

FIRST DRAFT

**Forum for Food Security**



**in Southern Africa**

**Regional Issues in Food Security for Southern Africa**

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The Theme Papers use economic, institutional and political analysis applied to the evidence base in the region, and informed where relevant by evidence from other parts of the South, to explore the policy implications of the priority food security issues raised in Country Issues Papers produced by resident experts in Lesotho, Malawi, Mozambique, Zambia and Zimbabwe.

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## Introduction

This short brief looks at food security policy issues for Southern Africa that arise at the regional, or supra-national, level. Three particular aspects are examined as being of particular importance for food security:

- trade, stocks and commodity exchanges;
- early warning systems and disaster preparedness; and
- migration.

By way of setting the issues in context, an initial hypothesis may be that the scope for regional cooperation in food security is greatest in assuring the *availability* of food at all times at moderate and stable prices. Regional trading, stocks, commodity exchanges, and early warning of production problems all have potential to make staple food available through the different countries.

There may be correspondingly less scope for supra-national policy in resolving issues of *economic and social access* (or entitlement) to food, since these largely relate to poverty reduction and relief. Policy for these, other than for overall economic growth and the relief of emergencies, tends to be primarily national. Migration, however, can be important for the livelihoods of poor and vulnerable households, and thus to their access to food.

## Food availability: trade, stocks and commodity exchanges

### *The cereals trade in Southern Africa*

Tables 1 and 2 show trade in cereals and prepared products of cereals, and for maize and maize flour, over the period from 1991 to 2001, for ten countries of Southern Africa — the Southern African Development Community (SADC) less Angola, DR Congo and the islands of Mauritius and the Seychelles.

On average between 1991 and 2001, the ten countries have exported just under 2 million tons and imported around 4.5 million tons of cereals and preparations. The region is thus a net importer of cereals, with an average net deficit of some 2.6 million tons — equivalent to some 14% of the average annual consumption of cereals in the region. About half the cereals deficit is made up of imports of wheat and wheat flour. Rice is the other main cereal imported.

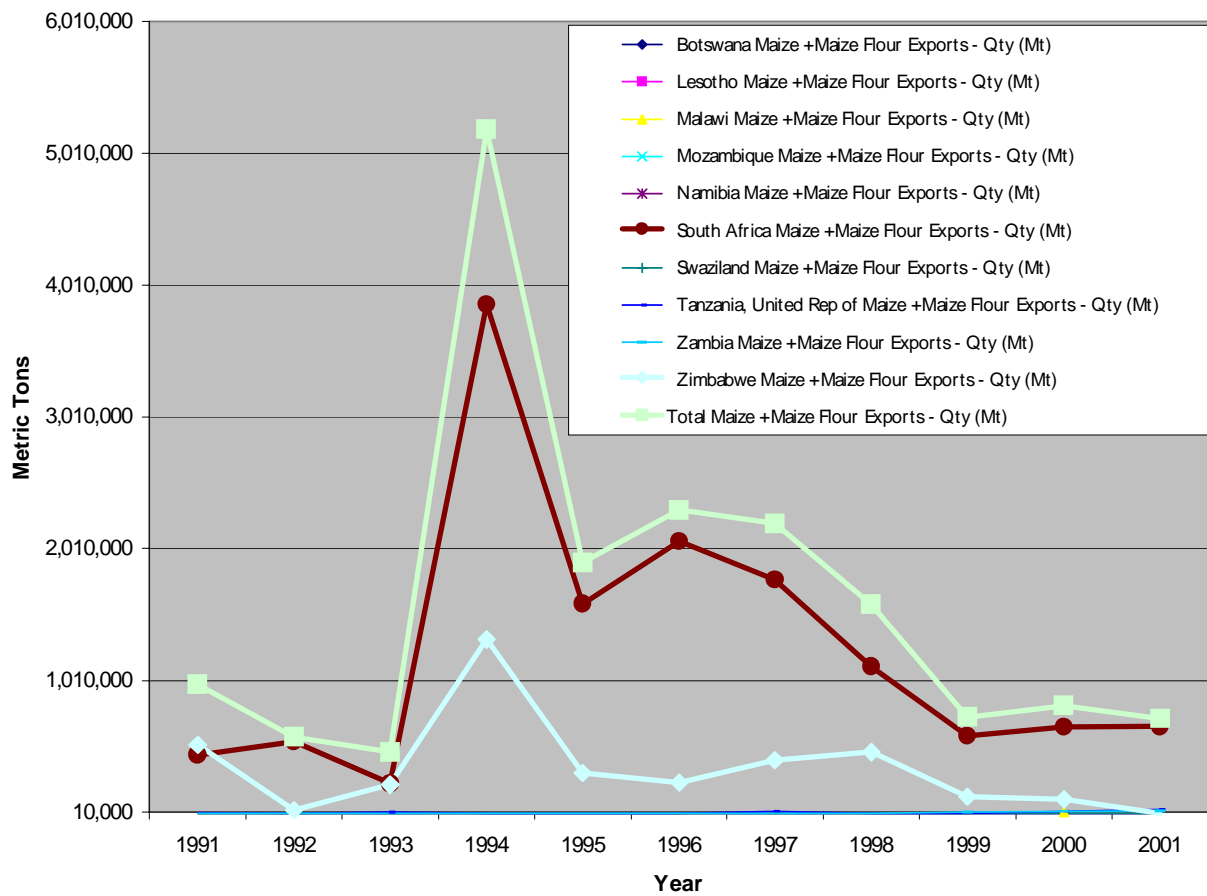
Few of the countries export cereals on any scale: only South Africa and Zimbabwe have regularly exported more than 20,000 tons a year; with Tanzania since 1999 starting to export in quantity. All ten countries are substantial importers of cereals, with South Africa accounting for almost half of the imports. Mozambique, Namibia, Tanzania and Zimbabwe are the next largest importers.

The degree of dependence on imports for supplies is markedly different between a group made up of Botswana, Lesotho, Namibia, and Swaziland where 70% or more of supplies typically come from imports, and the other six countries where imports make up between 10 and 20% of annual consumption.

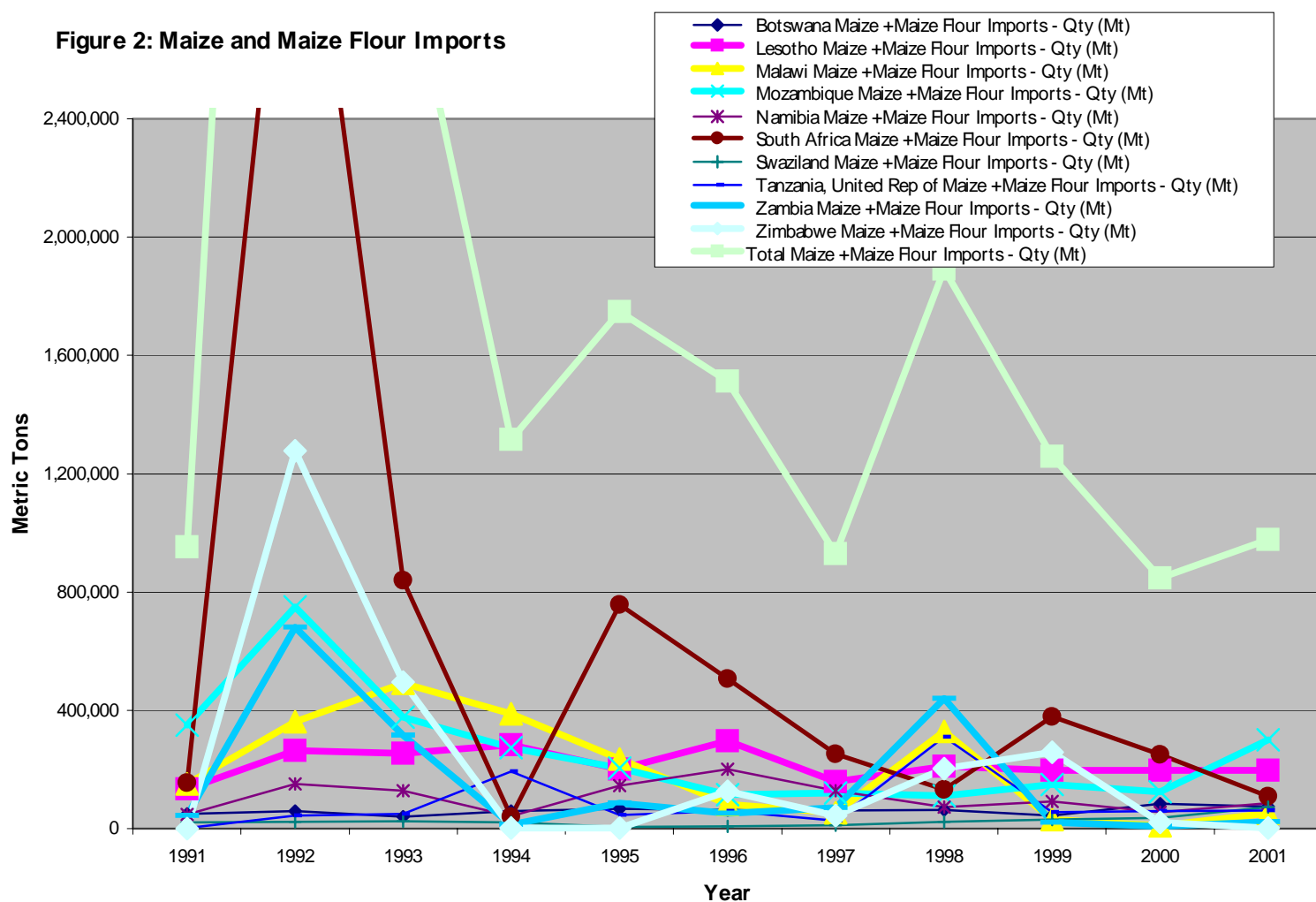
Trends in cereals trading are difficult to detect, since the amounts traded vary markedly from year to year, in response to harvests.

Restricting attention the main cereal consumed, maize, Figures 1 and 2 illustrate exports and imports of maize and maize flour for the same sample.

Figure 1: Maize & Maize Flour Exports



Looking at trade in maize and maize flour, and beginning with exports, only two countries have been consistent exporters in the 1990s: South Africa and Zimbabwe. Figure 1 suggests that exports of maize may be in decline. Indeed, the last time that maize exports from the ten countries reviewed here passed the one million ton mark, a level easily reached in the mid 1990s, was in 1998.

**Figure 2: Maize and Maize Flour Imports**


Imports of maize and maize flour — see Figure 2 — fluctuate depending upon harvests. There were notable increases in imports in 1992, 1995 and 1998, in response to widespread drought in the region. Ignoring the drought years, there are some slight indications that imports may have been declining in some countries — most notably Malawi, Mozambique and South Africa, but clear, sustained and significant trends are difficult to detect.

### *The direction of trade in food grains*

Table 3 (a to c) shows the direction of flows of the main cereals traded within and outside Southern Africa, in 2001. These are officially recorded flows: they do not include informal or unofficial cross-border flows. Consequently they may substantially understate some local movements — for example maize exports from Mozambique and Tanzania to Malawi.

**Table 3a: Flows of Cereals & Cereals Products, 2001, Qty in tons**

Imports to:	Exports from:						RoW	Total
	Malawi	Mozambique	SACU	Tanzania	Zambia	Zimbabwe		
Malawi			106,646		237		8,422	115,305
Mozambique			65,170					
SACU	25		386,190		2,463	9,810	1,245,806	1,648,697
Tanzania			362		550		105,736	107,234
Zambia	308	150	45,921	998		33,087	35,379	116,846
Zimbabwe			7,663				12,883	20,546
RoW			863,013	1,954	22,205	223		
Total	333		1,198,463	2,952	25,598	43,127		

Source: ITC data. Includes all items under product codes 100110 to 110900 in the Harmonised System.

RoW = Rest of World; No data for Mozambique, other than that given in flows for other territories.

NB: Within SACU Imports = 386.2 kt; within SACU exports = 27.4kt!

**Table 3b: Flows of Maize and Maize Flour, 2001, Qty in tons**

Imports to:	Exports from:						RoW	Total
	Malawi	Mozambique	SACU	Tanzania	Zambia	Zimbabwe		
Malawi			52,855		237		1,120	54,212
Mozambique			49,468					
SACU	25		203,855		809	4,221	108,436	314,508
Tanzania			226		550		38,779	40,130
Zambia	30		18,719	724		1,720	660	22,237
Zimbabwe			1,947				36	1,954
RoW			574,530	154	17,209	223		
Total	55		665,499	878	18,844	6,171		

Source: ITC data. Includes maize seed, corn, flour, meal, hulled, pearled, sliced or kibbled, starch; product codes 100510, 100590, 110220, 110313, 110423, 110812 in the Harmonised System

RoW = Rest of World; No data for Mozambique, other than that given in flows for other territories.

NB: Within SACU Imports = 203.9 kt; within SACU exports = 2.4kt!

**Table 3c: Flows of Wheat and Wheat Flour, 2001, Qty in tons**

Exports from:

Imports to:	Malawi	Mozambique	SACU	Tanzania	Zambia	Zimbabwe	RoW	Total
Malawi			52,739				7,302	60,041
Mozambique			9,144					
SACU			60,104				332,805	393,211
Tanzania							28,715	28,726
Zambia			19,765			24,667	28,077	72,761
Zimbabwe			3,132				12,828	15,960
RoW			231,359	1,440	2,291			
Total			378,619	1,440	2,291	24,667		

Source: ITC data. Includes wheat as grain, durum, meslin, flour, pellets, starch and gluten; product codes 100110, 100190, 110100, 110321, 110811, & 110900 in the Harmonised System

RoW = Rest of World; No data for Mozambique, other than that given in flows for other territories.

NB: Within SACU Imports = 60.1 kt; within SACU exports = 2.1kt!

Table 1: Trade in Cereals and Preparations, Southern Africa, 1991-2001

## Quantities in Metric Tons

Exports	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Average 1991-2001	1998/99 Cereals Supply, Mt
<b>Botswana</b>	12,989	8,938	10,932	12,153	15,939	8,210	4,099	11,851	11,792	18,233	16,774	<b>11,992</b>	
<b>Lesotho</b>	7,800	5,175	2,020	1,800	800	600	753	3,600	3,600	3,600	3,600	<b>3,032</b>	
<b>Malawi</b>	2,917	3,202	11,297	8,955	9,360	4,888	4,719	6,373	6,575	11,034	234	<b>6,323</b>	
<b>Mozambique</b>												<b>0</b>	
<b>Namibia</b>										4,126	5,741	<b>4,934</b>	
<b>South Africa</b>	538,735	673,352	366,869	3,971,042	1,825,444	2,354,941	2,090,363	1,247,376	831,192	889,860	1,133,118	<b>1,447,481</b>	
<b>Swaziland</b>	450	450	450	450	450	450	4,826	8,754	4,865	10,174	7,505	<b>3,529</b>	
<b>Tanzania</b>	7,000	4,141	9,637	0	0	0	24,089	35,120	37,610	104,347	125,130	<b>31,552</b>	
<b>Zambia</b>	1,048	4,784	3,505	2,288	1,838	1,340	774	842	14,187	22,338	22,359	<b>6,846</b>	
<b>Zimbabwe</b>	546,600	36,283	237,739	1,360,042	450,672	335,331	491,229	573,222	213,900	180,565	24,667	<b>404,568</b>	
<b>Total Exports</b>	<i>1,117,539</i>	<i>736,325</i>	<i>642,449</i>	<i>5,356,730</i>	<i>2,304,503</i>	<i>2,705,760</i>	<i>2,620,852</i>	<i>1,887,138</i>	<i>1,123,721</i>	<i>1,244,277</i>	<i>1,339,128</i>	<b>1,916,220</b>	
<b>Imports</b>													
<b>Botswana</b>	115,047	158,677	151,377	204,133	233,452	171,518	181,792	185,532	144,619	223,633	197,535	<b>178,847</b>	186,908
<b>Lesotho</b>	215,333	346,030	357,030	372,530	289,601	394,399	249,183	297,814	279,295	229,478	229,478	<b>296,379</b>	420,858
<b>Malawi</b>	208,154	437,563	559,478	504,576	299,254	163,851	151,526	395,606	104,386	66,063	144,645	<b>275,918</b>	1,632,607
<b>Mozambique</b>	594,120	1,052,220	653,540	534,230	537,120	403,930	377,800	540,740	388,416	415,622	502,023	<b>545,433</b>	1,674,561
<b>Namibia</b>	233,594	401,293	488,692	362,913	469,902	413,242	353,745	363,223	475,035	146,773	179,956	<b>353,488</b>	284,224
<b>South Africa</b>	1,527,279	4,971,444	2,548,278	1,344,202	2,364,523	2,301,977	1,523,664	1,451,214	1,686,455	1,821,708	1,177,090	<b>2,065,258</b>	7,602,352



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<b>Swaziland</b>	93,913	96,673	88,100	100,300	72,300	61,800	76,075	68,473	111,284	110,676	152,214	<b>93,801</b>	121,860
<b>Tanzania</b>	128,941	190,530	197,240	336,800	210,577	235,584	382,376	754,973	252,264	570,007	610,887	<b>351,834</b>	3,599,065
<b>Zambia</b>	57,273	723,527	353,069	66,076	152,045	146,942	110,157	524,387	97,095	79,130	120,632	<b>220,939</b>	1,474,387
<b>Zimbabwe</b>	41,548	1,479,145	602,378	91,322	120,886	451,516	215,792	345,122	319,633	118,966	48,799	<b>348,646</b>	1,863,678
<b>Total Imports</b>	3,100,155	9,698,425	5,847,805	3,712,949	4,516,208	4,573,241	3,440,318	4,741,552	3,713,863	3,558,423	3,165,724	<b>4,551,697</b>	18,860,499

Exports - Imports	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Average 1991-2001	1998/99 Cereals Supply, Mt
<b>Botswana</b>	-102,058	-149,739	-140,445	-191,980	-217,513	-163,308	-177,693	-173,681	-132,827	-205,400	-180,761	<b>-166,855</b>	186,908
<b>Lesotho</b>	-207,533	-340,855	-355,010	-370,730	-288,801	-393,799	-248,430	-294,214	-275,695	-225,878	-225,878	<b>-293,348</b>	420,858
<b>Malawi</b>	-205,237	-434,361	-548,181	-495,621	-289,894	-158,963	-146,807	-389,233	-97,811	-55,029	-144,411	<b>-269,595</b>	1,632,607
<b>Mozambique</b>	-594,120	-1,052,220	-653,540	-534,230	-537,120	-403,930	-377,800	-540,740	-388,416	-415,622	-502,023	<b>-545,433</b>	1,674,561
<b>Namibia</b>	-233,594	-401,293	-488,692	-362,913	-469,902	-413,242	-353,745	-363,223	-475,035	-142,647	-174,215	<b>-352,591</b>	284,224
<b>South Africa</b>	-988,544	-4,298,092	-2,181,409	2,626,840	-539,079	52,964	566,699	-203,838	-855,263	-931,848	-43,972	<b>-617,777</b>	7,602,352
<b>Swaziland</b>	-93,463	-96,223	-87,650	-99,850	-71,850	-61,350	-71,249	-59,719	-106,419	-100,502	-144,709	<b>-90,271</b>	121,860
<b>Tanzania</b>	-121,941	-186,389	-187,603	-336,800	-210,577	-235,584	-358,287	-719,853	-214,654	-465,660	-485,757	<b>-320,282</b>	3,599,065
<b>Zambia</b>	-56,225	-718,743	-349,564	-63,788	-150,207	-145,602	-109,383	-523,545	-82,908	-56,792	-98,273	<b>-214,094</b>	1,474,387
<b>Zimbabwe</b>	505,052	-1,442,862	-364,639	1,268,720	329,786	-116,185	275,437	228,100	-105,733	61,599	-24,132	<b>55,922</b>	1,863,678
<b>Total</b>	-1,982,616	-8,962,100	-5,205,356	1,643,781	-2,211,705	-1,867,481	-819,466	-2,854,414	2,590,142	-2,314,146	1,826,596	<b>-2,635,476</b>	18,860,499
Share of deficit made up by wheat & wheat flour	62%	12%	32%		60%	101%	115%	45%	33%	52%	36%	<b>46%</b>	

Source: FAO data (at [http://www.fao.org/waicent/portal/statistics\\_en.asp](http://www.fao.org/waicent/portal/statistics_en.asp))

Cereals and preparations include grains, flours, pasta and dough for all cereals. It excludes manufactured foods such as biscuits.

The cereals supply is an estimate of annual consumption for the countries concerned, including both domestic production and the balance of trade.

**Table 2: Trade in Maize +Maize Flour, Southern Africa, 1991-2001 — Quantities in Metric Tons**

Exports	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Av 1991 - 2001	Maize Supply, 98-00, Mt
<b>Botswana</b>	571	747	2,854	1,676	635	2,089	104	810	810	2,399	2,650	1,395	
<b>Lesotho</b>	5,300	4,000	20	0	800	550	750	2,200	2,200	2,200	2,200	1,838	
<b>Malawi</b>	751	758	4,125	1,380	3,190	514	718	53	91	11,000	200	2,071	
<b>Mozambique</b>	0	1	2	3	4	5	6	7	8	9	10	5	
<b>Namibia</b>	0	0	0	0	0	0	0	0	0	953	1,657	237	
<b>South Africa</b>	444,838	545,110	229,500	3,865,491	1,591,332	2,064,386	1,776,255	1,114,875	589,328	656,815	661,754	1,230,880	
<b>Swaziland</b>	0	0	0	0	0	0	2,425	1,890	1,559	3,581	1,104	960	
<b>Tanzania</b>	7,000	4,141	9,637	0	0	0	16,190	90	2,690	17,326	28,754	7,803	
<b>Zambia</b>	477	115	3,326	2,083	1,621	1,123	94	162	9,101	16,971	18,844	4,902	
<b>Zimbabwe</b>	519,493	25,570	216,469	1,320,870	307,650	235,064	404,123	466,135	126,514	106,747	2,076	339,156	
<b>Total Exports</b>	978,430	580,442	465,933	5,191,503	1,905,232	2,303,731	2,200,665	1,586,222	732,301	818,001	719,249	1,589,246	
<b>Imports</b>													
<b>Botswana</b>	50,592	60,097	39,540	58,389	67,479	63,190	60,470	63,129	43,667	84,181	74,924	60,514	71,152
<b>Lesotho</b>	133,003	263,500	255,100	283,100	199,900	296,486	158,914	209,929	197,748	197,748	197,748	217,561	298,030
<b>Malawi</b>	151,264	362,138	492,317	389,000	235,004	83,040	54,220	329,083	30,263	8,719	51,840	198,808	1,480,305
<b>Mozambique</b>	350,000	750,000	376,000	273,600	205,000	115,000	121,000	110,000	150,000	125,000	300,000	261,418	975,308
<b>Namibia</b>	46,940	151,512	128,705	42,863	145,178	201,378	127,965	72,700	92,127	55,594	85,590	104,596	61,990
<b>South Africa</b>	155,120	3,603,910	840,453	40,492	756,619	507,489	252,866	131,263	378,208	251,100	109,355	638,807	4,409,239
<b>Swaziland</b>	20,259	22,000	25,000	20,300	6,300	7,300	12,009	22,506	31,501	37,096	72,597	25,170	68,495
<b>Tanzania</b>	1,651	44,000	49,000	193,000	45,170	58,896	26,740	310,210	55,244	60,126	60,476	82,228	2,401,954
<b>Zambia</b>	43,358	680,000	316,000	13,530	85,429	52,500	70,430	440,400	20,952	7,174	22,160	159,267	1,293,948

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<b>Zimbabwe</b>	791	1,278,065	495,533	1,421	2,266	126,889	44,442	202,742	258,256	21,211	1,804	221,220	1,444,921
Total Imports	952,978	7,215,222	3,017,648	1,315,695	1,748,345	1,512,168	929,056	1,891,962	1,257,966	847,949	976,494	1,969,589	12,505,342

Net: Exports-Imports	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Average 1991-2001	Maize Supply, 98-00, Mt
<b>Botswana</b>	-50,021	-59,350	-36,686	-56,713	-66,844	-61,101	-60,366	-62,319	-42,857	-81,782	-72,274	-59,119	71,152
<b>Lesotho</b>	-127,703	-259,500	-255,080	-283,100	-199,100	-295,936	-158,164	-207,729	-195,548	-195,548	-195,548	-215,723	298,030
<b>Malawi</b>	-150,513	-361,380	-488,192	-387,620	-231,814	-82,526	-53,502	-329,030	-30,172	2,281	-51,640	-196,737	1,480,305
<b>Mozambique</b>	-350,000	-749,999	-375,998	-273,597	-204,996	-114,995	-120,994	-109,993	-149,992	-124,991	-299,990	-261,413	975,308
<b>Namibia</b>	-46,940	-151,512	-128,705	-42,863	-145,178	-201,378	-127,965	-72,700	-92,127	-54,641	-83,933	-104,358	61,990
<b>South Africa</b>	289,718	-	-610,953	3,824,999	834,713	1,556,897	1,523,389	983,612	211,120	405,715	552,399	592,074	4,409,239
<b>Swaziland</b>	-20,259	-22,000	-25,000	-20,300	-6,300	-7,300	-9,584	-20,616	-29,942	-33,515	-71,493	-24,210	68,495
<b>Tanzania</b>	5,349	-39,859	-39,363	-193,000	-45,170	-58,896	-10,550	-310,120	-52,554	-42,800	-31,722	-74,426	2,401,954
<b>Zambia</b>	-42,881	-679,885	-312,674	-11,447	-83,808	-51,377	-70,336	-440,238	-11,851	9,797	-3,316	-154,365	1,293,948
<b>Zimbabwe</b>	518,702	-	-279,064	1,319,449	305,384	108,175	359,681	263,393	-131,742	85,536	272	117,936	1,444,921
Total Exports-Imports	25,452	-	-	-3,875,808	156,887	791,563	1,271,609	-305,740	-525,665	-29,948	-257,245	-380,343	12,505,342

Source: FAO data (at [http://www.fao.org/waicent/portal/statistics\\_en.asp](http://www.fao.org/waicent/portal/statistics_en.asp))

The maize supply is an estimate of annual consumption for the countries concerned, including both domestic production and the balance of trade.

For Malawi, the main flows of cereals are imports of maize and wheat, coming in very large part from the SACU. It is surprising to see no cereals trade recorded with Zimbabwe, a country that exports both wheat and maize to SACU and Zambia, and whose main production areas are located closer to Malawi than those of SACU.

From the partial data for Mozambique, the main flow shown is of cereals, mainly maize and maize flour, from SACU. But this represents only a small part (less than 13% by volume) of cereals imports to Mozambique, the great bulk of which must therefore be coming from the rest of the world.

The SACU is by far the largest single trader in cereals in the region. Most of the exports and imports are made up of exchanges with the rest of the world, and within SACU itself, rather than with other countries in Southern Africa.<sup>1</sup>

Most of Tanzania's cereals trade is with other parts of the world, but there are small amounts traded with SACU and Zambia.

Zambia gets most of its cereals imports from SACU and Zimbabwe, but still imports substantial amounts from the rest of the world. Maize imports come overwhelmingly from SACU, while wheat arrives in roughly equal quantities from the rest of the world, Zimbabwe and SACU.

Zimbabwe's cereal trade is dominated by exports of wheat to Zambia, imports of wheat from the rest of the world and SACU, and exports of maize to SACU and Zambia.

### ***Is there scope for more trade in grains in Southern Africa?***

Most reviews — see for example Mano et al 2003 — tend to commend international trade as a way to gain the benefits of specialisation and to even out fluctuations in supply, without having to maintain large stocks within country. Can these benefits be achieved by trading within the region, that is within SADC?

There are — following Weeks & Subasat 1998 — three questions that might be asked. One concerns the degree of complementarity of food production systems between the various countries. If countries produce different mixes of crops, then trade makes sense to obtain a wider variety of foods through trade at lower cost than through domestic production. Their study shows the following:

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<sup>1</sup> There are large differences in the amount of trade within SACU as recorded by imports and exports: in the total for cereals and cereals products, as few as 27,400 tons are recorded as exported, while as many as 386,200 tons are shown as imports within the Customs Union. It is not clear why such a large difference should exist in officially recorded data. It may stem from differences in recording small-scale trade: when individuals and petty traders cross borders with small amounts of cereals, the amounts arriving may be registered as imports, but they are not recorded as exports.

**Table 4: Complementarity in food production, 1984–86**

NSD = No significant difference

	Lesotho					
Malawi		Malawi				
Mozambique		NSD	Mozambique			
South Africa				South Africa		
Tanzania		NSD	NSD	NSD	Tanzania	
Zambia		NSD		NSD		Zambia
Zimbabwe		NSD				NSD

Source: Weeks & Subasat 1998

The picture is mixed. In many cases, the pairings suggest trading possibilities in most, but not all cases. It seems that Malawi has little complementarity with any of its neighbours, and that Zambia only has Mozambique and Tanzania as complementary amongst those countries close to it.

A second question concerns the similarities of consumption patterns. Weeks & Subasat (1998) examined this by comparing percentage consumption over 43 different food items. This produces the following results:

**Table 5: Complementarity in food consumption, 1984–86**

NSD = No significant difference

	Lesotho					
Malawi		Malawi				
Mozambique			Mozambique			
South Africa	NSD			South Africa		
Tanzania			NSD		Tanzania	
Zambia	NSD	NSD				Zambia
Zimbabwe	NSD	NSD		NSD		NSD

Source: Weeks & Subasat 1998

Again the picture is mixed. Lesotho, Malawi, Zambia and Zimbabwe all tend to have similar consumption patterns to their neighbours and near-neighbours. But other pairings show scope for trade.

Combining production and consumption to show just those pairs where both production and consumption are similar gives the following:



**Table 6: Complementarity in food production and consumption, 1984–86**

NSD = No significant difference

	Lesotho					
Malawi		Malawi				
Mozambique			Mozambique			
South Africa				South Africa		
Tanzania			NSD		Tanzania	
Zambia		NSD				Zambia
Zimbabwe		NSD				NSD

Source: Weeks & Subasat 1998

Thus we are left with two groups of pairings. One pairing is the close correspondence of production and consumption between Mozambique and Tanzania. The other consists of the pairs between Malawi, Zambia and Zimbabwe.

This does not necessarily mean that no trade is indicated between countries with similar production and consumption patterns. Trade might well be possible if there are significant differences in the production costs between different pairs of countries. Different costs may explain why, for example, Malawi imports maize from both Mozambique and Tanzania despite the similar food production structures of the countries involved. Data on production costs, however, is difficult to collect and comparisons are bedevilled by questions over the methods of calculation.

So far, the discussion looks at trade possibilities for some average pattern of production and consumption. But food production fluctuates markedly between years in the region. How much does production co-vary across the countries of interest here? Two sources shed some light on this question. Poulton & Dorward (2003) looked at correlations of maize harvests for the last 30 years or so, while Weeks & Subasat (1998) report data for correlations of the proxy indicator of cereals imports — imports are likely to rise and fall with the level of domestic harvests — for a shorter period, 1971 to 1990.

**Table 7: Annual variations in maize production, 1972–2002, and net imports of cereals imports (other than wheat), 1971–1990**

	Lesotho				
Malawi	+Prod	Malawi			
Mozambique	+Prod	+Prod +Imp	Mozambique		
South Africa	+Prod			South Africa	
Tanzania		+Prod	+Prod		Tanzania

Zambia		<i>+Imp</i>	<i>+Imp</i>	+Prod		<b>Zambia</b>
Zimbabwe		<i>+Imp</i>	<i>+Imp</i>	+Prod		+Prod <i>+Imp</i>

Source: Poulton & Dorward 2003, Weeks & Subasat 1998

*+Imp* = positive correlation on cereals imports, significant at 5% level

+Prod = positive correlation on maize harvest, significant at 5% level

In maize production, it seems there are two main sets of correlations of harvests: one between South Africa, Zambia and Zimbabwe; the other between Malawi, Mozambique and Tanzania. This suggests there may be potential to cover for production shortfalls in each set by trading between the blocks.

Correlations in cereal imports are fewer but show that Malawi, Mozambique, Zambia and Zimbabwe tend to be importing at the same time. The Mozambique result can perhaps be discounted, since the data series covers a time largely marked by strife, so that we are left with co-variance of cereals imports for the three countries of the old Central African Federation.

Overall it seems that there may be limited opportunities for trade to even out fluctuations in harvests between immediate neighbours; but there are more opportunities when near-neighbours are considered. This ties in with the evidence seen in the direction of cereals trade flows seen earlier: relatively few movements between neighbouring countries, but more substantial trade with SACU (largely South Africa).

If there were fewer barriers to trade, and lower transport costs, it might be that most of the harvest deficits experienced in the five countries would be covered by imports from South Africa, Tanzania (and possibly Kenya as well), and northern Mozambique.

### ***Policy for cereals trade***

National policies affecting trade in food grains vary, as the following Table shows:

**Table 8: Policies for international trade in grains**

<b><i>Country</i></b>	<b><i>Policy for international trade in food grains</i></b>
Lesotho	Permits import and export of grain without restriction by private traders.
Malawi	No restrictions on grain imports, can be made by private or state traders. The former tend to deal with small cross-border movements from Mozambique and Tanzania, the latter with larger shipments from outside the region.  Grain exports need a licence.
Mozambique	Imports of grain allowed: imposes duties of 17% on imported grain but may waive this when there are food emergencies.  Grain exports allowed, but local authorities may try to restrict this when

	local shortages arise.
South Africa	Liberal regime for international trade in grains, but applies a tariff of R137/ton on imports of maize and wheat.
Zambia	Grain imports allowed by private and state agencies. (But temporarily banned some imports from Zimbabwe in 2002 on the grounds they were being dumped.) Export regime: ???? Duties of 5% apply to traded grains, may be waived on imports when supplies run short.
Zimbabwe	Government monopolises international trade in grains through the GMB. 15% import tax applies. In addition 30% duties on wheat imports and 15% on rice imports: these may be waived when supplies run short.

Source: Mano et al 2003

With the exception of Zimbabwe, current policies tend to allow private trading in grains internationally, subject to some (quite modest) tariffs and duties. That said, it is less clear that official policies permitting grain exports are maintained at times when domestic market experience either shortage of supply or price rises, or both of these.

### ***Regional trade agreements***

All five countries are members of SADC, and under the **SADC Trade Protocol** that entered into force on September, they are committed to creating a free trade zone by 2008, although that deadline extends to 2012 for some sensitive products including agricultural produce.

In addition, Malawi, Zambia and Zimbabwe are members of **Comesa**, and under this nine countries, including these three, have already entered into free trade area since late 2000. Indeed, a customs union within Comesa is scheduled for 2004.

Lesotho, of course, has long been part of the **Southern Africa Customs Union**.

Official policy throughout Southern Africa is thus directed towards freer trade within the region, subject to agreeing precise modalities, and allowing time for harmonisation and adjustment.

***Policy challenges*** for increased trade within the region include the following (Amani 2003):

- Reducing transport costs that tend to be high within the region;<sup>2</sup>

<sup>2</sup> Typical costs of transport (from Amani 2003):

From	To	Cost, US\$/ton
US Gulf Ports	Durban	25.5
Durban	Gauteng	23.6
Gauteng	Harare	55.6

- Cutting non-tariff barriers to trade, such as cumbersome paperwork, long delays at border posts, ad hoc quantitative restrictions, and customs corruption;
- Facilitating the flow of information through harmonisation of standards and grades, publication of tariffs, dissemination of market data;
- Simplifying tariff structures;
- Facilitating international payment systems; and,
- Clarifying the trade regimes and regulations that apply when countries belong to more than one multilateral agreement (e.g. SACU, SADC, COMESA overlap), or have separate bilateral trade treaties, in addition to commitments to the WTO.

If there is a general commitment to freer intra-regional trade, questions remain about strong that commitment is likely to be when trade affects either price levels or the survival of enterprises in a given country. In the particular case of markets for staple foods, more regional integration is likely to lead to less variation in prices between areas, and less variations through time. But this could mean that when an area has suffered a harvest failure, and additional cereals are imported from a neighbouring country, the (short term) effect may be to raise prices in the exporting country. This helps surplus producers, but harms consumers in the exporting country. The temptation in such cases will be to ban or restrict exports.<sup>3</sup>

### *Stocks of food*

Since food is consumed daily while crops are harvested once or twice a year, any food system has to have stocks to even out consumption and production within any given year. Similarly, given that human consumption of staples varies little between years, but harvests may vary by a large margin from the expected or planned production, depending on weather, pests and diseases, inter-annual storage is needed to reduce the risk of running out of stock following a low harvest.

Three questions thus arise about food stores:

1. How large do stocks have to be to cope with fluctuating supply against fairly steady demand?
2. Who holds the stocks: private actors including traders and households, or public agencies? And
3. Where, and at what level, are the stocks held: village, district, nation, region, or world?

The answer to the first question is partly a technical matter, requiring data on consumption, production and the variations typically seen in these; and partly a matter of the willingness to bear

Gauteng	Lusaka	73.2
Gauteng	Lilongwe	50.6

Costs are sea freight for the first row, otherwise road transport in 32 ton trucks.

<sup>3</sup> There are reports that provincial and district authorities in northern Mozambique have tried to limit maize exports to Malawi on precisely these grounds — apparently without much success to date.

the risk and cost of stocks running out. The answer also depends on the scale of market covered by the stocks, and the ability and time taken to buy in supplies from a wider market.

The second and third questions tend to provoke more controversy. Broadly speaking, two different camps emerge in response to these:

**(a) Market-based approaches**, favouring a free markets in grains and of liberal international trade. The arguments in favour of liberalisation include the following:

- Given that the greater the territorial aggregation for which stocks are held, the smaller they have to be relative to total grain transacted in the system to keep the risk of running out of stocks to an acceptably low level. Hence drawing on regional or international stocks, exporting and importing grains between territories as and when needed or convenient, lowers the costs of inventories;
- Private sector traders are more flexible and responsive to market conditions than public sector agencies.

**(b) Public regulation and intervention.** The arguments for an active public role include two fears, thus:

- Private traders may try to rig markets to generate excess profits, by, for example, holding stocks off the market to drive up prices;
- Private traders may misjudge the risks, or accept risks that are unacceptably high for society as a whole,<sup>4</sup> of running out of stocks and supplies.

It is therefore argued that there has to be some public holding of stocks to allow government to intervene in the market to reduce price spikes (by selling off public stocks when prices rise), and to insure against running out of stock. It is also usually argued that the stocks have to be held nationally, since this allows sovereign governments to respond speedily to local problems.

Amongst those who argue for a public role, there are differences of opinion over whether to hold physical reserves or to have access to a foreign exchange fund to finance public imports when needed. Holding physical reserves eliminates the risks of high international prices for grains or hold-ups in delivering food imports, but they tie up resources in inventories and are subject to waste and losses.

Recent public food stock policy in the five countries and South Africa varies, as Table 9 shows.

**Table 9: Public stocks of food grains in the five countries and South Africa**

<i>Country</i>	<i>Policy for public stocks of food grains</i>
Lesotho	No public stocks held.
Malawi	Aims for 60kt, 9 days supply. Amount held has fluctuated from almost nothing to 225kt during the last two years.
Mozambique	No public stocks held.

<sup>4</sup> Traders who mis-calculate suffer from missing a chance to trade profitably. But for the rest of society the risks are those of seeing grain prices soaring, and being unable to afford food.

<i>South Africa</i>	<i>No public stocks held.</i>
Zambia	Aims for 200kt maize in stock, 375kt cereals in all, 3 months supply; in recent years often held less.
Zimbabwe	Aims for 500kt of maize, 200kt of wheat, 3 months supply: in recent years often held less.

Source: Mano et al 2003

In the three countries that have public stocks, repeated discussions have arisen between donors who favour smaller public stocks, and governments that have been anxious to keep substantial public physical reserves.

The management of public stocks has not always been transparent or apparently conducted in the public interest. The Malawian strategic grain reserve is a particular case. *'In 2000, the Government of Malawi commissioned a study, financed by the European Commission, to inform future food security policy, and to include recommendations on the size and management of the Strategic Grain Reserve (SGR). The study recommended that the size of the SGR be reduced from its existing level of 167,000 Metric Tonnes (MT) to between 30,000 and 60,000 MT. The study argued that this would be sufficient to deal with a localised crisis, and would also reduce operating costs. Over the course of 2001, most of the SGR was sold off, largely, it seems, within Malawi.'* (IDC 2003, 21) During 2002 the Reserve was replenished to more than 200kt, apparently at a cost much higher than the price of earlier sales. The government has been reluctant to disclose to whom and where the grain was sold, and how the stock was replenished.

This raises the question, in the case that public stocks are held, about who operates the stock and to what rules. So far, public stocks have been managed at the discretion of ministers with little public disclosure of operations and decision rules. An alternative would be to have public stocks managed by a largely autonomous public agency, operating to stated objectives and rules, with regular publication of operations.

### ***Commodity exchanges***

Part of the reason to hold stocks is to guard against the price risk of food grains only being available at high prices when needed. An alternative to public stocks is to use private commodity exchanges either to contract for forward supplies of grains at a fixed price at a future date, or else to buy the (tradable) option to acquire grain at a given price at some future time. If there are enough buyers and sellers, such exchanges promise participants a range of possibilities that fit with their needs for flexibility and for the degree of risk they are willing to bear.

Within SADC, Safex in Johannesburg is the largest such exchange (Gravelet-Blondin 2003). Safex trades in what for the other five countries are very large amounts of maize: for example between December 2000 and August 2001, 4.5 million tons of white maize were traded on the exchange — almost half the combined annual consumption of the five other countries (c 9 million tons a year). Zimbabwe also had an exchange, ZIMACE formed in 1994, that went into abeyance when government monopolised grain trading in mid 2001. Zambia, too, has an agricultural

commodity exchange dating from 1994. There have been studies as well, on forming a regional exchange for the Comesa countries to trade in cereals, sugar, coffee and cotton (Goggin 2003).

There is currently a proposal, arising from a special meeting of the SADC Ministers of Food, Agriculture and Natural Resources convened in Harare on 25 August 2001, that the use of futures and options should be considered as an alternative to holding large physical strategic reserve stocks by member countries or by SADC itself.

Policy questions that arise with stocks and commodity exchanges:

- Is it necessary for government to hold public stocks of food grains, or can this be left to the private sector?
- If there is a public role in grain stocks, should reserves be in physical stocks or funds to buy imports?
- If there are public stocks or reserves, should these be held nationally, or is there scope for regional cooperation?
- If there are public stocks, who will manage them, to what rules, and how much will they publish details of operations?
- Is there scope for using futures and options on commodity exchanges such as Safex to insure against price risks?

### **Early warning systems and disaster preparedness**

Regional cooperation in running early warning systems (EWS) makes sense: there are economies of scale in collecting data through, for example, satellite images, and in analysing such data. Also, when assessing the responses to an early warning of a harvest failure in one area, it can be useful to know if there are similar warnings applying to neighbouring parts of the region.

SADC has experience of running such a regional EWS in tandem with support to national EWS for several years now, apparently successfully. When the 2002 food and humanitarian crisis broke it was no surprise. Clear warnings had been given well in advance. (Mano et al. 2003)

The EWS did well in registering production and availability of cereals in the region. But to date early warnings systems have been less good at tracking non-climatic shocks such as conflict, and the HIV/AIDS pandemic. Information has not yet been fully set in the context of livelihoods. Ability to analyse markets, trade and prices is limited. The EWS primarily track cereals, and not the other, non-cereal staple foods such as cassava. To date, the EWS have tended to report information to governments and donors, with much less attention to potential clients in private enterprise and civil society. (McNabb 2003)

In terms of disaster preparation, however, most national governments were not well prepared for the events of 2002, and SADC lacked contingency plans. The Regional Disaster Management Technical Committee that had been established under SADC auspices had not been operational.

Better was the performance of the Regional Vulnerability Assessment Committee, formed as part of the food security programme of SADC FANR in the early 2000s. This was able to take the lead in supporting country emergency food assessments in the six EMOP countries, in synthesising information, and in communicating with major donors such as the World Food Programme.

Policy questions that arise in regional cooperation for early warning and disaster preparedness are less those of whether there should be such systems, since they are largely in place, so much as questions of how to improve the effectiveness and focus of the current systems. These questions include:

- What indicators, methods and techniques should be used when collecting data for vulnerability assessments and early warnings?
- How should the information be analysed and results disseminated so as to contribute to public policy more effectively?
- How can the information and analysis be used to assist private actors in food systems?

## Migration

If the opportunities to trade between the countries of Southern Africa have not always been developed, the labour market has been — ever since the colonial order was established in the last quarter of the C19. From then onwards labour from areas of smallholder farming, both within and outside of the destination country, was recruited for jobs in the mines of Namibia, South Africa, Zambia and Zimbabwe; as well as for work on estates and plantations throughout the region, but especially in Mozambique, South Africa and Zimbabwe. Typically young men were recruited for periods of months and years during which they travelled unaccompanied, accommodated in barrack-like conditions. Their wages were often retained until the end of their contracts, when they were sent home with whatever funds remained after deductions.

Whatever the social costs of these migrations, and the effects of loss of labour on areas of origin,<sup>5</sup> migration came to form a central part of household livelihood strategies in many parts of the region, especially for rural areas of relatively dense settlement and for some remote rural areas where economic opportunities at home were few. Remittances became an important source of income, and indeed, in some cases, capital for farming and other businesses.

These migration patterns have withered in the last 20 and especially the last 10 years. Many of the mining economies have suffered from falling prices for their output and exhaustion of reserves. For example, in the gold mines of South Africa, half the jobs were lost between 1987 and 2000.

Increasingly what migration takes place — and data on the precise extent of such movements is scarce and unreliable — consists of two flows. One is of skilled labour, for example professionals such as doctors, moving to countries where the pay, conditions, facilities to use and perceived life style (including personal security and political freedom) is better. The other is made up of much less skilled migrants who travel on their own initiative in the hope of finding a paid job, often crossing borders illegally and thus having no official status in their host country. Given the numbers tempted to do this, and the stagnation of the urban and industrial economies of the region in the last decade or so, such migrants may contribute to over-supply of urban markets for unskilled labour. If they find any work, it is often at low rates of pay, and on casual and other precarious terms, with few if any labour rights.

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<sup>5</sup> There is a longstanding debate about the effects of migration on home areas, and on the degree to which the terms of migrant labour have been exploitative, with labour being paid less than the cost of reproduction since the smallholder or peasant economy subsidises the reproduction of the rest of the household — see, for example, Potts 2000, O’Laughlin 2002.



For both skilled and unskilled migrants, South Africa acts as a magnet, owing both to the size of its economy, and to having higher rates of pay than most of the other SADC countries (Botswana and Namibia being possible exceptions).

There is a **draft SADC protocol** on the free movement of labour within the region, but at least two countries are reluctant to sign to this — Botswana and South Africa. (Kritzinger-van-Niekerk & Moreira 2002). In general, official recognition of the extent of migration and the issues it raises are politically sensitive. But the question of whether migration should be either discouraged, or tolerated, or encouraged remains.

Whatever the answer to the overall question, migration is *de facto* a key dimension of the livelihoods of a substantial fraction of the rural households of Southern Africa. It affects food production in home areas, both negatively by removing labour but also positively when remittances fund inputs and capital equipment. Remittances may also improve household food security by increasing cash incomes that allow access to food.

Policy challenges associated with migration include (Peberdy & Oucho 2001):

- Understanding more about migrations by generating more data on the phenomenon;
- Harmonising policies on movement between countries;
- Protecting the rights of migrants whether legal or not, as part of basic human and employment rights to fair treatment at work, access to education, health, and other social services; and,
- Rolling back xenophobia and discrimination against foreigners.

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