SPECIAL REPORT

FAO/WFP CROP AND FOOD SUPPLY ASSESSMENT MISSION TO SRI LANKA

10 May 2004

Mission Highlights

- Failure of the rains during the Maha season, especially in the districts of Kurunegala, Anuradhapura and Puttalam, resulted in reductions of 77.5, 37.0 and 63.3 percent, respectively, in Maha season paddy production in these districts compared to the previous year.
- Nationally, the decrease in paddy production was 7.2 percent below the previous five-year average and 13.8 percent below paddy production in 2002/03.
- The paddy area planted in the Maha season increased substantially in Northeast Province as a result of the return of former internally displaced persons, but the harvested area was reduced nationally by 13.1 percent compared to the previous year because of drought.
- Other field crops, including maize, various pulses and chillies, mainly grown under rainfed conditions, were heavily damaged, but livestock production, in general, was not adversely affected.
- Reduced availability of water in major irrigation tanks in Kurunegala, Puttalam and Anuradhapura and in other districts may cause a very significant reduction in the Yala crop in 2004. This could result in two consecutive paddy crop failures in these districts.
- Rice import requirements for 2004 have been estimated at 411 730 tonnes. With commercial imports estimated at 300 000 tonnes and anticipated food aid at 27 750 tonnes, there remains an uncovered deficit of 83 980 tonnes.
- A total of 67 398 farming families in the most seriously affected north-central districts of Kurunegala, Anuradhapura and Puttalam were estimated to be the most seriously affected and in need of food assistance. In addition, 7 100 families in Monaragala, Hambantota and other areas, along with some 3 370 landless families have been seriously affected by the drought.
- Most of the drought-affected families have also been the most vulnerable to food insecurity over the past several years. Given this chronic nature of vulnerability, the mission supports the government's decision to offer food-for-work (FFW) assistance instead of free relief.

1. OVERVIEW

An FAO/WFP Crop and Food Supply Assessment Mission visited Sri Lanka from 7–26 March 2004 to assess the 2003/04 Maha crop harvest, forecast 2004 Yala production, and estimate cereal import requirements for the 2004 marketing year (January/December), including anticipated commercial imports and unmet gaps compared to historical consumption levels.

The Mission interviewed central and local government officials and observed standing and harvested crops still in the field to assess yields. The Mission also visited millers, wholesalers, retailers, traders and farmers to obtain information on cereal stocks, flows, marketing system, prices, trade, cost of paddy production and input supply and costs. The Mission covered 13 out of 25 districts in the country, which account for some 57

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percent of national paddy production. Districts visited include Puttalam, Kurunegala, Anuradhapura, Mannar, Vavuniya, Kalutara, Galle, Matara, Hambantota, Moneragala, Badulla, Polonnaruwa and Kandy. For those not visited, the mission obtained written information from the Ministry of Agriculture and Livestock staff, which was supplemented by information obtained through personal and telephone contacts from various sources. Discussions were held with staff of UN agencies, NGOs, resident diplomatic missions and government officials at the national, district and division levels. The Mission also used rainfall and temperature charts and high resolution SPOT-4 satellite images to verify vegetation conditions in 2004 compared to normal conditions in the country.

The 2003/04 rainy season was generally characterized by low and erratic rainfall, particularly in Kurunegala, Puttalam, Anuradhapura, Mannar, Hambantota, Monaragala and Badulla; the border district of Vavuniya was also affected. The dry period began in most districts in September 2003 and continued until March 2004. Those farmers depending on rain-fed production and on irrigation water from minor tanks suffered most. Many farmers in the most affected districts did not receive sufficient rains for planting rice and other field crops, while others planted only to see their crops fail in the dry period beginning in December. Total paddy output for the Maha crop is estimated at 1.635 million tonnes, which is 13.8 percent below the bumper crop of 1.897 million tonnes in the previous year and some 7.2 percent below the five-year average from 1998/99 to 2002/03 Maha season. Paddy production in the Maha season in the districts of Kurunegala, Anuradhapura and Puttalam is estimated as lower by 77.5, 37.0 and 63.3 percent, respectively, from the previous year.

Prospects for the Yala paddy crop, which normally amounts to 65 percent of the main Maha crop, are poor in Kurunegala, Anuradhapura, Puttalam and Hambantota, but elsewhere are reasonable. For those farmers who lost their Maha crop, the prospect of also losing a Yala crop could result in severe hardship.

The Mission estimates rice import requirements in marketing year 2004 at 411 730 tonnes. Commercial imports by traders and millers are forecast at 300 000 tonnes and pledged/pipeline food aid at 27 750 tonnes (17 750 tonnes of rice and 10 000 tonnes of wheat). This leaves a deficit of 83 980 tonnes, which needs to be filled by government and international assistance. International emergency food aid for the 77 868 most affected families amounts to about 20 210 tonnes.

Emergency supply of seeds and fertilizers (paddy, various pulses and oilseeds) to the most drought-affected farming families is also urgently required for the 2004/05 Maha season. It is recommended that a needs assessment be carried out well in advance of the Maha planting season and that interventions be coordinated closely with existing programmes aimed at improving farming practices. It is now too late to provide assistance for the 2004 Yala season. Support to existing projects for the production of good quality seeds of paddy and pulses as well as promotion of improved farming practices are recommended to further improve food security at household level.

2. SOCIO-ECONOMIC CONTEXT

2.1 Macroeconomy

Sri Lanka is an island in the Indian Ocean covering 6.5 million ha. The population numbered about 19.1 million in 2003 (see Table 1), with annual population growth of 1 percent. Three sectors characterize the population: the rural sector constitutes 72.2 percent of the population, the urban sector 21.5 percent and the estate sector 6.3 percent.

Sri Lanka switched to a market-oriented economy in the late 1970s with the introduction of a package of structural reforms. Policy changes have focused on the elimination of direct state control on economic transactions, a larger role for the private sector in the economy and greater openness to trade. As a result, real growth in Sri Lanka has averaged between 5 and 6 percent over the past two decades. However, since 1985, economic growth has been adversely affected by civil strife, which contributed to a significant reduction in private investment. Since 1994, the escalating civil war, heightened political and economic uncertainty and the slowdown in the pace of economic reform have kept Sri Lanka's growth rates well below potential. External shocks have also had a significant impact on external trade. Major examples of such shocks in recent years include the Asian crisis of 1997–98 and the rise in oil prices. Real GDP growth rate fell to 4.3 percent in 1998–99. Real GDP decreased by 1.5 percent in 2001 from the previous year. The onset of peace, more stable power supplies and a modest recovery in external demand facilitated a recovery in 2002, with real GDP growth at 4 percent annually. Real GDP growth in 2003 has been estimated at 5.5 percent over the previous year, as a result of strong growth in the service sector and recovery in tourism, though tourism suffered a setback in the closing months of the year as a result of political instability. Per

capita GDP was estimated at US$960 in 2003, with real GDP growth forecast at 6.1 percent for 2004. The government is committed to its aim of rebuilding and liberalizing the economy by increasing privatization and deregulation.

The trade deficit of goods and services in 2003 is estimated at US$1.2 billion, compared US$1.1 billion in 2002.

Table 1. Sri Lanka: Key economic indicators, 1999–2004

	1999	2000	2001	2002	2003	2004 [1/]
Population (millions)	18.4	18.6	18.8	18.9	19.1	19.3
Growth of real GDP	4.3	6	-1.5	4	5.5	6.1
GDP per capita (US$ at market exchange rates	850	880	820	870	960	1 040
Exports of goods & services (billions of US$ at current market price)	5.6	6.4	5.8	5.9	6.8	7.7
Imports of goods & services (billions of US$ at current market price)	6.8	8.1	6.8	7.0	8.0	9.1
Agriculture in origin of GDP (percent of factor cost GDP)	20.7	19.9	20.1	20.1	19.9	20.2
Consumer price index	4.7	6.2	14.2	9.6	6.9	6.5
Unemployment rate (percent)	8.9	7.6	7.9	9.2	8.5	7.8

[1/] Forecast

Source: The Economist Intelligence Unit Limited, Country Report, February 2004.

According to the Household Income and Expenditure Survey of 2002, 23.9 percent of the 4.5 million households in Sri Lanka are considered poor. The average per capita daily energy intake is 2 078 calories; for poor household, 1 778 calories. The Nutrition Country Profile for Sri Lanka published by FAO shows that around 26 percent of the people are undernourished.

Around 60 percent of the employed population in the rural sector is involved in agriculture-related work and around 90 percent of the rural population depend on agriculture. Landless and marginal farmers constitute the bulk of poor and food insecure households in rural areas. The main source of income in the rural sector is agriculture, including livestock rearing.

2.2 Agricultural sector

The relative contribution of the agriculture sector to GDP declined from around 40 percent in the 1960s to 23 percent in 1990; it has remained at about 20 percent in recent years. Although its significance has declined in recent years, the agricultural sector remains critical to national output and employment.

Low productivity in the domestic agricultural sector results from several problems that successive governments have failed to resolve. Farmers have limited access to credit, modern agricultural implements and high-quality seeds. Land holdings are small. Threshing systems, storage and transportation of produce are still fairly primitive, resulting in high post-harvest losses.

An estimated 1.8 million families are engaged in farming, which is dominated by smallholders, with 64 percent of farm families cultivating holdings of less than 0.8 ha. Permanent agricultural land comprises 1.6 million ha. Of the cultivated area, nearly 43 percent is under plantation crops and some 49 percent under paddy. Paddy (unmilled) rice dominates the non-plantation agricultural sector and accounts for one-fifth of total agricultural output, rendering it an important determinant of agricultural growth.

There are many restrictions on the diversification of land use, on full private ownership of land by farmers and on the transfer of public land to private owners. These restrictions greatly limit the scope for diversification and impede investment in the agricultural sector. They also ignore the capital value of the land and so preclude the use of land as collateral for both working capital and long-term credit.

The hostilities between government forces and the Liberation Tigers of the Tamil Eelam (LTTE) during the past 20 years have resulted in thousands of deaths and disappearances and the destruction of movable and

immoveable property including communications, roads and transport systems. A large number of families were affected by the civil disturbances between 1983 and 2001. Agriculture and fisheries are the major sectors in the affected areas, and as a result of the damage to irrigation schemes, livestock farms, machinery and equipment, vehicles and animal sheds, billions of rupees have been lost. With the signing of the ceasefire agreement between the Government of Sri Lanka and LTTE in February, 2002, there is relative peace in the area, but food security remains at a very low level in the Northern and Eastern provinces of the country, as indicated by recent nutrition surveys.

From independence to the beginning of 1990s paddy cultivation thrived under a protected trade environment and a government-guaranteed price scheme (GPS). In 1995 rice imports were liberalized, and the licensing system was abolished and replaced with a tariff rate of 35 percent. The rate was reduced to 20 percent later that year. The current tariff for rice is SL Rs 9/kg. The tariff was waived for specified periods of time during several years to curtail price rises in the domestic market because of production shortages in the market.

In Sri Lanka, carry-over stocks of rice are maintained by farmers, traders and millers, but accurate information on the level of stocks is very difficult to obtain. Most of the paddy farmers sell about 50 percent of the marketable production soon after the harvest for immediate cash requirements; the balance is stored for consumption and later sales. Some farmers store paddy on their farms by using the traditional “Bissa system”, but this system is considered to be inefficient and is the cause of significant post-harvest losses. A majority of the large millers own storage facilities.

Government policy has consistently placed high priority on increasing domestic production of rice to attain self-sufficiency. Investment has been oriented to large-scale irrigation schemes, land development/-settlement programmes and the free provision of irrigation water and fertilizer subsidies. Irrigation projects are categorized either as “Major Schemes”, with command areas from 80–4 000 ha, or “Minor Schemes”, with a command area of less than 80 ha. However, the ability of these schemes to provide irrigation water still depends, to a large extent, on sufficient rainfall to replenish tanks and reservoirs. There are three major agro-climatic zones: dry, intermediate and wet. Two monsoons, namely the northeast (October–February) and the southeast (May–September), provide irrigation water for the Maha and Yala crops, respectively.

3. RAINFALL AND WATER AVAILABILITY DURING 2003/04 MAHA SEASON

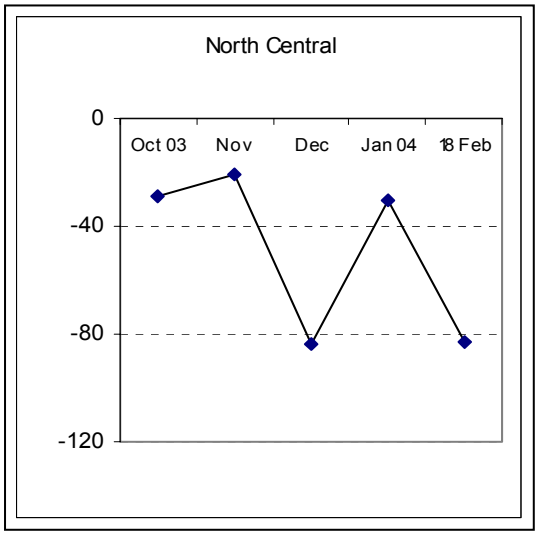
Rainfall during the 2003/04 Maha season was low and erratic compared with the normal season. Rainfall levels well below the 50-year averages were recorded for each month from September 2003 to February 2004 for the Northwestern and Central Provinces, as shown in Table 2 and in the accompanying graphs. After receiving substantial rains in September, precipitation during the Maha period was lower than normal. Except in November, the western and southern regions had extremely low rainfall during the same period. Uva and Sabaragamuwa provinces had two months of good rainfall in September and November, but very low rainfall during the other four months of the Maha season.

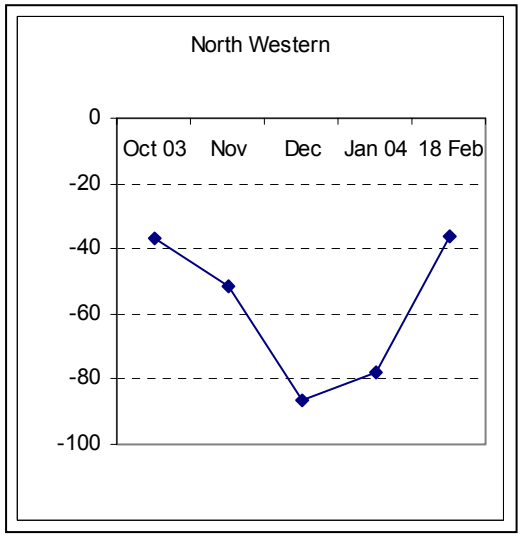
At the district level, Hambantota, Anuradhapura, Moneragala, Badulla, Kurunegala, Puttalam and Mannar suffered severe and prolonged drought from December 2003 to March 2004.

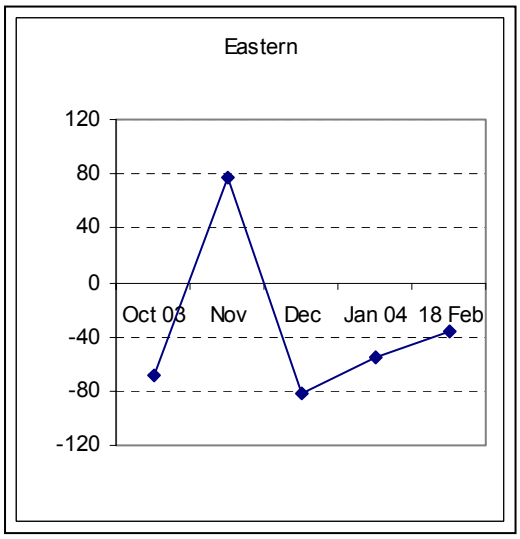
Table 2. Comparison of actual rainfall to normal rainfall (percent + or -) in Sri Lanka, September 2003–February 2004

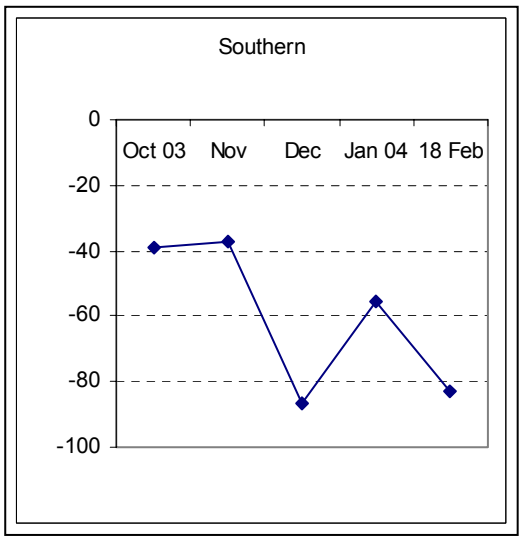
Province	September	October	November	December	January	February
North Central	+100	-29	-21	-84	-30	-83
North-western	-60	-37	-51	-86	-77	-36
Central	-59	-64	-13	-88	-56	-61
Eastern	+70	-68	78	-82	-55	-37
Uva	-49	-50	41	-79	-5	-66
Sabaragamuwa	+37	-57	10	-61	-46	-15
Western	-32	-69	5	-98	-90	-9
Southern	-52	-39	37	-86	-56	-83
Sri Lanka Average	-13	-54	1	-84	-49	-44

Note: February data updated to Feb 25, 2004









The reduced rainfall has also resulted in very low water levels in the major reservoirs and minor tanks. A comparison of water levels in potential total capacity ending the Maha season in 2002/03 and 2003/04 for the most important reservoirs in Anuradhapura, Kurunegala, Badulla, Hambantota, Monaragala and Puttalam is given in Table 3.

Table 3. Reservoir levels ending Maha season in Sri Lanka, 2002/03 and 2003/04 (in percent potential total capacity)

District	2002/03	2003/04
Anuradhapura	87	34
Kurunegala	97	26
Hambatota	29	15
Badulla	74	29
Moneragala	71	21
Puttalama	100	21

4. FOOD PRODUCTION IN 2004

4.1 2003/04 Maha season paddy production

The mission estimates total paddy production in the 2003/04 Maha season at 1 635 100 tonnes (Table 4), a reduction of 7.2 percent compared with the five-year average from 1998/99 to 2002/03 and a 13.8 percent reduction compared with the previous year's bumper crop of 1 896 800 tonnes. The most significant declines

in production compared to the previous year were in three districts: Kurunegala (77.5 percent), Anuradhapura (37 percent) and Puttalam (63.3 percent).

Area planted

At the national level, area planted to paddy totalled 521 182 ha, a reduction of 6.9 percent from the 559 600 ha of the previous year. The harvested area is estimated at 486 000 ha; this reduction was caused by the dry period from September to March. Planted areas in Kurunegala and Anuradhapura districts were reduced significantly compared to the previous year and the average of previous five years due to lack of irrigation water and rainfall. Harvested areas in these districts were down by 73.3 percent and 47.9 percent, respectively, compared to the previous year. In Puttalam, the harvested area was 30 percent below that of the previous year. The government targeted areas had been achieved only 21 percent in Kurunegala, 61 percent in Puttalam, and 68 percent in Anuradhapura for all irrigation schemes (Table 5); 18 percent in Kurunegala, 44 percent in Puttalam, and 43 percent in Anuradhapura for minor irrigation schemes.

The reduction in planted area was somewhat offset by larger plantings in Northeast Province, especially in the districts of Kilinochchi, Mannar and Mullaitivu, which resulted from the large numbers of formerly displaced people returning to cultivate their lands following the ceasefire signed in February, 2002. In Kilinochchi district the 17 000 ha harvested this year, represent 90.1 percent more than the previous year. In Jaffna, which solely depends on rainfed paddy, the area planted was similar to last year's, while the harvested area was 27.3 percent smaller, with production estimated at 11 700 tonnes, a reduction of 41.5 percent from the previous year.

Pests and diseases

No major pests or rice diseases were reported to the mission.

Table 4. Sri Lanka: Estimated 2003/04 Maha season paddy production, with comparison with last year and the average of the previous 5 years

District	Area Harvested			Yield			Production		
	2003/04 ('000 ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 (tonnes /ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 ('000 tonnes)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)
Colombo	5.0	12.5	10.9	2.70	-3.3	-7.0	13.5	8.9	3.2
Gampaha	11.0	10.1	11.6	2.10	-24.2	-24.3	23.1	-16.6	-15.3
Kalutara	13.5	0.6	-8.5	2.37	3.6	-9.6	32.0	4.2	-17.6
Galle	14.0	-10.0	-13.4	2.64	-1.8	5.0	37.0	-11.7	-9.0
Matara	14.0	0.1	-12.8	2.86	2.7	2.4	40.0	2.8	-10.6
Ratnapura	14.0	10.4	-2.4	2.67	1.8	-2.7	37.4	12.3	-5.0
Kegalle	9.0	4.3	1.9	2.89	-10.0	-16.7	26.0	-6.1	-14.9
Kurunegala	17.2	-73.3	-71.2	2.97	-15.9	-15.1	51.0	-77.5	-75.4
Puttalam	10.6	-30.0	5.9	1.39	-47.6	-51.2	14.7	-63.3	-47.5
Kandy	14.2	2.1	-6.7	2.84	0.7	0.2	40.3	2.8	-6.4
Matale	11.0	-29.3	-20.3	2.96	-20.9	-18.8	32.6	-44.1	-35.2
Nuwara Eliya	5.9	5.1	-4.0	1.69	0.1	-9.0	10.0	5.3	-12.7
Badulla	18.5	-12.9	-12.2	3.43	6.8	-0.1	63.4	-7.0	-12.3
Monaragala	11.4	-22.0	-11.5	3.76	0.0	-0.3	42.9	-22.0	-11.6
Jaffna	4.7	-27.3	-22.2	2.49	-19.5	-3.1	11.7	-41.5	-25.1
Killinochchi	17.0	90.1	124.3	2.59	-11.0	18.2	44.0	69.2	175.9
Vavuniya	11.3	44.6	78.1	3.14	-9.1	-3.1	35.5	31.5	72.0
Mullativu	9.7	0.7	66.3	3.02	7.8	20.0	29.3	8.5	97.4
Mannar	7.6	-8.5	29.0	4.50	9.9	41.3	34.2	0.6	80.0
Anuradhapura	32.7	-47.9	-36.5	4.22	20.9	20.1	138.0	-37.0	-23.7
Polonnaruwa	46.9	-6.0	-3.9	4.03	2.1	-0.1	189.1	-4.0	-4.1
Trincomalee	24.0	-4.2	7.0	3.96	22.5	22.4	95.0	17.3	30.7
Batticoloa	50.6	14.2	34.3	2.47	8.2	-1.5	124.8	23.6	33.0
Ampara	55.5	-2.2	0.1	3.90	-3.4	-2.4	216.5	-5.5	-2.3
Hambantota	17.5	7.6	0.2	3.93	-1.8	-0.3	68.7	5.7	1.0
Udawalawe	8.5	-4.5	14.6	5.12	1.2	4.4	43.5	-3.3	18.1
Mahawelih	30.7	21.2	25.1	4.59	0.3	0.9	140.9	21.5	26.2
SRI LANKA TOTAL	**486.0**	**-13.1**	**-6.3**	**3.6**	**-0.7**	**-0.9**	**1 635.1**	**-13.8**	**-7.2**

Table 5. Comparison of target planted area with actual harvested area of paddy in selected districts affected by drought in Maha season 2003/04 (hectares)

	Target area				Achieved harvested area				
District	Major	Minor	Rainfed	Total	Major	Minor	Rainfed	Total	Lost areas
Anuradhapura.	25 250	23 550	2 425	51 225	21 398	10 099	3 262	34 759	18 525
Kurunegala.	15 863	36 064	29 293	81 220	8 784	6 519	1 899	17 202	64 018
Puttalam	7 033	9 146	1 176	17 355	5 424	4 005	1 199	10 628	6 727
Mannar	3 886	8 624	2 469	14 979	7 578	100	0	7 678	7 301
Vavuniya	4 730	2 808	5 444	12 982	3 378	7 591	263	11 232	1 750

Table 6. Sri Lanka: Forecast 2004 Yala season paddy production, with comparison with last year and the average of the previous 5 years

District	Area Harvested			Yield			Production		
	2003/04 ('000 ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 (tonnes/ ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 ('000 tonnes)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)
Colombo	1.8	9.2	-0.3	2.17	8.4	0.1	3.9	18.2	0.0
Gampaha	2.6	-40.7	1.1	2.31	10.2	-3.1	6.0	-34.8	-1.3
Kalutara	12.3	18.3	0.5	2.28	3.9	-3.3	28.0	22.8	-3.3
Galle	10.7	1.0	-0.2	2.15	5.4	4.7	23.0	6.5	4.5
Matara	15.0	12.0	3.3	2.53	13.7	-3.0	38.0	27.5	-0.6
Ratnapura	12.0	14.1	5.6	2.50	13.9	-1.2	30.0	29.9	4.2
Kegalle	7.0	-10.7	0.7	2.57	-10.0	-9.8	18.0	-19.6	-9.6
Kurunegala	15.0	-72.1	-61.1	3.00	-5.3	-6.1	45.0	-73.6	-63.6
Puttalam	3.0	-72.1	-62.1	2.67	-2.6	-8.6	8.0	-72.9	-65.0
Kandy	9.0	-5.3	-7.5	3.00	13.2	7.6	27.0	7.1	-0.6
Matale	6.3	-2.2	1.3	2.86	-13.1	-12.5	18.0	-15.1	-11.5
Nuwara Eliya	2.1	20.1	1.4	1.90	0.7	-2.4	4.0	21.2	-1.0
Badulla	10.0	-9.3	-1.8	3.60	1.5	-0.2	36.0	-7.9	-2.2
Monaragala	4.0	-35.7	-16.3	3.00	-14.4	-19.5	12.0	-45.0	-32.0
Jaffna									
Killinochchi	2.0	-37.0	-49.4	2.00	-32.5	-24.2	4.0	-57.4	-60.8
Vavuniya	0.1	-87.1	-88.3	3.00	-13.8	-5.6	0.3	-88.9	-88.8
Mullativu	1.0	-41.7	-46.2	3.00	-15.7	5.3	3.0	-50.8	-43.2
Mannar	0.6	18.6	-23.5	2.50	-2.7	-2.4	1.5	15.4	-25.7
Anuradhapura	4.0	-81.6	-77.6	3.00	-4.1	-10.9	12.0	-82.3	-80.0
Polonnaruwa	45.0	-3.4	-2.7	3.56	-10.1	-11.9	160.0	-13.2	-14.4
Trincomalee	12.0	-6.5	-0.9	3.33	-14.0	-11.3	40.0	-19.5	-11.9
Batticoloa	15.0	-20.4	-4.3	3.00	2.4	0.7	45.0	-18.5	-3.6
Ampara	52.0	0.4	-1.1	4.04	-5.8	-7.6	210.0	-5.4	-8.6
Hambantota	12.0	-35.0	-24.4	3.00	-8.6	-16.5	36.0	-40.6	-35.7
Udawalawe	8.0	-1.6	-3.7	4.75	-0.7	-1.1	38.0	-2.3	-4.8
Mahawelih	7.0	-12.0	-8.3	4.00	1.6	2.4	28.0	-10.5	-6.4
SRI LANKA TOTAL	**269.5**	**-23.2**	**-16.0**	**3.25**	**-2.8**	**-6.1**	**874.7**	**-25.4**	**-21.1**

Table 7. Sri Lanka: Estimated 2004 total paddy production (sum of 2003/04 Maha and 2004 Yala), with comparison with last year and the average of the previous 5 years

District	Area Harvested			Yield			Production		
	2003/04 ('000 ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 (tonnes/ ha)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)	2003/04 ('000 tonnes)	2003/04 (percent change from 2002/03)	2003/04 (percent change from average)
Colombo	6.8	11.6	7.7	2.56	-0.7	-4.9	17.4	10.8	2.5
Gampaha	13.6	-5.4	9.4	2.14	-16.6	-20.3	29.1	-21.1	-12.8
Kalutara	25.8	8.4	-4.4	2.33	3.5	-7.4	60.0	12.1	-11.5
Galle	24.7	-5.5	-8.1	2.43	0.0	4.2	60.0	-5.5	-4.3
Matara	29.0	5.9	-5.1	2.69	7.2	-0.9	78.0	13.5	-6.0
Ratnapura	26.0	12.0	1.2	2.59	6.7	-2.2	67.4	19.5	-1.1
Kegalle	16.0	-2.8	1.4	2.75	-9.6	-14.0	44.0	-12.2	-12.8
Kurunegala	32.2	-72.7	-67.2	2.98	-11.4	-11.6	96.0	-75.8	-71.0
Puttalam	13.6	-47.5	-24.1	1.67	-37.9	-41.2	22.7	-67.4	-55.4
Kandy	23.2	-0.9	-7.0	2.90	5.5	3.1	67.3	4.5	-4.2
Matale	17.3	-21.3	-13.6	2.92	-19.1	-17.1	50.6	-36.4	-28.4
Nuwara Eliya	8.0	8.7	-2.6	1.75	0.6	-7.3	14.0	9.4	-9.7
Badulla	28.5	-11.7	-8.8	3.49	4.9	-0.1	99.4	-7.4	-8.9
Monaragala	15.4	-26.1	-12.8	3.56	-3.3	-4.8	54.9	-28.5	-17.0
Jaffna	4.7	-27.3	-22.2	2.49	-19.5	-3.7	11.7	-41.5	-25.1
Killinochchi	19.0	56.8	64.7	2.53	-13.5	11.4	48.0	35.6	83.6
Vavuniya	11.4	32.7	58.3	3.14	-9.2	-3.0	35.8	20.5	53.5
Mullativu	10.7	-5.7	39.1	3.02	3.5	15.4	32.3	-2.4	60.5
Mannar	8.2	-6.9	22.8	4.35	8.7	38.3	35.7	1.1	69.8
Anuradhapura	36.7	-56.5	-47.1	4.09	20.3	17.8	150.0	-47.7	-37.7
Polonnaruwa	91.9	-4.7	-3.3	3.80	-3.9	-6.0	349.1	-8.5	-9.1
Trincomalee	36.0	-5.0	4.3	3.75	8.7	9.7	135.0	3.3	14.3
Batticoloa	65.6	3.9	22.9	2.59	4.6	-1.7	169.8	8.7	20.9
Ampara	107.5	-0.9	-0.4	3.97	-4.6	-5.1	426.5	-5.5	-5.5
Hambantota	29.5	-15.1	-11.5	3.55	-1.9	-4.6	104.7	-16.6	-15.6
Udawalawe	16.5	-3.1	5.0	4.94	0.3	1.2	81.5	-2.9	6.2
Mahawelih	37.7	13.2	17.2	4.48	1.3	1.8	168.9	14.7	19.3
SRI LANKA TOTAL	**755.5**	**-17.0**	**-10.0**	**3.32**	**-1.5**	**-2.8**	**2 509.8**	**-18.2**	**-12.6**

4.2 2004 Yala season paddy production forecast

The Yala crop normally comprises 65 percent of the volume of the total Maha crop; mean annual production for 1998–2003 was some 1.12 million tonnes. This crop is produced using irrigation water from major tanks. This year, major tanks in Kurunegala, Anuradhapura, Mannar and Puttalam are seriously depleted (see Table 3), and the outlook for the Yala season in these districts is bleak. This could result in two successive crop failures for many farmers, with obvious implications for food security and incomes. However, heavy rains in late March and April could alter this situation. Elsewhere in the main Yala production areas such as Ampara and Polonnaruwa, water levels are adequate and a normal Yala season is expected. The forecast production of 874 700 tonnes is a worst-case scenario.

The overall total paddy production in 2004 (the sum of the 2003/04 Maha and the 2004 Yala seasons is estimated at 2.51 million tonnes (Table 7), 12.6 percent below the average of the five-year average from 1998/99 to 2002/03 and down 18.2 percent from the previous year. The most significant declines compared to the previous year's production were in the following districts: Kurunegala (75.8 percent), Puttalam (67.4 percent), Anuradhapura (47.7 percent), Jaffna (41.5 percent) and Matale (36.4 percent).

4.3 Maize and other cereal production estimations/forecasts in 2004

The main crops other than paddy, in terms of planted area, are maize, chillies, cowpea, groundnut, finger millet, sesame, potato, red onion, green gram and black gram. Maize is grown mainly for consumption as a vegetable, not for grain. Finger millet is used in the production of a traditional sweetmeat product and as a porridge. Sorghum crops were seen growing around some households.

Table 8. Planted area of selected crops in 2003/04 and in 2002/03

Crop	Planted area in 2003/04 (ha)	Planted area in 2002/03 (ha)	Percent difference 2003/04 over 2002/03
Soya bean	168	210	-20
Groundnut	5 733	8 549	-33
Maize	28 057	34 587	-19
Finger millet	3 180	4 128	-23
Sesame	1 742	3 180	-45
Solanum potato	4 405	4 557	-3
Chillies	7 624	10 496	-27
Red onion	2 605	3 496	-25
Cowpea	6 541	9 145	-28
Black gram	6 292	9 662	-35
Green gram	4 388	9 500	-54
Total	**70 735**	**97 510**	**-27**

These crops are grown mainly under rainfed conditions and were thus badly affected by drought in the districts of Kurunegala, Anuradhapura, Puttalam, Monaragala and Hambantota, with lesser damage occurring in other districts (Table 8). In contrast, sweet potatoes and cassava were thriving in most areas in the North Central province; the former crop provides significant cash income for producers.

Some crops, such as potatoes, which are mainly produced in the higher rainfall areas of Nuwara Eliya and Kandy, were not affected by the dry weather. In Kurunegala, Anuradhapura and Vavuniya, the loss of pulse crops was over 80 percent in some cases, causing a sharp decline in income for the farmers concerned. Pulse crops are normally planted in December and January, precisely the time that the drought conditions set in and this resulted in large reductions in planted area, as shown in Table 8. Cash crops such as chillies and cowpea produced only one picking in December before the effects of the drought became manifest and the plants withered.

Coconuts and fruit trees such as mango and jack were not badly affected by the drought, except in isolated areas with thin soils. Some coconut trees in Kurunegala and Anuradhapura were seen to be wilting. Mango yields are expected to be exceptionally good in 2004 as the climatic conditions are suited to this tree.

Markets were well stocked with vegetables and fruits thanks to an efficient privately run marketing and distribution system.

4.4 Livestock production in 2003/04 and prospects for 2004

In the dry zone, which includes parts of Kurunegala and Anuradhapura, the most badly affected districts, livestock belonging to individuals used to be kept in large herds which grazed the available land. As agricultural activity has spread ever further into the areas used by these herds of cattle and goats, they have been dispersed among a large number of “contract rearers” who are also small farmers. This system of contract rearing is becoming more popular. Cattle and goats from the large herds are now being managed on a contract basis by small farmers in return for milk and a share of the offspring. This activity provides useful income even in a dry year and some protection against the worst effects of crop failure. The main income received by the contract livestock rearers is milk, but the system also offers the opportunity to build up a small herd. Livestock population and production situation in Sri Lanka for 1998–2003 is shown in Table 9.

Table 9: Livestock population and production in Sri Lanka, 1998–2003

		1998	1999	2000	2001	2002	2003
Neat cattle ('000)							
Milk cows	Milking at present	243.6	249.7	246.0	246.8	207.1	211.8
	Not milking at present	259.5	258.8	248.0	248.8	271.1	277.4
Other cows		225.2	223.7	210.3	210.2	202.9	207.6
Bulls		187.5	190.3	180.0	181.1	174.7	178.8
Calves		262.6	269.0	263.3	266.4	257.1	263.1
Total cattle		**1 178.4**	**1 191.5**	**1 147.6**	**1 153.3**	**1 112.9**	**1 138.7**
Buffaloes ('000)							
Milk cows	Milking at present	53.3	55.4	53.3	53.4	51.7	51.6
	Not milking at present	46.5	48.4	46.5	46.7	45.1	44.8
Other cows		82.4	80.2	75.8	71.0	70.8	70.3
Bulls		66.7	66.8	62.1	58.8	56.3	56.0
Calves		67.7	68.8	66.9	60.5	58.2	57.8
Total buffaloes		**316.6**	**319.6**	**304.6**	**290.4**	**282.1**	**280.5**
Goats ('000)		519.3	514.4	495.2	492.6	360.4	414.9
Sheep ('000)		11.8	12.1	11.2	11.7		8.9
Pigs ('000)		76.3	73.6	70.8	68.3	82.1	67.0
Poultry ('000)							
Cock Birds		1 550.7	1 546.3	1 639.3	1 664.7	1 660.3	1 350.4
Hens		5 291.0	5 626.1	5 916.9	5 898.3	6 393.0	5 158.8
Chicks		2 724.3	2 750.3	3 066.2	3 091.9	3 510.9	3 262.9
Total Chickens		**9 566.0**	**9 922.7**	**10 622.4**	**10 654.9**	**11 564.2**	**9 772.1**
Ducks		12.8	10.3	9.9	12.4	12.5	15.9
Milk and egg production							
Milk ('000 Litres)		177 094.8	179 883.6	181 461.6	183 027.6	183 200.9	186 804.0
Eggs ('000)		875 800.8	897 945.6	922 983.6	946 057.2	890 700.0	884 880.0

Senior veterinary staff contacted by the mission reported that livestock have, in fact, benefited from the drought insofar as they have large areas of failed crops to consume that would not be available under normal circumstances during the period prior to harvest. The February/March period is often marked by reports of outbreaks of infectious diseases such as foot-and-mouth disease in cattle. This year, only one outbreak was reported from Mannar district, and this was brought under control.

There is no indication that milk supplies to processing centres have declined. Parasite infestations, such as liver fluke, which require moist conditions to complete their life cycle, have been reduced this year by the generally dry conditions. In some areas, supplies of drinking water are scarce. In Kurunegala, veterinary staff reported that bovine fertility had decreased and that there were more calving difficulties due to poor supplies of trace elements. The mission received some reports of distress sales of animals in Kurunegala, but there has been no major increase in livestock marketing or in slaughter figures over the past six months. FAO is supporting the expansion of livestock in the Kalpitiya Peninsula in Puttalam District with a view to raising farm incomes and also to improving fertility of sandy soils over time using animal manures.

5. CROP PRODUCTION SITUATION BY REGION

5.1 Central Province

Central Province is comprised of three districts: Kandy, Nuwara Eliya and Matale. The area planted in Matale district was reduced by 18.8 percent compared to the five-year average to 2002/03 and this, together with low rainfall led to a reduction in production of an estimated 35.2 percent. In Kandy and Nuwara Eliya, the extent of area planted and production were similar to those of the previous year.

5.2 North-Central Province

Two districts, Anuradhapura and Polonnaruwa, form North-Central Province. Most of the minor tanks produced no crop during the 2003/04 Maha season as a result of reduced rainfall in the months from September to December. There are three main categories of paddy farmers:

- Those who did not plant as they had no water or not enough rain for rainfed cultivation. This group at least lost no money on rice production this year, and were able to work elsewhere for money. Most had had a good Maha season in the previous year.
- Those who planted and fertilized and obtained enough water from minor tanks and from rainfall to see the crops through to maturity. This group had generally good crops, assisted by bright sunshine and sufficient water.
- Those who planted and then suffered crop failure after investing over SL Rs 40 000 per hectare on labour, fertilizers, seed and herbicides. This group was the worst off financially.

The most affected divisions in Anuradhapura are Galenbindunewewa, Horowpathana, Kahatagasdigiliya, Mahavilachchiya, Kebithigollewa, Mihintale, Nochchiyagama, Padaviya, Palagala and Rambewa.

In Anuradhapura, the area harvested is estimated at 32 700 ha, a decrease of 47.9 percent compared to the 62 800 ha harvested in the previous year. Production is estimated at 138 000 tonnes, 37 percent below that of the previous year. The brunt of the decline in productivity was borne by farmers using minor irrigation tanks or relying on rain for their crops. By contrast, in Polonnaruwa, where paddy is mainly grown using water from major tanks, production was broadly similar to the Maha season in 2002/03 at 189 100 tonnes.

The other crops grown were maize, chillies, cowpea, green gram and black gram, with some groundnuts. As a result of the drought, nearly all these rainfed crops suffered significant yield losses in Anuradhapura. Short season pulse crops such as cowpea and the spice crop (chilli) provided only one picking before succumbing to drought in December. These crops are often the main sources of income for farm families and their loss is a severe blow to the household economy.

Prospects for the Yala crop are poor in Anuradhapura, due to low water levels. However, if heavy rainfall occurs in Anuradhapura in late March and April, some Yala production may be possible. In contrast, Yala prospects in Polonnaruwa are good, with water levels in the tanks sufficient for normal or near-normal productivity.

5.3 North-eastern Province

Eight districts, Jaffna, Kilinochchi, Mannar, Mullaitivu, Vavuniya, Trincomalee and Batticoloa and Ampara form the North-eastern Province. Following the signing of a ceasefire in February, 2002, many farmers who had been displaced by the conflict have returned to their former lands. Considerable improvements have been made in irrigation infrastructure, especially the minor tanks in the past two years, facilitating a rapid expansion in production.

Rainfall in September, October and November was up to or above average in the district, but no effective rains have fallen since early December. Under normal conditions, these tanks have to be filled three times to allow a full Maha season, but this year the failure of the rains from December caused considerable areas of rice crops to suffer water stress in the latter stages of growth. Those farmers who planted in October or November had sufficient water to complete the crop's growth cycle, while those who planted in January suffered water shortages and even complete crop failure in some cases. Some farmers working a total of 888 ha availed themselves of a crop-insurance scheme, but the majority did not do so.

Considerable investment has been made in the upgrading of minor irrigation infrastructure, mainly through the World Bank funded Northeast Irrigation and Agricultural Improvement Project (NEIAP) during the past five years. The shortage of water has prompted some farmers in Mannar to invest in tube wells, which provide irrigation water to 8–16 ha.

Total planted area in Mannar District was 10 626 ha, of which 9 198 ha was under major irrigation schemes. Of this area, a total of 1 620 ha was totally destroyed by lack of water, leaving 7 578 ha producing an average yield of 4.5t/ha. This relatively high yield is facilitated by the highly fertile soils in this district, which are particularly suited to paddy cultivation and the almost total predominance of major tank irrigation this

year. Paddy grown using water from minor irrigation schemes, which depends largely on rainfall, was an almost total failure. The rain-fed planted area was 440 ha, mainly in the uncleared areas and of this only 150 ha survived to produce a crop estimated at 3t/ha. Following rainfall of 13.5, 166.2 and 354.8 mm in September, October and November, respectively, only 42.4 mm of rain fell in December, with no rain at all in January and February, 2004 in Mannar. Maha paddy production for Mannar District is estimated at 34 200 tonnes.

Cattle are in good condition, with plenty of grazing available, including the failed crops of rice.

Average rainfall in Vavuniya during the Maha season usually amounts to between 1 200–1 300 mm, but this year total rainfall was only 784 mm, with no rain falling in the month of December. Farmers who planted early obtained a crop, while those who planted late largely suffered crop failure. The paddy area harvested in Vavuniya is estimated at 11 300 ha, an increase of 44.6 percent over the previous year, while the harvest is estimated at 35 500 tonnes, compared to last year's total of 27 000 tonnes. Formerly displaced farmers returning to their lands to cultivate account for the increase in harvested area. Good water management was reported to be a factor in reducing potential yield losses.

Rainfed crops in Vavuniya, especially the important black gram crop, were severely affected by the drought in December onwards and most crops failed. Of an estimated 3 000 ha of black gram planted in 2003, only 45 ha produced any crop. Other field crops such as cowpea, groundnut, maize and green gram also suffered major losses in the drought, leaving many farmers with no income.

In Jaffna, which depends solely on rainfed cultivation for paddy, over 4 000 ha was damaged by the drought, and this resulted in a 27.3 percent reduction in harvested area compared to the previous year and a 41.5 percent reduction in production. In Trincomalee and Batticoloa, harvested area was maintained above last year's levels, while in Ampara, the Yala rains have already begun and may cause harvesting difficulties for the last of the Maha crop. Labour shortages for harvesting were reported to be a problem in Trincomalee, Batticoloa and Ampara. Reports were received that farmers in Ampara planted less paddy this year after poor prices for paddy in the previous year. Overall, however, production levels in Batticoloa, Ampara and Trincomalee, at 124 800 tonnes, 216 500 tonnes and 95 000 tonnes respectively, were well up to last year's levels.

Prospects for the Yala crop are normal in Trincomalee, and good in Ampara and Batticoloa. However, in Vavuniya and Mannar, lack of water in tanks is expected to result in a substantial reduction in plantings.

5.4 North-western Province

This province, which was the worst-hit by the drought, is comprised of Kurunegala and Puttalam Districts. Extension officers in Puttalam estimated that the 2003/04 season was one of the worst in recent memory and much worse than the dry season in 2001/2. Irrigation staff estimated that water shortages are the worst in fifty years.

Rainfall in three centres of Puttalam, Madurankuliya, Mundal and Anamaduwa was around 800–1 000 mm, compared to 1 400–1 600 mm in the previous year. Large areas of paddy land remained unplanted as there was not enough water in the irrigation tanks, whether small, medium or large, to provide sufficient water to grow rice. This was the main arbiter of production. Where crops received sufficient water, with more than average sunshine and minimal inputs, yields were good. Some crops suffered water stress in the later stages and yields were reduced accordingly. Rainfed crops were a failure in most places. Some disputes arose over the allocation of water, and the authorities had to intervene to keep the peace.

Overall Maha production in Puttalam is estimated at 14 700 tonnes, a reduction of 25 400 tonnes compared to the previous year's total of 40 100 tonnes. Approximately 75 percent of minor irrigation areas were seriously affected, with only 25 percent producing normal yields. Dryland crops of paddy were a total failure. The worst affected areas are in the north of Puttalam, along the border with Anuradhapura District.

Other field crops such as cowpea, green gram and black gram had lower-than-average yields, while groundnut yield was down by an estimated 80 percent. The output of perennial crops such as banana and coconut was also reduced, and this effect may persist into 2004/05. Water levels in wells were reported to be low in many areas, and the use of wells for irrigation purposes was sharply curtailed.

For the upcoming Yala crop, most tanks are empty or nearly so. Unless heavy rains come in late March and early April, the area under paddy during the Yala season will be considerably reduced from the 10 800 ha grown last year. Ministry of Agriculture and Livestock officials estimate that the Yala cropped area will be reduced by 75 percent in 2004 to around 2 700 ha.

Fertilizer usage was reported to be down by 50–60 percent, due to no proper rain in Maha season. Farmers who lost their crops have no seeds in some parts, especially in northern areas near the border with Anuradhapura District.

Livestock appeared to be in reasonable condition. With lower rainfall this year, parasitic infestations are estimated to be lower than normal.

Kurunegala District is normally the second highest paddy-producing district in Sri Lanka, after Ampara. This year, the area planted dropped catastrophically due to lack of irrigation water, mainly in minor tanks and to less-than-average rainfall for those farmers producing rainfed crops. The result is that production this year will be only about 22.5 percent of last year's bumper crop of 227 000 tonnes. This however, has to be kept in proportion as such droughts are a constant feature of Sri Lankan agriculture. This drought period follows two bumper harvests in the 2002/03 Maha crop and the 2003 Yala crop, after which farmers experienced difficulties in marketing their surplus rice at economic prices.

In most years, only the major irrigation schemes deliver constant supplies of water. The minor schemes are plagued by poor maintenance, silting and inefficient water use. Considerable efforts are being made by World Food Programme to implement improvement projects such as de-silting, bund management, canal clearance and other rehabilitation work under food-for-work (FFW) programmes. The worst affected divisions in Kurunegala are Kobeigane, Giribawe, Panduwasnuwara, Giribawa, Kotawehera, Polpithigama, Nikeweratiya and Ambanpola.

The Yala crop is expected to be extremely poor in both Puttalam and Kurunegala because of low water levels in tanks. Kurunegala is regarded as a marginal area for Yala production, though the 2002/03 Yala crop was estimated at 170 400 tonnes.

5.5 Sabaragamuwa Province

Sabaragamuwa is comprised of Ratnapura and Kegalle Districts, both of which are in the wet zone. The paddy area planted in both Ratnapura and Kegalle was average at 14 400 and 9 000 ha, respectively. Yields were slightly reduced because under the dry weather conditions the farmers did not apply top-dressings of fertilizers. Production is estimated at 37 400 tonnes and 26 000 tonnes, respectively, slightly below the long-term averages of 39 400 tonnes and 30 500 tonnes.

The Yala crop is important in both districts, with average harvested areas of 12 000 and 7 000 ha, respectively. Given their reliable rainfall, production is expected to be normal at around 30 000 and 18 000 tonnes, respectively.

5.6 Southern Province

Hambantota, Galle and Matara Districts form Southern Province. Production in Galle and Matara was well up to average, with harvests estimated at 37 000 tonnes and 40 000 tonnes, respectively. In Hambantota, some divisions suffered drought conditions which caused heavy crop losses.

Overall, however, production in Hambantota was estimated at 68 700 tonnes, which compares well to the long-term average production of 68 000 tonnes in this district.

In Hambantota, around 15 900 ha of paddy are cultivated during the Yala season. Water shortages may reduce the area planted in 2004. In Matara and Galle, a normal Yala crop amounting to around 60 000 tonnes is expected.

5.7 Western Province

The coastal districts of Colombo, Kalutara and Gampaha, in the wet zone of the country, form Western Province. The area harvested and production were similar to average in these districts and crop losses were lower than usual, due to the absence of water-logging, which is common under average climatic conditions.

The paddy area planted was similar to the average at 5 000, 11 000 and 15 900 ha, respectively, and production has been estimated at 13 500, 32 000 and 23 000 tonnes, respectively.

These districts produce 1 800, 12 300 and 2 600 ha, respectively, of Yala crops. Given the reliable rainfall, a normal Yala crop is expected. The average annual Yala crop over the past five years for these districts was 39 000 tonnes.

5.8 Uva Province

The districts of Badulla and Monaragala, inland from Ampara and Batticoloa, form Uva Province. The area harvested in Badulla was 18 500 ha, a decrease of 12.2 percent compared with the five-year average. At 63 400 tonnes, production was 7 percent below that of the previous year.

In Badulla, the Yala crop normally extends to 10 200 ha and a normal Yala crop is expected. Water shortages may reduce area planted in the drier district of Monaragala, but this remains to be seen.

6. FOOD SUPPLY AND DEMAND SITUATION, 2004

6.1 Current market situation

Rice marketing

There is a major problem with the profitability of paddy production in Sri Lanka and this has been recognized in a recent report.[1] The Paddy Marketing Board was dissolved some years ago. Since then prices of paddy have largely been determined by private traders and rice millers operating in an open market situation. Following the bumper Maha and Yala harvests in 2003, there was a large perceived surplus and many farmers in Kurunegala, Ampara and other districts had to sell for uneconomic prices that were as low as SL Rs 9/kg for paddy. A ban on imports of rice, including rice destined for World Food Programme projects, was imposed. The government introduced a price of SL Rs 13.5/kg for high-standard paddy rice. Farmers in the important surplus-producing district of Ampara were reported to have planted 4 000 fewer hectares than normal because of poor price expectations.

Fertilizers

The Ministry of Agriculture and Livestock (MOAL) estimated that the total tonnage of fertilizers used on Maha crops in 2002/03 at 280 162 tonnes, and 188 781 tonnes on Yala crops. Urea is the most widely used fertilizer amounting to 135 141 tonnes on Maha crops (51.8 percent) and 94 472 tonnes on Yala crops (50 percent). Government subsidies on urea partly account for this. The government has significantly reduced the subsidies recently and the fertilizer prices have increased substantially. The urea price was SL Rs 350 for a bag of 50 kg in 2001; it increased to SL Rs 650 in 2002, SL Rs 830 in 2003, and about SL Rs 900 in early 2004. Fertilizer cost usually accounts for about 40–60 percent of total material cost in paddy production in different districts based on the survey by Department of Agriculture of Sri Lanka.

The MOAL reported that 82.7 percent of the planted paddy area in 2002/03 received some type of chemical fertilizer. All areas visited by the mission reported a sharp drop in fertilizer usage in 2003/04 caused by rapidly increasing prices and the inability of small farmers to obtain the necessary seasonal credit from official financial institutions. Small traders at village level advance funds for inputs such as seed and fertilizers, but pay low prices for the paddy crop at the end of the season. This has the effect of keeping farmers constantly in debt. The Department of Agrarian Services in Kurunegala and Anuradhapura reported a high level of bad debts on credit extended to farmers for the 2003/04 Maha season, resulting from crop failures. A further factor in reducing fertilizer usage this year was the drought, which reduced the amount of top dressing applied.

Farm power

According to a MOAL report on the previous Maha season, 83 percent of the land for paddy cultivation was ploughed by tractor, 9.3 percent by buffaloes and 7.7 percent worked using a mixture of the two. Much the same pattern continued in 2003/04.

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[1] Office of the Advisor on Sustainable Development and Chairman of the Inter Ministerial Committee on Food Security, 2003. *Profitability and Sustainability of Rice Production in Sri Lanka.*

Herbicides, fungicides and insecticides

Insecticides were distributed on 75.2 percent of the sown area during the 2002/03 Maha season, with 32 percent of the area sown receiving fungicide treatment. Herbicides were used on 77.4 percent of the planted area in 2002/03, with even higher estimates for the 2003/04 season. One herbicide product has become the market leader in recent years, with over 70 percent market penetration, but this is now leading to infestation by a grass weed (*Leptacola cayenensis*, known as horsetail) and a sedge (*Cyperus difformis*), both of which are resistant to this product. It is essential that a number of herbicides or herbicide mixtures be rotated at least annually to avoid the emergence and domination of such resistant weeds.

Weeding

Only 16.1 percent of the planted area was hand-weeded in 2002/03, with flooding by water being used to kill weeds on 14 200 ha, mainly in Kilinochchi, Kalutara and Vavuniya. An estimated 4.1 percent of the paddy area was not weeded during 2002/03, with a broadly similar pattern emerging in the current year. The Research Department is testing row-planting as a means of facilitating mechanical weeding, but fully 92 percent of the planted area is broadcast sown. During the previous year, only 10 308 ha were transplanted in rows, with a further 37 000 ha transplanted but not in rows. Altogether, only 153 ha were row-seeded by machine in 2002/03, with a similar pattern in 2003/04 season.

6.2 Cereal supply/demand balance for 2004

A cereal supply/demand balance sheet for the country from January to December 2004 is presented in Table 10. In preparing the balance sheet, the following assumptions were made:

- a mid-year population of 19.22 million in 2004, obtained by applying an annual growth rate of 0.8235 percent to the previous year;
- a consumption requirement of 151.46 kg/caput of cereals (rice 98 kg/caput, wheat 50 kg/caput), the same level as in the previous year;
- a seed requirement of 103 kg/ha for paddy;
- post-harvest losses of 6 percent for rice;
- a milling rate of 66 percent from paddy to rice;
- opening stocks of 155 000 tones of rice and 300 000 tonnes of wheat;
- closing stocks of 150 000 tones of rice and 300 000 tonnes of wheat.

Table 10. Sri Lanka: Cereal supply and demand balance, January–December 2004 ('000 tonnes)

	Rice	Wheat
Domestic availability	1 811.47	300.00
Opening stocks	155.00	300.00
Production	1 656.47	0.00
Maha season	1 079.17	0.00
Yala season	577.30	0.00
Total utilization	2 223.20	1 281.12
Food use	1 883.81	961.12
Feed use	0.00	0.00
Seed use	90.00	0.00
Losses	99.39	20.00
Exports	0.00	0.00
Closing stocks	150.00	300.00
Import requirement	411.73	981.12
Commercial imports	300.00	981.12
Food aid received and pledged	17.75	10.00
Uncovered deficit	83.98[1/]	

[1/] 10 000 tonnes of wheat pledged for food aid as a substitute for rice.

7. VULNERABILITY/NEEDS ASSESSMENT (WFP)

7.1 Food security background

As indicated previously in the Overview (see section 1), rainfall during the September 2003 to February 2004 period was well below the required average amount and quite erratic compared to a normal season. The lack of sufficient water, or the timely availability of water for the Maha paddy crop in particular, led to significant losses both for those farmers who were not able to cultivate as well as those who sustained crop losses. In the most affected areas, these losses ranged from 20–70 percent.

It should be noted that this period of reduced rainfall and paddy production came immediately after two successive bumper paddy harvests in 2003 (Maha 2002/03 and Yala 2003). Household level paddy/rice stocks were therefore assumed to be fairly good at the end of 2003. However, the mission also noted that many of the poorer households had kept in stock at the household level only enough rice to carry them through the Maha harvest. Therefore, despite the record harvests of 2003, many of the poorest and most vulnerable households are once again exposed and vulnerable in the current situation.

During 2002 and early 2003, WFP carried out a nationwide analysis of vulnerability to food insecurity and ranked and mapped the relative food insecurity of each of the 323 Divisional Secretariat (DS) Divisions (see map on page 20). Many of the DS divisions that this mission visited and found to be the most affected by the lack of rainfall and resulting crop losses of the Maha season 2003/04 are those that correspond with the highest VAM (Vulnerability Analysis and Mapping) level of most vulnerable divisions. The mission was able to conclude that there seemed to be a strong correlation between these DS divisions that WFP's VAM has ranked as the most food insecure and the areas that appear to be most adversely affected by the losses of the recent Maha season.

The government has in place a number of welfare schemes that address both chronic household level poverty as well as measures to respond to sudden shocks, such as natural disasters. The Samurdhi welfare scheme provides cash assistance, depending on the number of family members, ranging from SL Rs 140 for one person up to a maximum of SL Rs 1 000 per family per month. The government emergency relief package takes the form of food items that total the equivalent of about SL Rs 1 960 per family per month. Only families whose income is less than SL Rs 3 000 per month are entitled to the government relief package, in normal circumstances.

As indicated above, the government is no longer involved in the areas of paddy marketing, storage and maintaining any national paddy/rice stocks or emergency food reserves. In addition, they allow and encourage the private sector to import rice to meet any national shortfalls in production. This has been mostly successful at a macro level, although at times of severe shortfalls the impact is often felt more acutely and more profoundly in the poorer, more food-insecure households.

7.2 Objectives and methodology of assessment

The objective of the vulnerability/needs assessment component of this mission was to examine the food security situation of the households in the affected districts and identify a method for determining the numbers and locations of the families most seriously affected by the relative failure of the 2003/04 Maha crops. Farmers in different areas have been affected differently and the crop losses were at varying degrees, with most farmers sustaining some losses, while some experienced a near total loss. It is important to observe and analyse the impact on household food security by livelihood groups and by districts or DS divisions. Under the section on Food Emergency Needs (see section 7.4, below), the methodology for estimating these needs will be explained.

A number of limitations and constraints of this needs assessment were confronted. First of all, there exists almost no information on national or district-level food stocks. Likewise, it is extremely difficult to estimate the level of household-level food stocks; especially since families have been affected to varying degrees. Secondly, different livelihood groups have been affected differently and this also varies from one locality to another. This makes the process of identifying an appropriate methodology for estimating the numbers of locations of the most seriously affected families more difficult.

7.3 Food security situation and outlook

As indicated above, certain livelihood groups have been more adversely affected by the varying failures of the recent Maha season. For example, the upland farmers who rely solely on rainfall for their agricultural production have been the most affected. This is a group that generally shows a higher prevalence of malnutrition among the family members. Therefore, any deterioration in production and household food consumption will only aggravate the already precarious nutritional status of the farming families in this group. Farming families who own land in irrigated systems tend to sustain a better household food security situation, have more assets to fall back on in times of crisis and are therefore more likely to cope with occasional shortfalls in crop production.

As mentioned above, the WFP VAM analysis of all 323 DS divisions in Sri Lanka, if overlaid with the districts and areas reported by government to be the most affected and visited by this mission, would correlate quite closely with the VAM rankings. In fact, the mission believes that those areas that VAM indicates as the most vulnerable to food insecurity are the areas that are most likely suffering the most from the current crisis, both in the short and medium term.

7.4 Food emergency needs

The annual allocation provided for disaster response in the budget of the Ministry of Social Welfare is only SL Rs 300 million (US$3 million). This is often insufficient to respond to all the emergency requirements of the population in a given year. The government had indicated in their request for a Crop and Food Supply Assessment Mission that rural families in seven (7) districts had been affected by the Maha harvest failure. If food assistance were to be required for thousands of families for several months, the government allocation would be rapidly depleted. Therefore, the government launched an appeal for international food assistance on 13 February 2004.

Meanwhile, the government decided to initiate food-for-work (FFW) interventions in the most affected areas as previous experience has indicated that this method is appropriate for targeting the most affected families. Since the value of the daily family food ration for FFW is lower than a cash wage for a casual labourer, those who participate in the FFW schemes are usually the ones who need the food and it will most likely be consumed within the household. One family representative (male or female) may participate in the FFW activity and bring back to the household enough food to feed the entire family. Therefore, the government does not foresee the need to undertake emergency relief food rations, but will use all resources towards their strategy of targeting the most vulnerable through FFW activities. WFP endorses this approach.

Prior to the end of the mission, the team developed a methodology for estimating the total number of most seriously affected families. This methodology is based on the following assumptions. Each family who has land:

- in a major irrigation system has an average of about 1 ha
- in a minor irrigation system has an average of about 0.4 ha
- in upland and rainfed areas has an average of about 0.8 ha

The known amounts of loss of planted area and the extent of damaged crops, can be summed up and divided by the estimated number of hectares mentioned above by category, and the total number of estimated farming families directly affected can be thus determined.

Although the government reported that seven districts were affected by the drought, and the mission teams visited all of these districts, the FAO/WFP team felt that the three contiguous districts of Kurunegala, Anuradhapura (north-central) and Puttalam (northwest) were by far the most seriously affected. Using the assumptions above, and then estimating that the percentage of the population of this group with no other assets or coping mechanisms could amount to about 25 percent, the mission estimates that in these three districts there would be a total of 67 398 farming families deemed to be the most seriously affected and in need of food assistance. In addition, some provision needs to be made for the landless labourers who also have lost income due to the drought and its effect on the 2003/04 Maha season. A nominal estimate of 5 percent of those affected, or an additional 3 370 families, should be added .

While the above estimates are based on the information from the three most seriously affected districts, the mission recognizes that some parts of the districts of Monaragala, Hambantota and other areas have also

been affected. Therefore, provision for these families could be considered by adding 10 percent of the above total of 70 767 families, for a total of 77 844 most seriously affected families probably requiring emergency food assistance.

WFP would recommend a food basket similar to the one used currently in Sri Lanka for FFW activities, composed of rice, lentils (pulses) and sugar. The recommended per capita daily ration for each commodity would be: 500 g of rice, 60 g of lentils and 30 g of sugar. With the family food ration for FFW based on 5 family members, this would mean a total of 2 500 g of rice, 300 g of lentils and 150 g of sugar per workday. This FFW ration would provide daily per capita requirements of 2 323 Kcal energy, 50 g of protein and 41 g of fat. Assuming that there are about 22 workdays per month and that food assistance will be required for about four months, namely May through August (until the Yala harvest period begins), this would amount to a total of 17 126 tonnes of rice, 2 056 tonnes of lentils and 1 028 tonnes of sugar.

7.5 Scope for local purchases

There is little or no scope for local purchases. First of all, it is highly doubtful that sufficient levels of rice stocks exist anywhere in the country. But even if they were available, the procurement cost would be at least 30 percent higher than world market prices because of the high costs of production. Nor are other commodities that might be used in a food basket for an emergency response available.

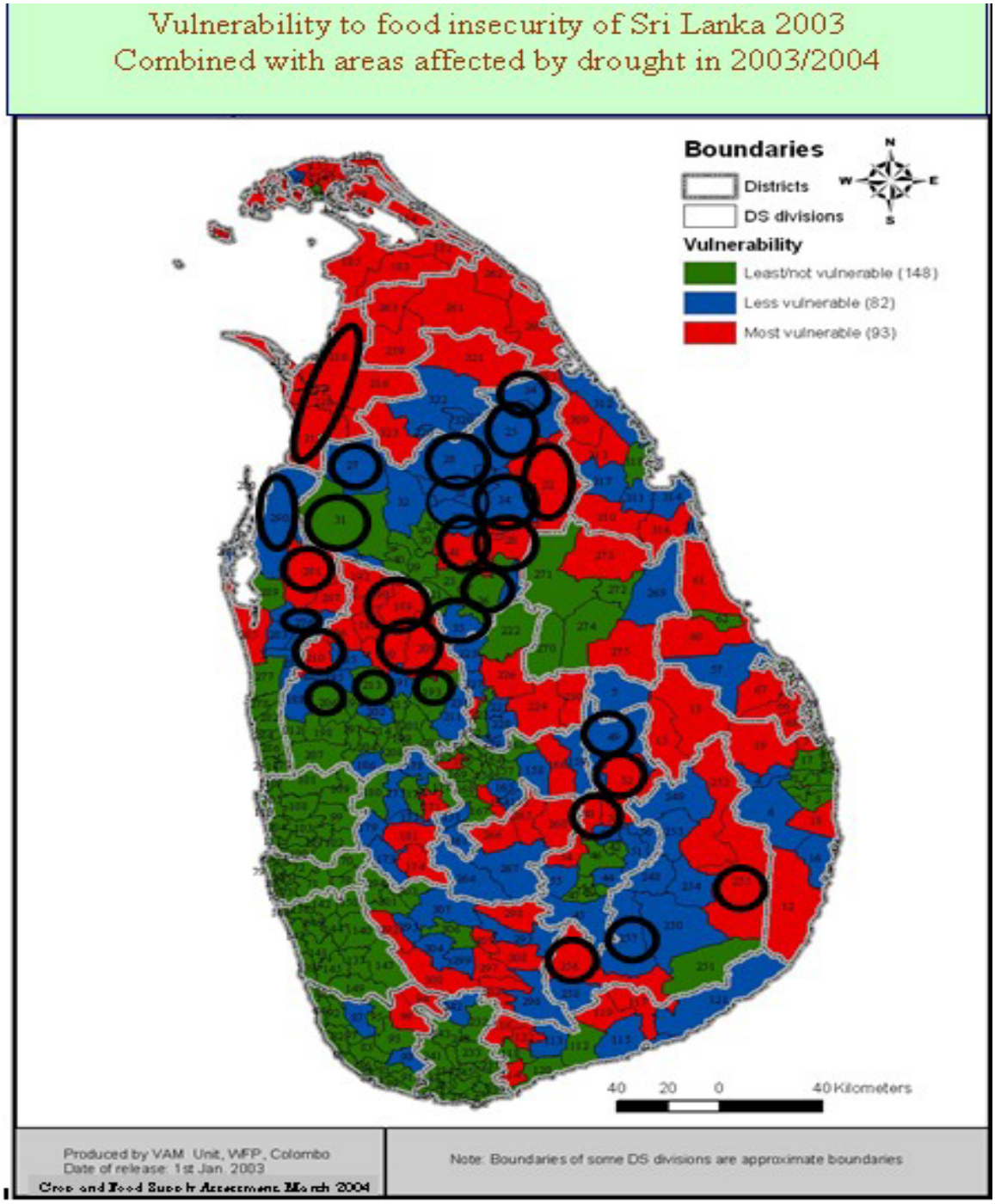
7.6 Logistics capacity and constraints

All logistics arrangements for ongoing food assistance programmes (WFP) are handled by the government, which has sufficient capacity for development or emergency interventions. During the emergency operations of the recent years (drought in 2002 and floods in 2003), the Ministry of Social Welfare managed quite satisfactorily all the transport, storage and distribution of the food items provided.

7.7 Use of ongoing food assistance programmes

WFP has an ongoing programme of FFW assistance in Sri Lanka with the Department of Agrarian Development in many of the drought-affected districts for the renovation of deteriorated minor irrigation systems. Given the current situation, available government and WFP resources for districts not affected by this drought could be re-allocated for use in the drought-affected districts. This would serve to provide additional employment in the short term and contribute in the long term to improving the efficiency of water utilization, thereby increasing agricultural production and mitigating against future periods of drought.

WFP is providing considerable food assistance to the north and east of Sri Lanka through a number of interventions, including FFW, mother child nutrition programmes and a school feeding programme. These areas produced bumper harvests of rice in 2003, yet marketing the surpluses was problematic for the small farmers. These same areas were not particularly affected by the recent dry spell. However, while most of the people of the north and east had achieved self-sufficiency in rice production in 2003, the lack of adequate storage facilities means there is little available now that might have been transported to help fill the gaps in the drought-affected districts bordering the north and east.



Note: Circled areas are the most drought-affected divisions.

This report has been prepared by Henri Josserand, Cheng Fang, James Breen, Jeff Taft-Dick, and Azmey Mohamed under the responsibility of the FAO and WFP Secretariats with information from official and unofficial sources. Since conditions may change rapidly, please contact the undersigned for further information if required.

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