field.

Community forestry

The *White Paper on Sustainable Forest Development in South Africa* states that community forestry is designed and applied to meet local social, household and environmental needs and to favour local economic development.

Community forestry is implemented by communities or with the participation of communities, and includes tree-centred projects in urban and rural areas, woodlots, and woodland management by communities and individuals. Community forestry has gained impetus through more focused core functions, particularly in urban greening and forest enterprise development.

Participatory Forest Management (PFM) of the Department of Agriculture, Forestry and Fisheries is an integrated approach that contributes to achieving the SFM of South African forests.

Elements of PFM were initially developed for indigenous state forests. However, the aim is to use PFM as an approach to manage all forest types where feasible (indigenous forests, plantations, woodlots and woodlands) and where different types of ownership and management (state, provincial, communal, private and community) exist.

Food and Trees for Africa (FTFA)

The FTFA is the sub-Saharan African partner of Global Releaf, an international greening organisation.

The FTFA's mission is to contribute to a healthy and sustainable quality of life for all, through environmental awareness and greening programmes.

Since its inception in 1990, the FTFA has developed, managed and promoted numerous sustainable greening programmes, including land-use management and food security through permaculture.

The FTFA works in partnership with government, the private and public sectors, and civil society.

The FTFA attempts to provide trees to as many underserved communities as possible with the help of sponsors and certificate programmes.

The Urban Greening Fund is managed by the FTFA, the departments of water affairs and of agriculture, forestry and fisheries and the Institute of Environment and Recreation Management. It was set up with donor funds, which included R1,2 million from the then Department of Water Affairs and Forestry.

It is a collective fund that supports partnerships aimed at sustainable development through tree planting, parks, food-gardening projects and environmental education.

Organisations, companies and individuals can contribute to the fund to help disadvantaged South Africans to create a greener, healthier and more secure life.

Fisheries

In 2009, the fishery responsibilities of the then Department of Environmental Affairs and Tourism were moved to the newly established Department of Agriculture, Forestry and Fisheries.

The South African coastline covers more than 3 200 km, linking the east and west coasts of Africa. South Africa's shores are particularly rich in biodiversity, with some 10 000 species of marine plants and animals having been recorded.

The productive waters of the west coast support a variety of commercially exploited marine life, including hake, anchovy, sardine, horse mackerel, tuna, snoek, rock lobster and abalone.

On the east coast, squid, linefish and a wide range of intertidal resources provide an important source of food and livelihood for coastal communities. Marine life that is not harvested, such as whales, dolphins and seabirds, is increasingly recognised as a valuable resource for nature-based tourism.

The South African fishing industry, which was once concentrated in the hands of a few, largely white-owned companies, has undergone intensive transformation over the past 10 years.

The Integrated Coastal Management Bill will replace the Seashore Act, 1935 (Act 21 of 1935). The Bill will also replace the Dumping at Sea Control Act, 1980 (Act 73 of 1980), and introduce, for the first time, a comprehensive national system for planning and managing South Africa's spectacular and valuable coastal areas.

The purpose of the National Coastal Management Bill is to:

- provide a legal and administrative framework that will promote cooperative, coordinated and integrated coastal development
- preserve, protect and enhance the status of the coastal environment as the heritage that belongs to all
- ensure coastal resources are managed in the interest of the whole community
- ensure there is equitable access to the opportunities and benefits derived from the coast
- give effect to certain of South Africa's international legal obligations.

This Bill declares the seashore, coastal waters (including estuaries) and South Africa's territorial seas to be coastal public property. It therefore also requires the State to act as the trustee of coastal public property.

4x4 regulations

Following the successful implementation of the 4x4 regulations that provide for the controlled use of off-road vehicles in coastal zones, the monitoring of certain stretches of coast has indicated that the banning of off-road vehicles has enabled several shore-breeding birds, especially Damara tern and the African black oystercatcher, to breed successfully on beaches once more.

According to conservationists from Ezemvelo KwaZulu-Natal Wildlife, the number of loggerhead and leatherback turtles hatching successfully on the beaches of northern KwaZulu-Natal has also increased since the ban was enforced.

National Policy for Seals and Seabirds

The National Policy for Seals and Seabirds in South Africa and the National Plan of Action for Seabirds, aimed at reducing the incidental catch of seabirds in longline fisheries, have been finalised.

This follows growing concern over the numbers of seabirds, especially albatrosses, being killed by longline vessels. The plan sets out the

required mitigation measures to reduce mortality of seabirds to below an interim target level of 0,05 birds/thousand hooks by South Africa's longline fisheries for hake, tuna, swordfish, Patagonian toothfish and sharks.

South Africa ratified the Agreement on the Conservation of Albatrosses and Petrels (ACAP) in November 2003. It is a multilateral agreement that seeks to conserve albatrosses and petrels by coordinating international activity to mitigate known threats to albatross and petrel populations. South Africa played a key role in negotiating the ACAP, and is home to many important populations of these seabirds, including those on the sub-Antarctic Prince Edward islands.

Marine protected areas (MPAs)

MPAs conserve natural environments and assist in the management of fisheries by protecting and rebuilding economically important stocks. Many of the new MPAs will be used to further develop and regulate coastal ecotourism opportunities.

In 2009, South Africa proclaimed a new MPA, spanning 180 000 square kilometres, around the Prince Edward islands in the Southern Ocean. This paved the way for increased conservation and protection of vulnerable species, such as albatrosses, penguins, seals and killer whales.

The proposal was gazetted in early May 2009. This followed a five-year planning process during which the then Department of Environmental Affairs and Tourism worked closely with the local chapter of the World Wide Fund for Nature to establish the framework for the area.

The new preserve, roughly the size of the state of Oklahoma, is to be known as the Prince Edward Islands MPA, and will be South Africa's 21st marine preserve.

It will be the fourth-largest ocean preserve on Earth. The new preserve will also be South Africa's first offshore protected area.

Protecting the waters

South Africa has already placed 18% of its 3 000-km-long coastline under official protection. This means that activities such as fishing and diving are strictly regulated. These restrictions are in line with a decree issued at the 2003 World Parks Congress held in Durban, KwaZulu-Natal, which stipulated that coastal countries must have at least 20% of their coastal area under protection by 2015.

Government shares joint responsibility for South Africa's MPAs with the South African National Parks (SANParks) and Ezemvelo KwaZulu-Natal Wildlife.

Marine pollution and sustainability

South Africa has one of world's busiest shipping routes and has experienced many oil spills over the years. It is estimated that 80% of the world's tanker traffic passes South Africa's coast.

The then Department of Environmental Affairs and Tourism developed the National Contingency Plan for the Prevention and Combating of Pollution from Ships, in consultation with the South African Maritime Safety Authority and the Department of Transport. This includes disposing, recovering or stabilising the spilt oil and rehabilitating the environment.

Sustainable Coastal Livelihoods Programme (SCLP)

The SCLP seeks alternative livelihood options for communities along the South African coast to minimise pressure on marine resources.

Subsistence fishing

The implementation of the Marine Living Resources Act, 1998 (Act 18 of 1998), has facilitated the allocation of formal rights to fishers in this sector for the first time.

It is an important part of the overall transformation of fisheries in South Africa. A primary goal is to allow subsistence fishers to obtain their food, or food security, through the harvesting of local resources. Consequently, the need to ensure that exploitation is sustainable is vital.

Identifying and working with fishing communities to promote orderly access has been emphasised. Implementation involves cooperation between all spheres of government and civil society.

A hake and abalone strategy has been developed to give these stocks an opportunity to recover from overutilisation and to ensure their sustainability. To take the pressure off existing fisheries, ongoing work is done to establish the feasibility of new fisheries to use previously unexplored resources, such as octopus, Natal deep-water rock lobster, oysters, white mussels and whelks.

Protecting the coastline

To counter illegal activities along the coastline, as well as the country's 1 155 000-km² Exclusive Economic Zone (EEZ), the former Department of Environmental Affairs and Tourism boosted its compliance unit with the appointment of more than 80 fishery-control officers (FCOs) and 100 honorary FCOs, after the implementation of the Honorary FCO Policy. The department also took delivery of four environmental-protection vessels

as part of measures to protect marine and coastal resources.

Lillian Ngoyi, Ruth First and Victoria Mxenge patrol up to the 200 nautical-mile limit from the shore. *Sarah Baartman* patrols the most remote reaches of the EEZ and around the Prince Edward islands in the Southern Ocean. The vessels also conduct multilateral patrols in the SADC coastal states.

Vessel monitoring

The department is making it obligatory for fishing vessels to have satellite technology on board so that it can monitor their movements. Five coastal nations in the SADC have taken the innovative step of linking their vessel-monitoring systems. South Africa, Namibia, Angola, Mozambique and Tanzania have signed a memorandum of agreement that will allow them to share information about the movement of licensed boats along the southern African coast.

Partnerships

To further counter illegal fishing and corruption, the former Department of UN Environmental Affairs and Tourism entered into partnerships with a broad spectrum of agencies, including national, provincial and local government, as well as non-governmental organisations.

Cooperation ensures that resources are used more effectively, resulting in a number of high-profile prosecutions and convictions.

Other important partnerships have been forged with specialised units of the South African Police Service. In addition, SANParks and a number of provincial nature-conservation agencies conduct monitoring, control and surveillance activities within the MPAs.

International cooperation

South Africa is a signatory to a range of multilateral agreements related to marine resources and protecting the marine environment. In terms of protecting the marine environment, these include the London Convention on Dumping at Sea, the Marine Pollution Convention, the Antarctic Treaty, the Abidjan Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Regions and Related Protocols, and the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the East African Region and Related Protocols.

The sustainable use of the oceans is governed by the UN Convention on the Law of the Sea. South Africa is also a member of several international organisations aimed at the sustainable management of the marine environment, such as the International Marine Organisation and the International Seabed Authority.

West Indian Ocean Land-Based Activities Project (WIO-LaB)

The WIO-LaB Project deals with the protection, prevention and management of marine pollution from land-based activities.

Commitment was given to this project by the main donors, the UN Environmental Programme and the Global Environmental Facility. The Government is assessing the effect that litter from rivers has on the oceans, is raising awareness of and educating communities about the importance of protecting the marine environment from pollution resulting from land-based activities, and has created task teams to deal with municipal water and the physical alteration and destruction of habitats.

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