

Agriculture



The agriculture, forestry and fisheries sectors are crucial to South Africa's socio-economic development. However, the future of these sectors depends on critical issues such as climate change, population growth, skills shortages, changes in consumer needs and shifts in the global economy and related markets.

The key priorities of the Department of Agriculture, Forestry and Fisheries (DAFF) are therefore, aligned to alleviating poverty, creating employment and improving food security. Added to this, the department focuses on the conservation and sustainable use of the country's natural resources in the agricultural, forestry and fisheries sectors.

The department's overall responsibilities include production and resource management, agricultural support services, trade and economic development, food safety and biosecurity, forestry, and marine aquaculture.

As one of the most employment-intensive sectors of the economy, agriculture's potential impact on empowerment and poverty relief is much larger than its actual weight in the economy suggests. While the primary agricultural sector contributes about 3% to the country's gross domestic product (GDP), it represents about 7% of formal employment. If the entire value chain of agriculture is taken into account, its contribution to GDP reaches about 12%.

Agricultural activities range from intensive crop production and mixed farming to cattle-ranching in the bushveld and sheep-farming in the more arid regions. 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.

The forestry industry is one of the strategic economic sectors in South Africa, with a significant contribution towards economic growth and job creation. Therefore, the expansion of South Africa's forest resources remains one of the department's main objectives to ensure growth, transformation and sustainability of the sector.

As a natural resource, the fisheries sector is also recognised as a potential area for economic growth. The mandate for fisheries management includes fresh water and inland fisheries, as well as aquaculture.

Broadening the scope of aquaculture will provide the opportunity to increase the production

The Department of Agriculture, Forestry and Fisheries hosted the third Global Conference on Agriculture, Food and Nutrition Security and Climate Change in Johannesburg in December 2013. The conference was convened in partnership with The Netherlands, Vietnam and United States governments.

of fish and other aquatic food species, thereby decreasing the pressure on natural fish resources. Through the National Aquaculture Strategic Framework, the department strives to ensure effective stakeholder engagement and management, as well as advancing the transformation agenda in the sector.

Legislation and frameworks

Subsequent to a tender process, the University of Pretoria was appointed as the service provider to assist the department with the review of all its legislation in 2012.

The following key legislation guides the actions and decision-making of the sector:

- The Veterinary and Para-Veterinary Act, 1962 (Act 71 of 1962) provides for the establishment, powers and functions of the South African Veterinary Council; the registration of people practising veterinary and para-veterinary professions and control of the practising of veterinary and para-veterinary professions, and was amended in 2012.

- The Fertiliser and Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947) regulates the registration of fertilisers, stock feeds, agricultural remedies, stock remedies, sterilising plants and pest control operators, and provides for control over the acquisition, disposal, sale and use of fertilisers, farm feeds, agricultural remedies and stock remedies.
- Consultation regarding the Plant Breeders' Rights Amendment Bill was underway to replace the Plant Breeders' Rights Act, 1976 (Act 15 of 1976). The Bill aims to strengthen the protection of intellectual property rights relevant to new plant varieties, which in turn positively impacts on the competitiveness of South Africa's agricultural sector.
- The Genetically Modified Organisms (GMO) Act, 1997 (Act 15 of 1997) provides for the regulation of GMO activities in South Africa, and states that biosafety assessments should be conducted for every proposed GMO activity. The Act provides a framework to ensure that all activities involving the use of GMOs are carried out in such a way as to limit possible harmful consequences.
- The Disaster Management Act, 2002 (Act 57 of 2002) and the National Disaster Risk-Management Framework of 2005 address agricultural risk management and climate change, and are supplemented by climate change-related policies and programmes.
- The Meat Safety Act, 2000 (Act 40 of 2000) provides for measures to: promote meat safety and the safety of animal products; establish and maintain essential national standards in respect of abattoirs; regulate the import and export of meat and establish meat safety schemes.
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) provides for control over the use of natural agricultural resources to promote the conservation of soil, water sources and vegetation, and the combating of weeds and invader plants.
- The Control of Markets in Rural Areas Ordinance, 1965 (Ordinance 38 of 1965).
- The Problem Animals Control Ordinance, 1978 (Ordinance 14 of 1978).
- The Livestock Brands Act, 1962 (Act 87 of 1962) regulates the registration of a brand in the name of an owner of livestock for the purpose of identifying the livestock.
- The Agricultural Credit Act, 1966 (Act 28 of 1966) provides for a system of assistance to people or undertaking to farming operations, and for control in respect of assistance rendered.

Gross value of agricultural production, 2012
(R' million)

Field crops	
Maize	25 035
Wheat	5 468
Hay	3 976
Grain sorghum	417
Sugar cane	6 117
Groundnuts	553
Tobacco	494
Sunflower seed	2 386
Soya beans	2 394
Other	2 410
Total	49 250
Horticulture	
Viticulture	4 131
Citrus fruit	7 906
Subtropical fruit	2 615
Deciduous and other fruit	10 361
Vegetables	9 422
Potatoes	5 297
Other	2 546
Total	42 278
Animal products	
Wool	2 168
Poultry and poultry products	37 547
Cattle and cattle products	18 123
Sheep and goats slaughtered	4 109
Pigs slaughtered	3 667
Milk	11 318
Other	3 968
Total	80 900
Grand total	172 428

Source: Directorate: Statistics and Economic Analysis, Department of Agriculture, Forestry and Fisheries

- The Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) regulates the subdivision of agricultural land and its use for purposes other than agriculture. Investigations are conducted by the provincial department in support of the execution of the Act.
- The Plant Improvement Act, 1976 (Act 53 of 1976) provides for the registration of establishments where plants and propagation material are sold and packed, for the introduction of schemes for the certification of certain propagation material, for the requirements to which plants and propagation material sold for the purposes of cultivation must conform and for quality control over plants and propagation material imported or exported.
- The Livestock Improvement Act, 1977 (Act 25 of 1977) regulates the collection and sale of semen and ova and the artificial insemination and in-ovulation of certain animals, the establishment of a system for the evaluation and certification of the performance of certain animals quality control regarding the importation and exportation of certain animals, semen, ova and eggs the incorporation of livestock breeders' societies and the maintenance of the legal personality of livestock breeders' societies and the granting of certain exclusive powers relating to the registration of pedigrees of certain livestock.
- The Cooperatives Act, 1981 (Act 91 of 1981) regulates the formation, registration, management and functioning of various types of co-operative and the winding up and dissolution of cooperatives.
- The Perishable Products Export Control Act, 1983 (Act 9 of 1983) provides for the control of perishable products intended for export from South Africa and for the continued existence of a statutory board to bring about the orderly and efficient export of perishable products from the country.
- The Agricultural Pests Act, 1983 (Act 36 of 1983) introduces measures for the prevention and combating of agricultural pests.
- The Agricultural Research Act, 1990 (Act 86 of 1990) establishes a juristic person, the Agricultural Research Council (ARC), to undertake agricultural research and regulate matters regarding the ARC's proceedings, powers, duties, management, control, employees, financing and related matters.
- The Agricultural Product Standards Act, 1990 (Act 119 of 1990) provides for control over the sale and export of certain agricultural products and other related products, with a view to the maintenance of certain standards regarding the quality of products and packing, marking and labelling.
- The Agricultural Produce Agents Act, 1992 (Act 12 of 1992) provides for the establishment of an Agricultural Produce Agents Council and fidelity funds.
- The Onderstepoort Biological Products (OBP) Incorporation Act, 1999 (Act 19 of 1999) provides for the establishment of a company to manage the institution, the appointment of directors and the holding and disposal of shares in the company.
- The Marine Living Resources Act, 1998 (Act 18 of 1998) provides for the conservation of the marine ecosystem, the long-term sustainable use of marine living resources and the orderly access to exploitation, use and protection of certain marine living resources; and for the exercising of control over marine living resources in a fair and equitable manner for the benefit of all the citizens of South Africa.
- The National Forest Act, 1998 (Act 84 of 1998) allows for an exemption for the use and handling of protected trees and their products; and authorises the Minister to establish a trust, in respect of state forests under certain circumstances.
- The National Veld and Forest Fire Act, 1998 (Act 101 of 1998) reforms the law on veld and forest fires and repeals certain provisions of the Forest Act, 1984 (Act 122 of 1984).
- The Sea Fishery Act, 1988 (Act 12 of 1988) provides for the conservation of the marine ecosystem and the orderly exploitation, use and protection of certain marine resources; and also provides for the exercise of control over sea fisheries.

Budget and funding

Agricultural economy

The budget of R6,178 billion allocated to the department was distributed as follows: Administration was allocated R663,9 million; Agriculture R4,554 billion; Forestry R525,5 million, and Fisheries R434 million.

Prices and income

The gross value of agricultural production (total production during the production season valued at the average basic prices received by producers) for 2012 was estimated at R171 258 million, compared to R149 774 million the previous year – representing an increase of 11,5%.

In February 2013, the Minister of Labour announced the new wage determination for farmworkers. The new minimum wage, as of 1 March 2013 to 28 February 2014, was pegged at R105 per day (up from R69 a day) for employees who work nine hours a day – or R11,66 per hour, R525 weekly or R2 274,82 per month. The Department of Labour will take action against employers who do not comply with the new sectoral determination for farmworkers.

This increase can be attributed mainly to an increase in the value of field crops.

The gross value of animal products, field crops and horticultural products contributed 47,2%, 28,3% and 24,5%, respectively, to the total gross, value of agricultural production.

The poultry-meat industry made the largest contribution (17,4%), followed by maize (14,3%) and cattle and calves slaughtered (10,3%). Producer prices of agricultural products increased on average by 11,9% from 2011 to 2012.

The weighted average price of field crops increased by 20,9%. The prices of dry beans increased by 52,5%, cotton by 34,5%, oil seeds by 30,2%, summer grains by 28,1%, hay by 17,7%, sugar cane by 10,3% and winter grains by 1,6%. The price of tobacco declined by 2,7%.

Producer prices of horticultural products rose by 6,6%. Prices of vegetables, viticultural products and fruit increased by 9,7%, 5,2% and 4,6%, respectively.

The weighted average price of animal products increased by 8,7% from 2011. Prices received for dairy products, poultry meat, slaughtered stock and pastoral products increased by 17,2%, 12,1%, 2% and 1,9% respectively.

Farm income

The gross income of producers (the value of sales and production for other uses, plus the value of changes in inventories) for the year that ended 31 December 2012 amounted to R167 394 million, compared to R146 993 million in 2011 – an increase of 13,9%. The increase can be ascribed mainly to farmers receiving better prices for products in general, but in particular prices of field crops, which improved by 23%; and those of animal products, which were 8,7% higher.

Gross income from field crops increased by 24,4%, to R44 804 million in 2012. Income from maize at R23 813 million was R7 143 million or 42,9% more than in the previous 12 months. Income from groundnuts and grain sorghum showed increases of 42,6% and 34,8%, respectively. Income from wheat increased by 13,2% to R5 254 million.

Income from sugar cane at R6 117 million was 15,6% higher than in the previous year. Income from tobacco increased by 6,9% to R422 million. Income from cotton improved by 71,5%. Gross income from horticultural products increased by 7,9%, from R38 694 million in 2011 to R41 749 million in 2012. Income from deciduous fruit at R10 231 million was only 7% up on 2011.

Income from subtropical fruit increased by 8,9% to R2 608 million. Income from vegetables increased by 10,1% to R14 757 million, and

that from viticulture by 10,9% to R3 987 million. Income from citrus increased by only 1,8% and amounted to R7 872 million.

Gross income from animal products was 11,9% higher in 2012 than in 2011 and amounted to R80 841 million, compared to R72 271 million. Red-meat producers earned R18 171 million from slaughtered cattle and calves, against the previous R17 436 – an increase of 4,2%. Income from slaughtered sheep rose by 10,9%, from R3 220 million to R3 571 million. Income from poultry-meat production increased by 16,8% to R29 845 million. Income from egg production, at R7 961 million, was 7,6% higher than in the previous year. Producers earned R11 036 million from milk production, which was 19,7% more than in the previous year. Income from wool increased by 11,6% to R2 167 million.

Net farm income amounted to R51 423 million for the year ending 31 December 2012, which is 20,5% higher than in the previous 12 months.

Salaries and wages, which represented 10,9% of total farming costs, amounted to R13 241 million. Interest paid by farmers to banks and other financiers was estimated at R5 674 million, or 4,8% of total farming cost.

Role players

Credit and assistance

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

Land and Agricultural Development Bank of South Africa

The Land Bank is a specialist agricultural bank guided by a government mandate to provide financial services to the commercial farming sector and agribusiness, and make available financial products to new entrants to agriculture from historically disadvantaged backgrounds.

Micro-Agricultural Financial Institutions of South Africa (Mafisa)

Mafisa is a scheme that provides production loans to smallholder operators within the agriculture, forestry and fisheries sectors. Mafisa loans were initially restricted to agricultural enterprises, but following the incorporation of the forestry and fisheries subsectors into the department of agriculture, the credit policy is under review so that it can also cater for these two subsectors.

The national commemoration of the annual World Food Day was held on 16 October, in North West.

Loans are provided at 8% interest and accessed through a network of institutions accredited by the DAFF as retail intermediaries. Intermediaries submit monthly and quarterly reports to the department as part of its monitoring process. Regular workshops and inspection visits to intermediaries are also conducted.

The scheme offers production loans of up to R500 000 per person, with the repayment terms structured according to the income cycle of the enterprise. The loans are limited to South African citizens who meet the eligibility criteria. Loans of up to R25 000 can be granted without security. Most of the loans disbursed are in respect of livestock, sugar cane and grain crops. Though the scheme caters for the entire value chain of the three subsectors, most of the loans disbursed by October 2013, were for primary agriculture.

Agri South Africa (AgriSA)

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

On behalf of its members, AgriSA promotes the development, profitability and stability of commercial agriculture through its involvement and input at national and international policy levels.

Agricultural Business Chamber

The Agricultural Business Chamber is a voluntary, dynamic and influential association of agribusinesses. Its mission is to negotiate and position for a favourable agribusiness environment where members can perform competitively and profitably, and prosper as a result. Other focus areas include:

- serving the broader and common business interests of agribusinesses in South Africa
- facilitating considerable networking opportunities, so that South African agribusinesses can play an active and creative role within the local and international organised business environment
- being involved in the legislative and policy environment on many fronts.

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 various projects to enhance the concept of successful agriculture.

National African Farmers' Union of South Africa (Nafu)

Nafu was established in 1991 to create a home for thousands of black farmers who had previously been excluded from the mainstream of agriculture. Nafu has members all over South Africa who have constituted themselves into regional unions. The union draws its members from a very broad base that includes farmers, agri-businesses, farmers' organisations, corporations and individuals who support Nafu's objectives and goals.

The African Farmers' Association of South Africa (Afasa)

In February 2013, Afasa welcomed the budget allocation of R6,2 billion to support the growth and development of smallholder farmers. The DAFF is expected to support smallholder farmers through conditional grants such as the Comprehensive Agricultural Support Programme (Casp), LandCare Programme, Ilima/Letsema Programme, as well as the mobilisation of farmers, women and youth into agricultural cooperatives. Afasa is South Africa's official representative of black and smallholder farmers.

Veterinary services

Veterinary public health and food safety aspects, in relation to animal products, remain a priority and are receiving increasing attention. The department has set aside R100 million for the Primary Animal Health Care Programme. Special attention is being given to the major rehabilitation of existing infrastructure, as well as the building of new clinics, animal health centres and other animal-handling facilities. Mobile veterinary vehicles will also be considered for remote areas. These efforts support the creation of an enabling environment for the planned Compulsory Community Service Programme for newly qualified veterinarians.

Agricultural Research Council

By May 2013, the ARC had successfully implemented the Animal Improvement Scheme, aimed at improving the performance, competitiveness and efficiencies of smallholder farmers, through the application of practical scientific approaches to breeding and management of livestock.

Through this scheme, the number of participating smallholder farmers increased from 920 in 2012, to 4 075 livestock producers by the end of March 2013.

During 2013/14, the ARC increased the number of farmers participating in the scheme by an additional 2 000. This included collaboration with other organisations such as the Industrial Development Corporation (IDC) and

the Independent Development Trust (IDT). The ARC will also continue providing services such as artificial insemination and embryo transfer to smallholder farmers.

The ARC renders innovative and smart solutions, which help farmers eliminate pests and eradicate diseases such as foot-and-mouth and rabies. Vaccines are a highly specialised animal health area. Therefore, the ARC conducts clinical trials ensuring the efficacy and effectiveness of such remedies for the livestock sector.

Onderstepoort Biological Products (OBP) state-owned company (SOC) Ltd

OBP SOC was corporatised in 2000 under the OBP Incorporation Act, 1999 (Act 19 of 1999).

The OBP's mandate is the prevention and control of animal diseases that impact on food security, human health and livelihood. This mandate is delivered through the continued development of innovative products and efficient manufacturing processes that ensure the affordability and accessibility of vaccines through diverse distribution channels.

The OBP possesses the capability, skills and scientific expertise to combat animal disease through the large-scale production of specialised animal vaccines. The company produces millions of doses per year to control as many as 50 different diseases and is an acknowledged world leader in the battle against disease.

Experiments at the OBP have seen encouraging progress in the development of new and improved vaccines against African horse sickness, which, despite the development of immunisation programmes, remains a constant threat to farmers, breeders and owners.

Products

The field crop planted over the largest area of farmland is maize, followed by wheat and, to a lesser extent, sugar cane and sunflower seed. The grain industry is one of the largest industries in South Africa and is a very strategic one.

According to the *Economic Review of South African Agriculture*, the gross income from field crops increased by 24,9% to R44 804 million for 2012.

Grains

Maize is the largest locally produced field crop, and the most important source of carbohydrates in the Southern African Development Community (SADC) region for animal and human consumption.

South Africa is the main maize producer in the SADC, with production averaging about 10,4 million tons (Mt) a year over the past 10 years.

It is estimated that over 8 000 commercial maize producers are responsible for most of the South African crop, while thousands of small-scale producers are responsible for the rest. Maize is produced mainly in North West, the Free State and Mpumalanga. Some 11,5 Mt of maize were commercially produced in 2012/13 on 2,8 million ha of land.

Wheat is produced mainly in the winter rainfall areas of the Western Cape and the eastern parts of the Free State. In 2012, 1,9 Mt were produced on 511 200 ha of land.

Malting barley is produced mainly on the southern coastal plains of the Western Cape. The area of barley planted totalled 84 940 ha in 2012, and production totalled 298 000 t.

Sorghum is cultivated mostly in the drier parts of the summer rainfall areas such as Mpumalanga, the Free State, Limpopo and North West. In 2012/13, an estimated 62 620 ha were planted, with production totalling 154 494 t.

Oilseeds

Groundnuts are grown mainly in the Free State, North West and Northern Cape. An area of 46 900 ha was planted in 2012/13, producing 42 300 t.

Sunflower seed is produced in the Free State, North West, the Mpumalanga highveld and in Limpopo. South Africa is the world's 13th largest producer of sunflower seed. An area of 504 700 ha was planted in 2012/13, producing 566 600 t.

Soya beans are produced mainly in Mpumalanga, the Free State and KwaZulu-Natal. Small quantities are also produced in Limpopo, Gauteng and North West. For the 2013 production season, soya beans were planted on 516 500 ha, with production totalling 787 100 t.

Canola is an oilseed crop grown mainly in the Western Cape. Small quantities have been planted in North West and Limpopo. Canola competes on the local market with other oilseeds such as sunflower seeds and soya beans. For the 2012 production season, the canola crop was estimated at 79 000 t on an area of 44 100 ha.

Sugar

South Africa produces cost-competitive high-quality sugar. The sugar sector is a diverse industry, combining the agricultural activities of sugar-cane cultivation with the industrial factory production of raw and refined sugar, syrups and specialised sugars, as well as a range of by-products. The cane-growing sector comprises about 29 130 registered sugar-cane growers farming predominantly in KwaZulu-Natal, with a substantial investment in Mpumalanga and the Eastern Cape.

Sugar is manufactured by six milling companies with 14 sugar mills operating in these cane-growing regions.

About 430 000 ha are under sugarcane production, with 68% grown within 30 km of the coast and 16% in the high rainfall areas of KwaZulu-Natal. The remainder is grown in the northern irrigated areas that comprise Pongola and Mpumalanga lowveld. The industry produces an estimated average of 19,9 Mt of sugarcane (2,2 Mt of sugar) per season. About 60% of this sugar is marketed in the Southern African Customs Union (Sacu).

Deciduous fruit

The deciduous fruit industry in South Africa, including fresh, dried and canned fruit for local consumption and export, is a multimillion rand industry. It is based on scientific research and development, resulting in optimum harvests and quality, a large variety of cultivars, and finely controlled storage methods. Deciduous fruits grown in South Africa include apples, pears, apricots, nectarines, peaches, plums, grapes, olives, figs and cherries.

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

In 2012, South Africa produced 1 694 452 t of deciduous fruit, 36 774 t more than in 2011.

Cotton

Cotton is cultivated in the Northern Cape, Limpopo, Mpumalanga, KwaZulu-Natal and North West. It constitutes 74% of natural fibre and 42% of all fibre processed in South Africa. It is grown under irrigation, as well as in dry-land conditions. Some 9 397 ha are dedicated to cotton production, with 77% under irrigation.

It is estimated that about 160 commercial farmers and about 600 small-scale farmers planted cotton in the 2012/13 production year.

DID YOU KNOW?

- In 1992, South Africa exported 21 M€ of wine. By 2001, the country had exported 217 M€ and by August 2012, 377 M€.
- Local sales are growing by about 4% year-on-year and exports by 7,8%.
- There are about 3 600 wine farmers in the Western Cape and vineyards of more than 100 000 ha.
- South Africa's share in the international wine market is about 5%.
- Almost 22% of South Africa's wine exports are to the United Kingdom.
- Wine tourism generates almost R5 billion a year in the Western Cape and creates thousands of jobs.

A total of 9 397 ha of cotton were planted in 2012/13, of which 77% was under irrigation and 23% under dry land. During the 2012/13 production season, the average production yield for South Africa was 3,5 t seed cotton per ha.

Tobacco

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

Flue-cured leaf tobacco contributes more than 79% to total production, with the number of ha cultivated for flue-cured tobacco being about six times the land cultivated for air-cured leaf tobacco. The industry produces 12 million kg of flue-cured tobacco and three million kg of air-cured leaf tobacco a year.

There are 170 tobacco growers in South Africa operating on some 5 000 ha of land. Tobacco farmers employ about 8 000 farm-workers and support about 40 000 dependants in total.

Honeybush and rooibos tea

Honeybush production is a young, growing industry that is unique to South Africa. Honeybush is part of the fynbos that grows wild in the Cederberg area of the Western Cape and is not produced anywhere else in the world. The plant grows naturally on the wetter and cooler southern slopes of mountains. Some species are mostly harvested in the wild, while others are cultivated commercially.

Some 230 ha of honeybush tea are under cultivation. It is harvested from the natural mountainous veld in the Langeberg and Swartberg in the Eastern and Western Cape and processed at farm processing facilities.

The honeybush industry has the potential to grow from an annual average of 150 t of processed tea to 1 500 t by 2021 and to increase turnover from R10 million to R100 million. South Africa produces about 200 t of honeybush tea a year. Local and international demand exceeds supply.

Fewer than 10 farmers cultivate only 30% of honeybush tea, and the rest (70%) is harvested in the wild. In August 2012, the ARC launched a new guide that will help small and emerging farmers to get started with this indigenous crop.

Due to the growing interest in the health properties of natural products and specifically herbal teas, many biochemists around the world are investigating rooibos. The rooibos plant grows well in the Cederberg area, where temperatures drop to 0° during the winter months and rise to 48° at the height of summer. On average, South Africa produces about 12 000 t

of rooibos tea a year. South Africans consume 4 500 to 5 000 t and the rest is exported.

Stress, ageing, cancer and obesity are some of the lifestyle challenges that featured prominently in the South African Rooibos Council's R2-million research budget in 2012. In addition to these health-focused projects, researchers also received funding to explore the chemistry, composition and flavour profile of this unique African herbal tea, or to advance organic and environmentally friendly rooibos farming. Prominent, independent researchers at South African universities and science councils lead the research projects.

Wine

South Africa is described as the most exciting New World wine-producing country, thanks to a combination of old vines, new regions and wine-making talent. Record harvests, a weaker rand and poor European crops benefit South African wine-makers.

According to Wines of South Africa, which represents all local wine exporters, there was a 40% increase in exports in the first six months of 2013, compared to the same period in 2012.

In July 2013, Wines of South Africa and the Western Cape Department of Agriculture hosted a wine-tasting event in Beijing, showcasing 250 South African wines. Packaged exports – bottled or box wine – to China have increased by 73% in the past four years. The first five months of 2013 yielded a 53% increase in total exports.

According to the *Global Trade Atlas*, South Africa is the seventh largest volume exporter to China.

South Africa is also the only wine-producing country that can track individual bottles of wine from the vineyard to the final product – a unique guarantee of quality and food safety.

The four biggest markets for packaged wine are the United Kingdom (UK), Sweden, Germany and the Netherlands.

South Africa is the eighth largest wine producer in the world. The 2012 wine grape crop size was estimated at 1 414 474 t, according to the South African Wine Industry Information and Systems. This was 8,6% more than the 2011 crop. With the exception of the Orange River, Paarl, Stellenbosch and Malmesbury, crops in all nine cultivation districts increased.

The 2012 crop – including juice and concentrate for non-alcoholic purposes, wine for brandy and distilling wine – amounted to 1 095,1 Ml. This was 8,1% more than the 2011 wine crop.

Domestic natural wine sales increased by 2,7% between 2011 and 2012. Exports of natural wine in bulk increased by 43,9% and exports of

packaged natural wine decreased by 8,7% for the period 2011 to 2012.

South Africa is looking at a solution to counter the impact of a decision by UK retailers to import South African wine in bulk and bottle it there. In 2011/12, 52% of South Africa's certified wine was exported in bulk. Wine in bulk means that South Africa does not have the brand identity associated with its high quality wine. The decision is also likely to affect the development of other ancillary and downstream industries such as the glass bottle industry.

Cabinet has approved the development of a five-year industry strategy for sustainable growth and to reduce the environmental costs of producing wine.

A consumer awareness programme, as well as a study on the impact of possible bulk imports of whisky from the UK, among other things, has also been approved.

Citrus and subtropical fruit

South Africa ranks 13th in world citrus production and despite increased competition, its citrus exports are growing. The country is also the world's third largest exporter of fresh citrus fruit by volume, after Spain and Turkey.

Citrus production is largely limited to irrigation areas and occurs in Limpopo (23 753 ha), Eastern Cape (13 951 ha), Western Cape (8 970 ha), Mpumalanga (9 111 ha), KwaZulu-Natal (3 284 ha), and Northern Cape (1 418 ha).

Pineapples are grown mainly in the Eastern Cape and northern KwaZulu-Natal.

Other sub-tropical crops such as avocados, mangoes, bananas, litchis, guavas, papayas, granadillas and macadamia and pecan nuts are produced, mainly in Mpumalanga and Limpopo, as well as in the subtropical coastal areas of KwaZulu-Natal and the Eastern Cape.

Vegetables

Potatoes are grown in 16 distinct potato production regions throughout the country.

About 30% of South Africa's potato crop is produced in the Free State, 22% in Limpopo and 17% in the Sandveld area of the Western Cape.

South Africa's wine industry saw the biggest grape crop ever produced, after a bumper 2013 harvest season. According to the South African Wine Industry Information and Systems, the 2013 wine grape crop reached about 1,5 Mt – 5,6%.

The 2013 wine harvest – including juice and concentrate for non-alcoholic purposes, wine for brandy and distilling wine – amounted to 1 152 million litres, calculated at an average recovery of 773 litres per ton of grapes.

About 87% of the country's total potato crops is produced under irrigation. Of the total crop, 39% is delivered to fresh produce markets and 17% is processed. Frozen French fries comprise 42% processed potato products.

In terms of gross income to the grower, potatoes are by far the most important vegetable crop, contributing about 36% to total income from vegetables. In 2012, the gross value of potatoes was R5 296,8 million. During 2012, some 2 251 000 t of potatoes were produced.

Overall vegetable production, excluding potatoes, in the 2012 season reached 2,733 Mt, up 6,6% from the previous season, when 2,564 Mt were harvested.

Vegetable consumption increased in 2012 to 45,7 kg per capita (+4,2%).

Tomatoes are produced countrywide, but on the largest scale 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 2012, 565 000 t of tomatoes were produced, with a gross value of R1 721 million. In Limpopo, South Africa's main tomato-growing area, most of the crops are found in Letaba (3 260 ha), Mooketsi and Musina (860 ha). Limpopo's total annual production is about 230 000 t.

Onions are grown mainly in Mpumalanga, certain areas of the Western Cape and the southern Free State, and in all areas of Limpopo with the main production areas being Polokwane and Mokopane. Onions have an estimated planting area of 6 500 ha to 9 000 ha and a retail value of R200 million a year. In 2012, the gross value of onions was R1 369,1 million. In 2012, 633 297 t of onions were produced.

Cabbages are grown countrywide, but the largest crops are in Mpumalanga and the Camperdown and Greytown districts of KwaZulu-Natal. South African cabbage production decreased in 2012 by 9 246 t or 6,5%, to 136 367 t. During 2012, the gross value of cabbage and red cabbage production totalled R203,1 million.

Dry beans are produced mainly in Mpumalanga, the Free State, Gauteng and North West. KwaZulu-Natal, Limpopo, the Western Cape and Northern Cape produce small quantities of this crop. Local demand is substantially higher than local production and, therefore, large quantities

of dry beans are imported each year. In 2013, some 60 200 t of dry beans were produced on 43 350 ha of land.

Livestock

Agriculture forms a critical part of South Africa's socio-economic and socio-political stability. Animal production contributes approximately 48% to the country's agricultural output in terms of value. The industry employs about 500 000 people.

The ARC, in partnership with all the provinces, will roll out the implementation of the Livestock Development Programme. In this initiative, the ARC will introduce and expand on the dissemination of technologies, such as artificial insemination and embryo transfer.

The National Agriculture Marketing Council (NAMC) is also actively engaged in a programme to introduce farmers to the structure, operation and requirements of the formal red meat market. This is the National Red Meat Development Programme (NRMDP). It works with emerging and communal farmers to increase the income earned from raising cattle through greater and more beneficial participation in formal red meat markets.

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

Dairy farming

Milk production in South Africa contributes about 0,5% to the world's milk production. South Africa has four major dairy breeds, namely Holstein, Jersey, Guernsey and Ayrshire. The industry comprises various economic activities with, significant differences in farming methods and the processing of dairy products, including the production and marketing of raw milk, pasteurised milk and cream, fermented milk, long-life milk and cream, yoghurt, and cheese and its by-products.

The South African dairy industry is important to the job market, with some 2 700 milk producers employing 60 000 farmworkers and providing 40 000 people with indirect jobs within the value chain, such as milk processing.

In November 2012, South Africa hosted the World Dairy Summit. It was attended by 56 member countries of the International Dairy Federation that represent 86% of the world dairy production community, which is the highest participation in recent years. The DAFF is also a member of its committee.

Beef cattle farming

Beef is produced throughout South Africa. The amount of beef produced depends on

In September 2013, government announced a national policy on food and nutrition security for South Africa. The policy includes the Food Production Intervention named Fetsa Tlala (end hunger). Fetsa Tlala ensures that under-used agricultural land is brought under production. The department brought 200 000 ha of land under production in seven provinces. The targeted goal is one million ha in the next five years.

infrastructure such as feedlots and abattoirs, and not necessarily on the number of cattle available in those areas. South Africa has a highly developed transport infrastructure that allows for movement of cattle from one area to another, even to and from neighbouring countries, for example, Namibia. Commercial farmers own 59% of the 14 million cattle available in South Africa. There are 27 popular breeds in South Africa including the Brahman, indigenous Afrikaner and Nguni, Tuli, Boron, Bonsmara, Drakensberger, Simbra, Beefmaster, Angus and Braford.

Small stock (sheep and goat) farming

South Africa has about 8 000 commercial sheep farms and about 5 800 communal farmers. In 2012, most of the estimated 24,4 million sheep in South Africa were found in the Eastern Cape, followed by the Northern Cape, Free State, Western Cape and Mpumalanga.

The sheep breed with the highest wool production per head is the South African Merino, followed by other dual-purpose Merino breeds, such as the Dohne Merino, South African Mutton Merino, Afrino and Letelle breeds. Dual-purpose breeds are bred with the specific aim of maximising wool and mutton produce.

Mutton sheep are found mostly in the semi-desert areas of the Northern and Western Cape, with the most popular mutton breed being the locally developed Dorper. Limited numbers of indigenous fat-tailed and Karakul sheep are still found. Karakul sheep are found in the more arid areas.

The Eastern Cape has the largest number of goats (38%), followed by Limpopo (19%). 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 one million goats. The South African mohair clip of four million kilograms, accounts for 60% of the world's mohair production. About 63% of all goats in South Africa are so-called indigenous goats.

Pig and poultry farming

The South African pork industry is relatively large, in terms of the overall South African agricultural sector. It contributes 2,15% to the primary agricultural sector. The gross value of pork production is dependent on the quantity produced and the price farmers received. Some 2,5 million pigs were slaughtered during 2012.

The trend in gross value follows a pattern of prices, since the industry is characterised by volatile prices.

According to the Bureau of Food and Agricultural Policy, as reported in the *Porcus* magazine, demand for pork meat in South Africa for domestic use has increased by 24% since 2007, which may be attributed to the marketing strategy for pork meat and consumption in the past three to four years.

Pork is produced throughout South Africa with Limpopo and North West being the largest producers, accounting for 44% of total production. There are about 4 000 commercial, 19 stud and about 110 smallholder pig farmers; they own about 125 000 sows (100 000 commercial and 25 000, smallholder farmers); they employ about 10 000 workers, comprising about 4 000 farm-workers and 6 000 workers in the processing and abattoir sectors. The 46 registered pig abattoirs use modern technology to ensure a stream lined slaughtering process. The predominant pig breeds are the South African Land Race, the Large White, Duroc and the Pietrain.

The poultry industry (including meat and eggs) continues to dominate the agricultural sector in South Africa, and is the main supplier of protein in kilogram terms to the South African consumer, as more poultry products are consumed per annum than all other animal protein sources combined.

The poultry industry is an essential component of South Africa's food value chain. It is the single largest component of the agricultural sector in the country by turnover.

In 2012, broiler production, especially broiler meat production, was the largest segment of South African agriculture at 17,6%, while all animal products in South Africa contributed 48,2%. The farm income from broiler meat for 2012 was R29,5 billion.

Poultry has shown an upward trend in consumption over the past five decades, as chicken remains an affordable protein source, relative to other sources of meat protein and has remained comparatively priced in a time of weak economic performance.

Although poultry producers remain the largest segment of South African agriculture, they

In March 2013, the Minister of Trade and Industry handed over fishing boats to the Ocean View community in Cape Town. The Department of Trade and Industry supported the Fishing Cluster Project in the West Coast region with almost R11 million.

The goal of the project is to create a viable and sustainable fisheries industry by putting in place a comprehensive package of support measures to create jobs, as well as income-generating opportunities.

The project is intended to broaden the participation of small-scale fishing communities to higher commercial, value activities. It is expected that the boats will create employment opportunities for locals.

have been faced with challenges regarding input prices, which put profit margins in broiler production under pressure.

The volatility in price and profitability is inherent to the broiler industry, since biological factors, such as poultry diseases and prolonged turnaround times in the production chain, combined with hikes in feed costs, electricity and fuel have a direct impact on production costs.

When such increases in production costs coincide with a downswing in the economy and poor demand for the product, profit margins become severely depressed. The broiler industry had to deal with this situation over the past four years.

According to the South African Poultry Association, consumption of poultry meat amounted to 1,885 Mt in 2012, total poultry production was 1,489 Mt, imports totalled 404 163 t and exports 8 135 t.

Poultry production minus poultry exports totalled 1,481 Mt or 74%; subsistence farming contributed 57 763 t or 2,9%; depleted flock came to 54 754 t or 2,7%; and imports totalled 404 163 t or 20,2% of total consumption.

Chicken imports contributed 91% to total poultry imports, turkey imports amounted to 8% and ducks, geese or guinea fowl totalled 0,1%.

The per capita consumption of poultry meat was 36,81 kg a year, compared to 36,12 kg in 2011.

The gross value of primary agricultural production from poultry meat, inclusive of all types of poultry, for the period 2012 was R29,845 billion, reflecting an annual increase of 16,8%.

Along with being the primary source of protein, the poultry industry remains an important contributor to job creation and employment opportunities. Some 10% of all agricultural sector workers are employed in the poultry sector.

Considering the dominance of the poultry industry in South Africa, it also has the largest influence on the feed industry as its main customer. The South African Poultry Association estimates that a total of 107 857 people (48 118 direct and 59 739 indirect) are employed in the broiler, hatchery, rearing, processing and distribution industries.

At a gross turnover of R7,961 billion at producer level, eggs take their place as the fourth largest animal product sector in agriculture in South Africa.

According to the *South African National Health and Nutrition Examination Survey* released in August 2013, more than half of South Africans do not have regular access to enough food.

The South African Poultry Association reported that the total value of chicken eggs at retail level was R8,2 billion for 2012. About 646 million dozen eggs were sold in 2012 through various channels.

Total imports of eggs, including shell eggs and egg products (liquid and dried), amounted to 267 t in 2012 and egg exports totalled 3 254 t. Shell eggs contributed 43% of total egg exports. Egg products contributed 57% or 1 843 t, with liquid egg products amounting to 1 670 t or 51% of total exports.

Annual per capita egg consumption increased steadily over the past four years, from 135 eggs in 2009 to 156 eggs in 2012. Considerable scope exists for increased per capita consumption, particularly taking into account the price competitiveness of eggs as a protein source, compared to other animal proteins.

The industry remains an important player in the job sector, with an estimated 8 000 workers employed during 2012.

Game ranching

The South African wildlife ranching sector is a unique sector that is widely recognised as one of the world leaders in the use of wildlife for farming/ranching purposes. The sector has shown extraordinary growth over the years, with the number of game farms operating in the country increasing from 3 500 in 1992 to about 10 000 in 2011.

Most game farms are situated in Limpopo, followed by the Northern and Eastern Cape, respectively. The wildlife ranching industry employs consumptive and non-consumptive uses of wildlife.

Consumptive use includes venison production (game meat and biltong), and trophy and recreational hunting; while non-consumptive use includes eco-tourism activities and accommodation.

Therefore, the departments of agriculture, forestry and fisheries, environmental affairs, and tourism are significant role-players in the wildlife ranching sector. The wildlife ranching industry contributes about R8 billion to the South African economy.

Limpopo is responsible for the highest number of game auctions held, as well as the highest turnover in the wildlife ranching industry.

In terms of meat production, the wildlife ranching sector produces 10% of the red meat in the country, and between 600 and 2 000 t of game meat are exported yearly.

The *ABSA 2012 Agricultural Outlook* projects game meat production, especially the export of meat, to be a potential large-income earner for the game farming industry, in future.

The DAFF has long recognised the potential of this sector for addressing food security, job creation, and rural development; with an investigation into the marketing potential for South African game farming conducted by the NAMC, in terms of the Marketing of Agricultural Products Act, 1996 (Act 47 of 1996) in 2006. In 2013, the DAFF finalised a game farming policy, which underwent a lengthy process of public consultation as well as extensive consultation with the relevant departments, such as the Department of Environmental Affairs (DEA) and industry role-players such as Wildlife Ranching South Africa to facilitate the development of a sustainable wildlife ranching sector with the potential to accommodate new entrants.

Programmes and projects

Regulatory services

The department's regulatory activities include the inspection of plants, animals and their products to ensure that imported animals and their products are free from disease, and imported and exported plants and products are free from quarantine pests and diseases.

South Africa is an active member of the World Organisation for Animal Health.

Disease reports are received from the Organisation for Animal Health and through direct contact with veterinary administrations in exporting countries.

Trade in animals and animal products is regulated to prevent the entry of diseases.

The department also conducts inspections at designated ports of entry. Pre-border inspections are aimed at exports for compliance with international requirements among trading partners. Post-border inspections are intended for those regulated articles that were given extended detentions at borders or escaped the border-control inspections.

Plants and plant products are inspected for compliance with plant health, genetic resources and food and quality-assurance legislation. Various surveys are also conducted throughout the country.

The Pest Risk-Analysis Division conducts scientific analysis of risks posed, based on scientific data. Risks associated with the importation of plant propagation material are managed by prescribing a compulsory predetermined quarantine detention period for specific high-risk categories.

To prevent the introduction of harmful exotic plant pests, all imported plant material is tested and audited.

Early detection of economically important exotic pests is ensured through surveillance,

detection and rapid response to prevent them from spreading.

Closely linked to early detection is the implementation of proper pest-awareness programmes to keep the agricultural sector and the general public informed.

Through its Import/Export Protocols Division, the department ensures and maintains 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.

Despite having maintained the country's lucrative fruit export markets, production and exports are still under threat. Accordingly, imports of host fruit from countries where pests have been established must be appropriately managed. This emphasises the importance of border control and risk management responsibilities.

To further strengthen contingency planning regarding pests and diseases, the Emergency Plant Pest Response Plan was developed for implementation in 2013/14.

Food import and export standards

Internationally, standards for food imports and exports are harmonised through various international standard-setting bodies subscribed to under the World Trade Organisation (WTO) and to which South Africa is a signatory, including the Sanitary and Phytosanitary Measurements Agreement, World Organisation for Animal Health, Codex Alimentarius Commission and the Intergovernmental Panel on Climate Change. These requirements aim to protect consumer rights, the environment, animal life and public health.

Through its Directorate: Food Import and Export Standards, the department collates information regarding the standards for sanitary and phytosanitary measures applicable to trade in animal and plant products. The DAFF also coordinates promotion and awareness programmes addressing cross-cutting standards and legislative requirements for food safety, quality, and plant and animal health.

The department and the Perishable Products Export Control Board (PPECB) work closely to assist South Africans – within the ambit of the law – to export their products successfully in a highly competitive global arena.

During 2012/13, the PPECB went from a R16 million loss to a financial break-even situation.

The PPECB has revised the PPEC Act, 1983 (Act 9 of 1983). It is hoped that once the new Act is promulgated, it will enable the PPECB to modernise its business offerings to the public

and put the PPECB's business model on a more sustainable footing.

National analytical services

The DAFF has laboratories in Pretoria and Stellenbosch that conduct analytical services. They support the units within the department responsible for formulating and updating regulations regarding agricultural foods of plant origin and liquor products. The laboratory has been working on a project to expand the scope of testing for pesticide residues.

Risk management

The National Agricultural Disaster Risk Management Committee provides strategic guidance on policy and advises the Ministry of Agriculture, Forestry and Fisheries on issues relating to agricultural disaster risk management. The committee comprises members from provincial departments of agriculture, organised agriculture such as Nafu, AgriSA, TAU SA and ARC and relevant directorates within the department.

The established National Drought Task Team, chaired by the DAFF, advises the National Disaster Management Advisory Forum on drought management. The task team comprises provincial disaster management centres, organised agriculture such as Nafu, AgriSA, TAU SA and ARC, and relevant directorates within the department. The department frequently responds to hazards such as droughts, veld fires, floods and outbreaks of pests and disease, which includes the control of migratory pests such as locusts and quelea. It is also responsible for the control of the blackfly pest.

Weather and climate Climate change

The agriculture sector in South Africa faces considerable impact from climate change, which affects the livelihoods of most people, especially those who are vulnerable to food insecurity.

South Africa responds to international obligations regarding climate mainly through the DEA, but the DAFF, as well as other departments such as those of mineral resources, energy, science and technology, and water affairs are also involved.

The Climate Change Programme implemented by the DAFF includes programmes on raising awareness, policy development, the development of sector mitigation and adaptation plans, conducting vulnerability assessments countrywide, and identifying and coordinating climate-related research projects.

South Africa is a full member of the Global Research Alliance which, among other

objectives, aims to enhance collaborative research into reducing agricultural emissions and increasing support and resourcing for agricultural emissions research.

Early warning unit

The increasing risk of disaster is reduced by strengthening early warning systems and disseminating early warnings, as well as raising awareness through campaigns. This helps to build resilient farming communities.

The DAFF has, therefore, developed and implemented an Early Warning System (EWS) that disseminates extreme weather warnings to farming communities. The EWS communicates monthly advisories and daily extreme weather warnings, in support of reducing disaster risk. The implementation of the EWS is continuously monitored and evaluated to identify and address gaps in the system. National Agro-Meteorological Committee meetings are held quarterly.

Floods and droughts

Climate variability has induced drought interspersed with flooding, resulting in lower-than-average agricultural production yields. The DAFF has completed two policy documents: the Agricultural Disaster Risk-Management Plan and the Agricultural Drought-Management Plan. An amount of more than R990 million has been made available through the Medium-Term Expenditure Framework period until 2014/15 as part of the flood-assistance scheme.

In August 2013, North West was declared a drought-stricken area after below average rainfall since 2012, which has had a very negative impact on livestock in all regions of the province.

Sustainable resource management and use

The DAFF and the ARC's Institute for Soil, Climate and Water have developed an inventory of soils, terrain forms and climate (land types). The *National Land Type Survey*, available for use at a 1:250 000 scale, aims to assist and guide land-use planning and decision-making at national level. All available natural-resource spatial information and other required data sets, including the latest Spot 5 satellite imagery and agricultural information, are found on the internet-based Agricultural Geo-Referenced Information System (Agis). Using interactive web-based applications, Agis provides access to spatial information, industry-specific information and decision-support tools.

The Advanced Fires Information System (Afis)

tracks all fire outbreaks in the SADC region through the use of Moderate Resolution Imaging Spectroradio-meter satellite imagery. The information may be viewed at afis.meraka.org.za

Soil degradation

Soil degradation is largely related to the decline in organic soil matter. Monoculture cereal production, intensive tillage, short-term 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.

It is calculated that 1,5 million ha (around 1% of the land surface) have a high to extremely high erosion risk. More than 11 million ha (9%) are classified as having a moderate erosion risk, and 17% 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 the north-western Free State – the areas that produce 75% of the country's maize.

South African soils are also extremely prone to serious soil compaction, particularly under intensive mechanised cultivated agriculture, in both dry land and irrigated land. 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 prone to serious crusting (surface sealing). The extent resulting and awareness of it have increased sharply over the last two decades. Switching to overhead and micro-regulation systems, and the widespread effects on crusting-prone soils have contributed to the problem. Human-induced soil acidification is a major problem. Its effect is severe since it impacts on the country's scarce, arable land, especially the limited high-potential agricultural land. Soil-fertility degradation is a concern. In commercial agriculture, there has been nutrient capital-building of some nutrients, especially phosphorus and zinc. In some cases, phosphorus has built up to excessive levels, where it starts to reduce crop yields.

Genetically modified organisms

Genetic modification (GM) provides a way to meet the growing demand for food without placing greater pressure on scarce resources.

South Africa has commercialised three different GM crops, namely maize, cotton and soya beans. The latest approval of GM crops for commercial use was in 2012, for GM maize that is resistant to certain insect species and herbicide-tolerant. In 2012, the area under GM crop production was estimated to be 2,9 million ha. Of the total (2,73 million ha) maize produced, 86% (2,428 million ha) is estimated to be genetically modified. The adoption rate for herbicide-tolerant soybean is 90%, and for cotton, 100%.

LandCare Programme

The National LandCare Programme is a government-supported community-based initiative which is active throughout the country. Driven by both the public and private sectors through partnerships and co-operation, it seeks to:

- conserve natural resources
- use them in a sustainable way
- create a conservation ethic through education and awareness
- create jobs and address poverty by launching various natural resource rehabilitation, improvement and conservation projects.

Serious concerns about land and water degradation are identified in each province and specific projects address these issues. Projects have been implemented in all nine provinces through the LandCare Conditional Grant, whereby ring-fenced funding is transferred to provinces, in terms of the Yearly Division of Revenue.

Four subprogrammes, namely WaterCare, VeldCare, SoilCare and JuniorCare, are all part of the LandCare Programme.

The fifth Biennial National Landcare Conference was held at the Mmabatho Convention Centre in Mafikeng, North West, from 1 to 4 October 2012. The theme of the conference was *LandCare: Sustaining Natural Resource Management 15 Years and Beyond for Better Livelihoods*. It brought together interested parties within the agricultural resources management sector, to discuss how the programme has addressed degradation, poverty and food security; to reward communities that have taken bold leadership on custodianship of natural agricultural resources, and to seek ways to address challenges facing the sector.

WaterCare

WaterCare promotes the development of techniques for water-resource management and encourages opportunities for training in this field.

The rehabilitation of irrigation schemes increases water supply and household food security. Irrigated agriculture 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. It contributes more than 30% of the gross value of the country's crop production. The DAFF has embarked on a process to rehabilitate irrigation schemes that have the potential to increase food production, eradicate poverty, create jobs and contribute to economic growth.

About 90% of the country's fruit, vegetables and wine are produced under irrigation. The department has identified the revitalisation of irrigation schemes and development as a priority area.

VeldCare

This programme 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

This programme encourages rural farmers 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.

The Conservation Agriculture (CA) approach has encouraged the proactive and sustainable use of agricultural natural resources. CA aims to ensure the effective and sustainable use and management of natural resources through minimum disturbance of the soil. CA integrates the management of soil, water and biological resources, to maintain and enhance land productivity and reduce the level of risk. It further aims to protect the potential of natural resources, prevent soil and water degradation and ensure economic viability with a reduction in vulnerability to the effects of climate change. The result of these practices will ensure continued household and national food security through crop production, while conserving the environment. CA is characterised by three principles:

- minimum mechanical soil disturbance (minimum tillage)

The 2013 Gauteng Female Farmer of the Year and the National Female Entrepreneur of the Year was Sphiwe Machika from Rethabiseng. She won these accolades because of her excellent work at Rethabiseng Sustainable Farm.

- permanent organic soil cover, particularly through available crop residues
- diversified crop-rotation practices.

Junior LandCare

The objectives of Junior LandCare are to empower previously disadvantaged youth by providing training in facilitation and leadership skills. This includes promoting food security at home and in schools, enhancing awareness of sustainable agriculture and stimulating the formation of youth clubs and projects that 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.

Smallholder development

In support of food security, the DAFF has persistently strengthened its support for smallholder producers and continues to do so with the involvement of both internal and external partners.

Support to smallholder producers is being synchronised through the department's co-ordinated Programme Management Unit, which comprises all DAFF technical support units.

The Programme Management Unit has been established to reinforce smallholder support activities of the already existing Smallholder Development Working Group, which is constituted by other national government departments, the ARC and the provincial departments of agriculture. Smallholder access to markets is pursued and engagements with institutions such as the World Food Programme and the Food and Agriculture Organisation for such market opportunities are at an advanced stage.

A web-based platform of the supported smallholder producers is being developed to ensure proper data and updates on all smallholder activities. The implementation of the approved Strategic Plan for Smallholder Support is on track with support funding received from the Department of Trade and Industry's Employment Creation Fund.

Small-scale sugar cane farmers in the Nkomazi area of Mpumalanga are to benefit significantly from government's Jobs Fund and are expected to double their production and create 1 544 new and sustainable jobs.

The farms should, over a five-year period, increase production from 450 000 tons of cane to 850 000 tons per year.

The Jobs Fund was announced by President Jacob Zuma during the State of the Nation Address in 2011. In June 2011, the Minister of

Finance set aside R9 billion for the Jobs Fund, to be allocated over a three-year period.

The fund is targeted at established companies with a good track record and which plan to expand existing programmes or pilot innovative approaches to employment creation, with a special focus on opportunities for young people.

Akwandze Agricultural Finance Ltd, through funding provided by the Jobs Fund, is addressing this need by ensuring these farmers can get adequate, cost-effective and appropriate financing with favourable terms.

Akwandze is also providing a package of associated farmer support initiatives such as on-site service back-up, training and capacity building.

According to the South Africa Sugar Association, the number of small-scale sugar growers has declined by 33% – from 50 000 in 2005 to around 33 700 in 2011. The productivity of small-scale farmers has also been declining. The tonnage in sugar produced by small-scale farmers has dropped from 850 000 at its peak to 450 000 tons per annum.

Akwandze is also supporting a cooperative of 216 small-scale farmers called Siboshwa to expand their growing area of 83 ha by 20 ha, developing their irrigation infrastructure and ensuring everything is in place to maintain it according to manufacturer specifications. This should allow them to produce another 2 000 t of cane.

Akwandze has matched a grant of R50 million from the Jobs Fund with a further R70 million and will recapitalise irrigation infrastructure for 1 281 small-scale growers, which will help to rehabilitate 10 000 ha of sugar cane land.

Akwandze will also extend its lending capacity to the growers for replanting, fertilizer, weeding and irrigation costs. The result should be to double the total annual tonnage of sugar cane produced by small-scale growers in Nkomazi.

It is anticipated that the Akwandze Project will create 1 544 new full-time jobs and increase turnover for these small-scale growers.

Extension and advisory services

Over the past five years the DAFF has implemented an extension and advisory revitalisation programme worth R1,1 billion. To improve the ratio of extension officers to farmers, more than 1 200 extension and advisory officers had been recruited by the end of 2012/13.

To ensure that these officers are visible and accountable on the ground, the Digital Pen technology has been rolled out nationally. This technology is used by extension personnel to record their interaction with clients and allows the

taking of pictures on site for evidence purposes.

To ensure access to appropriate information, the Extension Suite Online system has been adopted nationally.

This computerised system enables extension officers to access relevant information during their interaction with the farmers in the field.

For them to render effective service, extension officers have been equipped with working tools. A total of 15 515 information and communications technology equipment items have been allocated and put to use.

These include cellphones, Global Positioning System devices, laptops, printers and vehicles.

Training and research

The agricultural sector boasts state-of-the-art training and research facilities.

At grassroots level, South Africa has a number of regular schools offering a range of agricultural subjects and specialised agricultural high schools such as Bekker High School in North West, Harry Oppenheimer Agricultural High School in Limpopo and Boland Agricultural High School in the Western Cape.

Prospective farmers and technicians are trained at the country's colleges of agriculture such as Grootfontein Agricultural Development Institute in the Eastern Cape, Cedara College of Agriculture in KwaZulu-Natal and Madzivhandila College of Agriculture in Limpopo.

Universities (including those with and without designated faculties of agriculture) offer advanced degree courses and Bachelor of Technology degrees. Veterinary surgeons are trained at the University of Pretoria's Faculty of Veterinary Sciences at Onderstepoort.

This training potential is coupled with productive and robust research capacity in terms of scientists and researchers based at various organisations who are world leaders in their respective fields of agricultural research.

The ARC, several universities and various private-sector organisations, as well as some provincial departments of agriculture, which are responsible for technological development and transfer aimed at improving managerial efficiency on farms, conduct agricultural research.

The Directorate: Policy Research Support in the DAFF coordinates all agricultural research and development activities.

Through the Agricultural Science, Technology and Innovation Activities Coordination Committee, the department engages the Department of Science and Technology on joint issues of national importance within the National System of Innovation. The research unit is also involved in the development and implementation of

national research policies and strategies, such as the National Agricultural Research and Development Strategy. This encompasses the national priority-setting process, developing guidelines, administering a national research and technology fund and overall monitoring and evaluation.

The National Agricultural Research Forum (NARF) provides a platform for stakeholder consultations on research and development matters within the national agricultural research system.

The NARF facilitates consensus and makes recommendations to government and others on the coordination of research and development and technology transfer to enhance national economic growth, social welfare and environmental sustainability. Annual meetings are held to discuss research needs, priorities and budgeting.

Animal identification

Under the Animal Identification Act, 2002 (Act 6 of 2002) the Minister declares animals for compulsory identification. The national register is available to the South African Police Service through the State Information Technology Agency to help it trace 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.

Regulation services 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 DAFF.

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

To respond comprehensively to the management of regulated plant pests and diseases, the department, in close collabo-

ration with the South African fruit industries, has developed an early warning surveillance programme to quarantine fruit flies. The technical forum continues to identify, prioritise and manage quarantine pest risks such as the African invader fruit fly.

In the global trade of food and food products, veterinary public health and food safety aspects in relation to animal products received increasing attention.

Food security

Food security was high on the agenda at the fifth Brazil, Russia, India, China and South Africa (BRICS) Summit in Durban, in March 2013. Food security was an important issue for the BRICS member countries, and South Africa and the continent had a lot to offer in this regard.

The Integrated Food Security and Nutrition Programme 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 Integrated Food Security and Nutrition Programme recognises the broad regional food-security framework that the Regional Indicative Sustainable Development Programme highlighted, and which prompted South Africa to respond to the humanitarian appeal by the UN World Food Programme for emergency food relief in the SADC region.

In October 2013, President Zuma launched government's food security programme, Fetsa Tlala, in Kuruman in the Northern Cape. Government has made available R2 billion to support Fetsa Tlala.

The programme is managed by the DAFF. The Government's Integrated Food Security Production Intervention Programme was introduced in 2012 to afford smallholder farmers, communities and households the ability to increase production of basic food. This intervention will be managed over a period of 10 years from 2012 to 2022. The programme is intended to promote self-sufficiency and food security by getting communities to plant their own food.

The revival of Tugela Estate in KwaZulu-Natal forms part of efforts aimed at promoting agriculture and reviving agriculture to become an important regional contributor to the gross domestic product.

Significant work has been done to link subsistence and emerging farmers to the markets in the first economy. KwaZulu-Natal has many underused land-reform farms and irrigation schemes such as Tugela Estates, Texas Valley Farms and others.

In September 2013, the Department of Agriculture, Rural Development and Land Administration invited emerging livestock farmers in Mpumalanga to apply for help under the Masibuyele Esibayeni (back to the kraal) initiative. The programme seeks to improve food security, community upliftment, rural development and agrarian reform as part of the Zero Hunger Strategy.

Breeding stock is loaned to certain farmers for either five years in the case of large stock or three years in the case of small stock.

Successful applicants will receive one performance bull and 25 pregnant heifers, one dairy bull and 50 dairy cows, one male goat and 25 females, one ram and 25 ewes, and one boar and 10 sows.

Regional and international cooperation and trade

Regional cooperation

South Africa has strong and mutually dependent economic links with countries in the southern African region through the SADC and Sacu.

The department continues to expand its trade relations with other countries on the African continent and other countries in the world through bilateral cooperation agreements.

South Africa participates in the Regional Advisory Committee of the Regional Food Security Training Programme.

The Regional Food Security Training Programme was developed over a five-year period as endorsed by the Regional Advisory Committee. Its activities focus on 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 regional coordination of the activities and objectives of the International Plant Protection Convention. 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 phytosanitary coordinating body.

The SADC has produced the MoU on the Harmonisation of Seed Regulations in the SADC Region, which is based on three technical documents, namely the Regional Variety Release System Seed Certification and Quality Assurance; and Quarantine and Phytosanitary Measures.

Lower costs and simpler administration will encourage local small-scale seed producers and suppliers to expand their activities.

Regional trade

South Africa, as a member of Sacu and a signatory of the SADC Treaty, is committed to sharing its objectives with other nations in the region. Sacu opened its markets to the countries of the region by implementing the first phase of tariff reduction. The signatories to the SADC Agreement are Angola, Botswana, the DRC, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, the Seychelles, Swaziland, Tanzania, Zambia and Zimbabwe.

The first objective of the trade protocol is to

remove both tariff and non-tariff barriers to trade between SADC countries.

The SADC has set up an electronic reporting system for non-tariff barriers, in which the DAFF is involved as a contact point to receive traders' complaints.

International cooperation

In 2013, the KwaZulu-Natal provincial government received proposals from Healthy Agro and Heritage Dairies in India. These proposals offered to provide operating finances for the proposed initiative, if the landowners and farmers made land available, organise, themselves into a community business entity and government funded infrastructure rehabilitation and repairs.

Healthy Agro and Heritage Dairies are the largest agricultural businesses in southern India. However, India lacks land to meet the food needs of its growing population.

The company wishes to grow pulses (lentils and beans) on 500 ha of Tugela Estates. This crop will be exported to India and 30% of the profits will be paid to the Tugela Farmers' Business Entity. Further more, the company wants community farmers to grow 50 ha of vegetables on the rest of the scheme. It will buy vegetables from the community and all vegetable profits will go to the farmers.

Healthy Agro also wants government to buy 1 000 dairy cows for the community. The company will train the farmers to take care of the cows and will manage the dairy enterprise, facilitating the sale of all milk across to Heritage Dairy and all profits from milk sales will go to the farmers.

International trade

The Directorate: International Trade of the DAFF is responsible for implementing, monitoring and reporting on South Africa's commitments and rights under the WTO Agreement on Agriculture, as well as bilateral and regional trade agreements.

South Africa maintained its status as a net exporter of agriculture, forestry and fisheries (AFF) products during 2012. Total AFF exports amounted to R61,7 billion against imports of R55,1 billion during 2012. Although South Africa is a net exporter of primary agricultural products, the country has become a net importer of processed agricultural products.

Primary agricultural exports during 2012 totalled R24,9 billion against the imports of R6,8 billion.

Secondary or processed agricultural exports during 2012 were R26,2 billion against imports of R42,9 billion.

South Africa was a net exporter of forestry products and a net importer of fisheries products during 2012.

Exports of forestry products amounted to R9,9 billion against imports of R6,9 billion during 2012. Exports of fisheries products came to R1,4 billion against imports of R2 billion.

Exports of fruit and nuts constituted the largest export category by value (R18,9 billion) of South Africa's total AFF exports during 2012.

Imports of cereals to the value of R10,6 billion constituted the largest category, in terms of imports during the same period. Zimbabwe (9%), the UK (8%), and the Netherlands (8%) respectively, ranked as South Africa's top three export destinations for AFF products by value during 2012. With regard to imports, China (10%), Argentina (9%) and the UK (7%) ranked as the top three markets of origin for South Africa's AFF products, respectively, during 2012.

China, Zambia and Angola were the fastest growing export destinations for South Africa's AFF products by value during 2012. Exports of bird skin to China, wheat flour to Zambia and onions to Angola registered the highest growth during 2012. Indonesia, Japan and Germany showed the most negative growth during the same period, with cocoa to Indonesia, maize meal to Japan and wood pulp to Germany declining the most.

On the import markets' side, China, the Netherlands and India ranked the highest, in terms of import growth, during 2012. Imports of rice from China and India, as well as infant food from the Netherlands, registered the highest growth.

The United States of America, Germany and Thailand declined significantly during the same period with imports of wood pulp, rum, tafia and photocopy paper declining the most.

Forestry

The DAFF is the custodian of South Africa's forest resources, which cover over 40 million ha of the country's land surface area. An amount of R1,2 billion from the department's budget has been allocated to forestry and natural resources management.

The forest sector employs around 165 900 workers and provides about 62 700 direct jobs and 30 000 indirect jobs. Forestry provides livelihood support to 652 000 people of the country's rural population. The pulp and paper industry provides about 13 200 direct and 11 000 indirect employment opportunities.

Some 20 000 workers are employed in sawmilling, and 6 000 in the timber board and

2 200 in the mining timber industries, while a further 11 000 workers are employed in miscellaneous jobs in forestry.

In terms of land use, the afforested area is about 1,27 million ha or about 1% of the total South African land area of 122,3 million ha.

The forest sector (forestry and forest products) contributes about 1% to the GDP. In terms of regional GDP, forestry in KwaZulu-Natal contributes 4,4%; in Mpumalanga 3,7%; in the Eastern Cape 0,6%; and in Limpopo about 0,6%.

The DAFF contributes to eradicating poverty through the Forestry Livelihoods Programme. Firewood, construction poles, medicinal plants and edible fruits are all critical to the livelihoods of the rural poor.

The department develops human resources through forestry-sector skills development initiatives and promotes 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.

The department is pursuing a target of 10 000 ha of nett new afforestation a year.

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 DAFF is working closely with other government structures in the Eastern Cape and KwaZulu-Natal to fast-track the afforestation licensing process.

In the Eastern Cape, funds have been secured to assist communities with the processes of environmental impact assessments – a pre-requisite preceding any afforestation activity.

Afforestation is taking 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, which will lead to broad economic growth. An additional R500 million a year could be generated from such plantations.

The forestry programme also includes greening and tree-planting projects.

The programme prioritises work on fire-fighting programmes such as the Working on Fire Programme and encourages the establishment of fire-protection associations (FPAs).

About 70% of the citrus consumed in the EU comes from South Africa and the sector contributes about R6 billion to South Africa's gross domestic product.

Legislation

The National Forests Act, 1998 (Act 84 of 1998), and the Forestry Laws Amendment Act, 2005 (Act 35 of 2005), reflect the vision for the future of forestry in South Africa. They emphasise sustainable forest management, and explain how people and communities can use forests without destroying them. The Acts set out rules for protecting indigenous forests, and ensure 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 and shrub species. Some are threatened, and 47 species are protected under the Act.

Protected trees may not be cut; damaged; destroyed or possessed; collected; removed; transported; exported; purchased; sold; donated or in any other way acquired or disposed of except under a licence granted by the Minister or in terms of an exemption. In terms of the National Forests Act of 1998, all natural forests are protected.

The National Veld and Forest Fire Act (NVFFA), 1998 (Act 101 of 1998), and the National Veld and Forest Fire Laws Amendment, 2001 (Act 12 of 2001), are the primary legislation regulating veldfire management in the country. The National Veld and Forest Fire Amendment Bill was published on 31 May 2013 for public comment.

The purpose of these Acts is to prevent and combat veld, forest and mountain fires. The legislation provides a variety of institutions, methods and practices for achieving the purpose. The Acts place an individual duty on every landowner where there is a risk of fire to take certain minimum precautions to prevent and combat fires. It also introduces the concept of voluntary FPAs, which may be formed by landowners for purposes of veldfire management in a specific area.

Industry and exports

The forestry industry was a nett exporter of over R2,2 billion worth of goods in 2012, of which more than 99% took the form of converted value-added products.

The forest products industry ranks among the top exporting industries in the country, having contributed 1,92% to total exports and 1,4% to total imports in 2012. Capital investment in the industry amounted to an estimated R45 billion in 2011. The value of forest product exports grew by 23% over the past decade, from R11,2 billion in 2002 to R13,8 billion in 2012. In real terms, however (taking inflation into account) this growth was -28% over the period in question.

Consequently, the nett trade balance in foreign trade in forest products decreased from 2002 by -62% in nominal terms (-78% in real terms) to R2,2 billion in 2012.

In 2012, pulp products were the most important exports (R5 890 billion or 43% of the total), followed by paper (R4 707 billion or 34%), solid wood products (R2 680 billion or 19%) and other products (R555 million or 4%). Woodchip exports, mainly to Japan, accounted for 52% (R1 407 billion) of total solid-wood product exports.

As with other export-based industries, the continuing unfavourable economic environment has had a negative impact on demand, particularly in Japan, which is still recovering from the damage caused to some of its pulp and paper mills by the tsunami that occurred in March 2012.

As a result of this, exports of forest products from South Africa decreased in value by R1,2 billion or 7,7% from R15 billion in 2011 to R13,8 billion in 2012.

Role players National Forest Advisory Council (NFAC)

The NFAC 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, and makes recommendations on how public access to state-owned forests may be improved.

South African Forestry Company Limited (Safcol)

Safcol is government's forestry company, conducting timber harvesting, timber processing and related activities, both domestically and internationally. In 2013, the group had 18 plantations covering 187 320 ha with one sawmill and renting capacity at two others.

It subscribes to the Forest Sector Charter and plays a leading role in transformation within the industry. With the focus on communities adjacent to its plantations and specifically the youth in those communities, it makes a difference in the physical circumstances and networking in the communities. Between 2009 and 2011, 11 social compacts were signed with community clusters in Mpumalanga, KwaZulu-Natal and Limpopo.

In July 2013, the South African government reached an agreement to export citrus to China and India, as well as to the African continent, as government has made a commitment to help farmers forge trade links with the two BRICS nations. The citrus industry is the biggest employer of unskilled workers in the rural areas.

The Comprehensive African Agricultural Development Programme, an African Union and New Partnership for Africa's Development initiative, aims to drive agricultural development in Africa. The programme aims to increase public financing in agriculture by 10% and raise agricultural productivity by 6%.

In 2012, Safcol remained committed to socio-economic development. The structured approach of community partnerships was strengthened, with the focus on implementing needs-driven development and making a positive impact in community members' lives. In the areas where the group signed social compacts, an amount of R8,1 million was spent on socio-economic development projects.

In the same year, at the South African Enterprise Development Awards, Safcol received an award for the Most Innovative Enterprise Development Projects, as per the BBBEE codes. Initiatives towards green-building include implementing timber frame structures within socio-economic and enterprise development projects, which also received huge support from communities.

In support of the drive to develop skills and make forestry a career of choice, the group's bursary committee awarded 22 new internal bursaries for 2012/13. The in-house training centre, outside Sabie, offered training courses to 1 144 people and outsourced training courses to 244 people. Of special note is the launch of the Safcol-sponsored Forestry Chair at the University of Pretoria, which is an opportunity for students who wish to further their studies in forestry-related fields.

Despite a difficult operating environment, the Safcol group's financial performance for the 2012/13 financial year was better than it had been in the previous two financial years, resulting in an operating profit of R51 million (excluding the effect of the adjustment of plantation valuation). The profit to date has been attributed to the group's efforts to implement its turnaround strategy.

The group's share in the lumber market has increased from 4% to 12%, following the introduction of its new marketing and sales approach.

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 forest research function within the department has been coordinating a number of research projects focusing on sustainable management of forest resources. These include:

- the monitoring and evaluation of bark-harvesting techniques used for two indigenous tree species in the Letaba State Forest

- sustainable harvesting of plants used for medicinal purposes
- the sustainable use of Monkey rope (*Secamone gerrardii*) by local subsistence farmers
- *ex situ* and *in situ* conservation of the critically endangered *protea roupelliae* sbsp. *hamiltonii*
- conservation of the co-occurring endangered *Leucospermum gerrardii* within the Dr Hamilton Nature Reserve.

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 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 offers 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 Fibre Processing and Manufacturing (FPM) Sector Education and Training Authority (Seta), is responsible for ensuring that the training undertaken by the industry meets certain quality standards.

The department, together with the FPM Seta, offers study bursaries in forestry-related fields.

Programmes and initiatives

Participative forestry

The department supports the establishment of community projects through regional forestry staff. An estimated R2 million has already been spent from the Community Facilitation Fund to support the establishment of projects on the ground. Current projects include the establishment of medicinal plant nurseries, in partnership with various stakeholders, and beekeeping, in partnership with the ARC.

In addition to producing honey, beekeepers play a critical role in agriculture, contributing to crop pollination and the development of products worth billions of rand.

The honey industry in South Africa has an average annual turnover of R3,2 billion and

produces some 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.

National Arbor Week

National Arbor Week is celebrated annually around the first week in September, to promote the planting and maintenance of indigenous trees. It highlights the opportunities for sustainable economic development, community participation, poverty alleviation and job creation in forestry.

The Tree of the Year is a government initiative to raise awareness about the need to value and protect indigenous trees and to educate the public about South African trees.

The Trees of the Year for 2013 were *Virgilia oroboides*, also known as the blossom tree; the *Grewia occidentalis*, also known as the cross-berry; and *Barringtonia racemosa*, also known as the powder-puff tree.

In September 2013, seven trees were planted in honour of women leaders, during National Arbor Week, in the Botanical Gardens in Hammarsdale, KwaZulu-Natal.

At the same time, the Priority Zone Rooftop Gardens, a social project to address greening and issues of food security in areas where there is no space to establish gardens in city centres, was established, using recycled products, including old tyres, drums and pallets. Produce from the gardens is donated to the needy.

Also in September 2013, as part of the legacy projects for eThekweni, about 150 households received vegetable seedlings and seed packs as the first phase of the household food security project in Minitown.

Champion Tree Project

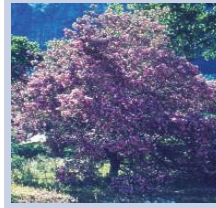
The purpose of the Champion Tree Project is to identify and protect trees that are of national importance and worthy of special protection, due to their remarkable size, age, or aesthetic, cultural, historic or tourism value. Similar projects have been established in several other countries, but this is the first of its kind in Africa.

Nomination forms with guidelines for the nomination process are available from the DAFF.

Every nomination cycle starts on 1 August year, and ends on 31 July the following year.

The first individual tree to be declared as protected under the National Forests Act of 1998, in 2003, was a historic English oak tree, the only remnant of the old Sophiatown that was razed by the previous government when it resettled that community in the 1950s.

This intervention was an attempt by a property



Virgilia oroboides, also known as the blossom tree

owner to stop the imminent destruction of the tree. Protection was afforded only after the tree was severely pruned.

This was the starting point of the Champion Tree Project, aimed at preventing similar destruction of other important trees.

More than 70 trees and groups of trees have been declared by the department as champion trees, based on criteria such as size, age and historical value. These trees are all protected under the National Forests Act of 1998. They include the Tsitsikamma Big Tree along the Garden Route, the Post Office milkwood tree of Mossel Bay, the Sagole baobab in Limpopo and camphor trees planted at Vergelegen Estate in the Western Cape three centuries ago.

The oldest planted tree in South Africa is



Grewia occidentalis, also known as the cross-berry

a saffron pear, brought from the Netherlands and planted in the Dutch East India Company's Gardens in Cape Town more than three centuries ago, supposedly by Jan van Riebeeck.

Historic trees include a poplar tree, which served as a landmark for refugees during the apartheid regime who found a safe haven in the Johannesburg house of Ruth Fischer, the



Barringtonia racemosa, also known as the powder-puff tree.

daughter of Bram Fischer, who was a founder member of the South African Communist Party.

Million Trees Programme

The Million Trees Programme was launched in 2007 as part of a UN greening initiative to encourage countries worldwide to plant more

trees. Its purpose is to ensure that at least one million trees, including fruit trees and indigenous ornamental shade trees, are planted every year.

In South Africa, the Million Trees Programme is a partnership between the three spheres of government, non-governmental and community-based organisations, schools and the corporate sector. Since its inception, more than four million trees have been planted, 40% of which were fruit trees planted mostly in poorer rural areas of the country.

In an effort to ensure the programme is implemented widely, government is calling on the corporate sector to make a contribution, and for citizens and organisations to become involved.

A million trees had been planted across the country by the end of 2013. This will bring to 13 million the number of trees planted nationwide since the project began in 2000.

The million-a-year tree plantation programme is in partnership with petroleum giant, Total South Africa.

Resources

Sustainable forest management

Broadly speaking, there are three categories of forest, namely indigenous forests, woodlands and plantation forests. Forestry activities in indigenous forests and woodlands are not limited to the protection of the resource as a natural heritage, but include its development, use and management, as well as the management and processing of non-timber forest products.

Plantation forestry practices include, among others, the establishment of vast areas of land with exotic species that are harvested and processed into pulp for the paper and packaging industries, sawn timber, furniture, shelving and flooring. By the end of June 2012, 1 539 752 ha of plantation forestry land (planted and conservation areas combined) in South Africa were certified by the Forest Stewardship Council (FSC), the second largest area in the southern hemisphere after Brazil.

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 conducted.

There has been an increase in the number of non-corporate growers who have become certified. This may 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 sustainable forest management, the forestry industry is also involved in the National Forest Advisory Council Committee for Sustainable Forest Management, which develops criteria, indicators and standards for sustainable forest management, tailored to meet South Africa's specific conditions.

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

Indigenous forests

Only about 0,5% of South Africa's total land area is covered by natural forests. About half of the more than 1 700 indigenous tree and shrub species, representing some 530 000 ha of dense growth, 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 in isolated valleys and ravines.

A number of these natural forest regions, such as the Tsitsikamma National Park, are important tourist attractions.

The large Afro-temperate forests of the southern Cape, although distributed close to the coast, are aligned with the inland forest types of the Eastern Cape, KwaZulu-Natal, Mpumalanga and Limpopo. This is because the southerly temperate latitudes compensate for the altitude of inland forests.

Almost half of all natural forests in South Africa are found on private property or land under communal tenure. A detailed inventory of natural forests helps government to monitor changes in forest areas.

Although the country's low natural forest coverage has led to the development of the commercial forestry sector over the last 100 years, natural forests have continued playing a major role in the livelihoods and well-being of many rural communities. The use of natural forests as sources of building material, fuel wood, food and medicine is increasing, with an estimated 80% of South Africa's population still using medicinal plants, most of which are sourced from natural forests.

The forest-type classification for natural forests represents 24 broad forest types. The Natural Forests Protected Areas System guides

the setting aside and demarcation of natural forests as protected areas.

Systematic timber harvesting occurs in certain areas of southern Cape forests and on a smaller scale, in the Amathole forests in the Eastern Cape. This sustainable harvesting system concentrates on the removal of small quantities of senile trees dying off within the forest. 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).

The seven-week fern (*Rumohra adiantiformis*), harvested in the Knysna and Tsitsikamma forests, is another valuable product of indigenous forests. The South African market for this fern is considerable and reaches its peak in September, when sales have been known to exceed 420 000 bunches.

Woodlands

The woodlands, also known as savannas, constitute a forest resource of major importance in South Africa. It is the most accessible forest resource for poor communities and contributes in the region of R2 000 to R5 000 to poor households annually. Natural forests cover less than one million ha of land in total, plantation forestry covers less than 1,3 million ha and the woodlands collectively cover about 29 million ha to 46 million ha.

The cover includes extensive areas in the low-lying, drier areas of Limpopo, KwaZulu-Natal and Mpumalanga. Rich biodiversity is found in savanna woodland comprising 5 900 plants, 540 bird species and 175 mammals. These include iconic species such as the Big Five group of mammals that are important to the tourism industry. Several protected tree species of the savanna, such as camel thorn and leadwood, contribute substantially to the lucrative braai wood market, and guidelines have been set for licensing processes to assist with the control of their use.

Kathu Forest in the Northern Cape is the first woodland area to be declared protected woodland under the National Forests Act of 1998.

In the past, this resource was not really recognised as a forestry responsibility, except where some woodland occurred on State-forest land in conservation areas. However, the National Forestry Action Programme of 1997 identified woodland management as a key area of operation for forestry. The New Forests Act of 1998 also includes woodland in its definition of forests and mandates monitoring and reporting on the state of the woodlands. This legislation protects woodlands on private and communal land, as well as in state forests, while promoting sustainable use.

Savanna 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 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. They form the backbone of the livelihoods of millions of people. The annual marula-fruit (*Sclerocarya birrea*) harvest, for example, is worth some R1,1 billion a year to rural communities.

There are 87 savanna woodland types, and although the biome as a whole is fairly well protected in formal and private reserves, many under-protected savanna types have been identified.

Another woodland type is the albania thicket biome, characterised by dense growth of woody and succulent plant species. There are 13 thicket types, which together cover about three million ha. Extensive spekboom plantings are underway in the Eastern Cape to restore the carrying capacity of degraded thicket areas, and to capitalise on the high carbon sequestration rates of this species as a climate change offset.

Commercial forests

Commercial forest plantations predominantly meet South Africa's demand for wood. During the 1930s, government started extensive commercial plantations to make South Africa self-sufficient in its timber requirements, and to provide more job opportunities.

Commercial plantations of exotic species proved to be a sound investment and the private sector established large plantations of pine, eucalyptus and wattle. South Africa's plantation forests cover about 1,2% of the combined cultivated (arable) and grazing land.

The commercial forestry industry in South Africa is committed to practising sustainable forest management and is a world leader in forest certification.

Stringent environmental codes of practice are implemented in all plantation and processing activities.

The Institute for Commercial Forestry Research (ICFR) completed its role in developing the National Forest Protection Strategy for the DAFF, a project funded by the FAO of the UN.

Another development which will assist in enhancing forest protection is the MoU, formalising FSA's support and funding for these activities at the Forestry and Agriculture Biotechnical Institute (FABI), which has been entered into with the University of Pretoria (UP).

FABI's state-of-the-art biological control and quarantine facility at the UP was officially opened in May 2011.

The FAO and DAFF approved the National Forest Protection Strategy, which includes forest fire-related matters, in 2011. Once fully implemented, the strategy is expected to provide the industry with additional resources and enhance the coordination of responses to combat forest fires.

Plantation yields

Sappi has 290 million commercial trees on its land. The company harvests 35 million trees and plants 37 million trees every year. Sappi manages about 140 000 ha under natural vegetation, which includes grasslands, indigenous forests, wetlands and riverine areas.

The timber is used in wood products such as roof trusses. It is also pulped, so that the wood fibre may be used for newspapers, boxes, paper bags and paper.

South Africa's intensively managed commercial forestry plantations are recognised as some of the most productive in the world – not only climatic and soil conditions but also advanced management techniques. Consequently, from a limited geographic footprint of 1,27 million ha, the industry can produce, on a sustainable and annual basis, between 16 and 18 Mt of timber a year.

Production from the country's plantation forests amounted to 16 Mt (18,5 mm³) in 2011, some 800 000 tons or 5,3% more than the 15,2 Mt (17,5 mm³) recorded in 2010.

In terms of production by product, pulpwood production at 10,3 Mt was by far the highest, representing 65% of total production. Sawlog production was 4,5 Mt (28% of total).

Mining-timber production of 573 000 tons and the production of other products such as poles and charcoal of 657 000 tons made up the balance.

Socio-economic reform and growth

The forestry vision states that forests are managed for people and that there is a need to create an enabling environment for economic and social development through sustainable forestry, especially at local level.

Forestry strategies to achieve this vision include forestry, enterprise development, aimed at creating opportunities for people to use forests including indigenous forests, woodlands and plantations, and forest-based resources for economic growth, income-generation and job creation.

The forestry enterprise development concept is central to government's pro-poor agenda

and also a key component of Broad-Based Black Economic Empowerment (BBBEE) in the forestry sector.

BBBEE Charter

The BBBEE Charter process is one of many government strategies aimed at transforming the economy. The formulation and implementation of BEE programmes at different levels and in different sectors of the economy include partnerships between government and the private sector, including trade unions and community-based organisations.

The BBBEE Charter for the forestry sector will be instrumental in achieving objectives such as increasing the number of black people, particularly women, who own, manage and control enterprises and productive assets; and facilitating ownership and management of enterprise and productive assets by communities, workers, co-operatives and other collective enterprises.

Under the charter, government aims to process about 15 000 ha of water-use licence applications a year for the next 10 years to obtain a nett increase in afforested land of about 10 000 ha a year or 100 000 ha over the entire period.

Community forestry

Community forestry is designed and applied to meet local social, household and environmental needs and to benefit 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 of the DAFF is an integrated approach that contributes to achieving the sustainable management of South African forests.

Elements of participatory forest management were initially developed for indigenous state forests.

However, the aim is to use participatory forest management as an approach to managing 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.

Ninety-six community-stream flow-reduction activity applications, totalling about 13 000 ha,

were supported by the departments of agriculture, forestry and fisheries and trade and industry through assistance provided in the undertaking of environmental impact assessments in the Eastern Cape.

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 healthier living, especially in disadvantaged communities, through environmental awareness and greening programmes.

The FTFA was started in 1990 to address sustainable development through greening, climate change action, sustainable natural resource management and food-security programmes.

The FTFA works in partnership with government, the private and public sectors and civil society. Its goal is to provide trees to as many underserved communities as possible, with the help of sponsors and certificate programmes.

The FTFA; the departments of water affairs and of agriculture, forestry and fisheries; and the Institute of Environment and Recreation Management manage the Urban Greening Fund.

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 create a greener, healthier and more secure life.

Fisheries

The Department of Agriculture, Forestry and Fisheries is tasked with managing the development and sustainable use of marine and coastal resources; maximising the economic potential of the fisheries sector; and protecting the integrity and quality of the country's marine and coastal ecosystems.

The South African coastline covers more than 3 000 km, linking the east and west coasts of Africa.

These shores are particularly rich in biodiversity, with some 10 000 species of marine plants and animals 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 main challenge in fisheries is to create a balance between maximising the social and economic potential of the fisheries industry; protecting the integrity and quality of the country's marine and coastal ecosystems and addressing transformation in the sector.

In line with international trends, the department recognises fisheries as an economic activity rather than a purely environmental or biodiversity matter.

Government has expanded the mandate for fisheries management by adding fresh water and inland fisheries, as well as aquaculture, to the department's existing responsibilities.

The department will gradually establish offices of the fisheries branch in coastal, as well as inland provinces.

These are economic decisions, which contribute to employment creation and poverty alleviation.

Industry and products

South Africa is among the global fishing nations which have identified the challenges within their fishing industry. With 22 commercial fisheries sectors and new fisheries being explored and experimented with, South Africa has two fisheries sector components.

Wild capture fisheries include three distinct components, commercial, recreational and subsistence fisheries, each of which requires specific research and management interventions.

The aquaculture (fish farming) sector is considered underdeveloped and as a result, has been prioritised, due to declining wild stocks.

Legislation and policies

- The Small-Scale Fisheries Policy seeks to address imbalances of the past and ensure that small-scale fishers are accommodated and properly managed. For the first time, fishing rights will be allocated on a group, rather than an individual basis. The policy further aims to

The World Forestry Congress will be hosted in KwaZulu-Natal at the Inkosi Albert Luthuli International Convention Centre (ICC) in Durban, in 2015.

More than 7 000 delegates, including scientists, policymakers, community-based organisations, non-governmental organisations, civil society organisations and government officials from around the globe are expected to attend this event to discuss issues affecting forests.

The key discussion points of the 2015 conference will be the role of forests in food security, climate change, agro-forestry and the economic value of trees.

support investment in community entities to take joint responsibility for sustainably managing the fisheries resources and to address the depletion of critical fisheries stocks.

- The department has entered into a service-level agreement with the South African Navy to manage its fleet of four patrol vessels and three research vessels for a year, while the department considers its various options regarding the long-term management of these vessels.

Resource management

The department increased its capacity to combat illegal, unregulated and unreported fishing, and launched an anti-poaching project in the Western Cape, funded through the Working for Fisheries Programme.

This enabled the department to deploy 60 military veterans in the Overberg region to serve as the “eyes and ears” of government.

The fishing sector comprises large-scale operators and small-scale and recreational fishermen and women.

The 2012 Status of the South African Marine Resources Report confirms that the continued general decline in local wild fish resources shows no exception to global deteriorating trends.

According to a recent UN report, more than two thirds of the world's fisheries have been overfished or are fully harvested, and more than one third is in a state of decline, due to the loss of fish habitats, soaring pollution levels in oceans and rivers and climate change.

According to the report, abalone stocks remain in a depleted to heavily depleted state as the resources continue to decline, due to increasing levels of poaching and ecological factors.

Meanwhile, line fish resources range from heavily depleted to optimal states, depending on species.

There are, however, signs of a positive response by some species to the emergency management measures implemented in 2000.

Given the low population sizes of many line fish species, however, present management measures are expected to assist in allowing stock to increase.

Under the operational management procedure, the West Coast rock lobster is showing signs of recovery.

Deep-sea fishing patrols by the fisheries branch resumed in April 2013, in accordance with an agreement between the Department of Agriculture, Forestry and Fisheries' fisheries branch and Damen Shipyards, following the expiry of the year-long operating Memorandum of Understanding between the fisheries branch and the South African Navy.

Deep-water hake remains depleted, but its status is improving, whereas shallow-water hake is considered optimal to abundant.

The implementation of precautionary management approaches to hake fisheries in recent years has resulted in a faster than anticipated recovery of deep-water hake.

Harders, which are the main target of the beach-seine and gillnet fisheries, remain in a depleted to heavily depleted state.

Environmental anomalies and illegal netting have affected the recruitment of the species in recent years.

The abundance of Agulhas sole has remained relatively constant over the past 15 years, while Cape horse mackerel has increased in abundance in recent years, due to good recruitment, and the stock is considered to be in an optimal state.

The status of Patagonian tooth fish remains unknown, although some data suggest that this resource is depleted and may be declining.

The anchovy stock is at the lowest level observed in the past 15 years, but sardine and round herring stocks continue to increase.

In South Africa, the fisheries sector is worth around R6 billion per annum and directly employs some 27 000 people in the commercial sector. Thousands more and their families depend on these resources for food and the basic needs of life.

The total allowable catch for the West Coast Rock Lobster 2013/14 fishing season has been set at 2 167,06 tons. The total allowable catch apportioned to the commercial offshore sub sector is set at 1 356,56 tons and for the commercial near-shore subsector, it is set at 451 tons.

The total allowable catch apportioned for the subsistence (small-scale/interim relief) subsector, is set at 276 tons (138 kg per fisher).

The apportionment for the recreational fishing subsector remains unchanged at four west coast rock lobsters per person per day for the duration of the fishing season.

The number of fishing days for the 2013/14 recreational fishing season has been determined at 26 days.

The 2013/14 west coast rock lobster recreational fishing season opened on 15 November 2013 and closed on 21 April 2014.

The size restriction remains at 80 mm carapace length and recreational fishing permits will only be issued to persons above the age of 12 years. Any west coast rock lobster caught, collected or transported shall be kept in a whole state.

West coast rock lobster caught with a recreational permit may not be sold by any person.

Recreational west coast rock lobster permits are obtainable at the Post Office, at a cost of R92 per permit and are valid for the entire recreational fishing season.

The department's decision to pursue the recovery target has been welcomed by WWF and carries the unanimous support of all the WCRL user sectors.

In November 2013, over 500 delegates from over 50 countries convened in Cape Town for the 23rd regular meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT).

ICCAT is a Regional Fisheries Management Organisation (RFMO) that is responsible for the management of tuna and tuna-like species in the Atlantic Ocean and Mediterranean Sea.

The meeting added weight to South Africa's negotiating position on the adequate allocations of key species, as tuna fisheries in the Atlantic offer opportunities for development and job creation in the country, which have not been fully exploited.

South Africa's strategic intent with participating in and hosting the annual ICCAT meeting was to ensure long-term fishing access in the Atlantic Ocean for South African fishing companies in the tuna pole fisheries and the developing large pelagic fisheries.

Access to the Atlantic Ocean is essential for encouraging future investment in the tuna/swordfish fisheries, to create the enabling environment for these fisheries to develop.

ICCAT will benefit South Africa with management activities, including collating fisheries data, guiding research, conducting stock assessments, establishing management and conservation measures and issuing country quotas.

Aquaculture

Aquaculture incorporates the breeding, trading or rearing of aquatic organisms in a controlled or selected aquatic environment for recreational, commercial or subsistence purposes.

Fisheries and aquaculture support the livelihoods of an estimated 540 million people. Aquaculture, is the farming of aquatic organisms and is divided into fresh-water culture and mariculture.

Species farmed in the latter include dusky kob, abalone, Pacific oysters, Mediterranean mussels and black mussels, among others. According to the National Aquaculture Strategic Framework, the sector is relatively small and government wants to create a climate in which it can grow.

Special attention will be paid to freshwater aquaculture, as it has shown growth potential.

Government will also push investments in research, development technology, transfer and extension, as well as education and training programmes in aquaculture.

In March 2013, government launched the R800-million Agriculture Development Enhancement Programme, which offers cost-sharing grants of R40-million per company.

The aim is to create more jobs in the sector. The grants will be made available for machinery, equipment, infrastructure, commercial vehicles and work boats, in pursuit of boosting competition in the industry.

Abalone fishing is severely restricted in South African waters, but poaching is rife, as it is a lucrative trade.

A big cause for the decline in abalone numbers is rampant poaching over the years. The species is highly coveted and fetches high prices, especially in the Far East.

In May 2013, Cabinet approved the National Aquaculture Policy Framework (NAPF). The policy provides a unified framework for the establishment and development of an industry that contributes towards sustainable job creation and increased investment.

The NAPF was developed against the backdrop of a global aquaculture sector that has seen an increased demand for fishery products.

In South Africa, marine and freshwater aquaculture presents a good opportunity to diversify fish production to satisfy local demand; contribute to food security, job creation, economic development and rural development; and improve export opportunities.

South Africa hosted the Third Global Conference on Agriculture, Food Security and Climate Change in the fourth quarter of 2013, led by the Department of Agriculture, Forestry and Fisheries.

Subsistence fisheries

Participation in subsistence fisheries is broad – coastal communities have traditionally made use of intertidal and shallow-water resources as a source of food. Only surplus not consumed by fishers is sold locally.

Some 147 fishing communities, 28 338 fisher households and about 29 233 people are considered true subsistence fishers.

A draft policy for the recognition, allocation and management of small-scale fishing rights is being developed for small-scale fishing.

Recreational fishing

With South Africa's extensive coastline spanning two oceans and its numerous dams, lakes, rivers and streams, South Africa is a recreational

fisher's paradise. However, recreational fishing may only be undertaken with a valid permit, and recreational fishing is limited to certain times of the fishing season.

To reduce user conflicts between commercial and recreational fishing, and to, protect stocks during breeding periods, certain areas have been declared closed areas.

Recreational fishers are also subject to bag limits of fish on a per-day basis.

The department's fisheries division has published a recreational fishing pamphlet to guide recreational fishers regarding the number and species of fish they may catch and where they may catch fish. Annual recreational fishing licences in all industries total about 300 000, with income generated from these licences amounting to R18 million. The actual annual catch is about 17 000 t of high-value species.



