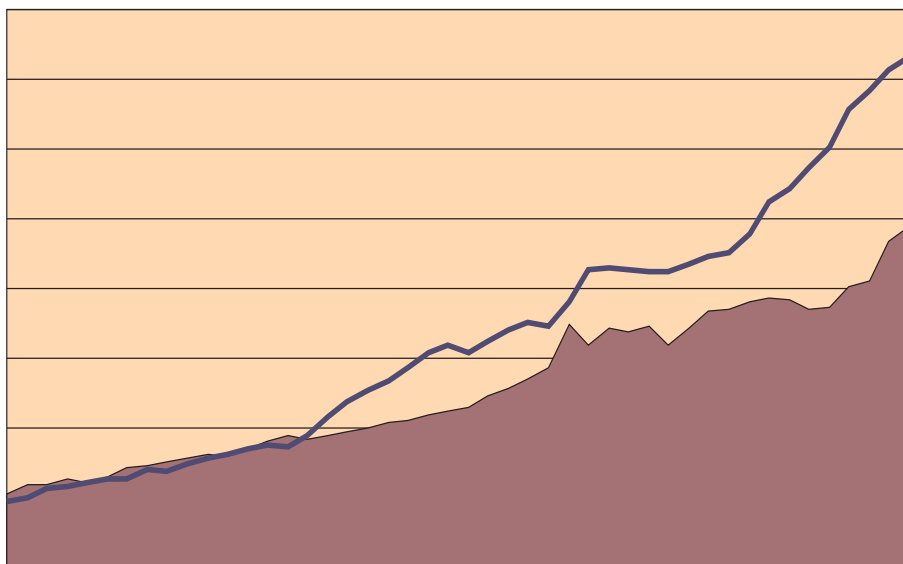




Africa Rice Center (WARDA)



2007 Africa Rice Trends



Africa Rice Trends 5th edition

About Africa Rice Center (WARDA)

Africa Rice Center (WARDA) is an autonomous intergovernmental research association of African member states. WARDA is also one of the 15 international agricultural research Centers supported by the Consultative Group on International Agricultural Research (CGIAR).

WARDA's mission is to contribute to poverty alleviation and food security in Africa through research, development and partnership activities aimed at increasing the productivity and profitability of the rice sector in ways that ensure the sustainability of the farming environment.

The modus operandi of WARDA is partnership at all levels. WARDA's research and development activities are conducted in collaboration with various stakeholders—primarily the national agricultural research systems (NARS), academic institutions, advanced research institutions, farmers' organizations, nongovernmental organizations and donors—for the benefit of African farmers, mostly small-scale producers, as well as the millions of African families for whom rice means food.

The New Rice for Africa (NERICA), which is bringing hope to millions of poor people in Africa, was developed by WARDA and its partners. The success of the NERICAs has helped shape the Center's future direction, extending its horizon beyond West Africa into Eastern, Central and Southern Africa.

WARDA hosts the African Rice Initiative (ARI), the West and Central Africa Rice Research and Development Network (ROCARIZ), the International Network for Genetic Evaluation of Rice in Africa (INGER-Africa) and the Inland Valley Consortium (IVC). It also supports the Coordination Unit of the Eastern and Central African Rice Research Network (ECARRN) based in Tanzania.

Since January 2005, WARDA has been working out of the International Institute of Tropical Agriculture (IITA) Benin station in Cotonou, having relocated from its headquarters in Bouaké, Côte d'Ivoire, because of the Ivorian crisis. WARDA has regional research stations near St Louis, Senegal and at IITA in Ibadan, Nigeria.

For more information, please visit www.warda.org

Temporary Headquarters and Research Center

Africa Rice Center (WARDA)

01 BP 2031, Cotonou, Benin

Tel.: (229) 21.35.01.88; Fax: (229) 21.35.05.56

E-mail: warda@cgiar.org

WARDA Sahel Station

ADRAO, B.P. 96,
Saint-Louis,
Senegal

Tel: (221) 962 6493

(221) 962 6441

Fax: (221) 962 6491

E-mail: warda-sahel@cgiar.org

WARDA Nigeria Station

WARDA
c/o International Institute of
Tropical Agriculture (IITA)
Oyo Road, PMB 5320
Ibadan
Nigeria

Tel: (234-2) 241 2626

Fax: (234-2) 241 2221

E-mail: warda-ibadan@cgiar.org

Eastern and Central Africa Rice Research Network (ECARRN)

c/o Mikochei Agricultural Research
Institute,
PO Box 6226
Dar es Salaam, Tanzania

Tel.: (255) 222 775 568

(255) 744 788 495

Fax: (255) 222 700 092

Email: a.luzi-kihupi@cgiar.org



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Aliou Diagne, Ibrahima Bamba, Ali A. Touré and Achille Medagbe

Preface for the Fifth Edition

WARDA set up a West Africa Rice Statistics Data Bank to serve rice policy and market development analysis. The first edition of the West Africa Rice Statistics Data Bank was published in 1996 as *Rice Trends in West Africa*.

In the process of updating these rice trends, the main data sources used to set up the West Africa Rice Statistics Data Bank (WARSDB) was the FAO statistical database (FAOSTAT–Agriculture Data, <http://www.fao.org/>) and USDA data are also used wherever data is missing from FAOSTAT. Main indicators available in WARSDB relate to harvested area of paddy rice, yield of paddy rice, production of paddy rice, quantity of rice imports (milled equivalent), value of rice imports (milled equivalent), total rice consumption (milled equivalent), per-capita rice consumption.

Initial data series start from 1961 and run to 2006. The data for the year 2006 are projections data based on the trend information (growth rate) calculated for the period 1991–2000. The information given by WARSDB relates to annual growth rates; yearly averages were calculated for some selected periods. For each indicator, annual growth rates and yearly averages were calculated for selected periods, namely 1961–1970, 1971–1980, 1981–1990, 1991 to 2000, and 2001–2005. An actual year value is given for comparison purposes and this relates to the year 2006. This information is organized in two sections from page 23 onwards. The first section gives information for the major geographical sub-regions of sub-Saharan Africa, namely West Africa, Central Africa, East Africa, Southern Africa, North Africa, and sub-Saharan Africa (as a whole). For comparison purposes, other world geographical regions are included in the WARSDB. Beginning on page 29, data and information on all the selected indicators are given for the individual countries for each sub-group. Commentaries based on the analysis of the trends are also made.

Foreword

In a world increasingly without borders, having reliable information about trends in production, consumption and trade in rice – a crop of rapidly increasing importance in sub-Saharan Africa – is of crucial importance. This new edition of Africa Rice Trends comes at a moment when world rice consumption is growing at 4% per year, outstripping production growth.

In Africa, rice consumption is growing at even faster rates, and replacing more traditional crops due to population growth and urbanisation. Rice production in Africa cannot keep up with rising demand, and the increases that have been recorded are mostly due to the extension of harvested area. The shortfall is imported at ever increasing prices. However, the quantity of rice available on the world market is relatively small compared to total world production. World rice stocks have decreased by 30% per year, and if current trends continue, world ending stocks of rice will diminish to zero between 2015 and 2020.

Rice prices have risen by as much as 40% over the last few years and are predicted to continue to rise. Africa, as a major importer of rice (10 million tonnes in 2007, i.e. one-third of what is available on the world market) is facing increasing difficulty in responding to the rapidly increasing demand within the continent. Given the thin and unstable nature of the world rice market, rice production in sub-Saharan Africa must increase in a sustainable manner.

I sincerely hope that this updated overview of trends in the rice sector in sub-Saharan Africa will help decision-makers and policymakers along with the research and development community at large to enhance the competitiveness and output of the African rice sector for the well-being of Africa's millions of rice producers and consumers.



Dr Papa A Seck
Director General
Africa Rice Center (WARDA)

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Africa Rice Trends

Characterization of the overall rice sector in SSA is complex due to the variable status conferred on rice by African consumers, the great diversity of ecosystems within which the crop is grown (upland, rainfed lowland, irrigated lowland, mangrove swamp etc.), the different rice production technologies used, and widely differing government policies. Moreover, factors affecting the global rice sector, i.e. the increasing interlinkages among global agricultural economies and the net importer status of SSA, have a strong bearing on the rice sector in SSA. For instance, current market developments do not bode well for food security in SSA. Global rice consumption has been outstripping global rice production since 2002. This is causing a gradual drop in globally-held rice inventories and is coupled with rising rice prices in the global market. The current market situation has the potential of further complicating the food security equation in many SSA countries.

Many SSA countries have made significant strides towards increasing their rice production by encouraging the adoption of new and improved varieties but mostly through area expansion and extensification. Initiatives currently underway in several countries – most significantly in Nigeria – are contributing to what is likely to become a trend of increasing production in SSA. Sustained high prices for rice in the international market will bolster these initiatives but this brief also highlights how consumption of rice in Africa continues to outstrip production.

West Africa remains at the hub of rice production in sub-Saharan Africa but the shortfall in rice production has increased significantly as consumption rises at a rate well above that of production growth. Southern Africa is experiencing the greatest rises in consumption of rice but only Mozambique is a significant producer of home-grown rice.

In East Africa, Madagascar, the Comoros and Tanzania can be numbered among the world's leading rice-consuming nations but only Madagascar can claim anything like self-sufficiency. There are some signs from the reported figures that the end of regional conflicts can also signal a return to rice production. The evidence from the 2001–2005 statistics shows a recovery in production and in consumption in several post-conflict countries.

Production: In 2006, paddy rice production in SSA was estimated at 14.2 million tonnes (Table 1). Rice production in SSA grew at 3.23% per annum from 1961 to 2005. This growth rate was higher than the yearly population growth rate of 2.90% during the same period.

Table 1. Average paddy production during selected periods (million tonnes)

Sub-region	1970s	1980s	1990s	2001–2005	2006†
West Africa	2.73	4.50	6.73	7.55	9.32
Central Africa	0.23	0.36	0.44	0.45	0.48
Eastern Africa	2.41	2.81	3.36	3.89	4.60
Southern Africa	0.12	0.11	0.15	0.18	0.20
SSA	5.49	7.78	10.69	12.07	14.20

† Estimate obtained by multiplying production level in 2005 by the average growth rate of production during the previous decade.

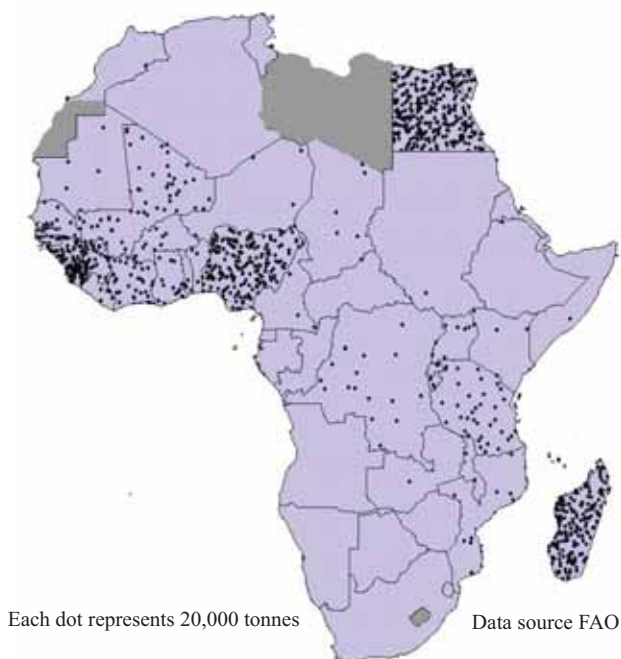


Figure 1. Paddy rice production in 2006

Over the five years (2001–2005), expansion of rice production stepped up, with an average yearly growth rate of 5.81%. The average quantity of milled rice produced in SSA during 2001–2005 was 8.1 million tonnes¹ per year. West Africa and East Africa are the main rice-producing sub-regions in SSA (Figure 1). These two sub-regions account for 95% of the total rice produced in SSA. But, the Southern Africa sub-region had the highest rate of production expansion since the 1990s (Figure 2).

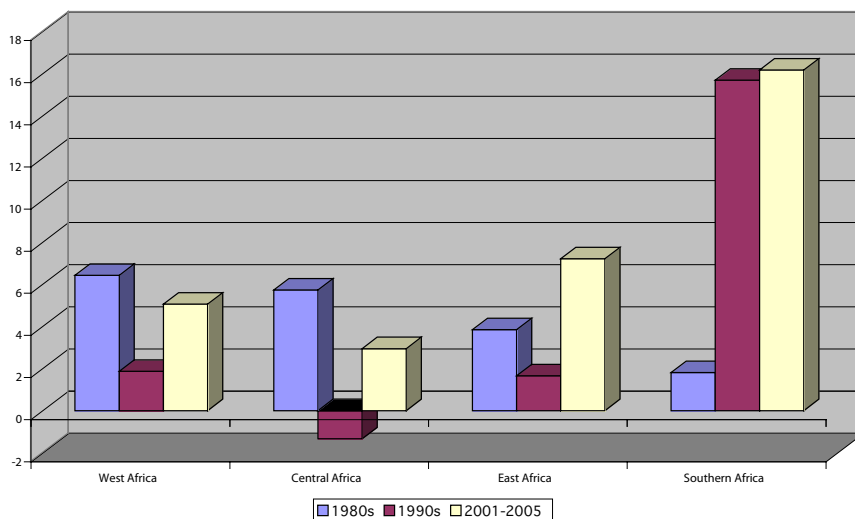


Figure 2. Production growth rates (%)

Harvested rice area and yield trends in SSA: sub-Saharan Africa harvested an average of 7.86 million hectares of rice per year during 2001–2005, with 3.29% per annum growth rate. The expansion in total area cultivated explains much of the increase in production, as the average annual growth of aggregate rice yield was negative (–1.14%) and average yield² stood at 1.51 t/ha (see Table 2).

Table 2. Average paddy yield and harvested area, 2001–2005

Sub-region	Yield (t/ha)	Harvested area (million ha)
West Africa	1.62	4.66
Central Africa	0.96	0.47
Eastern Africa	2.20	1.77
Southern Africa	0.91	0.19
SSA	1.51	7.86

¹Using a milled–paddy rice conversion factor of 0.67.

²A caveat is warranted regarding the interpretation of rice yield data in Africa, because it constitutes an average across all rice-growing ecologies: the high predominance of upland rice farming substantially lowers aggregate rice yield in Africa.

The rate of growth of harvested area has been faster than the rate of yield increase – this is consistent with the historical pattern of rice-sector dynamics in SSA, where increase in total output is driven mainly by extensification, i.e. bringing more land into rice cultivation. The limited growth of the aggregate productivity of rice is due to the large share of rainfed rice and subsistence-based rice farming systems. Rainfed production systems (upland and lowland) account for 63% of rice planted areas in SSA compared to 37% worldwide.

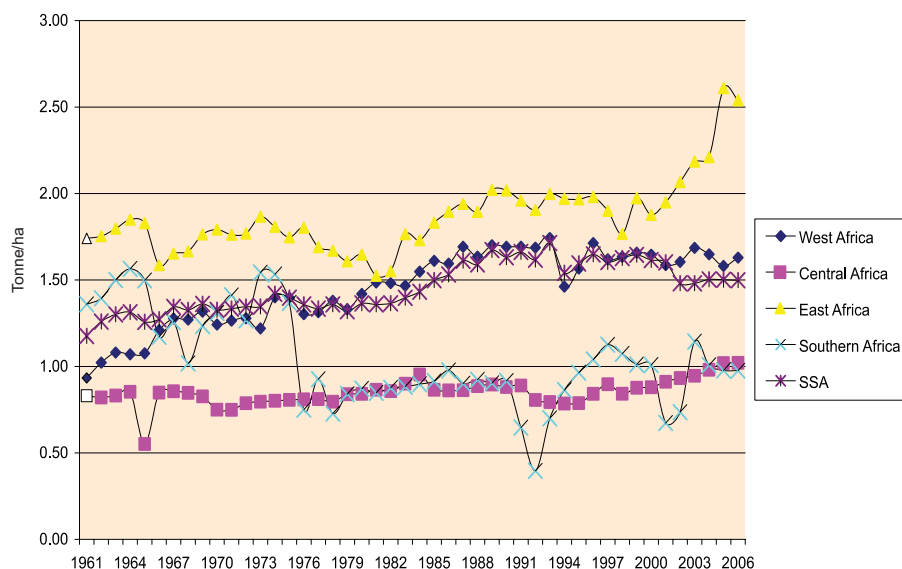


Figure 3. Trends in rice yields

The low aggregate yield figures do, however, suggest a strong and mostly untapped potential for boosting the productivity of rice in SSA, should the region apply the appropriate technologies and adopt an enabling rice policy environment. The current surge in rice price in the international market should give new impetus for enhancing investment in the rice sector in order to expand production and reduce reliance on imports.

Consumption: among the major cereals, rice is the most rapidly growing food source on the continent. Between 1961 and 2005, the annual increase in rice consumption was 4.52% in SSA – mostly faster than rice production growth during the same period. In 2006, the total quantity of milled rice consumed in SSA was 14.7 million tonnes.

During 2001–2005, rice consumption in SSA grew at 5.84% per year. This positive development in rice consumption can be largely attributed to strong demand in Southern and West Africa, where rice consumption grew (on average) at 11.58% and 6.55% per year, respectively (Figure 4). Average per capita rice consumption in SSA was 18 kg/year in 2001–2005.

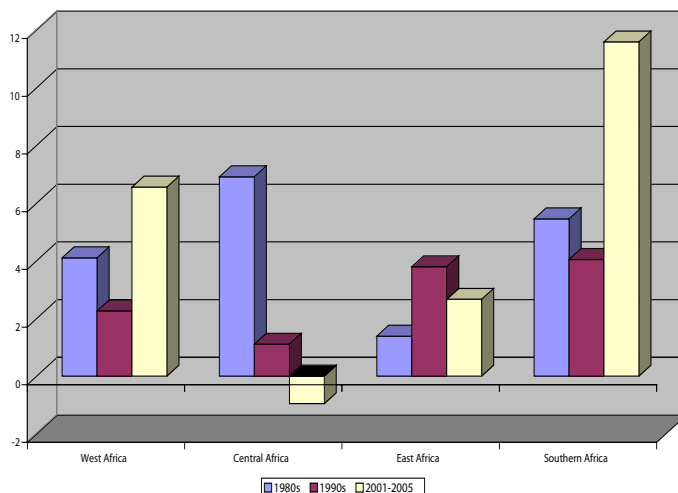


Figure 4. Rice consumption growth rates (%)

Table 3. Annual growth rate of yield and harvested area, 2001–2005

Sub-region	Yield (% change)	Harvested area (% change)
West Africa	0.20	4.84
Central Africa	2.78	0.16
Eastern Africa	6.73	0.45
Southern Africa	11.19	4.49
SSA	2.13	3.29

Self-sufficiency: the self-sufficiency ratio in rice in SSA, measured by the ratio of production over consumption, declined steadily from 112% in 1961 to 61% in 2006, when the continent relied on the international rice market to satisfy about 39% of its rice consumption needs. Figures 4, 5 and 6 illustrate, respectively, the country-level rice self-sufficiency, major rice importing countries, and the widening gap between rice production and consumption in SSA.

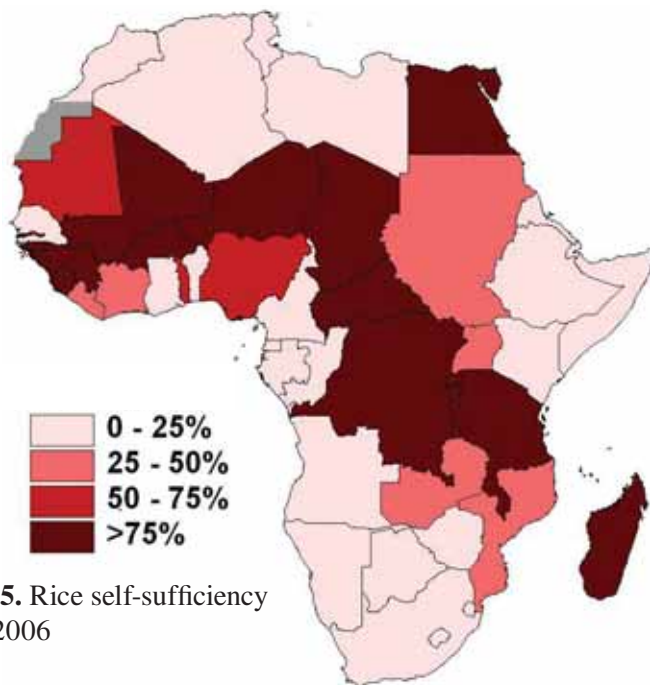


Figure 5. Rice self-sufficiency status, 2006

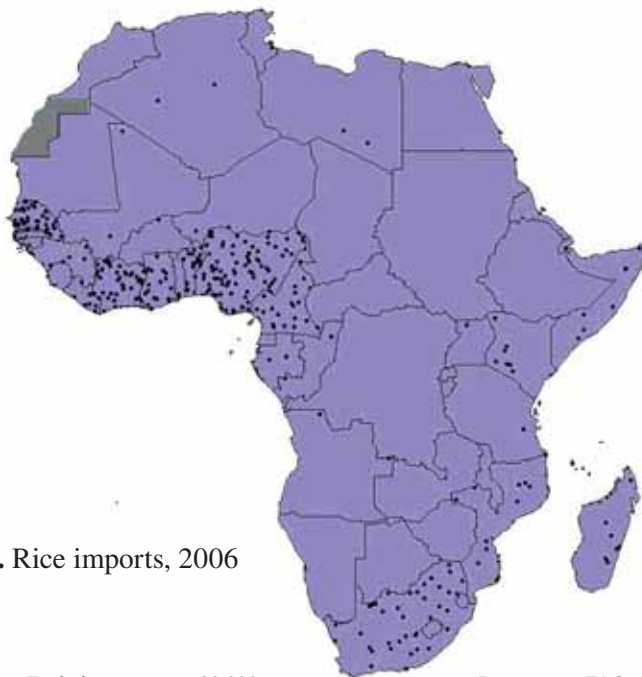


Figure 6. Rice imports, 2006

Data source FAO

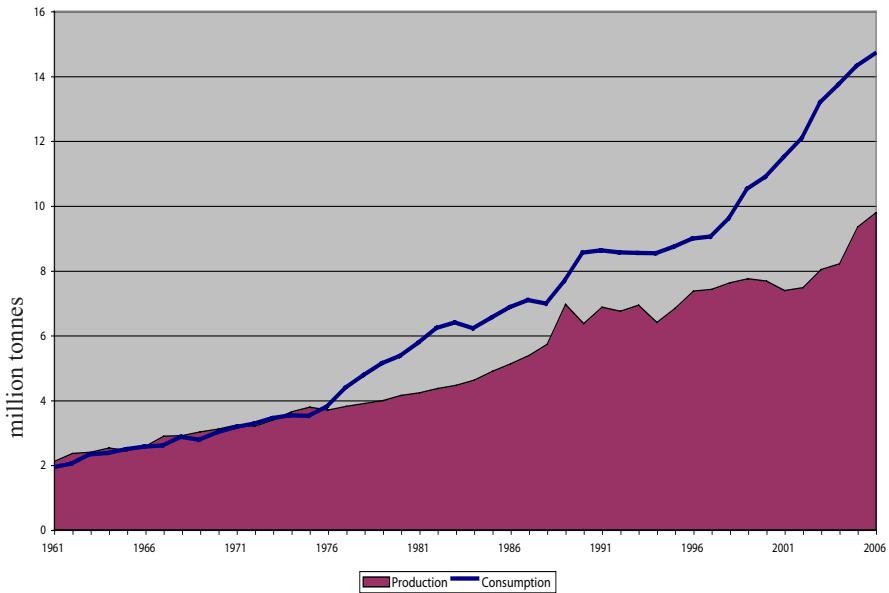


Figure 7. Rice production (milled equivalent) and consumption in SSA, 1961–2006

At 3.18% per annum from 1961 to 2006, rice production average growth rate in SSA has been higher than the yearly average population growth rate of 2.90% but substantially lower than the rice consumption growth rate, which has been increasing steeply at 4.52% per annum. This explains the widening rice supply gap and the growing imports of rice into SSA to bridge strong demand for rice.

Outlook for 2007: the production outlook appears favorable, as the FAO Rice Monitor edition of June 2007 forecasts that paddy production for the 2007 rice campaign will reach 22.1 million tonnes. This will mark the sixth consecutive year of production increase in Africa. The fact that production increases in the past two years are attributed to “positive effects of the adoption of NERICA rice varieties” and “strong institutional support” in some rice-producing countries such as Nigeria underscores the qualitative progress that the African rice sector is accomplishing. Moreover, rising rice prices may have provided sufficient incentive to further increase rice planting.

Overview of recent developments in West Africa

Production: in 2006, West Africa produced 6.24 million tonnes of milled rice and had a yearly average of 5.06 million tonnes of white rice produced over the period 2001–2005 (Table 4). Paddy production accounted for 65% of total rice produced in SSA during 2001–2005. In fact, rice production in West Africa more than doubled in 20 years, from 2.76 million tonnes in 1985 to 5.75 million tonnes in 2005 (milled-rice equivalent).

The aggregate performance of rice production in West Africa, measured by the average annual growth rate of rice production, was substantial (5.06%) during 2001–2005. Production expansion in West Africa grew faster than the overall growth rate of production on the continent. But, with annual rice consumption increasing at 6.55% – well above production growth rate over the 2001–2005 period – the shortfall in local rice production in West Africa has increased significantly. As a result, the main rice producing and consuming sub-region of the continent imports up to 42% of its consumption requirements via the international market.

The growth rate of production increased the most in Sierra Leone, followed by Senegal, Benin, Nigeria and Guinea (Table 5). Largest negative growth rates in production were recorded in Liberia, The Gambia, Niger and Burkina Faso.

Table 4. Average milled rice production (thousand tonnes) for selected periods in West Africa

Country	1970s	1980s	1990s	2001–2005
Benin	7.25	5.57	15.38	42.65
Burkina Faso	25.90	27.32	51.71	61.97
Cameroon	23.48	47.67	29.78	34.38
Chad	24.92	25.83	65.67	82.12
Côte d'Ivoire	290.58	355.06	453.54	444.60
The Gambia	19.10	17.86	13.87	16.63
Ghana	52.87	48.10	125.20	177.18
Guinea	266.77	411.24	633.95	770.41
Guinea Bissau	30.22	68.67	75.76	57.20
Liberia	157.38	186.76	82.62	75.17
Mali	122.39	147.15	377.07	569.13
Mauritania	2.99	23.16	44.74	49.95
Niger	20.47	38.09	42.35	49.23

Nigeria	357.24	1177.95	2086.25	2103.40
Senegal	62.20	94.56	116.98	146.33
Sierra Leone	356.73	329.84	255.06	336.06
Togo	10.41	13.29	39.72	45.07
West Africa	1830.90	3018.13	4509.65	5061.48

Table 5. Growth rates (%) of yield, harvested area and production, 2001–2005

Country	Yield	Area	Production
Benin	7.24	-0.11	7.13
Burkina Faso	-3.38	-1.56	-4.89
Cameroon	-14.58	14.72	-2.01
Chad	-1.88	3.68	1.73
Côte d'Ivoire	2.45	0.06	2.51
The Gambia	-15.53	10.06	-7.03
Ghana	2.23	-2.75	-0.58
Guinea	0.55	4.76	5.34
Guinea Bissau	4.79	-1.61	3.10
Liberia	-6.43	-1.59	-7.92
Mali	0.43	-0.22	0.21
Mauritania	-2.68	8.08	5.17
Niger	2.94	-7.64	-4.92
Nigeria	2.52	4.08	6.70
Senegal	4.68	3.02	7.84
Sierra Leone	-7.96	28.59	18.35
Togo	1.99	0.62	2.62
West Africa	0.20	4.84	5.06

Yield and harvested rice area: during 2001–2005, West Africa recorded a positive rate of harvested area expansion and a marginal rate of yield expansion. Thus, rice production increase is mainly attributable to the opening of new land. Although production increases in West Africa have been driven mainly by area expansion, cultivated areas actually decreased in Benin, Burkina Faso, Ghana, Guinea Bissau, Liberia and Niger. In most countries, area expansion has coincided with a drop in yield. In Nigeria and Senegal, substantial improvement was recorded in the growth rate of area harvested and yield.

Per annum rice yield exhibited positive rates of increase in 10 West African countries; while seven countries had negative yield progression during 2001–2005. Strong rice yield increases were recorded in Benin, Guinea Bissau, Senegal,

Niger and Nigeria. Substantially negative changes of land productivity (i.e. yield) were recorded in The Gambia, Cameroon, Sierra Leone, Liberia and Burkina Faso (Table 5). Rice yield in West Africa tends to be highly variable and generally higher in the Sahel owing to the larger share of irrigated rice area (Table 6). From the 1980s to 2001–2005, eight countries recorded steady improvement in aggregated rice yield: Benin, Côte d’Ivoire, Ghana, Guinea, Mali, Niger, Senegal and Togo.

Consumption: in 2006, West Africa consumed 9.87 million tonnes of rice. During 2001–2005, rice consumption increased annually at 6.55%, well above production growth rate over the same period. Using an arbitrary threshold of 45 kg per capita rice consumption (Figure 7), West African countries can be divided into two groups: a group of countries in which annual per-capita rice consumption could be considered low (less than 45 kg) and another group of countries in which yearly rice consumption is high (more than 45 kg per capita). Rice consumption growth rate tended to increase faster in coastal countries.

Table 6. Rice yield for selected periods (t/ha)

Country	1980s	1990s	2001–2005
Benin	1.19	1.71	2.39
Burkina Faso	1.72	2.10	1.81
Cameroon	4.23	3.36	1.57
Chad	1.17	1.50	1.25
Côte d’Ivoire	1.16	1.36	1.95
The Gambia	1.63	1.53	1.89
Ghana	1.11	1.87	2.15
Guinea	1.71	1.71	1.74
Guinea Bissau	1.53	1.74	1.32
Liberia	1.24	1.15	0.92
Mali	1.17	1.86	2.03
Mauritania	4.53	3.66	4.28
Niger	2.60	2.93	3.07
Nigeria	2.08	1.69	1.38
Senegal	1.98	2.35	2.52
Sierra Leone	1.33	1.26	2.42
Togo	0.99	1.69	2.13
West Africa	1.59	1.64	1.62

Data problems and unofficial re-exports from coastal to landlocked Sahelian countries might explain rapid consumption growth in countries such as Benin and the modest consumption in Niger and Burkina Faso (Table 7).

Table 7. Growth rate of rice consumption by selected periods

Country	1980s	1990s	2001–2005
Benin	9.09	-3.06	46.87
Burkina Faso	10.22	4.68	-5.91
Cameroon	6.24	3.84	19.93
Chad	10.26	1.60	0.78
Côte d'Ivoire	4.17	0.99	7.46
The Gambia	1.61	-0.16	-2.94
Guinea	0.89	3.23	1.71
Guinea Bissau	2.68	0.65	1.16
Liberia	-1.00	-2.28	-0.16
Mali	6.37	8.10	14.03
Mauritania	8.01	5.40	-2.89
Niger	4.16	-1.12	-14.24
Nigeria	4.22	3.39	5.08
Senegal	3.60	3.25	0.11
Sierra Leone	2.47	-1.72	4.64
Togo	15.89	-4.42	-0.70
West Africa	4.10	2.25	6.55

Self-sufficiency ratio: the sub-regional self-sufficiency ratio was 58% during 2001–2005. Three countries (Chad, Guinea and Niger) appeared to be self-sufficient in rice. The countries with the lowest self-sufficiency ratio were Senegal (18%), Cameroon (19%) and Benin (23%). Compared to the 1990s, the self-sufficiency ratio in rice improved for eight countries, while nine countries witnessed a drop in their ratio of production over consumption. The best performers in terms of improvement in self-sufficiency were Niger and Mauritania.

Table 8. Self-sufficiency ratio by decade.

Country	1980s	1990s	2001–2005
Benin	0.13	0.18	0.23
Burkina Faso	0.33	0.32	0.36
Cameroon	0.57	0.29	0.19
Chad	0.71	1.04	1.18
Côte d'Ivoire	0.54	0.74	0.42
The Gambia	0.30	0.27	0.39
Ghana	0.47	0.61	0.33
Guinea	1.39	1.23	1.28
Guinea Bissau	0.84	0.90	0.66
Liberia	0.74	0.64	0.45
Mali	0.82	1.13	0.80
Mauritania	0.27	0.38	0.67
Niger	0.55	0.65	1.10
Nigeria	0.87	0.93	0.64
Senegal	0.22	0.20	0.18
Sierra Leone	0.96	0.65	0.79
Togo	0.37	0.39	0.48
West Africa	0.71	0.76	0.58

Overview of recent developments in Central Africa

Production: in Central Africa, milled rice production averaged 300,000 tonnes from 2001–2005 and was estimated at close to 321,000 tonnes for 2006. Rice is not the region’s main staple food, yet its production has increased by more than 90% since the 1970s. The leading paddy rice producer in Central Africa is the Democratic Republic of Congo with slightly over 315,000 tonnes (Table 9). Considerable increase in rice production was observed in Rwanda (42.68%), Central African Republic (6.19 %) and Burundi (2.51 %) during the 2001–2005 period (Table 10).

Table 9. Average milled rice production (1000 tonnes) for selected periods in Central Africa

Country	1970s	1980s	1990s	2001–2005
Burundi	4.44	15.41	29.75	42.52
Central African Rep	7.50	8.63	9.12	19.48
Congo, Dem Rep	140.01	209.24	250.55	212.50
Congo, Rep	2.98	0.98	0.86	0.88
Gabon	0.43	0.46	0.55	0.67
Rwanda	1.85	4.64	6.53	23.16
Central Africa	157.2	239.36	297.35	299.22

Table 10. Growth rates (%) of yield, harvest area and production in Central Africa during 2001–2005

Country	Yield	Area	Production
Burundi	1.82	0.68	2.51
Central African Rep	-0.21	6.41	6.19
Congo, Dem Rep	0.00	-0.63	-0.63
Congo, Rep	-0.17	-0.33	-0.51
Gabon	-0.26	0.28	0.02
Rwanda	9.45	30.36	42.68
Central Africa	2.78	0.16	2.94

Yield and harvested rice area: the sub-regional yield and area growth were, respectively, 2.78% and 0.16% for the period 2001–2005. The average harvested area and yield were estimated, respectively, at 466,000 hectares and 0.96 tonne per hectare. Rwanda showed the strongest positive annual growth rate of 30.36% in rice harvested area as well as in improvement (9.45%) of paddy yield. For instance, rice yield in Rwanda increased from 2.49 t/ha in the 1980s to 3.65 t/ha

during 2001–2005. Due to greater area and to yield growth, rice production also increased in Burundi, but for the remaining countries the evolution of yield and area devoted to rice was variable. In Central African Republic, area expansion explains the relatively high production growth. In the Congo Republic, both area and yield recorded negative rates of expansion.

Consumption: in 2006 the estimated quantity of milled rice consumed in Central Africa region was 397,100 tonnes. Owing to the downturn in rice consumption in the Democratic Republic of Congo, the sub-regional consumption pattern displayed a negative trend even though rice consumption growth rate increased remarkably in countries such as Burundi, Gabon and Rwanda.

The sub-regional per capita consumption of rice was 3.36 kg/year during 2001–2005. Gabon and the Republic of Congo have the highest per capita rice consumption levels with respectively 37.2 kg/year and 16.7 kg/year (Figure 8).

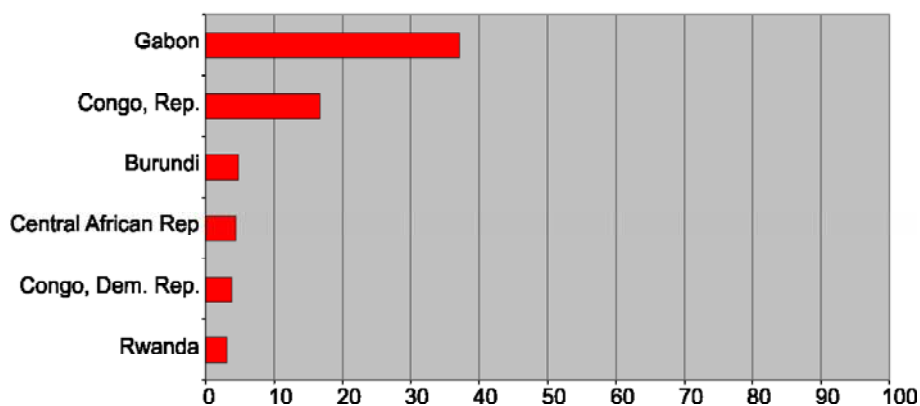


Figure 8. Per capita rice consumption in Central Africa (kg/year) during 2001–2005

Table 11. Growth rates (%) of consumption for selected countries in Central Africa

Country	1980s	1990s	2001–2005
Burundi	20.61	5.31	4.60
Central African Rep	1.36	5.59	2.85
Congo, Dem Rep	6.35	-1.25	-2.94
Congo, Rep	6.70	8.62	-5.14
Gabon	9.63	3.23	3.30
Rwanda	1.03	-0.20	5.39
Central Africa	6.91	1.10	-0.96

Source: FAOSTAT, last accessed 17 September 2007.

Self-sufficiency ratio: rice self-sufficiency ratio varies hugely among Central African countries. On the one hand, rice production in Burundi, the Central African Republic and Democratic Republic of Congo has the potential to fully satisfy domestic consumption requirements during 2001–2005, while on the other hand a negligible proportion of locally-produced rice is consumed in Gabon and in the Republic of Congo. A quarter of the sub-regional rice consumption requirement was imported through the international market during 2001–2005.

Consumption: in 2006 the estimated quantity of milled rice consumed in Central Africa region was 397,100 tonnes. Owing to the downturn in rice consumption in the Democratic Republic of Congo, the sub-regional consumption pattern displayed a negative trend even though rice consumption growth rate increased remarkably in countries such as Burundi, Gabon and Rwanda.

The sub-regional per capita consumption of rice was 3.36 kg/year during 2001–2005. Gabon and the Republic of Congo have the highest per capita rice consumption levels with, respectively, 37.2 kg/year and 16.7 kg/year (Figure 8).

Table 12. Self-sufficiency ratio by decade

Country	1980s	1990s	2001–2005
Burundi	1.23	1.23	1.25
Central African Rep	0.93	0.90	1.14
Congo, Dem Rep	0.90	1.00	0.98
Congo, Rep	0.10	0.03	0.02
Gabon	0.04	0.02	0.01
Rwanda	0.46	0.42	0.84
Central Africa	0.83	0.81	0.75

Overview of recent developments in East Africa

Production: the average annual milled rice production was 2.6 million tonnes in the period 2001–2005 (Table 13). In 2006, the milled rice production estimate for East Africa is 3.1 million tonnes, with Madagascar and Tanzania accounting for 2.3 million tonnes and 525,300 tonnes, respectively, bearing out the strong upward trend in production which grew at a laudable rate of 7.21% during the same period. Except for Malawi, all countries increased annual rice production, resulting in a higher rice production growth rate in Eastern Africa than those of Central Africa and West Africa. The region's performance was due to increases in rice production in Kenya, Tanzania, Uganda and Madagascar. A notable hike in production was recorded in countries such as Sudan and Somalia.

Table 13. Average milled rice production (1000 tonnes) for selected periods and countries in East Africa

Country	1970s	1980s	1990s	2001–2005
Comoros	7.64	8.99	11.29	11.50
Kenya	24.56	30.19	31.58	32.49
Madagascar	1333.37	1460.22	1655.21	1942.52
Malawi	42.04	23.80	41.34	49.99
Somalia	4.16	8.56	2.92	7.44
Sudan	5.39	1.87	2.12	12.16
Tanzania	184.05	329.54	446.29	456.97
Uganda	12.40	17.29	54.47	85.76
East Africa	1613.61	1880.46	2245.22	2598.83

Table 14. Growth rates (%) of yield, harvest area and production for selected East African countries 2001–2005

Country	Yield	Area	Production
Comoros	0.34	0.42	0.77
Kenya	3.66	4.02	7.83
Madagascar	5.78	0.79	6.62
Malawi	-11.79	-5.88	-16.97
Somalia	24.32	1.68	27.51
Sudan	26.25	3.76	30.99
Tanzania	14.03	-1.57	12.24
Uganda	-1.41	7.67	6.15
East Africa	6.73	0.45	7.21

Consumption: in 2006 milled rice consumption is estimated to reach 3.1 million tonnes in East Africa. During the five-year period of 2001–2005, the average annual consumption of milled rice was 2.8 million tonnes in East Africa. But robust increases in rice consumption in the Comoros, Kenya, Sudan and Tanzania more than offset the negative growth of rice consumption in Tanzania and Madagascar (Figure 9). Overall the sub-regional rice consumption grew at a relatively high speed of 2.66% per year (Table 15). On a per capita consumption basis, Madagascar, Comoros and Tanzania stand out noticeably as the major rice-consuming nations in the world. With per capita consumption of nearly 100 kg/year, rice is by far the main staple in Madagascar.

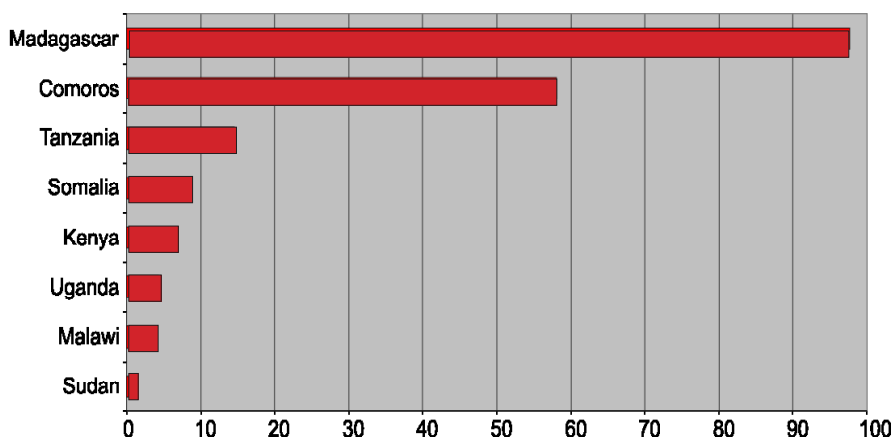


Figure 9. Per capita consumption of rice in East Africa (kg/year) during 2001–2005

Table 15. Growth rates (%) of rice consumption for selected countries in East Africa

Country	1980s	1990s	2001–2005
Comoros	-10.44	26.40	11.29
Kenya	-0.02	3.12	3.03
Madagascar	5.99	9.19	-15.12
Malawi	2.98	6.69	8.53
Somalia	-1.56	-1.39	1.53
Sudan	-11.97	6.62	
Tanzania	9.13	5.65	-1.19
Uganda	4.44	13.35	5.04
East Africa	1.38	3.79	2.66

Self-sufficiency ratio: during 2001–2005, East Africa was nearly self-sufficient in rice, with rice imports representing 7% of the total quantity consumed. Unlike other sub-regions of Africa, East Africa traditionally produced most of the rice it consumed. Madagascar is apparently self-sufficient in its most important staple food crop.

Table 16. Growth rates (%) of rice consumption for selected countries in East Africa

Country	1980s	1990s	2001–2005
Comoros	0.28	0.29	0.27
Kenya	0.98	0.42	0.16
Madagascar	1.16	1.25	1.13
Malawi	1.16	1.11	0.97
Somalia	0.11	0.03	0.13
Sudan	0.06	0.26	
Tanzania	0.94	10.3	0.86
Uganda	0.85	0.95	0.76
East Africa	1.03	1.04	0.93

Overview of recent developments in Southern Africa

Production: the Southern Africa sub-region produced 118,270 tonnes of milled rice over the period of 2001–2005 with an annual growth rate of 16.18 %. In this region, Mozambique is the leading rice producing country with an average paddy production of 102,200 tonnes over 2001–2005 (Table 17).

Table 17. Average milled rice production (1000 tonnes) for selected periods and countries

Country	1970s	1980s	1990s	2001– 2005
Angola	12.93	3.75	6.78	5.33
Mozambique	57.67	58.78	83.47	102.20
South Africa	1.94	2.01	2.00	2.13
Swaziland	3.38	1.79	0.67	0.08
Zambia	1.02	5.91	7.78	8.13
Zimbabwe	0.55	0.26	0.29	0.39
Southern Africa	77.49	72.51	101.00	118.27

Yield and harvested rice area: Out of a total harvested rice area of 204,000 hectares in 2005, Mozambique accounted for 180,000 hectares. On average, 192,000 hectares of paddy rice were harvested during 2001–2005, with an upward growth rate of 4.49%. Angola (40.84%), Mozambique (3.38%) and Zambia (2.26 %) showed substantial positive growth rates for harvested rice areas. As in West and Central Africa, rice production in the Southern Africa region is plagued by low yield. The aggregate rice yield has historically been less than 1 tonne per hectare (Table 18).

Table 18. Rice yield for selected periods in Southern Africa (t/ha)

Country	1980s	1990s	2001–2005
Angola	0.81	1.36	1.13
Mozambique	0.86	0.82	0.87
South Africa	2.31	2.30	2.28
Swaziland	6.29	5.20	3.54
Zambia	0.97	0.99	1.22
Zimbabwe	1.75	2.15	2.34
Southern Africa	0.90	0.88	0.91

Consumption: During the 2001–2005 period, rice consumption in Southern Africa accelerated at a double-digit growth rate of 11.6%. Such dramatic increase in rice consumption illustrates that rice is occupying an increasing role in people’s diets in Southern Africa. Mozambique and South Africa have the highest per capita consumption of rice at 14 kg/year.

Table 19. Growth rates (%) of rice consumption for selected countries in Southern Africa

Country	1980s	1990s	2001–2005
Angola	5.03	−7.28	29.13
Mozambique	1.63	3.96	25.09
South Africa	7.84	5.90	5.28
Swaziland	20.97	0.20	−22.19
Zambia	−0.33	4.75	11.95
Zimbabwe	9.24	3.79	0.00
Southern Africa	5.45	4.04	11.58

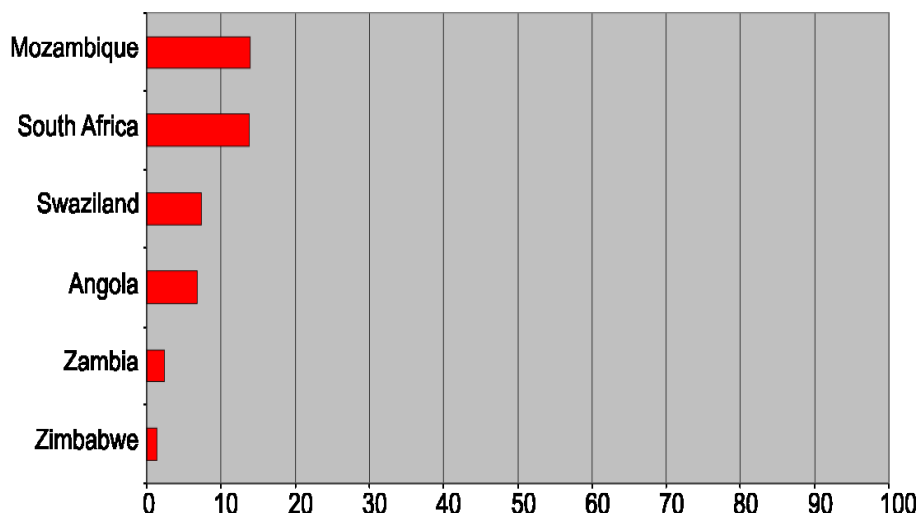


Figure 10. Per capita rice consumption (kg/year) in Southern Africa during 2001–2005

Self-sufficiency ratio: with a sufficiency ratio of 11% during 2001–2005, the southern sub-region has the largest proportion of reliance on the international rice imports market. Except for Mozambique and Zambia, rice imports represent

more than 90% of domestic consumption requirements. Practically all rice consumed in South Africa is sourced from the international market.

Table 20. Self-sufficiency ratio by decade

Country	1980s	1990s	2001–2005
Angola	0.07	0.13	0.06
Mozambique	0.45	0.61	0.41
South Africa	0.01	0.00	0.00
Swaziland	0.69	0.08	0.01
Zambia	0.65	0.66	0.32
Zimbabwe	0.03	0.02	0.02
Southern Africa	0.17	0.15	0.11

Major rice exporters to Africa in recent years

The global rice export market is thin, with only 7% of global production traded on the international market. The global rice market is also characterized by its high level of concentration with the five leading rice exporters (Thailand, Vietnam, India, the USA and Pakistan) accounting for more than 66% of global rice exports, and the 10 leading exporters more than 90% of the total shipped rice (FAO). Since African rice imports represent a third of the total quantity traded on the global market, all the major rice exporters value the African market. However, it is Thailand which provides the lion's share of rice shipped to Africa. Apart from Thailand, the continent's main rice suppliers are China, Pakistan, the USA, India and Vietnam (Table 21). And, there are four African countries among the 10 largest rice importers in the world (Table 22).

Table 21. Major rice exporters to Africa

Exporter	No. importing African countries	2000	2001	Average 2000–2002	Share of total rice exports to Africa (%)
Thailand	38	2 558 600	3 546 100	3 063 350	60
China	16	1 077 900	1 077 900	1 090 600	22
Pakistan	39	331 500	534 500	450 200	9
USA	27	206 100	203 400	213 600	4
India	10	91 000	194 900	145 250	3
Vietnam	9	105 100	28 600	105 250	2
Total	–	4 395 600	5 585 400	5 068 250	100

Source: FAOSTAT 2005.

Table 22. Top 10 world rice importers in 2006

Country	Import quantities (million tonnes)
Philippines	1.90
Nigeria ³	1.60
Iran	1.20
Iraq	1.20
Saudi Arabia	1.00
Indonesia	0.90
Côte d'Ivoire	0.85
Malaysia	0.85
South Africa	0.80
Senegal	0.75

Source: USDA 2007

³In the July 2007 edition of FAO Rice Monitor, Nigeria and Philippines tied as the world's largest rice importing countries in 2006 with 1.8 million tonnes each.

Africa Rice Trends main tables

Introduction to the main Africa Rice Trends tables

The following tables contain data from the FAO data series some of which present data rounded off to the nearest thousand units (production, total consumption and imports). Users should be aware that for countries with low values for a given variable, rounding error might significantly bias growth rates and especially yield estimates. In some cases, the time-series data contain zero values due to rounding off.

Yield: all figures are for paddy (or ‘rough rice’) harvested per hectare and are calculated as paddy production divided by area harvested for each year.

Production: all figures are for paddy harvested during the calendar year.

Imports: all volume figures refer to total imports of paddy, cargo rice and milled rice, measured in terms of milled-rice equivalents, and include both commercial and non-commercial (food aid) imports. The average unit value of rice imports is calculated as the total value of commercial rice imports (US\$) divided by the total volume of commercial rice imports (metric tonnes), based on data taken from the trade section of FAOSTAT.

Consumption: *per capita* and total rice consumption refer only to rice used for human food consumption, and so do not include losses and rice (paddy) used as seed or processed for other purposes. These quantities would have to be added to rice consumed as food to obtain total disappearance. *Per capita* consumption is taken from the Food supply–Crop Primary Equivalent section of FAOSTAT. All figures are for milled rice (also referred to as ‘husked rice’).

The **self-reliance ratio** is the share of locally-produced rice in total rice supply. To avoid difficulties due to estimation of the appropriate milling rate, this ratio was calculated by the formula: $\text{Production} / \text{Total consumption}$.

The **rice share in calorie intake:** simply dividing the calorific intake from rice in the daily diet by the grand total calorific intake of the daily diet derives the rice share in terms of calorie intake. The importance of rice relative to other cereals in terms of calorie intake is calculated in a similar way by dividing the calorific intake from rice in the daily diet to the energetic intake from total cereals (excluding beer) contained in the daily diet.

Table 23. Harvest rice paddy area 1961–2006

	Annual Growth Rate (%)					Yearly Averages (ha)						2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
WEST AFRICA	1.54	3.27	4.54	2.05	4.84	1,600,832	2,048,708	2,813,146	4,101,745	4,664,039	5,720,602	
CENTRAL AFRICA	14.04	1.70	5.68	-2.08	0.16	148,926	291,521	404,969	530,458	466,197	469,841	
EAST AFRICA	3.14	2.90	0.68	2.18	0.45	1,055,818	1,390,745	1,542,370	1,745,834	1,765,719	1,811,919	
SOUTHERN AFRICA	2.40	0.89	1.06	6.56	4.49	95,947	103,866	119,666	164,634	192,478	205,011	
SUB-SAHARAN AFRICA	3.01	2.62	2.43	2.38	3.29	3,070,800	4,047,729	4,981,912	6,594,982	7,863,184	8,207,373	
NORTHERN AFRICA	6.73	-1.01	-0.21	3.03	1.55	411,123	449,015	413,231	582,748	626,924	618,000	
AFRICA	3.22	2.52	3.05	1.95	3.29	3,312,647	4,283,854	5,293,582	7,125,561	7,715,356	8,825,373	
CHINA	1.91	-0.38	-0.31	-0.36	0.40	30,153,303	35,744,637	33,245,127	31,550,170	28,321,528	29,380,000	
INDIA	0.76	0.91	0.60	0.70	0.01	36,205,674	38,893,616	40,907,272	43,325,150	42,551,340	43,700,000	
OTHER DEV. COUNTRIES ASIA	1.32	1.27	0.54	1.31	-0.28	45,209,233	48,794,377	53,012,373	57,146,515	60,902,777	60,622,644	
LATIN AMERICA & CARIBBEAN	3.78	3.31	-1.31	-1.00	4.94	5,629,928	7,243,164	7,587,855	6,458,345	6,145,804	5,838,647	
OTHER dev. COUNTRIES	0.80	1.69	-0.86	-1.22	10.52	4,623,900	4,669,823	4,488,394	4,303,076	5,089,225	5,956,993	
WORLD	1.45	0.90	0.29	0.67	0.63	125,303,962	139,845,331	144,635,459	149,977,213	150,778,269	154,323,697	

Table 24. Rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate (%)					Yearly Averages (ha)					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
WEST AFRICA	3.58	1.02	1.80	-0.18	0.20	1.15	1.33	1.59	1.64	1.62	1.63
CENTRAL AFRICA	-0.20	0.93	0.05	0.75	2.78	0.80	0.80	0.88	0.84	0.96	1.02
EAST AFRICA	-0.34	-1.21	3.14	-0.52	6.73	1.74	1.74	1.82	1.93	2.20	2.54
SOUTHERN AFRICA	-2.41	-7.62	0.73	8.57	11.19	1.33	1.12	0.90	0.88	0.91	0.98
SUB-SAHARAN AFRICA	1.10	-0.07	2.51	-0.15	2.13	1.29	1.36	1.51	1.63	1.57	1.76
AFRICA	1.37	-0.54	2.01	0.78	1.49	1.75	1.76	1.85	2.16	2.35	2.39
NORTHERN AFRICA	-0.37	0.86	2.33	1.86	2.04	5.17	5.35	5.96	8.11	9.61	10.57
CHINA	4.74	2.87	2.17	1.37	0.52	2.89	3.66	5.21	6.06	6.19	6.26
INDIA	1.14	1.64	3.59	1.43	1.56	1.51	1.77	2.26	2.82	3.00	3.12
OTHER DEV. COUNTRIES											
ASIA	1.56	1.87	1.73	0.85	2.50	1.83	2.18	2.80	3.22	3.89	4.22
LATIN AMERICA & CARIBBEAN	-0.20	1.02	2.87	3.43	0.21	1.73	1.86	2.30	3.11	3.91	4.21
OTHER DEV. COUNTRIES	1.46	-0.32	1.10	1.54	-	5.01	5.29	5.62	5.92	2.28	2.08
WORLD	2.40	1.78	2.11	1.04	0.54	2.11	2.52	3.23	3.72	3.94	4.11

Table 25. Rice paddy production (tonnes) 1961–2006

	Annual Growth Rate (%)					Yearly Averages (ha)						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
WEST AFRICA	5.18	4.32	6.42	1.87	5.06	1,848,229	2,732,680	4,504,669	6,730,826	7,554,448	9,320,052	
CENTRAL AFRICA	13.81	2.65	5.73	-1.34	2.94	119,337	234,629	357,253	443,811	446,594	479,474	
EAST AFRICA	2.80	1.66	3.85	1.65	7.21	1,836,262	2,408,378	2,806,653	3,363,259	3,894,572	4,601,382	
SOUTHERN AFRICA	-0.07	-6.80	1.80	15.69	16.18	126,857	115,660	108,219	150,751	176,518	200,072	
SUB-SAHARAN AFRICA	4.13	2.83	5.41	1.81	5.81	3,930,685	5,491,347	7,776,793	10,688,646	12,072,132	14,600,980	
AFRICA	4.81	1.89	4.61	2.86	5.10	6,058,496	7,890,627	10,242,079	15,479,148	18,100,624	21,131,000	
NORTHERN AFRICA	6.33	-0.15	2.11	4.95	3.62	2,127,811	2,399,280	2,465,286	4,749,052	6,028,492	6,530,020	
CHINA	6.75	2.48	1.86	1.00	0.53	87,843,084	130,542,650	173,276,308	191,013,543	176,098,191	184,070,000	
INDIA	1.91	2.56	4.21	2.15	1.89	54,936,203	68,900,266	92,838,813	122,378,590	129,104,000	136,510,000	
OTHER DEV. COUNTRIES ASIA	2.90	3.16	2.28	2.18	2.21	82,772,893	106,798,824	148,708,773	183,989,516	236,639,642	255,937,672	
LATIN AMERICA & CARIBBEAN	3.57	4.37	1.53	2.40	5.16	9,742,811	13,487,641	17,362,414	20,044,752	24,032,959	24,563,686	
OTHER DEV. COUNTRIES	2.27	1.37	0.23	0.31	-	23,179,609	24,707,584	25,198,819	25,463,654	10,533,257	12,393,295	
WORLD	3.88	2.69	2.40	1.72	1.17	264,585,798	352,334,015	467,400,944	558,393,584	594,381,379	634,605,733	

Table 26. Rice imports volume (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
WEST AFRICA	4.98	16.69	-2.13	1.76	-0.80	358,486	829,094	1,730,351	1,540,907	3,074,956	4,737,111
CENTRAL AFRICA	-0.06	2.87	4.56	8.22	-11.04	29,904	42,519	80,850	83,182	88,216	103,742
EAST AFRICA	2.61	9.09	-10.35	2.62	9.71	68,050	170,181	346,348	347,615	449,776	487,580
SOUTHERN AFRICA	6.85	15.91	3.34	3.18	14.39	74,336	170,101	305,765	544,771	968,488	1,083,278
SUB-SAHARAN AFRICA	3.52	13.07	-0.17	1.33	11.66	678,111	1,397,357	2,884,762	3,166,909	6,777,664	8,702,497
AFRICA	4.80	14.58	-1.61	2.41	2.20	547,822	1,264,663	2,580,593	2,666,903	4,757,012	6,532,596
NORTHERN AFRICA	10.87	8.84	12.03	4.47	-7.24	17,046	52,768	117,279	150,428	175,576	120,884
CHINA	-22.22	195.94	18.61	-0.01	13.71	59,286	73,217	374,065	778,944	782,460	865,706
INDIA	-1.26	-43.84	9.36	-31.06	18.07	799,185	204,756	211,957	22,571	359	271
OTHER DEV. COUNTRIES ASIA	2.30	1.37	-3.64	15.01	1.29	4,150,482	5,236,795	4,694,012	6,090,194	8,047,403	8,529,195
LATIN AMERICA & CARIBBEAN	0.65	9.24	5.78	-4.96	4.52	391,219	604,685	923,063	1,770,750	2,942,549	q2,849,822
OTHER DEV. COUNTRIES	-1.17	269.17	4.31	4.95	10.47	2,03,200	388,945	774,460	1,917,839	1,487,097	1,854,171
WORLD	1.54	5.04	0.84	6.39	1.90	6,243,412	7,841,918	9,699,487	14,264,674	17,838,484	18,308,723

Table 27. Volume of rice imports (000 US\$), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005		1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimated
WEST AFRICA	6.23	32.37	-7.37	5.54	10.51		50,456	282,666	519,897	441,548	717,572	1,225,926
CENTRAL AFRICA	5.17	15.55	9.00	-3.58	-2.35		4,865	17,056	38,782	42,842	27,162	28,435
EAST AFRICA	6.01	20.28	-8.30	1.96	15.62		12,448	58,852	114,685	98,461	98,461	127,103
SOUTHERN AFRICA	11.03	23.66	-0.01	3.83	27.08		12,708	58,571	95,298	162,830	222,907	322,753
SUB-SAHARAN AFRICA	5.80	26.48	-3.92	1.13	-2.82		98,117	462,909	877,659	922,464	1,182,694	1,166,018
AFRICA	6.94	28.00	-5.09	3.58	13.59		83,246	436,438	809,601	768,182	1,091,003	1,737,754
NORTHERN AFRICA	10.47	23.78	5.42	-6.84	23.51		2,769	19,293	40,940	22,501	24,901	33,537
CHINA	-18.08	57.83	20.41	-0.79	-86.41		7,897	29,640	88,839	298,962	71,433	136
INDIA	2.71	-40.21	10.20	-20.61	-55.80		122,118	49,341	53,838	6,756	61	2
OTHER DEV. COUNTRIES ASIA	6.96	13.72	-5.89	13.13	7.35		580,407	1,640,958	1,703,532	2,144,738	2,956,523	3,514,204
LATIN AMERICA & CARIBBEAN	3.34	20.61	0.74	-2.46	12.45		65,247	224,400	325,495	639,135	330,761	367,017
OTHER DEV. COUNTRIES	6.76	14.65	7.78	2.92	7.21		22,340	193,216	408,791	1,022,443	866,977	1,013,390
WORLD	5.69	17.16	-1.51	5.74	10.63		896,370	2,608,925	3,455,595	5,217,109	5,574,687	6,844,973

Table 28. Total consumption of rice and rice products (milled equivalent), 1961–2006

	Annual Growth Rate					Yearly Averages						2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005		
WEST AFRICA	6.00	8.48	4.10	2.25	6.55	1,340,202	2,261,066	4,230,546	5,963,867	8,684,580	9,871,893	
CENTRAL AFRICA	8.64	2.67	6.91	1.10	-0.96	97,309	179,588	292,322	368,768	397,980	397,081	
EAST AFRICA	2.80	3.14	1.52	3.79	2.66	881,074	1,326,723	1,843,261	2,172,253	2,794,067	3,147,826	
SOUTHERN AFRICA	3.07	8.89	5.45	4.04	11.58	140,545	233,356	429,686	658,141	1,044,798	1,337,396	
SUB-SAHARAN AFRICA	4.75	6.49	3.68	2.67	5.84	2,459,131	4,000,733	6,795,816	9,163,030	12,921,425	14,650,593	
AFRICA	4.38	5.62	3.49	2.87	5.16	3,321,776	5,175,628	8,257,972	11,723,301	16,059,437	18,147,849	
NORTHERN AFRICA	3.36	2.67	2.62	3.65	2.43	862,645	1,174,896	1,462,157	2,560,271	3,138,012	3,393,653	
CHINA	6.81	2.77	1.78	0.17	-2.08	50,659,218	75,806,619	102,045,430	112,995,031	105,056,134	157,726,281	
INDIA	0.94	1.77	3.55	1.81	2.28	33,717,639	41,063,542	55,423,968	72,537,885	85,057,036	90,341,674	
OTHER DEV. COUNTRIES ASIA	3.27	2.52	2.26	1.84	0.65	47,491,687	64,334,541	84,343,346	101,453,798	113,691,787	59,724,957	
LATIN AMERICA & CARIBBEAN	3.45	3.64	2.38	2.16	2.04	5,446,384	7,555,330	10,287,238	12,167,454	13,608,174	14,486,655	
OTHER DEV. COUNTRIES	-0.33	0.38	0.58	1.12	1.62	12,825,943	12,961,657	13,611,602	15,260,819	17,243,413	17,950,737	
WORLD	3.53	2.45	2.26	1.26	0.49	153,583,161	207,037,903	270,807,992	325,715,746	349,968,122	357,442,585	

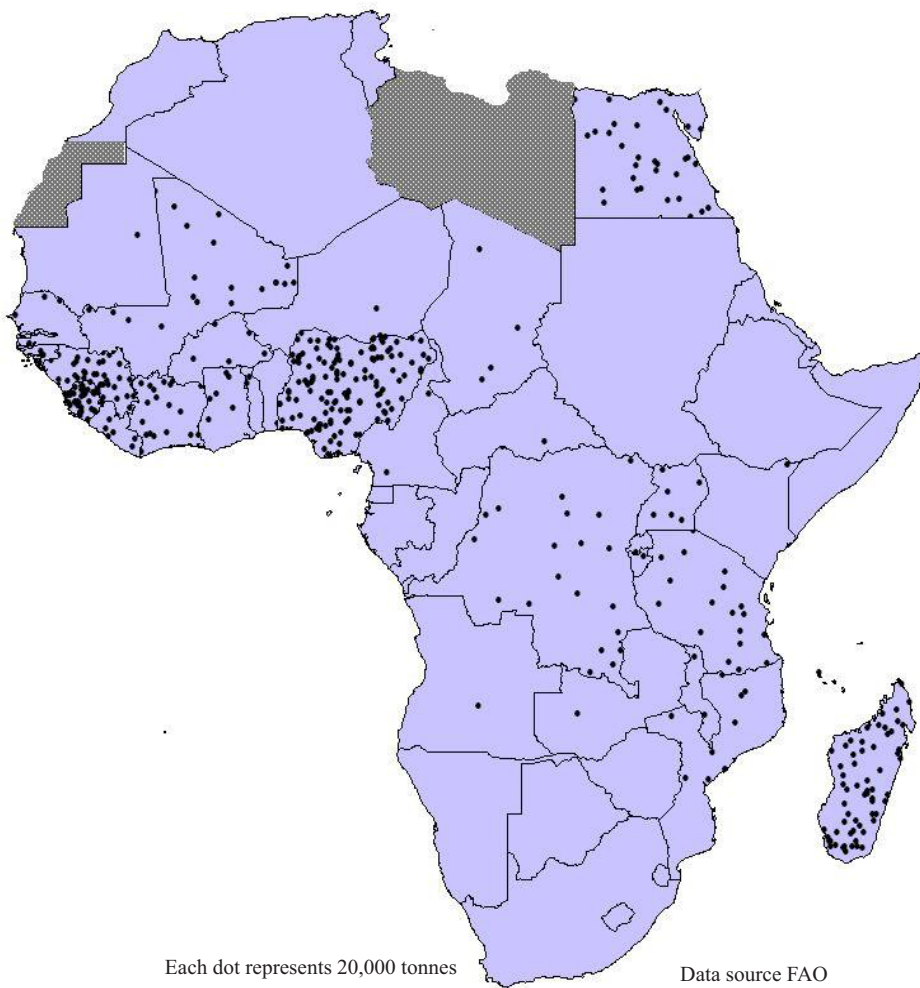


Figure 11. Harvested rice area in 2006

Table 29. West Africa – harvested rice paddy area (ha), 1961–2006

	Annual Growth Rate										Yearly Averages					
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate					
BENIN	4.51	10.60	-0.73	13.86	-0.11	2,323	7,058	7,036	12,636	26,667	26,901					
BURKINA FASO	-2.60	-0.84	-4.02	9.61	-1.56	41,807	38,177	24,166	37,014	51,032	106,000					
CAMEROON	7.01	4.48	-8.70	6.89	14.72	12,958	22,100	17,664	13,324	36,220	40,000					
CHAD	5.77	-3.57	-1.97	8.96	3.68	28,765	44,744	31,268	66,493	97,929	80,839					
CÔTE D'IVOIRE	3.13	5.08	6.33	-6.59	0.06	267,930	360,400	458,800	518,312	340,624	370,000					
GAMBIA	0.80	-2.11	-4.54	3.51	10.06	25,766	22,133	17,152	13,523	13,575	18,347					
GHANA	7.52	7.74	-3.04	4.65	-2.75	38,929	87,500	67,450	100,645	123,048	125,000					
GUINEA	4.40	4.40	4.40	4.40	4.76	151,674	233,375	359,086	552,516	661,104	758,434					
GUINEA BISSAU	-10.57	9.47	-9.81	0.88	-1.61	50,100	57,200	78,153	65,349	64,384	65,000					
LIBERIA	-5.94	2.06	-0.21	8.07	-1.59	186,900	190,400	224,738	105,490	122,000	120,000					
MALI	-0.76	-1.49	4.65	4.25	-0.22	167,520	178,508	184,761	299,423	419,864	400,596					
MAURITANIA	12.84	9.22	20.31	4.83	8.08	475	1,689	8,046	18,135	17,553	15,725					
NIGER	7.60	3.50	0.97	-4.41	-7.64	11,359	19,380	21,853	22,307	24,272	23,000					
NIGERIA	5.51	4.39	10.42	3.93	4.08	206,600	310,400	849,600	1,865,620	2,270,800	2,725,000					
SENEGAL	2.85	0.92	1.94	0.41	3.02	82,604	75,384	71,612	74,662	86,067	85,037					
SIERRA LEONE	2.80	2.18	0.28	-6.72	28.59	300,087	385,000	370,960	299,873	277,302	730,000					
TOGO	3.93	1.02	-1.42	6.40	0.62	25,037	15,261	20,801	36,424	31,599	30,723					
WEST AFRICA	1.54	3.27	4.54	2.05	4.84	1,600,832	2,048,708	2,813,146	4,101,745	4,664,039	5,720,602					

Table 30. Central Africa – harvested rice paddy area (ha), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BURUNDI	14.50	5.03	15.83	4.11	0.68	1,527	3,260	7,534	14,570	19,287	19,500
CENTRAL AFRICAN REPUBLIC	16.04	2.32	-7.01	13.96	6.41	7,770	13,276	9,649	9,364	15,308	16,000
CONGO, DRC	14.70	1.73	5.86	-2.51	-0.63	135,218	269,500	383,025	500,467	420,091	417,900
CONGO	-8.15	-5.12	-7.80	-1.25	-0.33	3,915	4,103	1,383	1,708	1,967	1,900
GABON	-4.33	-0.51	-3.29	1.22	0.28	339	353	314	410	501	507
RWANDA	0.00	9.31	12.34	-2.52	30.36	158	1,029	3,063	3,939	9,042	14,034
CENTRAL AFRICA	14.04	1.70	5.68	-2.08	0.16	148,926	291,521	404,969	530,458	466,197	469,841

Table 31. East Africa – harvested rice paddy area (ha), 1961–2006

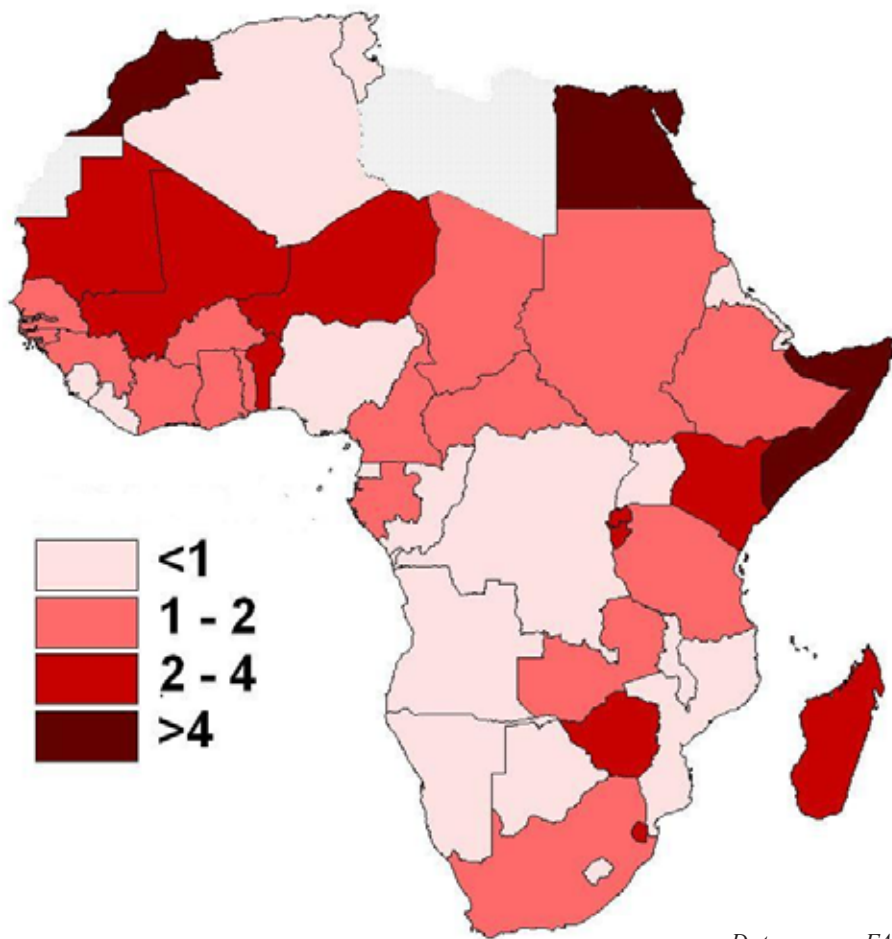
	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
COMOROS	1.49	3.38	0.95	0.20	0.42	9,510	10,110	12,620	13,950	14,075	14,000
KENYA	-3.53	3.55	4.16	-0.22	4.02	4,523	7,313	12,865	11,737	13,229	18,000
MADAGASCAR	2.62	1.99	-0.56	0.44	0.79	914,461	1,094,412	1,162,362	1,176,660	1,227,214	1,250,000
MALAWI	12.58	2.49	2.01	6.74	-5.88	11,311	42,000	22,760	36,303	49,449	42,500
SOMALIA	0.00	39.41	6.69	-8.83	1.68	35	3,079	3,990	1,944	2,131	1,719
SUDAN	17.45	11.11	-25.31	25.18	3.76	1,897	8,118	3,012	3,169	6,472	9,200
TANZANIA	6.21	8.01	4.77	6.31	-1.57	109,100	207,882	305,162	437,357	357,402	355,000
UGANDA	20.67	-2.73	10.21	4.74	7.67	4,981	17,831	19,800	58,000	87,400	113,000
EAST AFRICA	3.14	2.90	0.68	2.18	0.45	1,055,818	1,390,745	1,542,570	1,745,834	1,765,719	1,811,919

Table 32. Southern Africa–harvested rice paddy area (ha), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
ANGOLA	-0.55	-5.53	-14.05	-1.06	40.84	21,320	17,700	6,600	7,881	7,817	13,000
MOZAMBIQUE	3.06	2.01	1.68	7.81	3.38	68,714	79,900	102,016	143,252	173,053	180,000
SOUTH AFRICA	-1.72	0.00	0.00	0.00	-0.28	1,350	1,300	1,300	1,300	1,395	1,386
SWAZILAND	1.75	1.43	-6.60	-26.00	-49.17	2,342	1,758	486	166	34	3
ZAMBIA	-	24.46	7.93	-0.27	2.26	261	2,165	8,977	11,833	9,928	10,368
ZIMBABWE	10.25	-15.63	-11.55	1.68	0.40	1,960	1,043	288	203	251	254
SOUTHERN AFRICA	2.40	0.89	1.06	6.56	4.49	95,947	103,866	119,666	164,634	192,478	205,011

Table 33. SSA, Africa and World harvested rice paddy area (ha), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
SUB-SAHARAN AFRICA	3.01	2.62	2.43	2.38	3.29	3,070,800	4,047,729	4,981,912	6,594,982	7,863,184	8,207,373
AFRICA	3.22	2.52	3.05	1.95	3.29	3,312,647	4,283,854	5,293,582	7,125,561	7,715,356	8,825,373
WORLD	1.45	0.90	0.29	0.67	0.63	125,303,962	139,845,331	144,635,459	149,977,213	150,778,269	154,323,697



Data source: FAO

Figure 12. Rice yield in 2006 (t/ha)

Table 34. West Africa – rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–970	1971–1980	1981–1990	1991–2000	2001–2005	
BENIN	14.62	-3.56	4.39	6.01	7.24	0.68	1.54	1.19	1.71	2.39	2.64
BURKINA FASO	5.21	3.74	2.96	1.57	-3.38	0.86	1.02	1.72	2.10	1.81	1.78
CAMEROON	3.97	17.77	7.40	-0.86	-14.58	0.98	1.49	4.23	3.36	1.57	1.30
CHAD	-0.75	-1.81	17.52	-3.26	-1.88	1.14	0.87	1.17	1.50	1.25	1.32
CÔTE D'IVOIRE	4.24	-0.82	0.04	6.27	2.45	1.00	1.21	1.16	1.36	1.95	1.89
GAMBIA	1.21	1.63	-0.77	1.93	-15.53	1.30	1.30	1.63	1.53	1.89	1.69
GHANA	0.77	-1.93	8.41	1.19	2.23	1.11	0.91	1.11	1.87	2.15	2.00
GUINEA	0.02	0.02	0.02	0.02	0.55	1.70	1.71	1.71	1.71	1.74	1.77
GUINEA BISSAU	6.59	-3.46	14.38	-5.06	4.79	0.96	0.80	1.53	1.74	1.32	1.63
LIBERIA	11.57	0.09	-1.74	4.16	-6.43	0.83	1.23	1.24	1.15	0.92	0.55
MALI	-1.02	4.40	5.30	3.10	0.43	1.00	1.03	1.17	1.86	2.03	2.54
MAURITANIA	-7.74	9.04	-2.91	3.45	-2.68	1.50	2.68	4.53	3.66	4.28	4.48
NIGER	12.26	-5.43	6.33	2.00	2.94	1.83	1.62	2.60	2.93	3.07	2.85
NIGERIA	3.58	2.77	0.07	-2.89	2.52	1.26	1.69	2.08	1.69	1.38	1.44
SENEGAL	-0.74	1.77	2.42	0.57	4.68	1.27	1.19	1.98	2.35	2.52	2.24
SIERRA LEONE	3.46	-0.37	-0.10	-1.99	-7.96	1.32	1.38	1.33	1.26	2.42	1.46
TOGO	-6.42	-1.96	11.09	5.42	1.99	0.81	1.08	0.99	1.69	2.13	2.48
WEST AFRICA	3.58	1.02	1.80	-0.18	0.20	1.15	1.33	1.59	1.64	1.62	1.63

Table 35. Central Africa – rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
BURUNDI	-9.04	3.64	4.23	0.22	1.82	2.18	2.05	3.01	3.02	3.29	3.50
CENTRAL AFRICAN REPUBLIC	-1.72	6.88	3.26	1.27	-0.21	0.88	0.83	1.38	1.44	1.90	1.88
CONGO, DRC	-0.20	0.57	-0.45	0.05	0.00	0.76	0.77	0.82	0.75	0.76	0.76
CONGO, REP	16.10	-3.58	-0.29	-2.16	-0.17	1.44	1.09	1.08	0.75	0.67	0.74
GABON	-2.08	1.82	-1.79	-0.06	-0.26	1.99	1.77	2.18	2.00	1.99	1.97
RWANDA	-	1.85	-7.29	-1.29	9.45	0.85	2.67	2.49	2.65	3.65	4.48
CENTRAL AFRICA	-0.20	0.93	0.05	0.75	2.78	0.80	0.80	0.88	0.84	0.96	1.02

Table 36. East Africa – rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
COMOROS	0.04	2.01	0.42	0.26	0.34	1.13	1.13	1.06	1.21	1.22	1.21
KENYA	11.10	-0.81	-1.92	0.65	3.66	4.19	5.07	3.54	4.05	3.66	3.60
MADAGASCAR	0.19	-1.03	2.46	0.12	5.78	1.83	1.82	1.88	2.10	2.36	2.79
MALAWI	2.54	0.53	0.26	1.14	-11.79	0.88	1.48	1.56	1.67	1.48	1.18
SOMALIA	--	-4.36	-2.34	-9.98	24.32	0.29	2.40	3.33	1.92	5.24	6.13
SUDAN	-4.77	-4.61	3.61	-0.70	26.25	0.99	1.02	1.00	0.93	2.72	2.17
TANZANIA	-5.11	-1.82	9.26	-1.17	14.03	1.13	1.36	1.59	1.54	1.93	2.21
UGANDA	-6.79	5.58	1.13	0.66	-1.41	1.14	1.06	1.28	1.40	1.47	1.36
EAST AFRICA	-0.34	-1.21	3.14	-0.52	6.73	1.74	1.74	1.82	1.93	2.20	2.54

Table 37. Southern Africa – rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
ANGOLA	-1.93	-2.91	-3.21	7.52	-15.94	1.21	1.08	0.81	1.36	1.13	0.69	
MOZAMBIQUE	-3.19	-9.21	0.77	11.23	14.17	1.32	1.09	0.86	0.82	0.87	0.97	
SOUTH AFRICA	0.47	2.24	0.00	-0.14	-0.08	1.51	2.23	2.31	2.30	2.28	2.28	
SWAZILAND	2.29	-2.84	12.36	-8.81	3.60	2.67	2.90	6.29	5.20	3.54	4.00	
ZAMBIA	-	-0.97	2.34	1.37	0.22	0.12	0.73	0.97	0.99	1.22	1.29	
ZIMBABWE	6.00	-6.49	28.79	-2.15	-2.02	1.35	0.66	1.75	2.15	2.34	2.22	
SOUTHERN AFRICA	-2.41	-7.62	0.73	8.57	11.19	1.33	1.12	0.90	0.88	0.91	0.98	

Table 38. SSA, Africa and World – rice paddy yield (t/ha), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
SUB-SAHARAN AFRICA	1.10	-0.07	2.51	-0.15	2.13	1.29	1.36	1.51	1.63	1.57	1.76
AFRICA	1.37	-0.54	2.01	0.78	1.49	1.75	1.76	1.85	2.16	2.35	2.39
WORLD	2.40	1.78	2.11	1.04	0.54	2.11	2.52	3.23	3.72	3.94	4.11

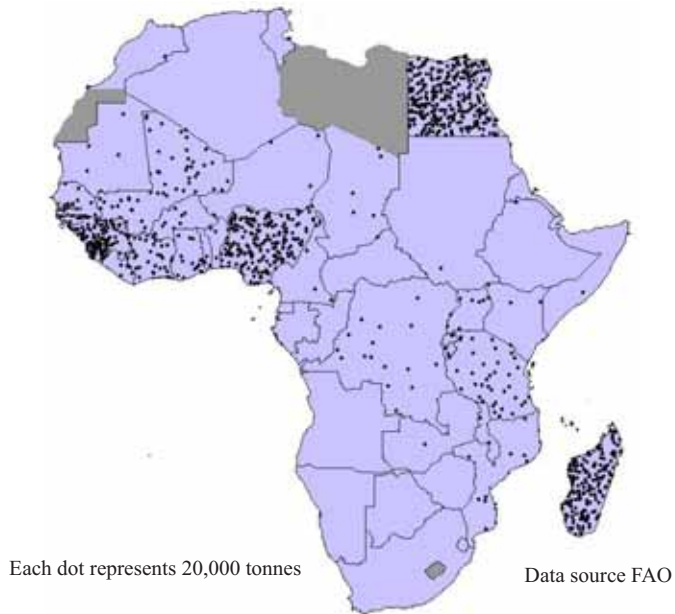


Figure 13. Paddy rice production in 2006

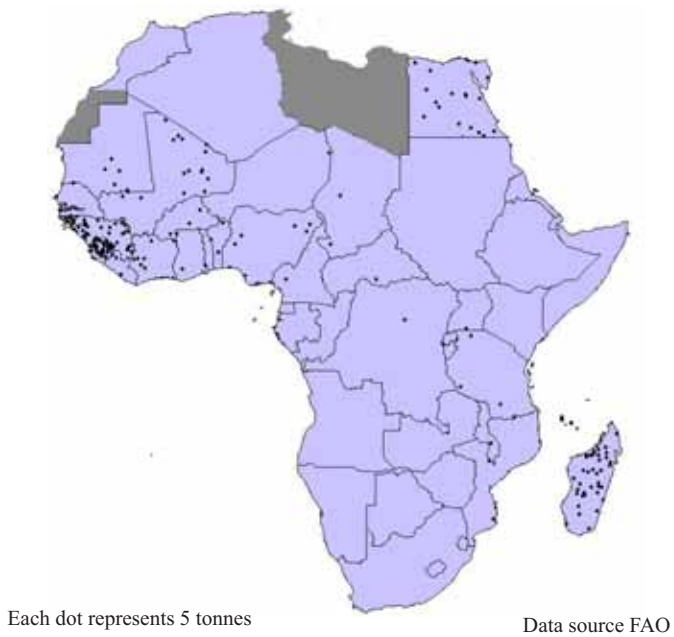


Figure 14. Per capita rice production in 2006

Table 39. West Africa – rice paddy production (t), 1961–2006

	Annual Groth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
BENIN	19.79	6.67	3.64	20.71	7.13	1,686	10,822	8,317	22,953	63,655	70,972
BURKINA FASO	2.48	2.87	-1.18	11.33	-4.89	34,889	38,660	40,783	77,176	92,497	189,176
CAMEROON	11.27	23.05	-1.94	5.97	-2.01	13,042	35,044	71,143	44,444	51,319	52,000
CHAD	4.98	-5.31	15.21	5.40	1.73	32,386	37,197	38,557	98,015	122,571	106,572
CÔTE D'IVOIRE	7.51	4.22	6.37	-0.74	2.51	270,620	433,700	529,940	676,922	663,578	700,000
GAMBIA	2.02	-0.51	-5.27	5.51	-7.03	33,584	28,504	26,664	20,700	24,817	31,024
GHANA	8.35	5.66	5.11	5.89	-0.58	43,483	78,910	71,790	186,869	264,443	250,000
GUINEA	4.42	4.42	4.42	4.42	5.34	258,283	398,160	613,790	946,195	1,149,864	1,340,313
GUINEA BISSAU	-4.68	5.68	3.16	-4.23	3.10	44,250	45,100	102,500	113,079	85,375	106,000
LIBERIA	4.94	2.15	-1.95	12.56	-7.92	141,300	234,900	278,749	123,315	112,200	66,000
MALI	-1.77	2.85	10.20	7.49	0.21	164,870	182,676	219,620	562,794	849,444	1,018,775
MAURITANIA	4.11	19.09	16.81	8.45	5.17	643	4,467	34,571	66,779	74,550	70,462
NIGER	20.78	-2.12	7.36	-2.49	-4.92	22,145	30,547	56,847	63,209	73,480	65,661
NIGERIA	9.30	7.29	10.50	0.93	6.70	264,100	533,200	1,758,132	3,113,800	3,139,400	3,924,000
SENEGAL	2.09	2.71	4.40	0.98	7.84	106,591	92,831	141,131	174,598	218,403	190,493
SIERRA LEONE	6.35	1.80	0.18	-8.58	18.35	396,708	532,430	492,300	380,689	501,581	1,062,320
TOGO	-2.74	-0.97	9.51	12.16	2.62	19,650	15,534	19,834	59,289	67,272	76,284
WEST AFRICA	5.18	4.32	6.42	1.87	5.06	1,848,229	2,732,680	4,504,669	6,730,826	7,554,448	9,320,052

Table 40. Central Africa – rice paddy production (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BURUNDI	4.14	8.85	20.73	4.34	2.51	2,995	6,629	23,000	44,407	63,461	68,311
CENTRAL AFRICAN REPUBLIC	14.04	9.36	-3.99	15.42	6.19	6,632	11,192	12,880	13,610	29,072	30,000
CONGO, DRC	14.47	2.30	5.38	-2.46	-0.63	103,637	208,970	312,297	373,950	317,169	315,830
CONGO, REP	6.63	-8.51	-8.07	-3.38	-0.51	5,075	4,440	1,467	1,283	1,319	1,400
GABON	-6.32	1.30	-5.03	1.16	0.02	659	640	682	820	1,000	1,001
RWANDA	-	11.34	4.15	-3.78	42.68	340	2,758	6,927	9,741	34,572	62,932
CENTRAL AFRICA	13.81	2.65	5.73	-1.34	2.94	119,337	234,629	357,253	443,811	446,594	479,474

Table 41. East Africa – rice paddy production (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
COMOROS	1.53	5.45	1.37	0.46	0.77	10,700	11,400	13,420	16,850	17,164	17,000
KENYA	7.17	2.72	2.16	0.43	7.83	17,252	36,664	45,057	47,129	48,495	64,840
MADAGASCAR	2.82	0.94	1.89	0.55	6.62	1,670,903	1,990,106	2,179,437	2,470,467	2,899,286	3,485,000
MALAWI	15.45	3.03	2.27	7.96	-16.97	9,984	62,750	35,523	61,697	74,617	50,000
SOMALIA	-	33.33	4.19	-17.93	26.41	100	6,210	12,780	4,365	11,308	10,542
SUDAN	11.84	5.99	-22.61	24.30	30.99	1,820	8,038	2,790	3,165	18,150	20,000
TANZANIA	0.78	6.05	14.47	5.07	12.24	120,605	274,700	491,846	666,104	682,038	784,000
UGANDA	12.47	2.69	11.45	5.43	6.15	4,900	18,510	25,800	81,300	128,000	154,000
EAST AFRICA	2.80	1.66	3.85	1.65	7.21	1,836,262	2,408,378	2,806,653	3,363,259	3,894,572	4,601,382

Table 42. Southern Africa – rice paddy production (t), 1961–2006

	Annual Growth Rate							Yearly Averages					
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate		
ANGOLA	-2.47	-8.28	-16.80	6.38	18.39	25,904	19,297	5,600	10,118	7,953	9,000		
MOZAMBIQUE	-0.23	-7.38	2.47	19.91	18.03	89,768	86,074	87,736	124,588	152,540	174,000		
SOUTH AFRICA	-1.27	2.24	0.00	-0.14	-0.36	2,043	2,900	3,000	2,990	3,185	3,158		
SWAZILAND	4.09	-1.45	4.94	-32.52	-47.34	6,279	5,039	2,678	1,005	116	12		
ZAMBIA	-	23.24	10.46	1.10	2.49	106	1,527	8,818	11,615	12,136	13,337		
ZIMBABWE	16.86	-21.11	13.91	-0.51	-1.63	2,757	823	387	435	588	565		
SOUTHERN AFRICA	-0.07	-6.80	1.80	15.69	16.18	126,857	115,660	108,219	150,751	176,518	200,072		

Table 43. SSA, Africa and World rice paddy production (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate
SUB-SAHARAN AFRICA	4.13	2.83	5.41	1.81	5.81	3,930,685	5,491,347	7,776,793	10,688,646	12,072,132	14,600,980
AFRICA	4.81	1.89	4.61	2.86	5.10	6,058,496	7,890,627	10,242,079	15,479,148	18,100,624	21,131,080
WORLD	3.88	2.69	2.40	1.72	1.17	264,585,798	352,334,015	467,400,944	558,393,584	594,381,379	634,605,733



Figure 15. Rice imports in 2006

Table 44. West Africa – rice (milled equivalent) imports (t), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	196–1970	1971–1980	1981–1990	1991–2000	2001–2005	
BENIN	4.83	3.44	14.46	-16.96	52.14	5,366	8,665	48,234	153,836	189,074	312,376
BURKINA FASO	0.00	0.00	0.00	41.41	-38.05	0	675	2,828	80,083	67,990	11,398
CAMEROON	3.41	-0.08	18.50	10.72	10.59	7,496	21,387	45,600	110,948	310,946	479,434
CHAD	-22.97	92.18	0.13	0.00	-0.64	133	1,531	10,716	963	572	250
CÔTE D'IVOIRE	5.24	10.20	-6.00	0.00	1.63	53,536	106,122	329,092	209,497	566,578	850,000
GAMBIA	4.43	17.42	6.38	-19.25	218.69	9,575	19,321	45,515	22,836	10,364	8,769
GHANA	3.82	3.50	13.39	-2.39	17.44	35,048	31,260	52,259	69,023	250,326	375,200
GUINEA	-4.71	21.25	6.87	-5.27	-7.55	28,825	43,290	95,886	156,388	120,830	98,908
GUINEA BISSAU	18.39	-4.44	3.51	-2.58	15.45	8,826	22,460	27,745	17,778	20,268	3,906
LIBERIA	4.86	6.80	-0.68	-9.11	18.00	36,540	51,778	91,180	44,483	99,936	150,992
MALI	0.00	0.00	-36.42	14.50	-47.67	3,491	27,714	67,597	15,701	54,064	49,520
MAURITANIA	4.99	12.78	-17.50	-2.22	-7.39	11,430	27,260	59,955	8,448	8,076	7,666
NIGER	-29.56	100.31	-12.56	81.33	-59.05	1,091	9,183	32,211	45,068	106,124	14,869
NIGERIA	-4.76	141.83	-45.08	0.00	-9.40	1,188	205,908	368,093	283,249	1,226,758	1,600,000
SENEGAL	3.90	10.28	0.40	-32.12	6.60	131,326	215,674	347,828	243,449	3,026	750,000
SIERRA LEONE	22.76	0.00	0.62	-30.27	110.88	21,789	29,662	69,262	25,585	22,146	10,257
TOGO	-3.60	36.35	14.50	-19.73	1.49	2,826	7,204	36,350	53,572	17,878	13,566
WEST AFRICA	4.98	16.69	-2.13	1.76	-0.80	358,486	829,094	1,730,351	1,540,907	3,074,956	4,737,111

Table 45. Central Africa – rice (milled equivalent) imports (t), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
BURUNDI	-21.16	4.15	-	-0.61	0.00	1,057	1,094	785	2,130	946	0	
CENTRAL AFRICAN REPUBLIC	16.93	14.42	11.80	12.66	-37.40	160	140	3,065	2,520	2,014	529	
CONGO, DRC	-0.81	0.11	3.95	-11.00	2.17	24,852	31,847	49,469	9,557	7,470	3,783	
CONGO, REP	8.19	3.54	3.98	13.40	-11.25	1,424	2,660	9,820	25,365	38,212	49,135	
GABON	5.72	14.05	3.95	10.11	80.99	1,647	4,727	12,322	37,562	29,718	48,678	
RWANDA	0.00	21.67	-15.17	28.29	-40.12	764	2,051	5,389	6,048	9,856	1,617	
CENTRAL AFRICA	-0.06	2.87	4.56	8.22	-11.04	29,904	42,519	80,850	83,182	88,216	103,742	

Table 46. East Africa – rice milled equivalent) imports (t), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
COMOROS	5.89	-1.12	-5.89	-13.38	24.97	9,596	14,459	23,177	15,364	16,576	26,627	
KENYA	-23.81	-	2.11	-0.92	4.55	3,104	3,592	19,172	97,761	123,326	149,137	
MADAGASCAR	-	7.74	-16.68	19.06	1.18	16,091	83,636	153,826	58,409	138,192	131,909	
MALAWI	-	-	1.09	-22.47	-46.51	249	387	691	1,073	3,414	364	
SOMALIA	-0.78	-0.41	-1.77	2.70	43.54	21,483	31,765	73,615	72,170	86,808	130,525	
SUDAN	12.26	-	-3.22	-52.81	176.13	6,162	6,505	28,240	41,616	17,192	1,916	
TANZANIA	-3.69	25.46	-16.31	7.36	-9.22	13,923	39,612	65,640	63,446	43,784	20,237	
UGANDA	-4.01	-	-	54.75	-3.47	6,359	4,684	5,164	13,140	15,418	24,621	
EAST AFRICA	2.61	9.09	-10.35	2.62	9.71	68,050	170,181	346,348	347,615	449,776	487,580	

Table 47. North Africa – rice milled equivalent) imports (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
ALGERIA	392.08	8.91	-2.55	-0.49	10.60	1,599	12,230	23,490	32,350	55,630	47,409
EGYPT	0.00	0.00	0.00	98.73	56.51	5	3	5,545	466	2,152	5,440
MOROCCO	11.63	9.06	13.29	15.59	-19.97	13,382	37,752	80,698	105,034	102,674	43,577
LIBYAN ARAB JAMAHIRIYA	0.00	0.00	0.00	9.32	20.89	18	2	1,830	721	904	1,071
TUNISIA	-3.57	4.80	49.65	33.49	14.37	2,042	2,781	5,716	11,857	14,216	23,387
NORTH AFRICA	10.87	8.84	12.03	4.47	-7.24	17,046	52,768	117,279	150,428	175,576	120,884

Table 48. Southern Africa – rice milled equivalent) imports (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
ANGOLA	14.02	78.10	2.68	-8.36	37.90	2,066	21,918	54,191	40,404	88,860	57,447
MOZAMBIQUE	0.00	0.00	5.26	-13.76	54.40	75	38,491	92,961	63,005	157,142	223,532
SOUTH AFRICA	6.16	4.88	1.05	8.09	6.91	66,254	99,541	143,362	415,182	702,682	796,714
SWAZILAND	0.00	0.00	0.00	0.00	-69.91	0	0	905	4,023	5,010	180
ZAMBIA	15.41	4.58	0.00	27.05	-26.43	2,801	5,789	4,074	4,540	5,722	2,490
ZIMBABWE	12.81	1.52	9.43	4.50	-35.75	3,140	4,362	10,272	17,617	9,072	2,916
SOUTHERN AFRICA	6.85	15.91	3.34	3.18	14.39	74,336	170,101	305,765	544,771	968,488	1,083,278

Table 49. Africa and World – rice milled (equivalent) imports (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
SUB-SAHARAN AFRICA	3.52	13.07	-0.17	1.33	11.66	678,111	1,397,357	2,884,762	3,166,909	6,777,664	8,702,497
AFRICA	4.80	14.58	-1.61	2.41	2.20	547,822	1,264,663	2,580,593	2,666,903	4,757,012	6,532,596
WORLD	1.54	5.04	0.84	6.39	1.90	6,243,412	7,841,918	9,699,487	14,264,674	17,838,484	18,308,723

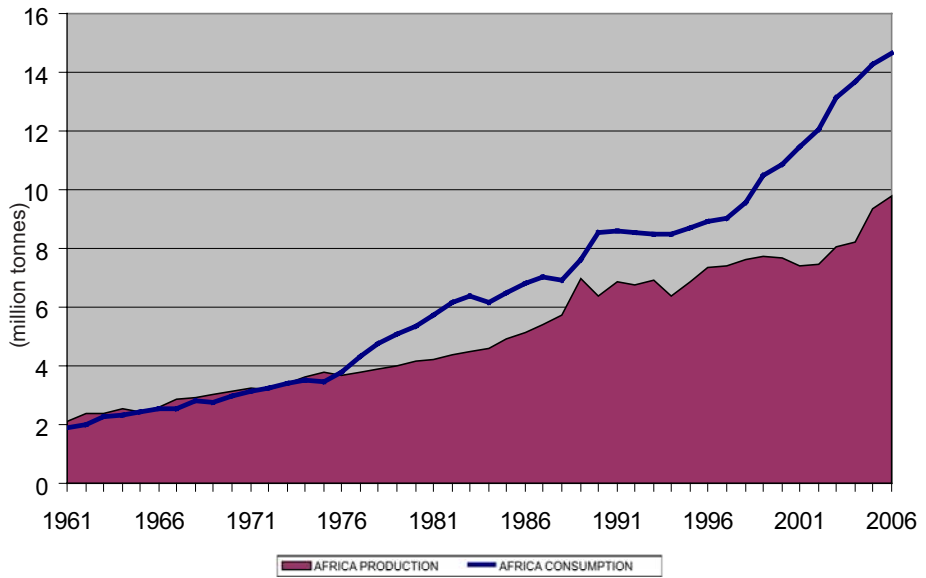


Figure 16. Evolution of rice consumption and production in SSA (million tonnes)

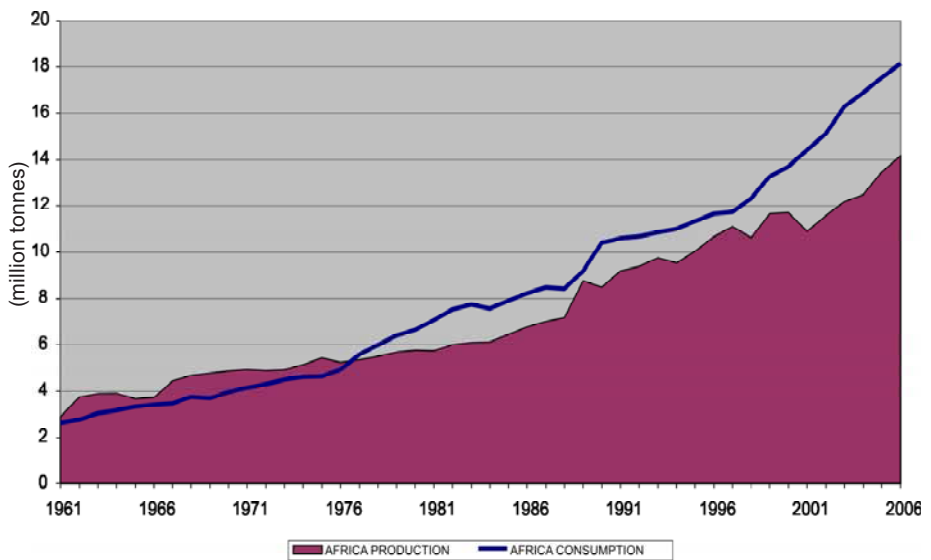


Figure 17. Evolution of rice consumption and production in Africa (million tonnes)

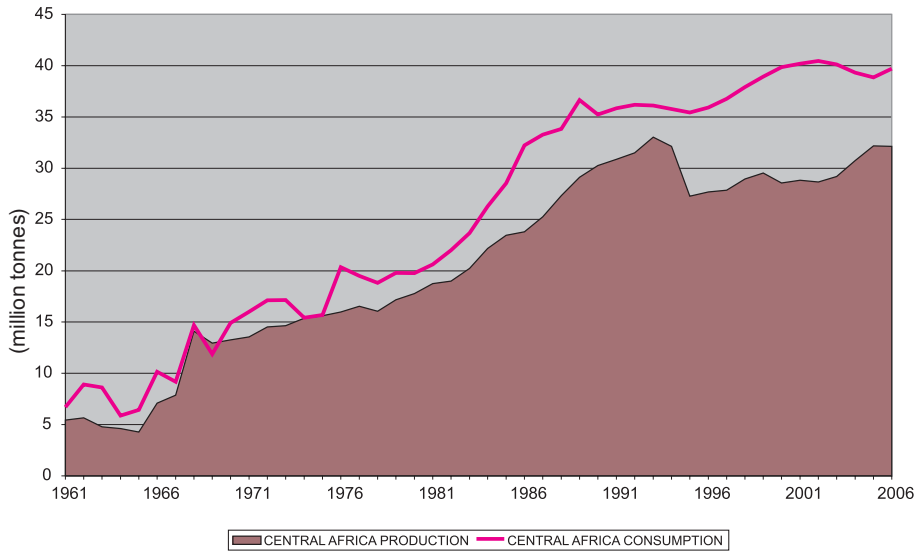


Figure 18. Evolution of rice consumption and production in Central Africa (million tonnes)

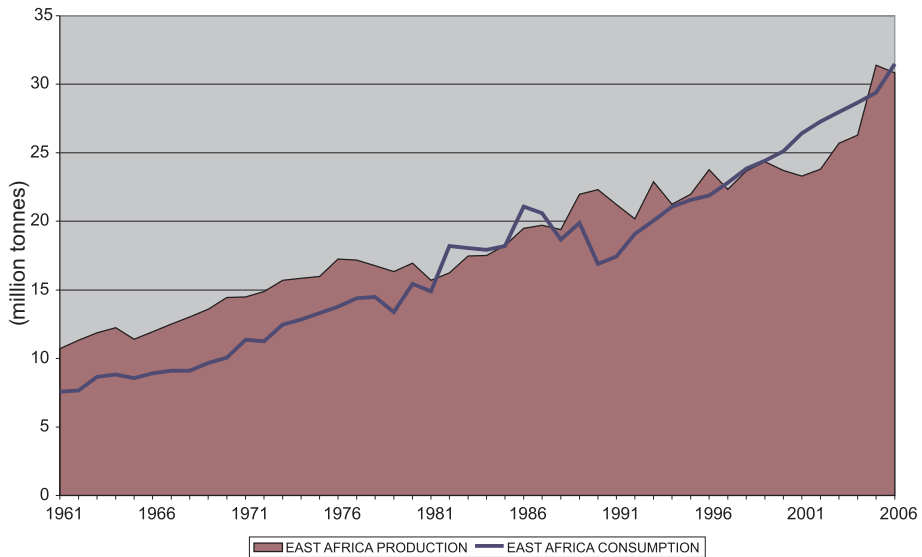


Figure 19. Evolution of rice consumption and production in East Africa (million tonnes)

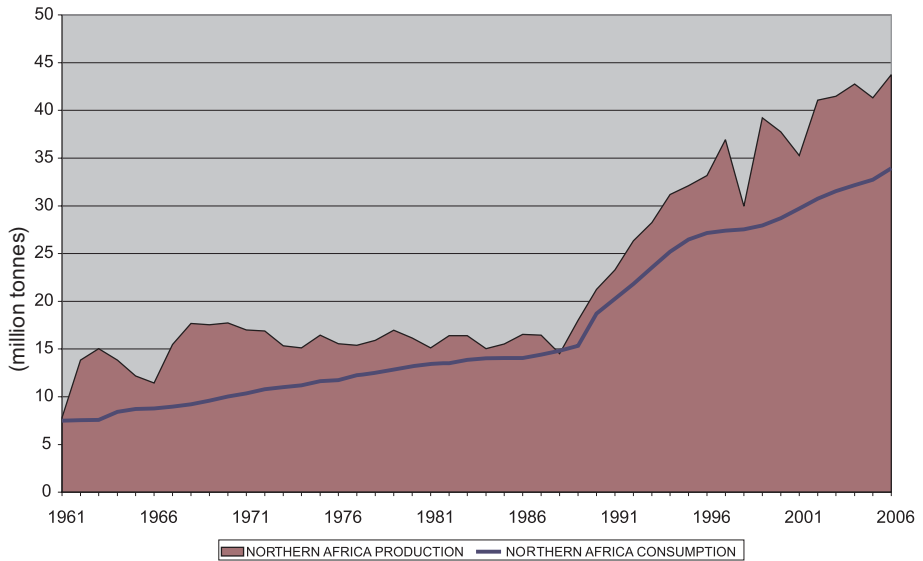


Figure 20. Evolution of rice consumption and production in Northern Africa (million tonnes)

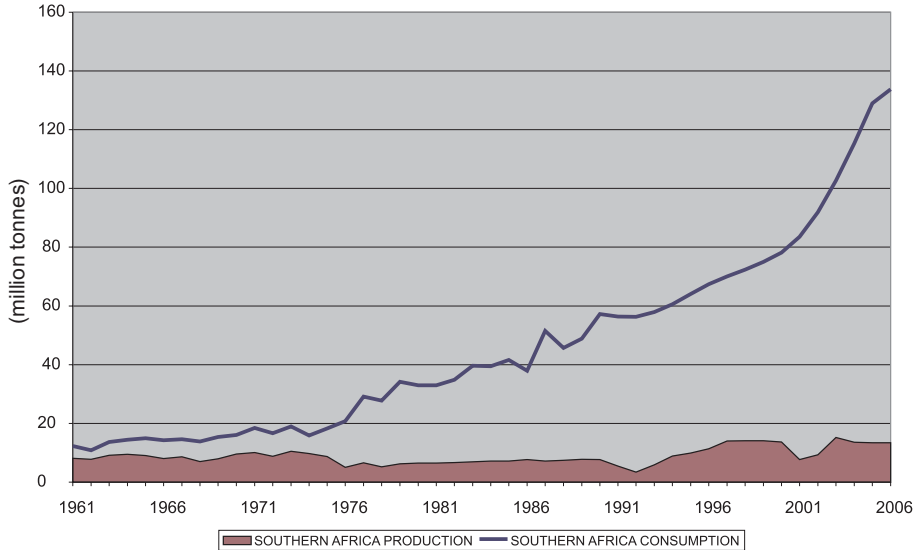


Figure 21. Evolution of rice consumption and production in Southern Africa (million tonnes)

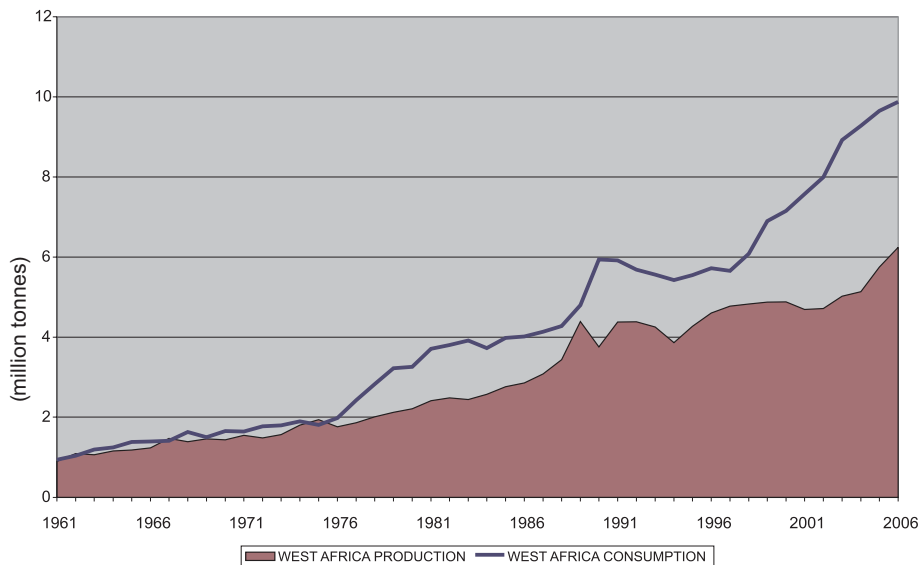


Figure 22. Evolution of rice consumption and production in West Africa (million tonnes)

Table 50: West Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
BENIN	8.11	7.85	12.33	-17.36	63.18	872	2,301	14,221	47,111	44,853	82,926
BURKINA FASO	0.00	-10.87	17.63	41.43	-29.92	257	448	976	25,665	13,705	3,877
CAMEROON	6.69	10.58	17.17	7.48	25.48	1,180	5,470	10,866	21,973	78,654	147,960
CHAD	-9.43	84.28	-0.40	-12.40	11.72	23	692	4,118	770	129	74
CÔTE D'IVOIRE	4.79	26.34	-7.33	1.80	12.77	6,927	33,574	85,982	53,154	126,133	139,196
GAMBIA	5.59	27.28	4.96	-22.91	221.38	1,190	3,910	9,124	6,243	2,589	7,403
GHANA	1.81	12.63	8.47	1.70	27.39	7,081	9,810	16,306	24,185	67,004	87,877
GUINEA	-3.40	28.92	2.57	-8.40	14.58	4,552	14,796	23,593	38,734	21,870	28,456
GUINEA BISSAU	19.33	3.63	1.00	-4.86	35.58	1,263	5,721	8,899	4,363	4,336	10,002
LIBERIA	9.26	14.88	-5.47	-11.32	27.28	6,309	17,393	35,650	13,658	22,773	35,402
MALI	97.12	6.09	-36.06	7.17	-32.38	499	12,385	20,300	4,702	10,193	1,337
MAURITANIA	6.33	29.01	-17.87	3.54	0.92	1,482	5,598	15,907	3,057	2,475	2,747
NIGER	-20.81	117.09	-12.11	70.93	-56.02	146	3,825	13,540	15,207	23,399	4,347
NIGERIA	-9.69	159.83	-45.86	104.65	2.24	249	108,608	150,201	113,493	291,399	659,075
SENEGAL	6.88	19.28	-0.74	-29.00	20.06	15,088	47,161	77,689	52,621	772	359
SIERRA LEONE	22.50	29.47	1.30	-27.57	124.78	2,920	9,224	23,025	6,611	5,807	13,766
TOGO	-1.46	45.73	10.04	-28.85	-5.70	419	1,749	9,499	10,002	1,482	1,123
WEST AFRICA	6.23	32.37	-7.37	5.54	10.51	50,456	282,666	519,897	441,548	717,572	1,225,926

Table 51. Central Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006

	Annual Growth Rate							Yearly Averages						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate			
BURUNDI	12.98	22.47	-5.65	0.94	–	332	4,403	7,904	11,933	371	1			
CENTRAL AFRICAN REPUBLIC	19.33	19.04	7.54	-5.48	-32.06	37	71	1,233	375	519	96			
CONGO, DR	3.69	3.69	23.15	-35.37	-0.82	3,791	8,012	16,646	6,942	2,402	3,449			
CONGO, REP	9.36	22.15	5.26	-1.64	-3.59	221	936	3,640	7,000	9,344	10,573			
GABON	9.56	34.36	2.32	6.95	83.41	280	2,551	6,057	13,803	11,561	12,800			
RWANDA	–	41.41	-6.42	0.46	-46.12	205	1,084	3,302	2,789	2,964	1,516			
CENTRAL AFRICA	5.17	15.55	9.00	-3.58	-2.35	4,865	17,056	38,782	42,842	27,162	28,435			

Table 52. Central Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006 2006

	Annual Growth Rate							Yearly Averages						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate			
COMOROS	7.01	8.43	0.22	-14.30	32.86	1,355	3,751	6,610	5,475	4,216	7,306			
KENYA	-23.71	–	-0.25	9.35	4.83	645	1,076	6,107	15,820	25,405	36,841			
MADAGASCAR	–	20.71	-14.76	13.03	5.91	2,441	23,425	41,500	16,212	26,976	36,661			
MALAWI	–	51.46	12.02	-26.92	-38.79	62	230	249	1,054	723	133			
SOMALIA	3.36	11.96	-2.08	-6.22	57.86	3,344	9,628	22,638	25,530	21,138	32,152			
SUDAN	18.18	8.53	8.37	-50.99	212.24	1,066	2,154	10,937	6,081	4,525	795			
TANZANIA	-2.03	39.35	-13.17	3.68	-1.30	2,248	16,670	24,414	24,064	9,554	5,179			
UGANDA	0.31	–	–	55.16	-2.30	1,287	1,919	2,230	4,225	4,413	6,987			
EAST AFRICA	6.01	20.28	-8.30	1.96	15.62	12,448	58,852	114,685	98,461	98,461	126,054			

Table 53. Northern Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005		1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
ALGERIA	20.06	22.47	-5.65	0.94	20.91		300	4,404	7,903	11,933	18,973	20,362
EGYPT	13.43	7.07	92.53	13.04	56.78		2	7	1,499	416	1,273	4,051
MOROCCO	46.30	-16.41	18.41	7.64	22.56		7	17	897	510	481	620
LIBYAN ARAB JAMAHIRIYA	14.19	25.09	5.49	-21.52	-15.71		2,057	13,763	28,890	5,659	32	10
TUNISIA	-1.57	15.65	42.32	27.24	26.27		404	1,103	1,750	3,983	4,142	8,493
NORTHERN AFRICA	10.47	23.78	5.42	-6.84	23.51		2,769	19,293	40,940	22,501	24,901	33,537

Table 54. Southern Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005		1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
ANGOLA	16.32	89.33	2.19	-16.03	44.28		427	8,769	18,116	17,399	20,775	14,553
MOZAMBIQUE	-9.31	227.19	1.83	-6.82	66.16		28	11,303	23,774	20,820	34,833	62,842
SOUTH AFRICA	10.44	13.37	-1.74	9.79	22.17		11,093	34,970	48,438	112,459	160,250	242,654
SWAZILAND	0.00	0.00	44.34	8.24	-62.55		108	108	562	3,445	1,720	152
ZAMBIA	18.53	9.83	-8.07	9.65	-13.79		507	1,895	1,591	1,484	2,799	1,321
ZIMBABWE	16.51	10.66	6.03	6.82	-32.57		546	1,526	2,817	7,223	2,530	1,232
SOUTHERN AFRICA	11.03	23.66	-0.01	3.83	27.08		12,708	58,571	95,298	162,830	222,907	322,753

Table 55. SSA, Africa Central Africa – rice (milled equivalent) imports value ('000 USD), 1961–2006

	Annual Growth Rate						Yearly Average					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
SUB-SAHARAN AFRICA	5.80	26.48	-3.92	1.13	-2.82	98,117	462,909	877,659	922,464	1,182,694	1,166,018	
AFRICA	6.94	28.00	-5.09	3.58	13.59	83,246	436,438	809,601	768,182	1,091,003	1,737,754	
WORLD	5.69	17.16	-1.51	5.74	10.63	896,370	2,608,925	3,455,595	5,217,109	5,574,687	6,844,973	

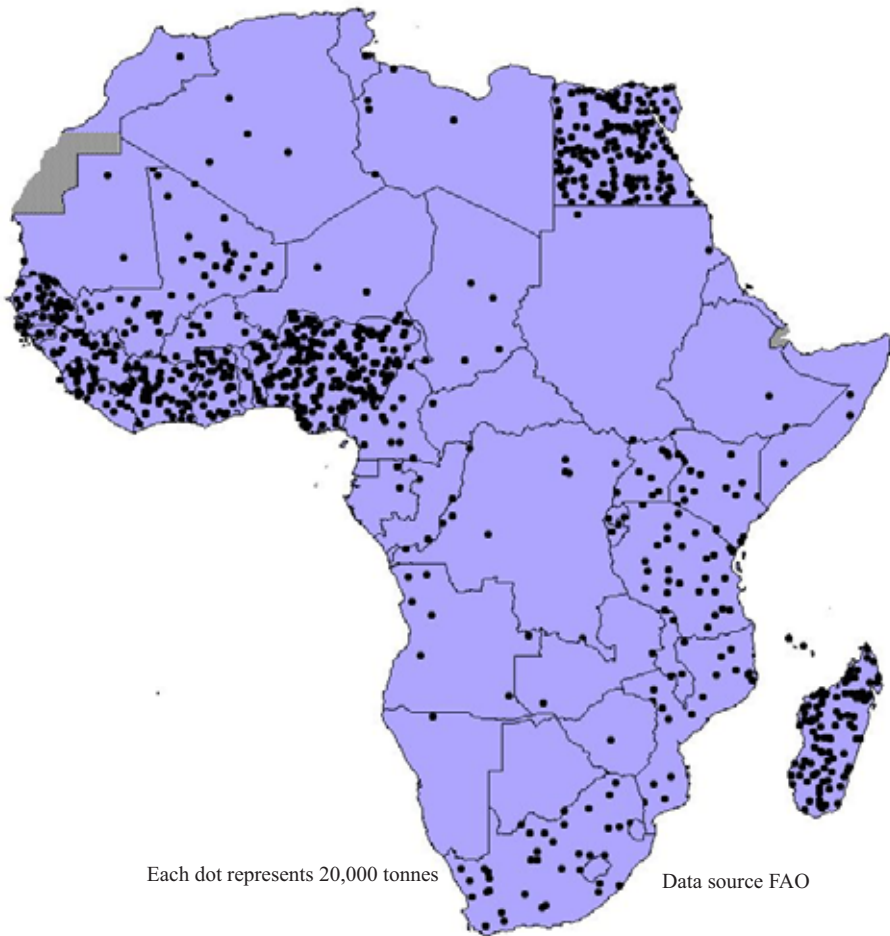


Figure 23. Harvested rice area in 2006

Table 56. West Africa – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005		1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BENIN	7.39	3.41	9.09	-3.06	46.87		5.889	12,613	45,142	93,197	233,964	395,527
BURKINA FASO	1.94	11.45	10.22	4.68	-5.91		23,258	33,588	95,379	158,857	174,200	155,003
CAMEROON	11.16	13.98	6.24	3.84	19.93		14,780	39,910	87,269	103,515	198,320	287,342
CHAD	4.79	-5.71	10.26	1.60	0.78		18,268	22,462	32,687	63,047	69,546	71,476
CÔTE D'IVOIRE	9.41	8.58	4.17	-0.99	7.46		183,178	324,909	662,882	658,342	1,065,166	1,208,594
GAMBIA	2.68	4.32	1.61	-0.16	-2.94		27,969	37,658	61,307	52,528	42,210	40,134
GHANA	2.95	3.78	8.99	0.67	18.01		56,502	71,596	104,761	211,519	564,542	751,412
GUINEA	4.47	3.36	0.89	3.23	1.71		168,730	227,526	297,422	515,230	603,268	643,948
GUINEA BISSAU	1.49	-0.35	2.68	0.65	1.16		34,541	46,195	82,001	83,884	86,564	90,363
LIBERIA	5.54	3.62	-1.00	-2.28	-0.16		115,188	186,523	251,639	134,201	169,108	167,617
MALI	-0.03	4.55	6.37	8.10	14.03		90,984	130,520	183,708	340,148	755,532	865,599
MAURITANIA	5.20	15.24	8.01	5.40	-2.89		11,482	32,442	83,389	116,788	75,040	74,562
NIGER	16.08	9.18	4.16	-1.12	-14.24		13,604	27,082	70,008	65,526	45,962	31,136
NIGERIA	10.88	20.13	4.22	3.39	5.08		138,353	468,413	1,340,588	2,267,615	3,270,270	3,704,675
SENEGAL	3.90	7.63	3.60	3.25	0.11		201,805	271,909	438,061	596,501	818,204	839,844
SIERRA LEONE	8.80	4.12	2.47	-1.72	4.64		222,401	312,685	348,498	390,677	419,688	455,004
TOGO	-1.82	10.77	15.89	-4.42	-0.70		13,273	15,034	45,804	112,292	92,996	89,657
WEST AFRICA	6.00	8.48	4.10	2.25	6.55		1,340,202	2,261,066	4,230,546	5,963,867	8,684,580	9,871,893

Table 57. Central Africa – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BURUNDI	-4.00	9.03	20.61	5.31	4.60	2,509	4,437	12,557	24,187	34,036	39,513
CENTRAL AFRICAN REPUBLIC	15.86	10.11	1.36	5.59	2.85	3,553	6,811	9,366	9,849	17,152	19,101
CONGO, DRC	8.92	1.74	6.34	-1.25	-2.94	83,572	154,413	234,193	249,240	216,142	200,480
CONGO, REP	7.26	0.45	6.70	8.62	-5.14	4,516	5,307	11,895	34,170	58,424	55,310
GABON	3.35	12.58	9.63	3.23	3.30	1,972	4,935	14,206	35,242	45,962	49,796
RWANDA	-	16.81	2.98	6.69	8.53	1,187	3,685	10,104	16,080	26,264	32,881
CENTRAL AFRICA	8.64	2.67	6.91	1.10	-0.96	97,309	179,588	292,322	368,768	397,980	397,081

Table 58. East Africa – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
COMOROS	3.32	3.42	1.03	-0.20	5.39	14,434	20,539	32,448	40,066	43,550	48,145
KENYA	3.89	3.60	-10.44	26.40	11.29	11,882	26,632	43,597	114,972	206,360	317,577
MADAGASCAR	3.02	1.99	-0.02	3.12	3.03	732,667	989,848	1,265,102	1,330,553	1,721,364	1,878,587
MALAWI	21.73	4.39	5.99	9.19	-15.12	4,657	30,957	21,254	37,654	51,188	35,846
SOMALIA	-0.67	3.20	-1.56	-1.39	1.53	21,529	35,359	81,705	84,064	57,519	58,258
SUDAN	8.22	-0.83	8.74	-11.97	6.62	6,378	11,700	33,586	58,692	46,364	47,184
TANZANIA	0.43	9.11	9.13	5.65	-1.19	80,576	196,267	345,620	433,490	533,052	550,023
UGANDA	-0.29	6.41	4.44	13.35	5.04	8,951	15,421	19,949	62,109	113,096	212,206
EAST AFRICA	2.80	3.14	1.52	3.79	2.66	881,074	1,326,723	1,843,561	2,172,253	2,794,067	3,147,836

Table 59. North Africa – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate					Yearly Averages						2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
ALGERIA	2.33	5.77	4.19	1.96	10.55	5,846	12,079	24,819	43,885	72,896	88,122	
EGYPT	3.30	2.60	2.40	3.68	2.31	847,702	1,152,518	1,412,695	2,419,370	2,944,650	3,173,772	
MOROCCO	9.71	7.07	6.94	6.41	2.35	9,097	10,298	20,690	56,816	84,018	93,395	
LIBYAN ARAB JAMAHIRIYA	-	-	-	-1.43	-3.53	-	-	32,160	28,877	23,986	25,757	
TUNISIA	-	-	-	4.53	-1.61	-	-	7,370	11,323	12,462	12,606	
NORTHERN AFRICA	3.36	2.67	2.62	3.65	2.43	862,645	1,174,896	1,462,157	2,560,271	3,138,012	3,393,653	

Table 60. Southern Africa – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate					Yearly Averages						2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
ANGOLA	-2.21	23.28	5.03	-7.28	29.13	14,899	31,365	60,582	56,079	98,624	141,020	
MOZAMBIQUE	-0.35	9.53	1.63	3.96	25.09	50,749	88,609	131,512	130,784	257,012	395,621	
SOUTH AFRICA	5.70	5.23	7.84	5.90	5.28	67,086	100,502	213,990	431,547	638,108	745,021	
SWAZILAND	4.27	50.69	20.97	0.20	-22.19	156	1,247	3,429	8,241	8,308	5,371	
ZAMBIA	16.45	6.32	-0.33	4.75	11.95	2,894	6,839	9,886	11,993	25,728	32,283	
ZIMBABWE	14.49	-1.39	9.24	3.79	0.00	4,760	4,793	10,287	19,497	17,018	18,081	
SOUTHERN AFRICA	3.07	8.89	5.45	4.04	11.58	140,545	233,356	429,686	658,141	1,044,798	1,337,396	

Table 61. SSA, Africa and World – rice and rice product (milled equivalent) total consumption (t), 1961–2006

	Annual Growth Rate							Yearly Averages						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate			
SUB-SAHARAN AFRICA	4.75	6.49	3.68	2.67	5.84	2,459,131	4,000,733	6,795,816	9,163,030	12,921,425	14,650,593			
AFRICA	4.38	5.62	3.49	2.87	5.16	3,321,776	5,175,628	8,257,972	11,723,301	16,059,437	18,147,849			
WORLD	3.53	2.45	2.26	1.26	0.49	153,583,161	207,037,903	270,807,992	325,715,746	349,968,122	357,442,585			

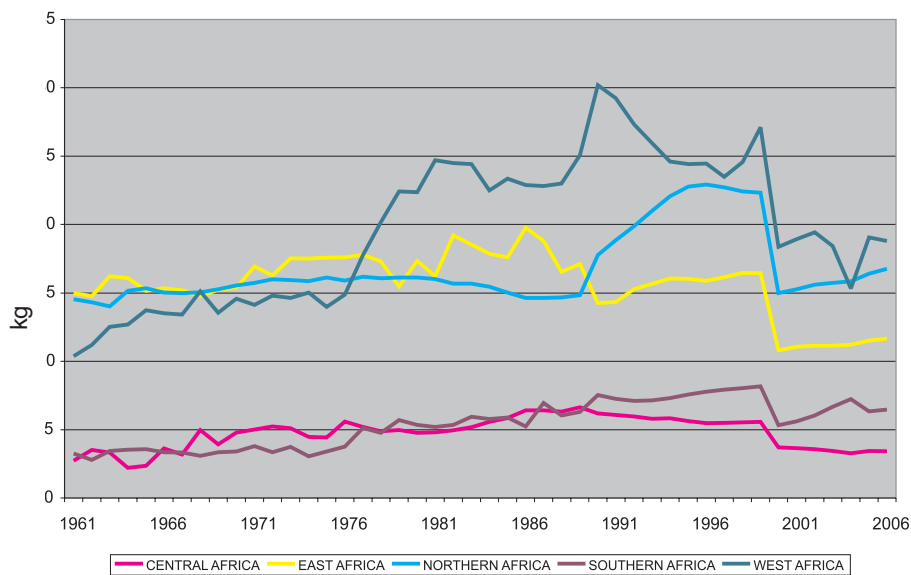


Figure 24. Evolution of per capita rice consumption by region (kg/year)

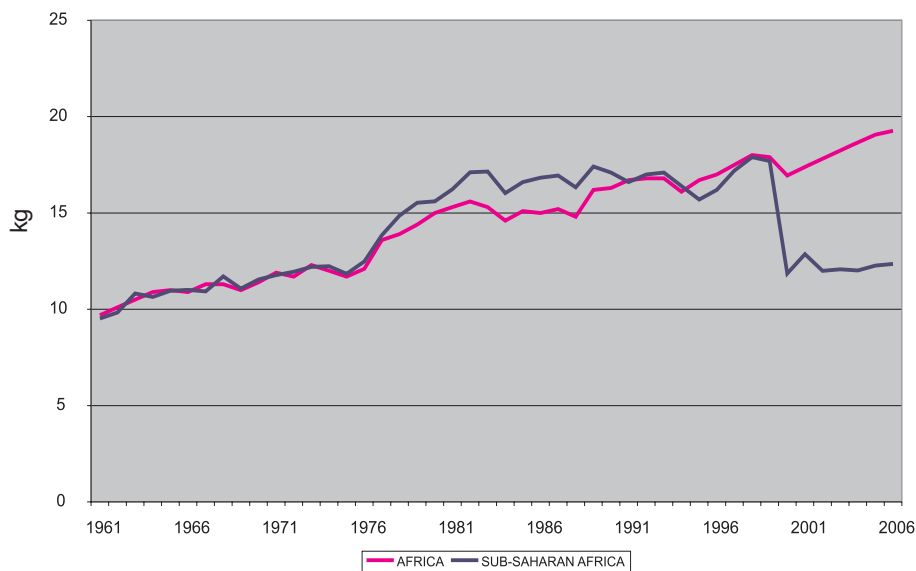


Figure 25. Evolution of per capita rice consumption in sub-Saharan Africa and Africa (kg/year)

Table 62. West Africa – rice and rice product (milled equivalent) per capita consumption (kg/year)

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
BENIN	5.31	0.90	5.27	-4.96	32.70	2.37	4.06	10.71	15.69	31.62	45.70
BURKINA FASO	-0.07	8.78	7.39	1.99	-7.87	4.70	5.32	11.78	15.10	12.99	10.86
CAMEROON	8.69	10.92	2.95	1.10	14.79	2.44	5.09	8.49	7.23	12.29	15.75
CHAD	2.95	-7.62	7.41	-1.64	-2.71	5.40	5.57	6.27	8.78	7.32	6.87
CÔTE D'IVOIRE	5.36	4.38	0.10	-6.52	3.82	38.74	46.21	64.97	43.04	59.53	61.43
GAMBIA	-0.10	0.99	-2.33	-3.02	-5.09	68.14	67.31	79.65	46.21	27.42	24.44
GHANA	0.66	1.56	5.21	-4.34	11.96	7.19	7.24	7.87	11.45	26.97	31.70
GUINEA	2.15	2.04	-1.87	0.40	-0.09	47.49	54.20	58.53	70.25	69.57	69.57
GUINEA BISSAU	1.97	-4.80	0.59	-2.24	-1.74	65.73	71.82	92.10	70.92	57.45	55.20
LIBERIA	2.53	0.54	-2.02	-8.63	-2.81	93.97	113.61	118.04	58.20	50.46	45.69
MALI	-2.24	2.27	3.46	4.95	7.73	18.36	20.85	22.71	32.08	39.65	41.65
MAURITANIA	3.00	12.51	5.22	4.23	4.03	10.28	22.76	46.01	49.57	20.23	22.30
NIGER	12.51	5.97	0.82	-4.60	-15.85	3.59	5.46	10.38	7.17	3.54	2.31
NIGERIA	8.03	16.93	1.34	0.10	2.09	2.76	7.08	15.81	20.27	24.44	25.38
SENEGAL	1.16	4.59	0.33	-0.48	-2.28	54.59	55.01	66.73	63.73	72.54	68.81
SIERRA LEONE	6.96	2.07	0.13	-2.92	-0.08	89.73	105.11	95.43	93.57	81.35	80.51
TOGO	-4.99	8.04	11.76	-8.71	-3.91	7.87	6.34	13.69	25.25	15.51	13.79
WEST AFRICA	3.39	5.74	1.03	-1.37	-0.78	13.07	17.02	24.34	25.68	18.33	18.80

Table 63. Central Africa – rice and rice product (milled equivalent) per capita consumption (kg/year)

	Annual Growth Rate					Yearly averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BURUNDI	-5.74	7.21	16.91	3.35	1.34	0.78	1.17	2.49	3.80	4.76	5.00
CENTRAL AFRICA REPUBLIC	13.70	7.64	-0.85	1.34	1.39	2.05	3.22	3.57	2.82	4.37	4.51
CONGO, DRC	5.88	-1.15	2.88	-3.93	-5.60	4.61	6.53	7.18	5.64	3.83	3.33
CONGO, REP	4.63	-2.34	3.18	4.06	-6.21	3.96	3.61	5.90	11.29	16.70	14.73
GABON	3.09	8.95	6.54	0.71	1.04	3.99	8.02	17.16	33.19	37.16	37.77
RWANDA	11.36	13.44	-0.56	5.29	5.99	0.33	0.78	1.66	2.43	3.07	3.52
CENTRAL AFRICA	5.83	-0.21	3.58	-1.25	-3.44	3.47	4.96	5.83	5.71	3.36	3.10

Table 64. East Africa – rice and rice product (milled equivalent) per capita consumption (kg/year)

	Annual Growth Rate					Yearly averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
COMOROS	0.75	-0.10	-2.02	-2.41	2.00	58.87	62.88	71.34	67.40	58.10	60.93
KENYA	0.58	-0.20	-13.40	29.58	11.11	1.19	1.89	2.22	4.11	6.60	7.07
MADAGASCAR	0.54	-0.88	-3.04	-0.08	0.11	118.51	124.66	117.40	93.37	97.59	97.73
MALAWI	18.74	1.10	1.32	6.61	-15.15	1.11	5.75	2.77	3.46	3.89	2.51
SOMALIA	-3.09	-2.31	-2.87	-0.52	-0.47	6.72	7.82	12.51	13.46	8.36	8.45
SUDAN	5.90	-3.80	-	-15.83	1.60	0.50	0.72	1.37	2.15	1.30	1.46
TANZANIA	-2.51	5.82	5.76	2.79	-2.79	6.76	11.95	15.39	14.08	14.49	13.53
UGANDA	-4.30	3.31	1.73	10.10	2.98	1.09	1.33	1.31	2.70	4.27	4.33
EAST AFRICA	-0.10	-0.08	-1.36	1.38	0.53	15.31	17.13	17.59	15.81	11.20	11.25

Table 65. Southern Africa – rice and rice product (milled equivalent) per capita consumption (kg/year)

	Annual Growth Rate										Yearly averages						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
ANGOLA	-3.64	20.37	1.46	-11.43	19.07	2.86	4.83	7.26	4.79	6.76	9.48						
MOZAMBIQUE	-2.65	6.72	0.58	1.14	18.75	6.02	8.14	9.83	8.13	13.96	18.54						
SOUTH AFRICA	3.05	2.52	5.40	3.71	4.12	3.32	3.84	6.34	10.10	13.84	14.69						
SWAZILAND	-18.56	46.35	16.97	-2.79	-17.07	0.31	2.37	4.86	8.87	7.39	5.27						
ZAMBIA	13.11	2.92	-2.86	1.83	8.47	0.76	1.37	1.52	1.29	2.41	2.72						
ZIMBABWE	10.84	-4.30	5.37	3.58	-0.23	1.02	0.77	1.19	1.69	1.35	1.33						
SOUTHERN AFRICA	0.55	6.01	3.07	1.89	8.32	3.31	4.20	6.02	7.59	6.95	7.99						

Table 66. SSA Africa and World– rice and rice product (milled equivalent) per capita consumption (kg/year)

	Annual Growth Rate										Yearly averages						
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
SUB-SAHARAN AFRICA	1.86	3.57	0.32	0.69	-0.45	10.80	13.23	16.77	16.87	12.26	12.36						
AFRICA	1.54	2.80	0.48	1.04	2.13	10.81	12.86	15.34	17.06	18.41	19.27						
WORLD	1.45	0.62	0.55	0.00	45.35	50.35	56.07	57.26	55.58	55.58	55.58						

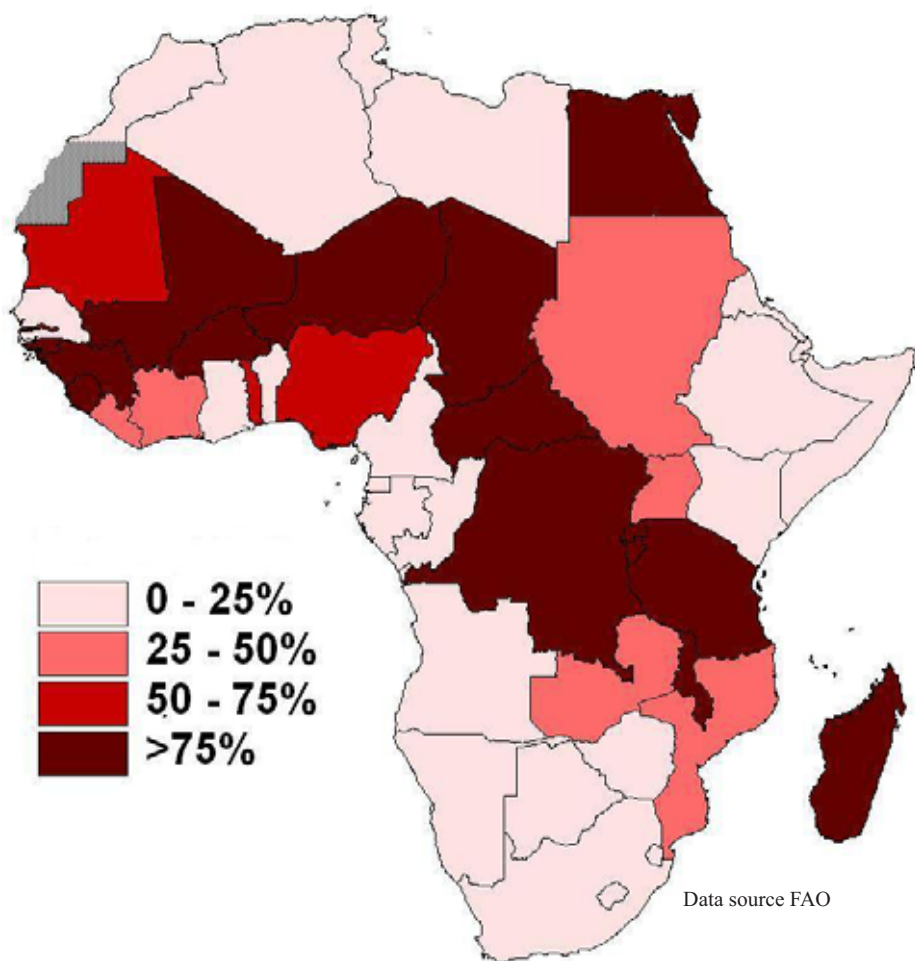


Figure 26: Rice self-sufficiency status, 2006

Table 67. West Africa – rice (milled equivalent) self-reliance ratio (%)

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	
BENIN	11.55	3.15	-5.00	24.52	-27.06	18.99	61.76	13.37	18.29	23.22	12.02	
BURKINA FASO	0.53	-7.70	-10.34	6.35	1.08	1.02	84.19	33.15	31.85	35.73	81.77	
CAMEROON	0.10	7.96	-7.70	2.05	-18.29	0.60	56.05	56.92	28.75	18.70	12.12	
CHAD	0.18	0.42	4.48	3.74	0.95	1.22	116.33	71.29	103.84	118.09	99.90	
CÔTE D'IVOIRE	-1.74	-4.01	2.11	0.26	-4.61	1.00	95.53	53.92	74.25	42.02	38.81	
GAMBIA	-0.64	-4.63	-6.77	5.68	-4.22	0.81	51.93	30.18	26.83	39.26	51.79	
GHANA	5.24	1.81	-3.57	5.19	-15.76	0.52	76.83	47.37	60.94	33.29	22.29	
GUINEA	-0.04	1.02	3.51	1.15	3.56	1.05	117.13	139.17	122.97	127.55	139.45	
GUINEA BISSAU	-6.07	6.05	0.47	-4.84	1.92	0.87	67.98	84.16	90.50	65.99	78.59	
LIBERIA	-0.57	-1.42	-0.96	15.18	-7.77	0.83	84.99	73.99	63.91	44.50	26.38	
MALI	-1.74	-1.63	3.60	-0.57	-12.12	1.22	96.52	81.81	113.18	80.22	78.86	
MAURITANIA	-1.03	3.34	8.14	2.89	8.30	0.04	8.98	26.65	37.92	67.04	63.32	
NIGER	4.05	-10.35	3.07	-1.39	10.87	1.05	84.86	54.56	64.50	110.44	141.29	
NIGERIA	-1.43	-10.69	6.02	-2.38	1.54	1.33	89.91	87.36	92.63	64.22	70.97	
SENEGAL	-1.74	-4.58	0.77	-2.20	7.72	0.37	24.70	21.76	19.77	17.89	15.20	
SIERRA LEONE	-2.25	-2.22	-2.23	-6.98	13.10	1.22	115.94	96.18	65.01	79.11	156.43	
TOGO	-0.94	-10.60	-5.51	17.35	3.34	1.00	83.38	37.09	39.33	48.50	57.01	
WEST AFRICA	-0.78	-3.83	2.23	-0.38	-1.40	0.93	83.87	71.15	75.88	58.41	63.25	

Table 68. Central Africa – rice (milled equivalent) self-reliance ratio (%)

	Annual Growth Rate					Yearly Averages					
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate
BURUNDI	8.48	-0.16	0.10	-0.93	-2.00	91.96	106.54	123.20	123.28	125.15	115.83
CENT AFR REP	-1.58	-0.68	-5.28	9.31	3.24	128.56	109.90	93.47	89.87	113.53	105.23
CONGO, DEM R	5.10	0.55	-0.90	-1.23	2.37	79.76	91.21	90.29	100.38	98.46	105.55
CONGO, REP	-0.59	-8.92	-13.85	-11.05	4.89	76.01	62.19	9.80	2.74	1.52	1.70
GABON	-9.36	-10.02	-13.37	-2.00	-3.18	23.57	11.03	3.78	1.57	1.46	1.35
RWANDA	-	-4.68	1.14	-9.81	31.46	15.20	57.24	46.25	41.75	84.45	128.23
CENTRAL AFRICA	4.75	-0.02	-1.10	-2.41	4.26	79.41	87.95	82.52	80.80	75.25	80.90

Table 69. East Africa – rice (milled equivalent) self-reliance ratio (%)

	Annual Growth Rate					Yearly Averages					
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate
COMOROS	-1.73	1.96	0.33	0.66	-4.38	49.95	37.21	28.09	28.52	26.53	23.66
KENYA	3.16	-0.85	14.06	-20.54	-3.11	98.70	96.64	98.32	92.29	15.85	13.68
MADAGASCAR	-0.20	-1.03	1.90	-2.49	3.48	152.89	134.93	115.92	125.22	112.62	124.29
MALAWI	-5.16	-1.30	-3.51	-1.12	-2.18	156.58	142.03	115.91	110.90	97.04	93.46
SOMALIA	-	29.20	5.85	-16.77	25.60	0.28	13.55	10.70	3.22	12.87	12.12
SUDAN	3.35	6.88	-28.83	41.20	22.86	17.56	50.04	0.00	6.15	25.61	28.40
TANZANIA	0.36	-2.80	4.90	-0.56	1.359	99.89	96.50	94.35	103.33	86.00	95.50
UGANDA	12.81	-3.49	6.71	-6.99	1.06	38.25	84.58	84.91	94.55	75.74	48.62
EAST AFRICA	-0.00	-1.43	2.30	-2.06	4.43	139.68	122.15	102.43	104.45	93.17	97.94

Table 70. Southern Africa – rice (milled equivalent) self-reliance ratio (%)

	Annual Growth Rate										Yearly Averages						
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate
ANGOLA	-0.27	-25.60	-20.79	14.74	-8.32	116.81	68.38	7.36	13.38	5.64	4.28						
MOZAMBIQUE	0.12	-15.44	0.83	15.35	-5.64	119.15	74.39	45.16	61.35	40.90	29.47						
SOUTH AFRICA	-6.59	-2.85	-7.27	-5.71	-5.36	2.12	2.00	0.99	0.48	0.34	0.28						
SWAZILAND	-0.17	-34.60	-13.24	-32.66	-32.32	-	-	69.30	7.93	0.86	0.15						
ZAMBIA	-	15.92	10.83	-3.49	-8.45	1.55	14.85	64.65	65.60	32.28	27.68						
ZIMBABWE	2.07	-20.00	4.28	-4.14	-1.63	38.33	11.24	2.94	1.54	2.32	2.09						
SOUTHERN AFRICA	-3.05	-14.41	-3.46	11.19	4.12	60.92	37.50	17.23	14.90	11.25	10.02						

Table 71. SSA, Africa and World – rice (milled equivalent) self-reliance ratio (%)

	Annual Growth Rate										Yearly Averages						
	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate	1961-1970	1971-1980	1981-1990	1991-2000	2001-2005	2006 estimate
SUB-SAHARAN AFRICA	-0.60	-3.43	1.67	-0.84	-0.03	107.45	93.93	76.38	78.39	62.61	66.77						
AFRICA	0.41	-3.53	1.08	-0.01	-0.06	122.10	103.98	82.89	88.51	75.53	78.01						
WORLD	0.08	-0.10	0.05	-0.22	-0.07	95.91	96.23	96.45	95.64	94.90	94.88						

Table 72. West Africa – rice (milled equivalent) share in terms of calorie intake (%)

	Annual Growth Rate						Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BENIN	4.59	0.26	2.92	2.94	27.65	17.00	1.21	2.04	5.05	5.32	11.04	17.00
BURKINA FASO	-1.73	7.87	1.97	3.59	-34.09	0.47	2.78	3.23	5.57	5.21	4.65	0.47
CAMEROON	7.83	11.14	4.83	0.51	3.20	8.59	1.15	2.18	4.01	4.91	7.86	8.59
CHAD	3.72	-2.81	13.87	-3.57	-0.60	4.53	2.55	3.21	4.08	4.90	3.97	4.53
CÔTE D'IVOIRE	3.50	1.87	-0.35	2.50	-3.06	21.24	15.54	16.78	21.21	22.88	21.00	21.24
GAMBIA	0.30	4.30	-2.01	-2.80	-16.90	9.01	28.61	34.12	34.63	29.41	14.15	9.01
GHANA	1.98	4.81	2.98	-5.79	-2.51	7.62	3.25	3.15	3.69	5.53	8.32	7.62
GUINEA	2.24	1.63	0.27	-0.54	-6.64	25.60	21.93	24.64	27.82	32.18	29.61	25.60
GUINEA BISSAU	1.11	-3.35	1.42	-1.37	-11.72	26.92	32.38	35.59	41.09	44.84	33.62	26.92
LIBERIA	1.79	-0.05	-1.33	-8.61	-8.17	20.26	41.84	46.82	48.49	28.53	26.48	20.26
MALI	-2.42	1.36	-1.87	5.53	-0.32	19.60	8.78	10.80	11.49	14.85	20.80	19.60
MAURITANIA	3.07	10.88	3.31	1.91	-7.09	7.88	5.00	10.95	18.08	18.55	8.46	7.88
NIGER	10.03	5.22	1.72	-3.69	-16.51	2.97	1.81	2.49	4.78	4.47	4.56	2.97
NIGERIA	8.78	16.47	-0.75	-0.27	-2.71	9.13	1.53	4.08	8.55	8.42	9.32	9.13
SENEGAL	-0.06	4.48	-0.33	2.53	-0.47	31.55	21.66	23.73	28.13	27.96	30.94	31.55
SIERRA LEONE	3.52	0.93	0.18	-0.37	-	-	41.73	47.67	45.88	45.23	38.05	-
TOGO	-4.99	9.20	1.99	11.51	-12.80	5.32	3.36	3.00	4.85	7.47	6.93	5.32
WEST AFRICA	2.97	5.78	-0.74	-0.23	-1.95	12.10	7.02	9.37	12.66	11.96	12.49	12.10

Table 73. Central Africa – rice (milled equivalent) share in terms of calorie intake (%)

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
BURUNDI	-5.82	6.92	16.68	6.35	112.99	0.33	0.51	1.13	2.27	23.79	38.87
CENTRAL AFRICAN REPUBLIC	13.19	8.10	1.65	4.48	176.60	0.95	1.41	1.86	1.75	42.18	70.89
CONGO, DRC	6.28	-0.52	3.95	-3.12	13.36	2.08	3.00	3.45	3.27	4.19	4.61
CONGO, REP	5.00	-8.37	3.21	3.07	98.83	1.88	1.38	1.82	5.37	45.15	70.61
GABON	1.55	7.38	2.56	-2.34	138.48	1.93	3.35	6.15	11.74	125.16	193.33
RWANDA	-	12.20	0.81	2.41	133.46	0.13	0.34	0.72	1.14	19.18	31.04
CENTRAL AFRICA	4.79	3.20	4.74	-2.60	-3.62	1.85	2.66	3.57	3.84	3.90	0.00

Table 74. East Africa – rice (milled equivalent) share in terms of calorie intake (%)

	Annual Growth Rate					Yearly Averages					
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	2006 estimate
COMOROS	0.54	1.00	-0.75	-0.83	-5.05	30.43	33.34	39.94	37.57	28.08	25.75
KENYA	0.16	-0.17	-10.07	17.67	2.85	0.51	0.80	1.04	1.27	2.76	2.98
MADAGASCAR	-0.07	-0.61	-1.17	0.11	1.13	51.01	51.79	50.37	46.45	49.09	50.49
MALAWI	16.95	1.88	1.08	4.29	-19.71	0.49	2.37	1.25	1.82	1.88	1.18
SOMALIA	-3.39	-2.05	-1.71	-3.04	-	3.87	4.51	6.62	8.36	4.47	4.07
SUDAN	4.52	-4.55	5.27	-4.99	-12.18	0.26	0.33	0.69	0.44	0.63	0.27
TANZANIA	-2.26	1.97	7.68	1.94	-1.78	3.67	5.51	6.78	7.19	7.39	7.29
UGANDA	-4.22	4.34	2.25	8.54	-	0.47	0.58	0.59	1.32	1.96	2.54
EAST AFRICA	-0.48	-0.19	-0.33	0.41	0.53	5.37	5.91	5.98	5.54	5.77	5.82

Table 75: Southern Africa – rice (milled equivalent) share in terms of calorie intake (%)

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
ANGOLA	-4.76	19.31	4.05	-11.87	54.29	1.52	2.32	3.96	3.21	3.40	4.90
MOZAMBIQUE	-2.31	6.30	-0.78	2.19	29.02	3.16	4.17	5.21	4.20	6.10	9.25
SOUTH AFRICA	2.68	3.00	5.84	3.05	10.05	1.20	1.36	2.40	4.10	5.19	5.95
SWAZILAND	-18.74	41.40	16.21	3.85	-10.56	0.138	0.95	1.86	4.45	3.93	3.36
ZAMBIA	12.06	3.11	-1.47	-2.81	10.52	0.349	0.58	0.72	0.70	1.40	1.50
ZIMBABWE	10.76	-4.37	6.17	5.33	-22.81	0.492	0.351	0.56	0.87	0.59	0.18
SOUTHERN AFRICA	-11.19	52.95	9.70	11.88	8.97	0.020	0.298	0.93	2.281	3.003	4.048

Table 76: SSA and World – rice (milled equivalent) share in terms of calorie intake (%)

	Annual Growth Rate					Yearly Averages					2006 estimate
	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	1961–1970	1971–1980	1981–1990	1991–2000	2001–2005	
SUB-SAHARAN AFRICA	1.60	3.29	0.20	0.04	-1.21	5.123	6.276	7.796	7.756	8.157	8.107
WORLD	0.77	0.04	-0.06	-0.56	0.08	19.42	20.59	21.30	20.95	20.24	20.15

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