JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF ENERGY
TEHRAN REGIONAL WATER BOARD
THE ISLAMIC REPUBLIC OF IRAN

THE STUDY
ON
WATER MANAGEMENT
IN
THE WESTERN AREA OF THE CAPITAL TEHRAN
IN
THE ISLAMIC REPUBLIC OF IRAN

FINAL REPORT

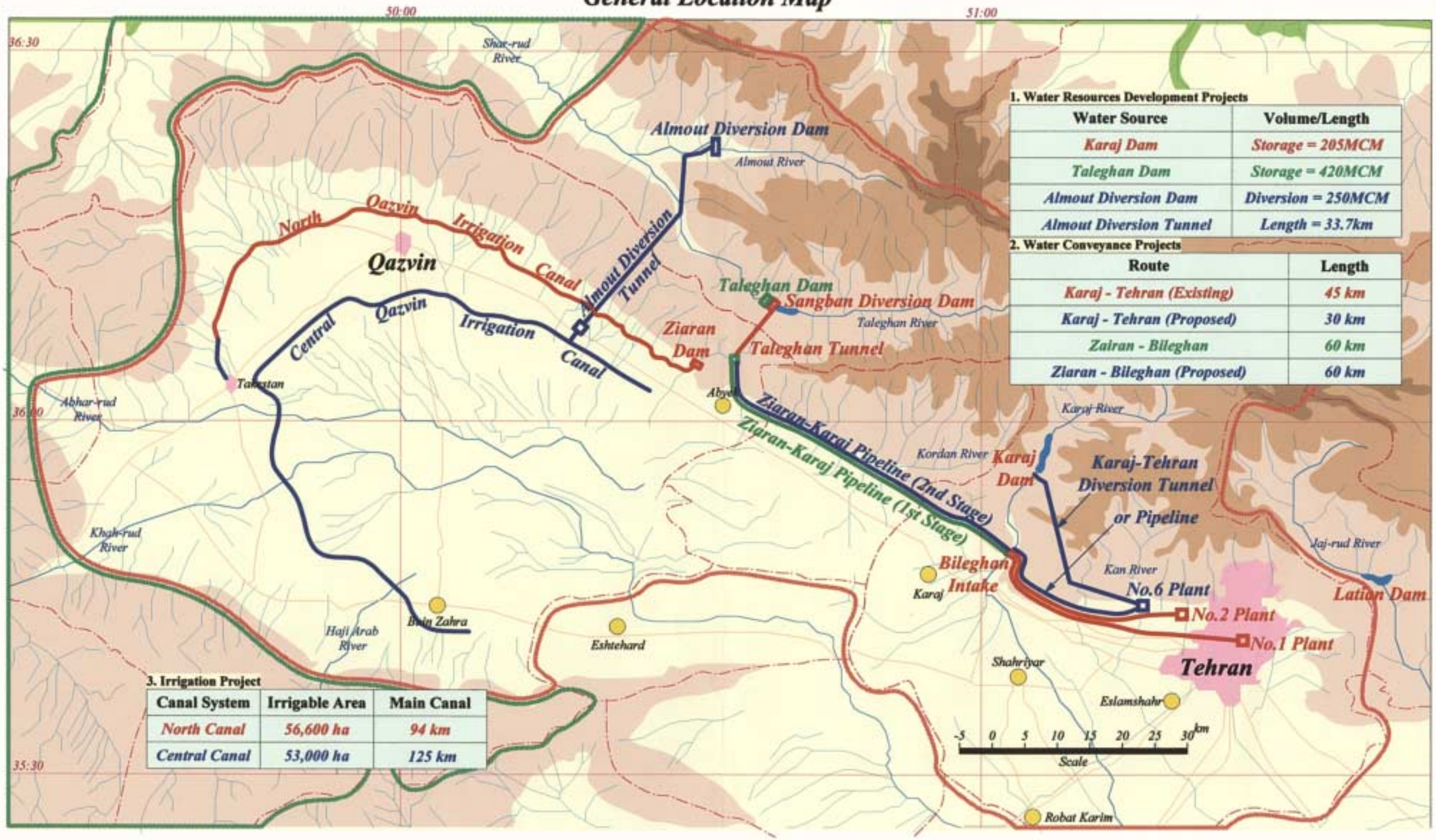
SUPPORTING REPORT

NOVEMBER 2001

SANYU CONSULTANTS INC.

Exchange Rate
US$ 1.0 = Rls 8,000
(May 2000～March 2001)

General Location Map



1. Water Resources Development Projects

Water Source	Volume/Length
Karaj Dam	Storage = 205MCM
Taleghan Dam	Storage = 420MCM
Almout Diversion Dam	Diversion = 250MCM
Almout Diversion Tunnel	Length = 33.7km

2. Water Conveyance Projects

Route	Length
Karaj - Tehran (Existing)	45 km
Karaj - Tehran (Proposed)	30 km
Zairan - Bileghan	60 km
Ziaran - Bileghan (Proposed)	60 km

3. Irrigation Project

Canal System	Irrigable Area	Main Canal
North Canal	56,600 ha	94 km
Central Canal	53,000 ha	125 km

LEGEND OF PROJECTS	
	Existing Project
	Project under Construction
	Proposed Project

LEGEND OF BOUNDARIES	
	Study Area (Part)
	Related River Basins (Part)

FINAL REPORT

(SUPPORTING REPORT)

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2.2.4 Land Use

Cropped area and production of Tehran and Qazvin provinces are shown in Tables 2.2.4.1 and 2.2.4.2. Plantation area of orchard of both provinces is shown in Table 2.2.4.3.

Table 2.2.4.1 Cropped Area and Production in Qazvin Province (1998/99)

Crops		Agricultiral Land (ha)			Production (ton)		
		Irrigated Area	Non-Irri. Area	Total	Irrigated Area	Non-Irri.Area	Total
Grains	Wheat	66,473	71,894	138,367	211,636	46,666	258,302
	Barely	26,000	11,814	37,814	75,126	8,269	83,395
	Rice	3,050		3,050	8,767		8,767
	Corn	3,406		3,406	21,117		21,117
	Total	98,929	83,708	182,637	316,646	54,935	371,581
Vegetables(1)	Pea	417	5,165	5,582	725	1,085	1,810
	Bean	2,658		2,658	3,415		3,415
	Lentil	707	21,112	21,819	1,423	5,789	7,212
	Others		1,603	1,603		534	534
	Total	3,782	27,880	31,662	5,563	7,408	12,971
Industrial Crops	Cotton	1,031		1,031	2,523		2,523
	Sugerbeets	7,225		7,225	227,144		227,144
	Oil seeds	9,797	315	10,112	13,858	71	13,929
	Total	18,053	315	18,368	243,525	71	243,596
Vegetables(2)	Potato	2,469		2,469	38,177		38,177
	Onion	1,200		1,200	11,612		11,612
	Tomato	3,974		3,974	116,382		116,382
	Others	226		226	3,167		3,167
	Total	7,869	0	7,869	169,338	0	169,338
Garden Crops	Melon	1,241		1,241	18,762		18,762
	Watermelon	359	1,169	1,528	5,179	3,882	9,061
	Cucumber	416	297	713	4,119	851	4,970
	Total	2,016	1,466	3,482	28,060	4,733	32,793
Feed crops	Alfalfa	19,381	411	19,792	151,513	395	151,908
	Fodder	4,058	5	4,063	250,891	1	250,892
	Total	23,439	416	23,855	402,404	396	402,800
Others		46		46	1,504		1,504
Total		154,134	113,785	267,919	1,167,040	67,543	1,234,583

Source; Ministry of Agriculture, Statistic data (2000)

Table 2.2.4.2 Cropped Area and Production in Tehran Province (1998/99)

Crops		Agricultiral Land (ha)			Production (ton)		
		Irrigated Area	Non-Irri. Area	Total	Irrigated Area	Non-Irri.Area	Total
Grains	Wheat	40,447	2,780	43,227	155,853	2,252	158,105
	Barely	41,263	396	41,659	154,346	428	154,774
	Rice	68		68	97		97
	Corn	250		250	1,250		1,250
	Total	82,028	3,176	85,204	311,546	2,680	314,226
Vegetables(1)	Pea		9	9		11	11
	Bean	233		233	74		74
	Lentil						
	Others		9	9		4	4
	Total	233	18	251	74	15	89
Industrial Crops	Cotton	7,663		7,663	19,085		19,085
	Sugerbeets	960		960	41,120		41,120
	Oil seeds	958		958	2,080		2,080
	Total	9,581	0	9,581	62,285	0	62,285
Vegetables(2)	Potato	5,260		5,260	100,898		100,898
	Onion	178		178	6,828		6,828
	Tomato	8,365		8,365	308,451		308,451
	Others	5,235		5,235	234,959		234,959
	Total	19,038	0	19,038	651,136	0	651,136
Garden Crops	Melon	424		424	4,296		4,296
	Watermelon	1,196	7	1,203	35,182	100	35,282
	Cucumber	3,975		3,975	67,257		67,257
	Others	1,546		1,546	37,261		37,261
	Total	7,141	7	7,148	143,996	100	144,096
Feed crops	Alfalfa	15,885		15,885	171,683		171,683
	Fodder	15,615		15,615	741,370		741,370
	Total	31,500	0	31,500	913,053	0	913,053
Others		69		69	263		263
Total		149,590	3,201	152,791	2,082,353	2,795	2,085,148

Source; Ministry of Agriculture, Statistic data (2000)

Table 2.2.4.3 Cropped Area and Production of Perennial Crops (1998/99)

Crops	Cropped area (ha)			Production (ton)		
	Sapling	Productive	Total	Sapling	Productive	Total
Tehran Province						
Grapes	151	11,371	11,522		139,799	139,799
Pistachio	264	71	335		128	128
Apple	714	14,735	15,449		225,278	225,278
Sub-total	1,129	26,177	27,306		365,205	365,205
Qazvin Province						
Grapes	3,534	31,206	34,740		307,219	307,219
Pistachio	1,559	1,878	3,437		1,819	1,819
Apple	451	4,499	4,950		73,724	73,724
Sub-total	5,544	37,583	43,127		382,762	382,762
Whole country	143,575	662,422	805,997		4,572,843	4,572,843

Source : Minstry of Agriculture, Statistic data (2000)

2.3. Socio-economic Condations

Table 2.3.1.1 GDP Growth Rate (at Constant 1361: 1982/83 Prices)

Sector	1370 (1991/92) (billion rials)	1375 (1996/97) (billion rials)	1377 (1998/99) (billion rials)	Growth Rate 1370-77 (%)	Growth Rate 1375-77 (%)
Oil	2,516.7	2,566.0	2,410.4	-0.61	-3.08
Non-oil	9,308.1	12,128.0	13,034.3	4.93	3.67
- Agriculture	3,120.2	3,822.9	4,277.8	4.61	5.78
- Manufacturing	1,940.3	2,320.1	2,633.3	4.46	6.54
- Trade	1,257.9	1,467.5	1,614.3	3.63	4.88
- Real Estates	1,383.5	1,804.0	1,693.3	2.93	-3.12
Total	11,824.8	14,694.0	15,444.7	3.89	2.52

Source: Central Bank of the Islamic Republic of Iran.

Table 2.3.1.2 Price Index (1372-76: 1993/94-1997/98)

Price Index	1372 (1993/94)	1373 (1994/95)	1374 (1995/96)	1375 (1996/97)	1376 (1997/98)	1377 (1998/99)
Wholesale						
General Index	25.3	42.4	60.2	25.1	9.9	11.6
- Domestically Produced Goods	26.8	39.7	53.6	23.7	12.2	16.4
- Exported Goods	6.6	42.9	54.3	13.8	6.9	9.5
- Imported Goods	27.2	47.1	71.9	29.1	6.9	7.0
Producer						
General Index	24.0	32.9	47.5	26.4	15.6	n.a.
- Agriculture	22.4	31.0	58.1	18.5	13.9	n.a.
- Industry	26.0	37.3	50.6	29.2	11.0	n.a.
- Mining	5.8	11.7	59.4	36.9	11.1	n.a.
- Water, Electricity & Gas	29.7	84.3	23.2	19.8	49.0	n.a.
- Services	22.1	23.3	32.9	30.0	25.0	n.a.
Consumer						
General Index	22.9	35.2	49.4	23.2	17.3	20.0
- Goods	22.5	41.3	57.8	16.9	12.2	18.9
- Services	32.7	33.1	40.6	40.2	21.5	24.1
- Housing, Fuel & Light	18.8	20.8	28.9	35.0	30.4	20.4

Source: Central Bank of the Islamic Republic of Iran.

Table 2.3.1.3 Sectoral Structure of GDP (at Constant 1361: 1982/83 Prices)

Sector	1365 (1986/87) (%)	1370 (1991/92) (%)	1375 (1996/97) (%)	1376 (1997/98) (%)	1377 (1998/99) (%)
Oil	14.2	21.3	17.5	16.0	15.6
Non-oil	85.5	78.7	82.5	84.0	84.4
- Agriculture	26.9	26.4	26.0	26.1	27.7
- Manufacturing	11.6	16.4	15.8	16.5	17.1
- Construction	6.6	4.3	4.8	4.5	4.0
- Trade	10.6	10.6	10.0	10.3	10.4
- Real Estates	12.7	11.7	12.3	11.4	11.0
- Others	17.4	9.3	13.6	15.2	14.2

Source: Central Bank of the Islamic Republic of Iran.

Table 2.3.1.4 Government Budget (1375-77: 1996/97-1998/99)

Item	1375 (1996/97) (%)	1376 (1997/98) (%)	1377 (1998/99) (%)
Revenue	100.0	100.0	100.0
Oil and Gas Sales	61.4	51.3	43.0
Taxes and Others	38.6	48.7	57.0
Expenditure			
Current Expenditure	100.0	100.0	100.0
- Water	5.8	3.7	3.8
- Agriculture & Natural Resources	3.8	3.1	2.9
- Others	90.4	93.2	93.3
Development Expenditure	100.0	100.0	100.0
- Water	1.1	1	0.6
- Agriculture & Natural Resources	1.6	1.6	0.9
- Others	97.3	97.4	98.5
Balance (billion rials)	9,569.10	-364.5	-585.0

Source: Plan and Budget Organization.

Table 2.3.1.5 Government Subsidies for Food

Item	Unit	1371 (1992/93)	1372 (1993/94)	1375 (1996/97)	1376* (1997/98)	1377** (1998/99)
Chemical Fertilizers	billion rials	85	239	492	549	522
Sugar	billion rials	244	239	345	373	292
Wheat	billion rials	513	1,154	3,933	4,376	3,390
Milk and Cheese	billion rials	32	103	234	459	440
Rice and Edible Oil	billion rials	0	0	604	435	212
Others	billion rials	170	392	372	227	245
Total	billion rials	1,044	2,126	5,989	6,419	4,579
Chemical Fertilizers	% of GDP	0.1	0.3	0.2	0.2	0.2
Sugar	% of GDP	0.4	0.3	0.1	0.1	0.1
Wheat	% of GDP	0.8	1.2	1.7	1.6	1.2
Milk and Cheese	% of GDP	0	0.1	0.1	0.2	0.2
Rice and Edible Oil	% of GDP	0	0	0.3	0.2	0.1
Others	% of GDP	0.3	0.4	0.2	0.1	0.1
Total	% of GDP	1.6	2.3	2.5	2.3	1.6

Note: * budgetary figures, and ** preliminary figures.
Source: Central Bank of the Islamic Republic of Iran.

Table 2.3.1.6 Subsidized Food

Item	Quantity (1,000 metric tons)				Price (rials/kg)			
	1374 (1995/96)	1375 (1996/97)	1376 (1997/98)	1377 (1998/99)	1374 (1995/96)	1375 (1996/97)	1376 (1997/98)	1377 (1998/99)
Wheat	9,300	9,400	8,200	8,400	62	93	116	128
Rice	280	297	275	286	100	300	400	500
Sugar	340	346	570	588	27	100	150	170
Edible Oil	222	223	150	155	60	300	500	600
Red Meat	53	54	52	27	750	1,000	1,500	2,000
Cheese	15	24	22	0	450	1,000	1,500	-
Total	10,210	10,344	9,269	9,456	-	-	-	-

Source: Consumer and Producer Protection Organization.

Table 2.3.2.1 Administrative Divisions (Whole Country, 1376: 1997/98)

No.	Province (Ostan)	Capital	Area (km2)	Sub-province (Shahrestan) (No.)	County (Bakhshe) (No.)	City (No.)	Rural Community (Dehestan) (No.)	Inhabited Village (No.)	Population* Total (No.)	Density (persons/km2)	Capital (No.)
1	East Azarbayejan	Tabriz	47,830	14	35	40	134	2,840	3,325,540	70	1,191,043
2	West Azarbayejan	Orumiyeh	39,487	14	32	24	107	3,227	2,496,320	63	435,200
3	Ardebil	Ardebil	17,881	9	21	17	63	1,882	1,168,011	65	340,386
4	Esfahan	Esfahan	107,027	18	38	67	117	2,470	3,923,255	37	1,266,072
5	Ilam	Ilam	20,151	7	17	15	36	753	487,886	24	126,346
6	Bushehr	Bushehr	23,191	8	17	15	36	706	743,675	32	143,641
7	Tehran	Tehran	18,637	9	22	25	63	379	10,343,965	555	6,758,845
8	Chaharmahal & Bakhtiyari	Shahr-e-Kord	16,201	5	13	18	34	925	761,168	47	100,477
9	Khorasan	Mashhad	302,766	23	76	60	225	7,996	6,047,661	20	1,887,405
10	Khuzestan	Ahvaz	63,238	16	36	39	112	4,496	3,746,772	59	804,980
11	Zanjan	Zanjan	21,841	3	13	8	44	984	900,890	41	286,295
12	Semnan	Semnan	96,816	4	12	16	28	789	501,447	5	91,045
13	Sistan & Baluchestan	Zahedan	178,431	7	29	16	92	6,038	1,722,579	10	419,518
14	Fars	Shiraz	122,416	16	60	51	183	4,393	3,817,036	31	1,053,025
15	Qazvin	Qazvin	15,502	2	10	12	37	94	968,257	62	291,117
16	Qom	Qom	11,237	1	4	3	9	363	853,044	76	777,677
17	Kordestan	Sanandaj	29,151	8	23	12	79	1,765	1,346,383	46	277,808
18	Kerman	Kerman	181,814	11	32	37	141	5,937	2,004,328	11	384,991
19	Kermanshah	Kermanshah	24,741	11	24	20	83	2,793	1,778,596	72	692,986
20	Kohgiluyeh & Boyerahmad	Yasuj	15,563	3	12	8	38	2,026	544,356	35	69,133
21	Golestan	Gorgan	20,891	6	15	16	42	958	1,426,288	68	188,710
22	Gilan	Rasht	14,106	12	33	36	101	2,700	2,241,896	159	417,748
23	Lorestan	Khorramabad	28,392	9	25	13	81	2,843	1,584,434	56	272,815
24	Mazandaran	Sari	23,064	14	34	35	100	2,976	2,602,008	113	195,882
25	Markazi	Arak	29,406	8	17	19	61	1,539	1,228,812	42	380,755
26	Hormozgan	Bandarabbas	71,193	8	21	16	69	2,046	1,062,155	15	273,578
27	Hamadan	Hamadan	19,547	8	18	19	68	1,123	1,677,957	86	401,281
28	Yazd	Yazd	73,467	7	14	16	39	1,144	750,769	10	326,776
	Total		1,633,987	261	703	673	2,222	66,185	60,055,488	37	19,855,535

Note: * based on cencus year 1375.
Source: Ministry of Interior.

Table 2.3.2.2 Administrative Divisions (Study Area and Relevant Major Cities)

Area/Major Cities	Water Unit Code	1375 (1996/97)		1379 (2000/01)	
		Province (Ostan)	Sub-province (Shahrestan)	Province (Ostan)	Sub-province (Shahrestan)
1. Western Capital Area					
(1) Tehran City	711-04	Tehran	Tehran	Tehran	Tehran
(2) Tehran Area					
- Eslamshahr	711-04	Tehran	Eslamshahr	Tehran	Eslamshahr
- Qarchak	711-04	Tehran	Varamin	Tehran	Varamin
- Andisheh	711-04	Tehran	Shahriyar	Tehran	Shahriyar
(3) Karaj Area					
- Qods	711-04	Tehran	Shahriyar	Tehran	Shahriyar
- Hasanabad	711-04	Tehran	Shahriyar	Tehran	Shahriyar
- Robatkarim	711-04	Tehran	Shahriyar	Tehran	Robatkarim
- Shahriyar	711-04	Tehran	Shahriyar	Tehran	Shahriyar
- Akbarabad	711-04	Tehran	Shahriyar	Tehran	Robatkarim
- Malard	711-04	Tehran	Shahriyar	Tehran	Shahriyar
- Karaj Bozorg	711-04	Tehran	Karaj	Tehran	Karaj
- Meshkindasht	711-04	Tehran	Karaj	Tehran	Karaj
- Mohamadshahr	711-04	Tehran	Karaj	Tehran	Karaj
- Mahdasht	711-04	Tehran	Karaj	Tehran	Karaj
(4) Hashtgerd Area					
- Hashtgerd	711-06	Tehran	Savojbolagh	Tehran	Savojbolagh
- Nazarabad	711-06	Tehran	Savojbolagh	Tehran	Savojbolagh
- Hashtgerd Jadid	711-06	Tehran	Savojbolagh	Tehran	Savojbolagh
2. Qazvin Plain					
(1) Northern Qazvin					
- Abyek	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Qazvin	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Mohamadabad	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Eqbaliyeh	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Sharifabad	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Alvand	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Zibashahr	711-03	Tehran	Qazvin	Qazvin	Qazvin
- Bidestan	711-03	Tehran	Qazvin	Qazvin	Qazvin
(2) Southern Qazvin					
- Takestan	711-03	Zanjan	Takestan	Qazvin	Takestan
- Esfavarin	711-03	Zanjan	Takestan	Qazvin	Takestan
- Nahavand	711-03	Zanjan	Takestan	Qazvin	Takestan
- Buin Zahra	711-03	Tehran	Qazvin	Qazvin	Buin Zahra
- Shal	711-03	Tehran	Qazvin	Qazvin	Buin Zahra
- Danesfahan	711-03	Tehran	Qazvin	Qazvin	Buin Zahra

Note: Karaj Bozorg comprises Rajayishahr (Gohardasht) and Mehrshahr.

Source: 1) "National Census of Population and Housing, 1375", Statistical Center of Iran.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.3.1 Population (1370 & 1375: 1991/92 & 1996/97)

Sub-province (Shahrestan)	1370 Population (1000)	1370 Urban (%)	1370 Rural (%)	1375 Population (1000)	1375 Urban (%)	1375 Rural (%)
Qazvin	909	48.8	51.2	992	56.9	43.1
Savojbolagh	222	24.0	76.0	224	46.7	53.3
Eslamshahr	n.a.	n.a.	n.a.	402	66.0	34.0
Tehran	6,497	99.7	0.3	6,794	99.5	0.5
Varamin	427	45.8	54.2	565	59.0	41.0
Rey	510	45.1	54.9	213	5.2	94.8
Shahriyar	506	29.4	70.6	855	45.4	54.6
Karaj	950	87.8	12.2	1,161	84.4	15.6
Study Area	**10,021**	**83.6**	**16.4**	**11,206**	**83.9**	**16.1**
Tehran Province	**10,136**	**86.0**	**14.0**	**11,336**	**83.6**	**16.4**
Whole Country	**55,837**	**57.0**	**43.0**	**60,055**	**61.3**	**38.7**

Note: 1) Unsettled population is included in rural population.
2) Rey's decreased population in 1375 was based on inclusion of Rey city in Tehran sub-province.
3) Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.

Source: 1) "Multi-round Population Survey, 1991, National Results", Statistical Center of Ir
2) "National Census of Population and Housing, 1996", Statistical Center of Iran.

Table 2.3.3.2 Population Growth Rates (1370-75: 1991/92-1996/97)

Sub-province (Shahrestan)	1370-75 Growth Rate (%)	Urban	Rural
Qazvin	1.76	4.96	-1.66
Savojbolagh	0.17	14.45	-6.69
Eslamshahr	n.a.	n.a.	n.a.
Tehran	0.90	0.86	10.40
Varamin	5.76	11.21	0.06
Rey	-16.02*	-45.39*	-6.34*
Shahriyar	11.06	21.13	5.50
Karaj	4.10	3.28	9.33
Study Area	**2.26**	**2.34**	**1.89**
Tehran Province	**2.26**	**1.68**	**5.62**
Whole Country	**1.47**	**2.95**	**-0.52**

Note: *Same as in Table 2.2.3.1.

Source: Same as in Table 2.2.3.1.

Table 2.3.3.3 Working Population (1375: 1996/97)

Sub-province (Shahrestan)	Total (1,000)	% of Total Population (%)	Manufacturing (%)	Agriculture (%)	Public and Social Services (%)	Others (%)
Qazvin	230	30.9	23.9	28.1	18.2	29.8
Savojbolagh	52	30.6	26.5	18.3	18.6	36.6
Eslamshahr	92	30.2	37.8	3.2	16.7	42.3
Tehran	1,814	32.5	20.7	0.7	29.9	48.7
Varamin	141	34.0	27.7	14.4	19.6	38.3
Rey	53	33.5	36.6	11.4	12.8	39.2
Shahriyar	215	34.8	25.4	5.7	23.9	45.0
Karaj	279	30.5	24.0	3.3	25.3	47.4
Study Area	**2,875**	**32.3**	**22.9**	**4.8**	**26.6**	**45.7**
Tehran Province	**2,910**	**32.3**	**22.7**	**5.1**	**26.6**	**45.6**
Whole Country	**14,572**	**32.1**	**17.5**	**23.1**	**20.5**	**38.9**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.3.4 Population Density (1375: 1996/97)

Sub-province (Shahrestan)	Population Density (persons/km^2)
Qazvin	64.0
Savojbolagh	80.5
Eslamshahr	2,173.5
Tehran	4,037.0
Varamin	238.2
Rey	92.9
Shahriyar	523.7
Karaj	473.6
Study Area	387.7
Tehran Province	330.3
Whole Country	36.8

Note: Same as in Table 2.2.3.3.
Source: "Tehran Province, 1375", Plan and Budget Organization.

Table 2.3.3.5 Population Projections and Growth

Province (Ostan)	Sub-province (Shahrestan)	Urban and Rural	1375 (1996/97) (1,000)	1380 (2001/02) (1,000)	1385 (2006/07) (1,000)	1390 (2011/12) (1,000)	1400 (2021/22) (1,000)	Population Growth 1375-1400 (%)
Tehran	Savojbolagh	Urban	105	130	175	291	748	8.19
		Rural	119	102	95	89	93	-0.99
		Sub-total	224	232	270	380	841	5.43
	Eslamshahr	Urban	265	299	339	381	464	2.26
		Rural	137	117	109	102	107	-0.99
		Sub-total	402	416	448	483	571	1.41
	Tehran	Urban	6,759	7,493	8,287	9,137	10,725	1.86
		Rural	35	30	28	27	28	-0.99
		Sub-total	6,794	7,523	8,315	9,164	10,753	1.85
	Varamin	Urban	143	159	179	200	243	2.15
		Rural	77	66	62	58	60	-0.99
		Sub-total	220	225	241	258	303	1.29
	Rey	Urban	11	15	20	24	33	4.42
		Rural	10	9	8	8	8	-0.99
		Sub-total	21	24	28	32	41	2.62
	Shahriyar	Urban	388	444	508	578	714	2.47
		Rural	467	397	373	348	364	-0.99
		Sub-total	855	841	881	926	1,078	0.93
	Karaj	Urban	980	1,092	1,226	1,370	1,654	2.12
		Rural	176	149	140	131	137	-0.99
		Sub-total	1,156	1,241	1,366	1,501	1,791	1.76
Qazvin	Qazvin	Urban	565	664	755	853	1,050	2.51
	Takestan	Rural	427	364	341	319	333	-0.99
	Buin Zahra	Sub-total	992	1,028	1,096	1,172	1,383	1.34
~~**Study Area**~~ Western Capital Area		Urban	9,216	10,296	11,489	12,833	15,631	2.14
		Rural	1,448	1,234	1,156	1,082	1,131	-0.99
		Sub-total	**10,664**	**11,530**	**12,645**	**13,915**	**16,762**	**1.77**
Whole Country		Urban	36,818	42,481	46,707	52,346	64,252	2.25
		Rural	23,237	25,896	25,558	25,773	25,900	0.43
		Sub-total	**60,055**	**68,377**	**72,265**	**78,119**	**90,152**	**1.64**

Note: 1) Varamin and Rey sub-provinces comprise only Qarchak and Hasanabad, respectively.
2) The rural population in Eshtehard is excluded from Karaj sub-province.

Source: 1) "Multi-round Population Survey, 1991, National Results", Statistical Center of Iran.
2) "National Census of Population and Housing 1996", Statistical Center of Iran.
3) "National Water Master Plan", 1998.
4) "Population Projections in Iran", FAO.

Table 2.3.3.6 Number of Households and Average Household Size (1375:1996/97)

Sub-province (Shahrestan)	Population (1,000)	No. of Households (1,000)	Average Family Size (persons)
Qazvin	992	202	4.9
Savojbolagh	224	48	4.7
Eslamshahr	402	82	4.9
Tehran	6,794	1,669	4.1
Varamin	565	118	4.8
Rey	213	44	4.9
Shahriyar	855	178	4.8
Karaj	1,161	254	4.6
Study Area	**11,206**	**2,595**	**4.3**
Tehran Province	**11,336**	**2,626**	**4.3**
Whole Country	**60,055**	**12,398**	**4.8**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.

Source: "National Census of Population and Housing, 1996", Statistical Center of Iran.

Table 2.3.3.7 Unemployment Rate (1375: 1996/97)

Sub-province (Shahrestan)	Population* (1,000)	Labour Force (1,000)	Working Population (%)	Unemployment Rate (%)
Qazvin	746	247	93.2	6.8
Savojbolagh	169	55	94.4	5.6
Eslamshahr	306	99	93	7.0
Tehran	5,586	1,926	94.2	5.8
Varamin	414	152	92.9	7.1
Rey	158	55	95.6	4.4
Shahriyar	617	225	95.4	4.6
Karaj	913	303	91.8	8.2
Study Area	**8,909**	**3,062**	**93.9**	**6.1**
Tehran Province	**9,014**	**3,098**	**93.9**	**6.1**
Whole Country	**45,401**	**16,028**	**90.9**	**9.1**

Note: 1) * 10 years of age and over.

2) Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan pro

Source: 1) "Tehran Province, 1375", Plan and Budget Organization.

2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.4.1 Industrial Production Value (1375: 1996/97)

Sub-province (Shahrestan)	Industrial Production Value (%)
Qazvin	1.3
Savojibolagh	0.2
Eslamshahr	0.3
Tehran	91.3
Varamin	0.7
Rey	1.1
Shahriyar	2.9
Karaj	2.2
Study Area	**12,538 billion rials (100.0)**
Tehran Province	**12,551 billion rials**
Whole Country	**82,996 billion rials**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: "Tehran Province, 1375", Plan and Budget Organization.

Table 2.3.4.2 Manufacturing Sector

Item	Industry	Tehran & Karaj		Hashtgerd		Qazvin		Study Area	
Industrial Production Value (billion rials) in 1373 (1994/95)	Food	2,100.8	(16.6)	2.4	(12.9)	46.6	(23.4)	2,149.8	(16.7)
	Textile & Leather	1,430.9	(11.3)	1.5	(8.1)	14.9	(7.5)	1,447.3	(11.3)
Note: Figures in parentheses show comparison with total as 100.	Wood	151.7	(1.2)	0.4	(2.1)	1.2	(0.6)	153.3	(1.2)
	Paper & Printing	749.6	(5.9)	7.1	(38.2)	1.3	(0.7)	758.0	(5.9)
	Chemicals	2,656.7	(21.0)	0.3	(1.6)	36.4	(18.3)	2,693.4	(20.9)
	Metals	549.6	(4.3)	3.0	(16.1)	2.0	(1.0)	554.6	(4.3)
	Non-metallic Minerals	846.7	(6.7)	0.2	(1.1)	31.2	(15.7)	878.1	(6.8)
	Machinery & Equipment	4,164.5	(32.9)	3.7	(19.9)	65.2	(32.8)	4,233.4	(32.9)
	Others	3.8	(0.1)	0	(0)	0	(-)	3.8	(-)
	Total	**12,654.3**	**(100.0)**	**18.6**	**(100.0)**	**198.8**	**(100.0)**	**12,871.1**	**(100.0)**
Number of Establishments in 1373 (1994/95)	Food	374	(34,524)	1	(11)	18	(772)	393	(35,307)
	Textile & Leather	886	(58,432)	3	(63)	7	(375)	896	(58,870)
Note: Figures in parentheses show the number of employees.	Wood	270	(7,909)	2	(36)	4	(110)	276	(8,055)
	Paper & Printing	301	(19,079)	2	(70)	1	(35)	304	(19,184)
	Chemicals	584	(41,706)	1	(17)	19	(746)	604	(42,469)
	Metals	117	(10,770)	1	(68)	2	(47)	120	(10,885)
	Non-metallic Minerals	435	(33,501)	1	(15)	24	(1,326)	460	(34,842)
	Machinery & Equipment	1,449	(94,440)	10	(209)	28	(2,044)	1,487	(96,693)
	Others	4	(114)	0	(0)	0	(0)	4	(114)
	Total	**4,420**	**(300,475)**	**21**	**(489)**	**103**	**(5,455)**	**4,544**	**(306,419)**
Number of Establishments in 1400 (2021/22)	Food	2,019	(80,098)	524	(14,905)	196	(8,061)	2,739	(103,064)
	Textile & Leather	928	(60,169)	43	(1,770)	256	(19,059)	1,227	(80,998)
Note: Figures in parentheses show the number of employees.	Wood	270	(7,909)	2	(36)	40	(945)	312	(8,890)
	Paper & Printing	301	(19,079)	5	(101)	94	(2,227)	400	(21,407)
	Chemicals	762	(47,283)	50	(1,175)	437	(16,818)	1,249	(65,276)
	Metals	169	(12,866)	6	(258)	183	(7,527)	358	(20,651)
	Non-metallic Minerals	638	(39,896)	55	(1,233)	277	(13,463)	970	(54,592)
	Machinery & Equipment	1,790	(111,235)	151	7,547)	227	(10,318)	2,168	(129,100)
	Others	5	(114)	0	(0)	1	(n.a.)	6	(114)
	Total	**6,882**	**(378,649)**	**836**	**(27,025)**	**1,711**	**(78,418)**	**9,429**	**(484,092)**

Source: National Water Master Plan, 1998.

Table 2.3.4.3 Industrial Development Potential Based on the Number of Employees in Study Area

Ranking	Tehran & Karaj		Hashtgerd		Qazvin		Study Area	
	1373 (1994/95)	1400 (2021/22)	1373 (1994/95)	1400 (2021/22)	1373 (1994/95)	1400 (2021/22)	1373 (1994/95)	1400 (2021/22)
1st	Machinery & equipment (31.4%)	Machinery & equipment (29.4%)	Machinery & equipment (42.7%)	Food (55.2%)	Machinery & equipment (37.5%)	Textile & leather (24.3%)	Machinery & equipment (31.6%)	Machinery & equipment (26.7%)
2nd	Textile & leather (19.4%)	Food (21.2%)	Paper & printing (14.3%)	Machinery & equipment (27.9%)	Non-metallic minerals (24.3%)	Chemicals (21.4%)	Textile & leather (19.2%)	Food (21.3%)
3rd	Chemicals (13.9%)	Textile & leather (15.9%)	Metals (13.9%)	Textile & leather (6.5%)	Food (14.1%)	Non-metallic minerals (17.2%)	Chemicals (13.9%)	Textile & leather (16.7%)
4th	Food (11.5%)	Chemicals (12.5%)	Textile & leather (12.9%)	Non-metallic minerals (4.6%)	Chemicals (13.7%)	Machinery & equipment (13.2%)	Food (11.5%)	Chemicals (13.5%)
5th	Non-metallic minerals (11.2%)	Non-metallic minerals (10.5%)	Wood (7.4%)	Chemicals (4.3%)	Textile & leather (6.9%)	Food (10.3%)	Non-metallic minerals (11.4%)	Non-metallic minerals (11.3%)
6th	Paper & printing (6.4%)	Paper & printing (5.0%)	Chemicals (3.5%)	Metals (1.0%)	Wood (2.0%)	Metals (9.6%)	Paper & printing (6.3%)	Paper & printing (4.4%)
7th	Metals (3.6%)	Metals (3.4%)	Non-metallic minerals (3.1%)	Paper & printing (0.4%)	Metals (0.9%)	Paper & printing (2.8%)	Metals (3.5%)	Metals (4.3%)
8th	Wood (2.6%)	Wood (2.1%)	Food (2.2%)	Wood (0.1%)	Paper & printing (0.6%)	Wood (1.2%)	Wood (2.6%)	Wood (1.8%)
No. of employees	300,475 (100.0%)	378,649 (100.0%)	489 (100.0%)	27,025 (100.0%)	5,455 (100.0%)	78,418 (100.0%)	306,419 (100.0%)	484,092 (100.0%)
No. of industrial establishments	4,420	6,882	21	836	103	1,711	4,544	9,499

Source: "National Water Master Plan", 1373.

Table 2.3.4.4 Cropped Area, Production and Yields based on Irrigated Farming (1377:1998/99)

Province	Item	Wheat	Barley	Sunflower Seeds	Cotton	Sugar Beets	Tomatoes	Potatoes
Tehran*	Cropped Area (ha)	40,447	41,263	958	7,663	960	8,365	5,260
	Production (ton)	155,853	154,346	2,080	19,085	41,120	308,451	100,898
	Yield (kg/ha)	3,853	3,741	2,171	2,491	42,833	36,874	19,182
Qazvin	Cropped Area (ha)	66,473	26,000	9,797	1,031	7,225	3,974	2,469
	Production (ton)	211,636	75,126	13,858	2,523	227,144	116,382	38,177
	Yield (kg/ha)	3,184	2,889	1,415	2,447	31,439	29,286	15,463
Study Area*	Cropped Area (ha)	**106,920**	**67,263**	**10,755**	**8,694**	**8,185**	**12,339**	**7,729**
	Production (ton)	**367,489**	**229,472**	**15,938**	**21,608**	**268,264**	**424,833**	**139,075**
	Yield (kg/ha)	**3,437**	**3,412**	**1,482**	**2,485**	**32,775**	**34,430**	**17,994**
Whole Country	Cropped Area (ha)	**2,229,078**	**706,183**	**159,388**	**205,905**	**184,837**	**117,526**	**157,255**
	Production (ton)	**7,630,903**	**2,111,183**	**228,107**	**23,457**	**4,987,417**	**3,162,614**	**3,379,941**
	Yield (kg/ha)	**3,423**	**2,990**	**1,431**	**2,094**	**26,983**	**26,910**	**21,493**

Note: * includes the whole Tehran province.
Source: Agricultural Statistics and Information Department, Ministry of Agriculture.

Table 2.3.4.5 Guaranteed Procurement Prices of Major Crops

Crop	1373/74 (1994-95)	1374/75 (1995-96)	1375/76 (1996-97)	1376/77 (1997-98)	1377/78 (1998-99)
Wheat	330	410.00	480	600	672
Barley	255	317	387	478	535
Maize	280	348.00	430	534	598
Paddy	650 - 950	808 - 1,180	950 - 1,400	1,181 - 1,740	1,323 - 1,949
Peas	585	727	860	1,075	1,204
Beans	540 - 660	808 - 870	950 - 1,030	1,187 - 1,287	1,330 - 1,441
Lentils	720	895.00	1,050	1,312	1,469
Sugar Beets	78	97	125	157	175
Soybeans	550	1,000	n.a.	1,160	1,300
Sunflower Seeds	700	1,200	n.a.	1,330	1,490
Potatoes	140	174	210	262	293
Onions	110	137	180	225	252

Source: Ministry of Agriculture.

Table 2.3.4.6 Chemical Fertilizer Prices (1379: 2000/01)

Chemical Fertilizers	Guaranteed Price (Rials/kg)	Free Market Price (Rials/kg)
Urea (46,0,0)	340 - 500	600 -800
Ammonium Phosphate (11,50,0)	400 - 420	700 - 800
Ammonium Nitrate (34,0,0)	340 - 360	600 - 700

Source: Farm household survey in the Study Area.

Table 2.3.4.7 Commodity Balances (1993-97) (1/2)

(Unit: Metric tons)

Crop	Item	1372 (1993)	1373 (1994)	1374 (1995)	1375 (1996)	1376 (1997)	Average
Wheat	Production	10,732,340	10,869,560	11,227,540	10,015,180	10,044,720	10,577,868
	Imports	2,449,519	2,330,306	3,111,000	3,890,250	6,031,375	3,562,490
	Stock Changes	4,478	992,467	-1,657,091	-307,832	-1,188,630	-431,322
	Exports	250	79,926	250	250	250	16,185
	Domestic Supply	**13,186,087**	**14,112,407**	**12,681,199**	**13,597,348**	**14,887,215**	**13,692,851**
	Feed	2,300,000	2,800,000	3,000,000	3,000,000	3,500,000	2,920,000
	Seed	745,994	722,418	696,072	692,892	770,000	725,475
	Waste	659,093	659,657	716,377	694,459	803,086	706,534
	Food Manufacture	0	0	0	0	7	1
	Food Availability	**9,481,000**	**9,930,332**	**8,268,750**	**9,209,997**	**9,814,122**	**9,340,841**
Barley	Production	3,058,105	3,044,695	2,952,265	2,736,250	2,498,556	2,857,974
	Imports	305,750	693,660	500,000	500,000	750,000	549,882
	Stock Changes	29,000	0	0	0	0	5,800
	Exports	0	58	0	0	0	12
	Domestic Supply	**3,392,855**	**3,738,297**	**3,452,265**	**3,236,250**	**3,248,556**	**3,413,644**
	Feed	3,042,845	3,376,107	3,105,548	2,934,075	2,942,042	3,080,123
	Seed	146,439	137,889	139,581	108,000	111,600	128,702
	Waste	169,642	186,917	172,613	161,813	162,428	170,683
	Food Availability	**33,929**	**37,384**	**34,523**	**32,362**	**32,486**	**34,136**
Paddy Equivalent	Production	2,280,768	2,258,969	2,300,901	2,684,767	2,350,124	2,375,106
	Imports	1,448,138	601,939	2,041,250	1,437,500	1,216,250	1,349,015
	Exports	53	476	53	53	53	138
	Domestic Supply	**3,728,853**	**2,860,432**	**4,342,098**	**4,122,214**	**3,566,321**	**3,723,983**
	Feed	152,000	170,000	194,000	635,000	222,000	274,600
	Seed	78,873	79,180	84,046	84,602	84,700	82,280
	Waste	45,618	45,181	46,018	53,695	47,003	47,503
	Food Availability	**3,452,362**	**2,566,071**	**4,018,034**	**3,348,917**	**3,212,618**	**3,319,600**
Rice Equivalent	Production	1,521,272	1,506,732	1,534,701	1,790,740	1,567,533	1,584,196
	Imports	965,908	401,493	1,361,513	958,812	811,238	99,793
	Exports	35	317	35	35	35	91
	Domestic Supply	**2,487,145**	**1,907,908**	**2,896,179**	**2,749,517**	**2,378,736**	**1,683,898**
	Feed	101,384	113,390	129,398	423,545	148,074	183,158
	Seed	52,608	52,813	56,059	56,430	56,495	54,881
	Waste	30,427	30,136	30,693	35,814	31,351	31,684
	Food Availability	**2,302,726**	**1,711,569**	**2,680,029**	**2,233,728**	**2,142,816**	**1,414,175**
Maize	Production	210,000	512,101	545,000	900,000	1,000,000	633,420
	Imports	767,552	768,318	1,150,000	889,000	1,310,000	976,974
	Domestic Supply	**977,552**	**1,280,419**	**1,695,000**	**1,789,000**	**2,310,000**	**1,610,394**
	Feed	895,327	1,171,986	1,551,750	1,637,880	2,117,200	1,474,829
	Seed	4,021	6,000	7,650	8,000	8,000	6,734
	Waste	48,877	64,020	84,750	89,450	115,500	80,519
	Food Availability	**29,327**	**38,413**	**50,850**	**53,670**	**69,300**	**48,312**
Onions	Production	957,404	1,112,422	1,130,473	1,199,623	1,157,218	1,111,428
	Imports	0	440	1,000	1,500	1,500	888
	Exports	14,141	96,085	100,000	100,000	100,000	82,045
	Domestic Supply	**943,263**	**1,016,777**	**1,031,473**	**1,101,123**	**1,058,718**	**1,030,271**
	Waste	95,741	111,286	113,147	120,112	115,872	111,232
	Food Availability	**847,522**	**905,491**	**918,326**	**981,011**	**942,846**	**919,039**
Potatoes	Production	3,211,965	3,184,840	3,074,095	3,139,919	3,284,106	3,178,985
	Imports	0	1,000	3,600	26,000	15,000	9,120
	Exports	0	103,268	0	0	0	20,654
	Domestic Supply	**3,211,965**	**3,082,572**	**3,077,695**	**3,165,919**	**3,299,106**	**3,167,451**
	Seed	149,512	142,670	143,266	169,242	170,000	154,938
	Waste	322,197	318,584	307,769	316,592	329,910	319,010
	Food Availability	**2,740,256**	**2,621,318**	**2,626,660**	**2,680,085**	**2,799,196**	**2,693,503**

Source: FAO.

Table 2.3.4.7 Commodity Balances (1993-97) (2/2)

(Unit: Metric tons)

Crop/Products	Item	1372 (1993)	1373 (1994)	1374 (1995)	1375 (1996)	1376 (1997)	Average
Soybeans	Production	130,000	147,023	134,000	140,000	145,000	139,205
	Imports	0	0	0	17,100	25,500	8,520
	Stock Changes	-3,000	-10,000	-4,000	8,000	0	-1,800
	Domestic Supply	**127,000**	**137,023**	**130,000**	**165,100**	**170,500**	**145,925**
	Seed	6,219	6,960	6,960	7,200	7,200	6,908
	Waste	14,781	2,063	8,040	0	0	4,977
	Food Manufactur	**106,000**	**128,000**	**115,000**	**157,900**	**163,300**	**134,040**
Soybean Cake	Production	83,740	101,120	90,850	128,770	134,300	107,756
	Imports	479,146	434,709	601,500	703,800	678,500	579,531
	Exports	0	43	43	43	43	34
	Domestic Supply	**562,886**	**535,786**	**692,307**	**832,527**	**812,757**	**687,253**
	Feed	**562,886**	**535,786**	**692,307**	**832,527**	**812,757**	**687,253**
Soybean Oil	Production	18,000	18,700	21,400	28,000	29,000	23,020
	Imports	624,685	459,184	468,000	488,100	346,000	477,194
	Stock Changes	-242,000	-25,000	0	0	0	-53,400
	Exports	0	15,000	155,000	158,000	48,000	75,200
	Domestic Supply	**400,685**	**437,884**	**334,400**	**358,100**	**327,000**	**371,614**
	Food Availability	**400,685**	**437,884**	**334,400**	**358,100**	**327,000**	**371,614**
Sugar Beets	Production	5,407,658	5,294,729	5,521,298	3,686,867	4,754,140	4,932,938
	Domestic Supply	**5,407,658**	**5,294,729**	**5,521,298**	**3,686,867**	**4,754,140**	**4,932,938**
	Food Manufactur	**5,407,658**	**5,294,729**	**5,521,298**	**3,686,867**	**4,754,140**	**4,932,938**
Tea	Production	56,961	55,603	54,352	62,100	68,600	59,523
	Imports	55,958	20,633	20,000	30,000	40,000	33,318
	Exports	0	1,038	0	0	0	208
	Domestic Supply	**112,919**	**75,198**	**74,352**	**92,100**	**108,600**	**92,633**
	Food Availability	**112,919**	**75,198**	**74,352**	**92,100**	**108,600**	**92,633**
Tabacco	Production	20,490	9,887	13,847	17,000	20,000	16,245
	Imports	5,677	16,207	16,194	18,194	15,467	14,348
	Exports	170	182	263	270	270	231
	Domestic Supply	**25,997**	**25,912**	**29,778**	**34,924**	**35,197**	**30,362**
	Other Uses	**25,997**	**25,912**	**29,778**	**34,924**	**35,197**	**30,362**
Brans	Production	1,397,688	1,457,756	1,235,755	1,352,432	1,439,258	1,376,578
	Exports	0	47	0	0	0	9
	Domestic Supply	**1,397,688**	**1,457,709**	**1,235,755**	**1,352,432**	**1,439,258**	**1,376,569**
	Feed	**1,397,688**	**1,457,709**	**1,235,755**	**1,352,432**	**1,439,258**	**1,376,569**
Cotton Lint	Production	90,000	123,000	165,000	176,000	132,000	137,200
	Imports	0	448	0	0	0	90
	Exports	1,541	1,083	30,000	19,000	56,500	21,625
	Domestic Supply	**88,459**	**122,365**	**135,000**	**157,000**	**75,500**	**115,665**
	Other Uses	**88,459**	**122,365**	**135,000**	**157,000**	**75,500**	**115,665**
Cottonseed	Production	165,021	232,078	313,957	365,000	250,000	265,211
	Domestic Supply	**165,021**	**232,078**	**313,957**	**365,000**	**250,000**	**265,211**
	Seed	5,550	8,165	9,600	7,140	6,960	7,483
	Waste	4,951	6,964	9,419	10,950	7,500	7,957
	Food Manufactur	**154,520**	**216,949**	**294,938**	**346,910**	**235,540**	**249,771**
Cottonseed Cake	Production	69,534	97,627	132,722	156,110	105,993	112,397
	Imports	600	0	0	0	0	120
	Domestic Supply	**70,134**	**97,627**	**132,722**	**156,110**	**105,993**	**112,517**
	Feed	**70,134**	**97,627**	**132,722**	**156,110**	**105,993**	**112,517**
Cottonseed Oil	Production	27,814	39,051	53,089	62,444	42,397	44,959
	Imports	65	0	0	0	0	13
	Domestic Supply	**27,879**	**39,051**	**53,089**	**62,444**	**42,397**	**44,972**
	Food Availability	**27,879**	**39,051**	**53,089**	**62,444**	**42,397**	**44,972**

Source: FAO.

Table 2.3.4.8 Wheat Trade Projections

Item	Unit	1378 (1999/00)	1379 (2000/01)	1380 (2001/02)	1381 (2002/03)	1382 (2003/04)	1383 (2004/05)	1384 (2005/06)	1385 (2006/07)	1386 (2007/08)	1387 (2008/09)	1388 (2009/10)
Net exporters												
(1) United States	10^6 metric tons	26.38	27.83	28.57	28.92	29.79	29.72	30.06	30.33	30.59	30.86	31.14
(2) Canada	10^6 metric tons	18.3	17.9	18.12	18.02	18.12	18.14	18.31	18.44	18.61	18.85	19.11
(3) Australia	10^6 metric tons	17.98	17.95	18.13	18.31	18.5	18.7	18.9	19.09	19.28	19.45	19.62
(4) European Union	10^6 metric tons	12.7	13.29	13.29	13.29	13.29	15	16.43	17.87	19.24	21.21	22.77
(5) Others	10^6 metric tons	12.6	12.91	13.04	13.56	13.99	14.41	14.66	15.02	15.64	16.01	16.46
Total net exports	10^6 metric tons	87.96	89.88	91.15	92.1	93.69	95.97	98.36	100.75	103.36	106.38	109.1
Net importers												
(1) Brazil	10^6 metric tons	7	7.14	7.18	7.21	7.24	7.29	7.35	7.41	7.49	7.56	7.64
(2) Egypt	10^6 metric tons	6.7	7.07	7.06	7.06	7.06	7.07	7.08	7.09	7.11	7.13	7.15
(3) Iran	10^6 metric tons	6.5	5.65	5.7	5.8	5.92	6.06	6.19	6.33	6.47	6.62	6.76
(4) Japan	10^6 metric tons	5.5	5.48	5.48	5.47	5.47	5.47	5.47	5.48	5.49	5.5	5.52
(5) Others	10^6 metric tons	62.26	64.54	65.73	66.56	68	70.08	72.27	74.44	76.8	79.57	82.03
Total net imports	10^6 metric tons	87.96	89.88	91.15	92.1	93.69	95.97	98.36	100.75	103.36	106.38	109.1
Wheat prices												
(1) U.S. FOB gulf	US$/metri ton	115.76	126.95	138	141.05	146.23	146.33	149.93	152.85	155.81	158.48	161.34
(2) Canadian Thunder bay	US$/metri ton	107.03	119.24	131.45	134.72	140.54	140.61	144.65	147.93	151.24	154.22	157.43
(3) Australian wheat board	US$/metri ton	87.71	97.13	107.7	110.48	115.38	115.41	118.85	121.65	124.47	127.01	162.66
(4) CIF Rotterdam	US$/metri ton	136.52	149.57	162.46	166.02	172.05	172.18	176.37	179.78	183.23	186.34	189.68
World												
Harvested area	10^6 ha	215.63	218	217.78	219.02	219.44	219.77	219.29	219.2	219.13	219.04	219.15
Yield	kg/ha	2,700	2,700	2,730	2,760	2,790	2,830	2,860	2,890	2,930	2,960	2,990
Production	10^6 metric tons	583.05	588.68	594.43	604.42	612.74	620.96	627.26	634.25	641.31	648.2	655.72
Beginning stocks	10^6 metric tons	133.05	129.25	123.72	120.4	120.84	122.89	124.93	126.4	127.64	128.51	128.63
Total supply	10^6 metric tons	716.1	717.93	718.15	724.82	733.59	743.85	752.19	760.65	768.95	776.7	784.35
Consumption	10^6 metric tons	586.86	594.21	597.75	603.98	610.7	618.91	625.79	633.02	640.44	648.07	655.85
Ending stocks	10^6 metric tons	129.25	123.72	120.4	120.84	122.89	124.93	126.4	127.64	128.51	128.63	128.5
Total use	10^6 metric tons	716.1	717.93	718.15	724.82	733.59	743.85	752.19	760.65	768.95	776.7	784.35
Trade	10^6 metric tons	87.96	89.88	91.15	92.1	93.69	95.97	98.36	100.75	103.36	106.38	109.1
Iran												
Harvested area	10^6 ha	6	6.52	6.56	6.59	6.6	6.6	6.59	6.58	6.57	6.55	6.53
Yield	kg/ha	1,420	1,720	1,750	1,780	1,810	1,840	1,870	1,900	1,930	1,960	1,990
Production	10^6 metric tons	8.5	11.18	11.49	11.74	11.96	12.16	12.35	12.52	12.69	12.85	13.01
Beginning stocks	10^6 metric tons	3.57	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07
Domestic supply	10^6 metric tons	12.07	13.25	13.56	13.81	14.03	14.23	14.42	14.59	14.76	14.92	15.08
Feed use	10^6 metric tons	0.5	0.51	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55
Food and other	10^6 metric tons	16	16.33	16.67	17.03	17.36	17.7	18.01	18.32	18.63	18.93	19.23
Ending stocks	10^6 metric tons	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07
Domestic use	10^6 metric tons	18.57	18.9	19.25	19.61	19.95	20.29	20.61	20.93	21.24	21.54	21.85
Net trade	10^6 metric tons	-6.5	-5.65	-5.7	-5.8	-5.92	-6.06	-6.19	-6.33	-6.47	-6.62	-6.76
Study area*												
Production	Metric tons	307,231	404,099	415,304	424,340	432,292	439,521	446,389	452,534	458,679	464,462	470,245
Consumption	Metric tons	1,675,203	1,701,567	1,728,347	1,760,552	1,793,357	1,826,774	1,860,813	1,895,486	1,932,117	1,969,456	2,007,517
Shortage	Metric tons	-1,367,972	-1,297,468	-1,313,043	-1,336,212	-1,361,065	-1,387,253	-1,414,424	-1,442,952	-1,473,438	-1,504,994	-1,537,272
Self-sufficiency rate	%	18.3	23.7	24	24.1	24.1	24.1	24	23.9	23.7	23.6	23.4

Note: * excludes feed use.
Source: "World Agricultural Outlook 2000", Food and Agricultural Policy Institute (FAPRI).

Table 2.3.4.9 Food Balance (1987) (1/3)

Products	Domestic Supply					Domestic Utilization						Per Capita Supply			
	Production	Imports	Stock Change	Exports	Total	Feed	Seed	Processing	Waste	Other Uses	Food	Supply	Calories	Protein	Fats
	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(10^3 tons)	(kg/year)	(Kcal/day)	(g/day)	(g/day)
Cereals	11,593	4,995	-865	1	15,722	4,700	937	0	756	0	9,329	182	1,544	41.8	8.3
- Wheat	7,601	3,259	-800	0	10,060	1,300	721	0	540	0	7,499	146.3	1,141	34.4	7.1
- Rice	1,203	681	0	0	1,884	45	44	0	24	0	1,771	34.5	358	7.1	1.1
- Barley	2,727	160	-66	0	2,821	2,476	172	0	144	0	29	0.6	5	0.2	0
- Maize	40	892	0	0	932	857	0	0	47	0	28	0.5	5	0.1	0.1
- Oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
- Millet	22	0	0	0	22	20	0	0	1	0	0	0	0	0	0
- Other	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0
Starchy Roots	2,348	0	0	14	2,334	0	105	0	235	0	1,993	38.9	80	1.3	0.2
- Potatoes	2,348	0	0	14	2,334	0	105	0	235	0	1,993	38.9	80	1.3	0.2
- Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarcrops	6,030	0	0	0	6,030	0	0	6,030	0	0	0	0	0	0	0
- Sugar cane	1,575	0	0	0	1,575	0	0	1,575	0	0	0	0	0	0	0
- Sugar beet	4,456	0	0	0	4,456	0	0	4,456	0	0	0	0	0	0	0
Sweeteners	719	398	192	0	1,309	0	0	0	0	0	1,309	25.5	249	0	0
- Raw Sugar	712	397	192	0	1,301	0	0	0	0	0	1,301	25.4	247	0	0
- Other	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
- Honey	7	0	0	0	7	0	0	0	0	0	7	0.1	1	0	0
Pulses	341	5	0	18	328	0	42	0	10	0	275	5.4	51	3.2	0.3
- Beans	95	0	0	1	94	0	9	0	3	0	83	1.6	15	1	0.1
- Other	246	5	0	17	234	0	34	0	8	0	192	3.8	36	2.2	0.3
Treenuts	215	0	0	55	160	0	0	0	0	0	160	3.1	24	0.8	2.3
Oilcrops	319	1	0	0	319	0	11	289	9	0	10	0.2	2	0.1	0.2
- Soyabeans	58	0	0	0	58	0	4	52	2	0	0	0	0	0	0
- Groundnuts	4	0	0	0	4	0	0	0	0	0	4	0.1	1	0.1	0.1
- Sunflowerseed	21	0	0	0	21	0	0	20	1	0	0	0	0	0	0
- Cottonseed	204	0	0	0	204	0	6	192	6	0	0	0	0	0	0
- Coconuts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
- Sesameseed	19	1	0	0	19	0	0	18	1	0	0	0	0	0	0
- Olives	8	0	0	0	8	0	0	5	0	0	3	0.1	0	0	0
- Other	5	0	0	0	4	0	0	1	0	0	3	0.1	1	0	0.1
Vegetable oils	62	561	-49	0	575	0	0	0	0	66	508	9.9	240	0	27.2
- Soyabean oil	10	415	-49	0	375	0	0	0	0	0	375	7.3	177	0	20.1
- Sunflowerseed oil	8	74	0	0	82	0	0	0	0	0	82	1.6	39	0	4.4
- Cottonseed oil	35	0	0	0	35	0	0	0	0	0	35	0.7	16	0	1.9
- Palmkernel oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Palm oil	0	65	0	0	65	0	0	0	0	65	0	0	0	0	0
- Copra oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Sesameseed oil	8	0	0	0	8	0	0	0	0	0	8	0.2	4	0	0.4
- Olive oil	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0.1
- Maize germ oil	0	4	0	0	4	0	0	0	0	0	4	0.1	2	0	0.2
- Other	0	3	0	0	4	0	0	0	0	1	3	0.1	1	0	0.2
Vegetables	5,076	0	0	85	4,991	0	0	0	548	0	4,443	86.7	53	2.5	0.4
- Tomatoes	1,173	0	0	2	1,171	0	0	0	117	0	1,054	20.6	10	0.6	0.1
- Onions	923	0	0	77	846	0	0	0	92	0	753	14.7	17	0.6	0.1
- Other	2,980	0	0	6	2,974	0	0	0	338	0	2,636	51.4	26	1.3	0.2
Fruit	9,824	2	0	364	9,463	0	0	0	1,168	0	8,295	161.8	178	2.2	0.9
- Oranges	1,205	0	0	1	1,204	0	0	0	120	0	1,083	21.1	17	0.4	0.1
- Lemons	347	0	0	0	347	0	0	0	35	0	313	6.1	3	0.1	0
- Grapefruit	33	0	0	0	33	0	0	0	3	0	30	0.6	0	0	0
- Other citrus	68	0	0	0	68	0	0	0	7	0	61	1.2	1	0	0.1
- Bananas	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
- Apples	1,238	0	0	30	1,209	0	0	0	124	0	1,085	21.2	28	0.2	0.1
- Dates	524	0	0	15	509	0	0	0	52	0	457	8.9	38	0.4	0.1
- Grapes	1,520	0	0	169	1,350	0	0	0	152	0	1,198	23.4	43	0.4	0.2
- Other fruit	4,889	2	0	148	4,743	0	0	0	674	0	4,068	79.4	47	0.7	0.4
Stimulants	43	17	0	1	60	0	0	0	0	0	60	1.2	1	0.3	0
Spices	21	2	0	11	13	0	0	0	0	0	13	0.2	2	0.1	0.1
Meat	846	140	0	0	986	0	0	0	0	0	986	19.2	100	7.4	7.6
Offals	103	0	0	0	103	0	0	0	0	0	103	2	6	0.9	0.2
Animal fats	110	89	0	0	199	0	0	0	0	61	138	2.7	53	0.1	6
Milk	3,350	631	0	0	3,981	861	0	0	168	0	2,953	57.6	85	5.5	5.3
Eggs	250	2	0	0	252	0	20	0	18	0	215	4.2	16	1.2	1.2
Seafood	211	416	0	1	626	426	0	0	0	0	199	3.9	7	1.1	0.2
Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vegetable products	-	-	-	-	-	-	-	-	-	-	-	-	**2,391**	**52.2**	**40**
Animal products	-	-	-	-	-	-	-	-	-	-	-	-	**268**	**16.1**	**20.6**
Total	-	-	-	-	-	-	-	-	-	-	-	-	**2,659**	**68.3**	**60.5**

Note : Based on a population of 51,258,000.
Source: FAO.

Table 2.3.4.9 Food Balance (1992) (2/3)

Products	Domestic Supply					Domestic Utilization							Per Capita Supply		
	Production (10^3 tons)	Imports (10^3 tons)	Stock Change (10^3 tons)	Exports (10^3 tons)	Total (10^3 tons)	Feed (10^3 tons)	Seed (10^3 tons)	Processing (10^3 tons)	Waste (10^3 tons)	Other Uses (10^3 tons)	Food (10^3 tons)	Supply (kg/year)	Calories (Kcal/day)	Protein (g/day)	Fats (g/day)
Cereals	15,025	4,508	-651	0	18,881	5,804	1,000	0	890	0	11,187	189.7	1,577	43.6	8.7
- Wheat	10,179	2,453	-477	0	12,154	1,800	791	0	632	0	8,932	151.5	1,182	35.6	7.3
- Rice	1,574	787	0	0	2,361	92	55	0	31	0	2,183	37	384	7.6	1.2
- Barley	3,065	110	-174	0	3,002	2,660	151	0	159	0	32	0.5	5	0.1	0
- Maize	200	1,157	0	0	1,357	1,246	2	0	68	0	41	0.7	6	0.2	0.1
- Millet	7	0	0	0	7	6	0	0	0	0	1	0	0	0	0
Starchy Roots	2,709	2	0	0	2,710	0	155	0	271	0	2,284	38.7	80	1.3	0.2
- Potatoes	2,709	2	0	0	2,710	0	155	0	271	0	2,284	38.7	80	1.3	0.2
- Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarcrops	7,861	0	0	0	7,861	0	0	7,861	0	0	0	0	0	0	0
- Sugar cane	1,856	0	0	0	1,856	0	0	1,856	0	0	0	0	0	0	0
- Sugar beet	6,005	0	0	0	6,005	0	0	6,005	0	0	0	0	0	0	0
Sweeteners	957	802	-69	0	1,690	0	0	0	0	0	1,690	28.7	279	0	0
- Raw Sugar	949	801	-69	0	1,681	0	0	0	0	0	1,681	28.5	278	0	0
- Other	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
- Honey	8	0	0	0	8	0	0	0	0	0	8	0.1	1	0	0
Pulses	674	9	0	42	640	0	94	0	20	0	526	8.9	86	5.4	0.6
- Beans	187	0	0	42	144	0	11	0	6	0	128	2.2	21	1.3	0.1
- Peas	0	9	0	0	9	0	0	0	0	0	9	0.1	1	0.1	0
- Other	487	0	0	0	487	0	83	0	15	0	389	6.6	64	4	0.5
Treenuts	348	0	0	107	241	0	0	0	0	0	241	4.1	33	1	3.1
Oilcrops	375	2	9	0	387	0	12	354	10	0	11	0.2	2	0.1	0.2
- Soyabeans	100	0	9	0	109	0	7	100	2	0	0	0	0	0	0
- Groundnuts	3	0	0	0	3	0	0	0	0	0	3	0	1	0	0.1
- Sunflowerseed	42	0	0	0	42	0	1	40	1	0	0	0	0	0	0
- Cottonseed	198	0	0	0	198	0	4	188	6	0	0	0	0	0	0
- Coconuts	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0
- Sesameseed	19	0	0	0	20	0	0	19	1	0	0	0	0	0	0
- Olives	11	0	0	0	11	0	0	7	0	0	4	0.1	0	0	0
- Other	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0
Vegetable oils	77	469	116	0	661	0	0	0	0	40	621	10.5	255	0.1	28.8
- Soyabean oil	17	354	116	0	487	0	0	0	0	0	487	8.3	200	0	22.6
- Sunflowerseed oil	16	51	0	0	67	0	0	0	0	0	67	1.1	28	0	3.1
- Cottonseed oil	34	0	0	0	34	0	0	0	0	0	34	0.6	14	0	1.6
- Palmkernel oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Palm oil	0	40	0	0	40	0	0	0	0	40	0	0	0	0	0
- Copra oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Sesameseed oil	8	0	0	0	8	0	0	0	0	0	8	0.1	3	0	0.4
- Olive oil	2	1	0	0	2	0	0	0	0	0	2	0	1	0	0.1
- Maize germ oil	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
- Other	0	22	0	0	22	0	0	0	0	1	21	0.4	8	0.1	1
Vegetables	7,901	0	-1	79	7,821	0	0	0	810	0	7,011	118.9	74	3.7	0.6
- Tomatoes	2,371	0	0	3	2,369	0	0	0	237	0	2,132	36.2	18	1	0.2
- Onions	1,305	0	0	72	1,233	0	0	0	131	0	1,102	18.7	22	0.7	0.1
- Other	4,224	0	-1	4	4,220	0	0	0	442	0	3,777	64.1	35	2	0.3
Fruit	11,422	120	0	592	10,951	0	0	0	1,287	0	9,665	163.9	188	2.5	1
- Oranges	2,410	0	0	17	2,393	0	0	0	241	0	2,152	36.5	30	0.7	0.2
- Lemons	522	0	0	1	521	0	0	0	52	0	469	8	4	0.1	0
- Grapefruit	48	0	0	0	48	0	0	0	5	0	43	0.7	0	0.1	0
- Other citrus	90	0	0	0	90	0	0	0	9	0	81	1.4	1	0	0.1
- Bananas	5	117	0	0	123	0	0	0	4	0	119	2	3	0.1	0
- Apples	1,463	0	0	120	1,343	0	0	0	146	0	1,196	20.3	27	0.2	0.1
- Dates	578	0	0	91	488	0	0	0	58	0	430	7.3	31	0.3	0.1
- Grapes	1,508	0	0	216	1,293	0	0	0	151	0	1,142	19.4	36	0.3	0.2
- Other fruit	4,798	3	0	147	4,654	0	0	0	621	0	4,033	68.4	55	0.9	0.4
Stimulants	55	95	0	0	150	0	0	0	0	0	150	2.5	4	0.7	0.1
Spices	33	8	0	22	19	0	0	0	0	0	19	0.3	3	0.1	0.1
Meat	1,164	131	0	0	1,294	0	0	0	0	0	1,294	22	109	8.4	8.1
Offals	131	0	0	0	131	0	0	0	0	0	131	2.2	7	1	0.3
Animal fats	140	38	0	0	178	0	0	0	0	62	116	2	39	0	4.4
Milk	4,145	402	0	0	4,547	1,110	0	0	207	0	3,230	54.8	83	5.3	5
Eggs	390	5	0	0	395	0	31	0	28	0	337	5.7	22	1.7	1.6
Seafood	334	452	0	2	784	445	0	0	0	0	339	5.8	11	1.6	0.4
Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	0
Vegetable products	-	-	-	-	-	-	-	-	-	-	-	-	**2,581**	**58.3**	**43.4**
Animal products	-	-	-	-	-	-	-	-	-	-	-	-	**270**	**18**	**19.7**
Total	-	-	-	-	-	-	-	-	-	-	-	-	**2,851**	**76.3**	**63.1**

Note : Based on a population of 58,962,000.
Source: FAO.

Table 2.3.4.9 Food Balance (1997) (3/3)

Products	Domestic Supply					Domestic Utilization						Per Capita Supply			
	Production (10^3 tons)	Imports (10^3 tons)	Stock Change (10^3 tons)	Exports (10^3 tons)	Total (10^3 tons)	Feed (10^3 tons)	Seed (10^3 tons)	Processing (10^3 tons)	Waste (10^3 tons)	Other Uses (10^3 tons)	Food (10^3 tons)	Supply (kg/year)	Calories (Kcal/day)	Protein (g/day)	Fats (g/day)
Cereals	15,115	8,903	-1,189	0	22,829	8,711	946	0	1,113	0	12,059	186.6	1,544	43	8.7
- Wheat	10,045	6,031	-1,189	0	14,887	3,500	770	0	803	0	9,814	151.9	1,185	35.7	7.4
- Rice	1,568	811	0	0	2,379	148	56	0	31	0	2,143	33.2	345	6.9	1.1
- Barley	2,499	750	0	0	3,249	2,942	112	0	162	0	32	0.5	5	0.1	0
- Maize	1,000	1,310	0	0	2,310	2,117	8	0	116	0	69	1.1	10	0.3	0.1
- Millet	4	0	0	0	4	4	0	0	0	0	0	0	0	0	0
Starchy Roots	3,284	15	0	0	3,299	0	170	0	330	0	2,799	43.3	89	1.4	0.2
- Potatoes	3,284	15	0	0	3,299	0	170	0	330	0	2,799	43.3	89	1.4	0.2
- Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarcrops	6,813	0	0	0	6,813	0	0	6,813	0	0	0	0	0	0	0
- Sugar cane	2,059	0	0	0	2,059	0	0	2,059	0	0	0	0	0	0	0
- Sugar beet	4,754	0	0	0	4,754	0	0	4,754	0	0	0	0	0	0	0
Sweeteners	859	1,382	-385	0	1,856	0	0	0	0	0	1,856	28.7	280	0	0
- Raw Sugar	851	1,379	-385	0	1,845	0	0	0	0	0	1,845	28.5	278	0	0
- Other	0	3	0	0	3	0	0	0	0	0	3	0	0	0	0
- Honey	8	0	0	0	8	0	0	0	0	0	8	0.1	1	0	0
Pulses	546	8	0	20	534	0	98	0	17	0	419	6.5	63	3.9	0.4
- Beans	110	0	0	20	90	0	9	0	3	0	78	1.2	12	0.7	0
- Peas	0	8	0	0	8	0	0	0	0	0	8	0.1	1	0.1	0
- Other	436	0	0	0	436	0	89	0	13	0	333	5.2	50	3.1	0.4
Treenuts	323	0	0	82	241	0	0	0	0	0	241	3.7	28	0.7	2.7
Oilcrops	491	38	0	5	524	0	15	477	10	0	29	0.4	3	0.1	0.2
- Soyabeans	145	26	0	0	170	0	7	170	0	0	0	0	0	0	0
- Groundnuts	3	0	0	0	3	0	0	0	0	0	3	0	1	0	0.1
- Sunflowerseed	46	0	0	0	46	0	1	44	1	0	0	0	0	0	0
- Cottonseed	250	0	0	0	250	0	7	236	8	0	0	0	0	0	0
- Coconuts	0	10	0	0	10	0	0	0	0	0	10	0.2	1	0.1	0.1
- Sesameseed	19	2	0	5	16	0	0	15	1	0	0	0	0	0	0
- Olives	26	0	0	0	26	0	0	12	0	0	14	0.2	1	0.1	0.1
- Other	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0
Vegetable oils	98	736	0	61	774	0	0	0	0	110	664	10.3	249	0.1	28.1
- Soyabean oil	29	346	0	48	327	0	0	0	0	0	327	5.1	123	0	13.9
- Sunflowerseed oil	18	245	0	13	250	0	0	0	0	0	250	3.9	94	0	10.6
- Cottonseed oil	42	0	0	0	42	0	0	0	0	0	42	0.7	16	0	1.8
- Palmkernel oil	0	2	0	0	2	0	0	0	0	0	2	0	1	0	0.1
- Palm oil	0	108	0	0	108	0	0	0	0	108	0	0	0	0	0
- Copra oil	0	6	0	0	6	0	0	0	0	0	6	0.1	2	0	0.3
- Sesameseed oil	7	0	0	0	7	0	0	0	0	0	7	0.1	3	0	0.3
- Olive oil	3	1	0	0	4	0	0	0	0	0	4	0.1	1	0	0.2
- Maize germ oil	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
- Other	0	27	0	0	27	0	0	0	0	1	26	0.4	10	0.1	1.1
Vegetables	9,153	2	0	112	9,042	0	0	0	940	0	8,102	125.4	76	4	0.6
- Tomatoes	2,547	0	0	8	2,539	0	0	0	255	0	2,284	35.3	18	1	0.2
- Onions	1,157	2	0	100	1,059	0	0	0	116	0	943	14.6	17	0.6	0.1
- Other	5,449	0	0	4	5,445	0	0	0	570	0	4,875	75.4	42	2.5	0.4
Fruit	13,800	43	0	703	13,139	0	0	0	1,533	0	11,608	179.6	219	2.7	1.1
- Oranges	2,390	0	0	60	2,330	0	0	0	239	0	2,091	32.3	26	0.6	0.2
- Lemons	940	0	0	2	937	0	0	0	94	0	843	13	6	0.2	0.1
- Grapefruit	47	0	0	0	47	0	0	0	5	0	42	0.7	0	0.1	0
- Other citrus	108	0	0	0	108	0	0	0	11	0	97	1.5	1	0	0.1
- Bananas	8	40	0	0	48	0	0	0	1	0	47	0.7	1	0	0.1
- Apples	1,998	0	0	190	1,808	0	0	0	200	0	1,608	24.9	33	0.2	0.1
- Dates	877	0	0	100	777	0	0	0	88	0	689	10.7	46	0.4	0.1
- Grapes	2,125	0	0	101	2,024	0	0	0	212	0	1,811	28	52	0.5	0.2
- Other fruit	5,309	3	0	250	5,062	0	0	0	683	0	4,379	67.8	53	0.8	0.4
Stimulants	69	42	0	0	110	0	0	0	0	0	110	1.7	2	0.5	0
Spices	29	4	0	14	20	0	0	0	0	0	20	0.3	3	0.1	0.1
Meat	1,444	71	0	1	1,515	0	0	0	0	0	1,515	23.4	114	8.9	8.5
Offals	161	0	0	0	161	0	0	0	0	0	161	2.5	8	1.1	0.3
Animal fats	174	19	0	0	193	0	0	0	0	62	131	2	40	0	4.5
Milk	4,895	237	0	0	5,132	1,411	0	0	245	0	3,477	53.8	82	5.1	4.8
Eggs	486	0	0	0	486	0	39	0	34	0	413	6.4	25	1.9	1.8
Seafood	382	677	0	7	1,052	694	0	0	0	0	358	5.5	11	1.6	0.4
Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1
Vegetable products	-	-	-	-	-	-	-	-	-	-	-	-	2,557	56.5	42.3
Animal products	-	-	-	-	-	-	-	-	-	-	-	-	279	18.6	20.3
Total	-	-	-	-	-	-	-	-	-	-	-	-	2,836	75	62.6

Note : Based on a population of 64,628,000.
Source: FAO.

Table 2.3.4.10 Food Consumption and Self-sufficiency in Food Production

Province	Crop	Production	Per Capita Consumption*	Population					Food Requirements					Self-sufficiency Rates				
		1377/78 (1998-00) (ton)	1366, 1371, 1376 (1987, 1992, 1997) (kg/person)	1375 (1996/97) (1,000)	1380 (2001/02) (1,000)	1385 (2006/07) (1,000)	1390 (2011/12) (1,000)	1400 (2021/22) (1,000)	1375 (1996/97) (ton)	1380 (2001/02) (ton)	1385 (2006/07) (ton)	1390 (2011/12) (ton)	1400 (2021/22) (ton)	1375 (1996/97) (%)	1380 (2001/02) (%)	1385 (2006/07) (%)	1390 (2011/12) (%)	1400 (2021/22) (%)
Tehran	Wheat	149,020	149.9	9,672	10,502	11,549	12,743	15,379	1,449,833	1,574,250	1,731,195	1,910,176	2,305,312	10.3	9.5	8.6	7.8	6.5
	Barley	83,381	0.53	9,672	10,502	11,549	12,743	15,379	5,126	5,566	6,121	6,754	8,151	1626.6	1498.0	1362.2	1234.6	1023.0
	Paddy	0	34.9	9,672	10,502	11,549	12,743	15,379	337,553	366,520	403,060	444,731	536,727	0	0	0	0	0
	Maize	670	0.77	9,672	10,502	11,549	12,743	15,379	7,447	8,087	8,893	9,812	11,842	9.0	8.3	7.5	6.8	5.7
	Beans	461	1.67	9,672	10,502	11,549	12,743	15,379	16,152	17,538	19,287	21,281	25,683	2.9	2.6	2.4	2.2	1.8
	Potatoes	83,713	40.3	9,672	10,502	11,549	12,743	15,379	389,782	423,231	465,425	513,543	619,774	21.5	19.8	18.0	16.3	13.5
	Onions	24,394	16.0	9,672	10,502	11,549	12,743	15,379	154,752	168,032	184,784	203,888	246,064	15.8	14.5	13.2	12.0	9.9
	Tomatoes	323,127	30.7	9,672	10,502	11,549	12,743	15,379	296,930	322,411	354,554	391,210	472,135	108.8	100.2	91.1	82.6	68.4
	Grapes	116,329	23.6	9,672	10,502	11,549	12,743	15,379	228,259	247,847	272,556	300,735	362,944	51.0	46.9	42.7	38.7	32.1
Qazvin	Wheat	158,211	149.9	992	1,028	1,096	1,172	1,383	148,701	154,097	164,290	175,683	207,312	106.4	102.7	96.3	90.1	76.3
	Barley	28,874	0.53	992	1,028	1,096	1,172	1,383	526	545	581	621	733	5491.9	5299.5	4970.7	4648.4	3939.2
	Paddy	8,230	34.9	992	1,028	1,096	1,172	1,383	34,621	35,877	38,250	40,903	48,267	23.8	22.9	21.5	20.1	17.1
	Maize	27,470	0.77	992	1,028	1,096	1,172	1,383	764	792	844	902	1,065	3596.3	3470.4	3255.0	3044.0	2579.6
	Beans	1,860	1.67	992	1,028	1,096	1,172	1,383	1,657	1,717	1,830	1,957	2,310	112.3	108.3	101.6	95.0	80.5
	Potatoes	48,730	40.3	992	1,028	1,096	1,172	1,383	39,978	41,428	44,169	47,232	55,735	121.9	117.6	110.3	103.2	87.4
	Onions	4,179	16.0	992	1,028	1,096	1,172	1,383	15,872	16,448	17,536	18,752	22,128	26.3	25.4	23.8	22.3	18.9
	Tomatoes	168,252	30.7	992	1,028	1,096	1,172	1,383	30,454	31,560	33,647	35,980	42,458	552.5	533.1	500.0	467.6	396.3
	Grapes	292,018	23.6	992	1,028	1,096	1,172	1,383	23,411	24,261	25,866	27,659	32,639	1247.3	1203.7	1129.0	1055.8	894.7
Study Area	Wheat	307,231	149.9	10,664	11,530	12,645	13,915	16,762	1,598,534	1,728,347	1,895,486	2,085,859	2,512,624	19.2	17.8	16.2	14.7	12.2
	Barley	112,255	0.53	10,664	11,530	12,645	13,915	16,762	5,652	6,111	6,702	7,375	8,884	1986.1	1837.0	1675.0	1522.1	1263.6
	Paddy	8,230	34.9	10,664	11,530	12,645	13,915	16,762	372,174	402,397	441,311	485,634	584,994	2.2	2.0	1.9	1.7	1.4
	Maize	28,140	0.77	10,664	11,530	12,645	13,915	16,762	8,211	8,878	9,737	10,715	12,907	342.7	317.0	289.0	262.6	218.0
	Beans	2,321	1.67	10,664	11,530	12,645	13,915	16,762	17,809	19,255	21,117	23,238	27,993	13.0	12.1	11.0	10.0	8.3
	Potatoes	132,443	40.3	10,664	11,530	12,645	13,915	16,762	429,759	464,659	509,594	560,775	675,509	30.8	28.5	26.0	23.6	19.6
	Onions	28,573	16.0	10,664	11,530	12,645	13,915	16,762	170,624	184,480	202,320	222,640	268,192	16.7	15.5	14.1	12.8	10.7
	Tomatoes	491,379	30.7	10,664	11,530	12,645	13,915	16,762	327,385	353,971	388,202	427,191	514,593	150.1	138.8	126.6	115.0	95.5
	Grapes	408,347	23.6	10,664	11,530	12,645	13,915	16,762	251,670	272,108	298,422	328,394	395,583	162.3	150.1	136.8	124.3	103.2

Note: * Per capita consumption has been estimated based on the average value of 1366, 1371 and 1376 figures.

Source: 1) "Food Balance Sheets", FAO.

2) "National Water Master Plan", 1998.

Table 2.3.4.11 Production of Livestock and Poultry Products in 1377 (1998/99)

Province (Ostan)	Red Meats (%)	Poultry Meats (%)	Hen Eggs (%)	Milk (%)
Qazvin	1.6	5.0	9.6	2.6
Tehran	4.0	18.4	28.1	8.5
Study Area	**5.6**	**23.4**	**37.7**	**11.1**
Whole Country (1,000 metric tons)	**747 (100.0)**	**696 (100.0)**	**498 (100.0)**	**5,105 (100.0)**
Per Capita Consumption (kg/year)	11.7	11.7	6.4	53.8
Food Requirements (1,000 metric tons)				
- Qazvin	11.6	11.6	6.3	53.4
- Tehran	113.2	113.2	61.9	520.4
- Study Area	**124.8**	**124.8**	**68.2**	**573.7**
- Whole Country	**702.6**	**702.6**	**384.4**	**3,231.0**
Self-sufficiency Rate (%)				
- Qazvin	103.4	301.7	761.9	252.8
- Tehran	26.5	113.1	226.2	83.4
- Study Area	**33.7**	**130.6**	**275.7**	**99.2**
- Whole Country	**106.3**	**99.1**	**129.6**	**158.0**

Note: Figures in parentheses indicate comparison with total as 100.
Source: 1) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.
2) "Food Balance Sheets, 1997", FAO.

Table 2.3.5.1 Roads and Highways (1375: 1996/97)

Sub-province (Shahrestan)	Asphalted Road (km/km^2)	Graveled Road (km/km^2)	Total (km/km^2)
Qazvin	0.09	0.04	0.13
Savojbolagh	0.09	0.02	0.11
Eslamshahr	0.42	0	0.42
Tehran	0.19	0	0.19
Varamin	0.11	0	0.11
Rey	0.13	0.02	0.15
Shahriyar	0.17	0.01	0.18
Karaj	0.13	0.07	0.20
Study Area	**0.11**	**0.03**	**0.14**
Tehran Province and Takestan Sub-province	**0.10**	**0.03**	**0.14**
Whole Country	**0.04**	**0.01**	**0.05**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.

Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.5.2 Water Production and Sales (1377: 1998/99)

Province (Ostan)	Production (1,000 CM)	Sales (1,000 CM)
Tehran	1,164,260	798,250
Qazvin	48,287	37,536
Study Area	1,212,547	835,786
Whole Country	3,975,534	2,931,802

Source: Water and Sewage Company.

Table 2.3.5.3 Electricity Consumption (1377: 1998/99)

Region	Household (%)	Public Utility (%)	Agriculture (%)	Industry (%)	Commerce (%)	Total* (MWh)
Tehran	42.4	14.0	1.9	25.5	16.2	16,901,688
Qazvin	24.9	3.8	11.6	51.5	8.2	1,501,338
Study Area	**41.0**	**13.2**	**2.7**	**27.6**	**15.5**	**18,403,026**
Whole Country	**38.2**	**9.4**	**9.0**	**32.1**	**11.3**	**77,646,091**

Note: * includes street lighting.
Source: Ministry of Energy.

Table 2.3.5.4 Elementary and Secondary Schools (1375/76: 1996-98)

Sub-province (Shahrestan)	Elementary Schools (km^2 per school)	Secondary Schools (km^2 per school)
Qazvin	15	47
Savojbolagh	13	55
Eslamshahr	1	3
Tehran	1	2
Varamin	7	25
Rey	8	26
Shahriyar	4	16
Karaj	4	12
Study Area	**6**	**15**
Tehran Province and Takestan Sub-province	**6**	**17**
Whole Country	**26**	**43**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Staistical Center of Iran.

Table 2.3.5.5 Literacy Rate (1375: 1996/97)

Sub-province (Shahrestan)	Male (%)	Female (%)	Average (%)
Qazvin	85.7	75.4	80.6
Savojbolagh	85.2	77.4	81.3
Eslamshahr	89.8	82.2	86.1
Tehran	93.1	87.9	90.6
Varamin	84.6	77.8	81.3
Rey	82.3	75.3	79.0
Shahriyar	86.8	78.5	82.8
Karaj	90.8	84.8	87.9
Study Area	**90.9**	**84.7**	**87.9**
Tehran Province and Takestan Sub-province	**90.8**	**84.7**	**87.8**
Whole Country	**84.7**	**74.2**	**79.5**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.5.6 Health and Medical Services (1375: 1996/97)

Sub-province (Shahrestan)	Hospital (km^2 per hospital)	Health & Medical Center (km^2 per center)
Qazvin	1,722	199
Savojbolagh	2,785	174
Eslamshahr	185	12
Tehran	15	10
Varamin	1,185	125
Rey	2,295	153
Shahriyar	1,632	68
Karaj	245	37
Study Area	**205**	**71**
Tehran Province and Takestan Sub-province	**240**	**82**
Whole Country	**2,380**	**281**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.3.5.7 Physicians and Dentists (1375: 1996/97)

Sub-province (Shahrestan)	Physician (km^2 per hospital)	Dentist (km^2 per center)
Qazvin	67	323
Savojbolagh	121	1,393
Eslamshahr	3	26
Tehran	0.12	0.24
Varamin	22	95
Rey	13	70
Shahriyar	13	71
Karaj	3	10
Study Area	**2**	**4**
Tehran Province and Takestan Sub-province	**2**	**5**
Whole Country	**32**	**173**

Note: Qazvin sub-province and Tehran province include Takestan sub-province in Zanjan province.
Source: 1) "Tehran Province, 1375", Plan and Budget Organization.
2) "Iran Statistical Yearbook, 1377", Statistical Center of Iran.

Table 2.4.4.1 History of Water supply into Tehran

(Unit : in MCM)

Year	Karaj Dam			Kan River	Latian Dam	Raw Surface Water Total	Treated Water		
	Steel Pipe	Concrete Pipe	Total				Ground Water	Surface Water (Treated)	Total
1974	38.45	158.03	196.48		82.65	279.14	26.69	213.69	240.37
1975	43.16	169.43	212.59		107.64	320.23	34.64	267.72	302.35
1976	41.40	181.90	223.30		104.91	328.21	18.08	292.94	311.02
1977	38.19	177.62	215.80		115.47	331.27	31.18	293.60	324.79
1978	47.34	185.41	232.75		135.99	368.74	22.70	330.51	353.21
1979	55.12	211.83	266.96		135.28	402.23	22.70	365.64	388.34
1980	60.12	216.63	276.75		128.77	405.52	32.29	367.12	399.41
1981	53.78	220.56	274.34		122.55	396.89	24.28	388.04	412.32
1982	51.20	230.91	282.11		142.49	424.60	53.00	373.33	426.33
1983	61.26	226.59	287.85		145.12	432.97	83.73	380.31	464.04
1984	65.94	246.58	312.51		165.33	477.85	57.92	439.00	496.92
1985	68.22	243.87	312.10		178.03	490.13	59.25	464.66	523.91
1986	57.63	234.49	292.11		187.18	479.29	62.76	449.94	512.70
1987	57.65	247.50	305.14		215.21	520.36	56.09	488.33	544.42
1988	62.32	257.00	319.32		249.53	568.85	53.92	538.48	592.40
1989	58.62	250.34	308.96		229.98	538.95	112.18	518.20	630.38
1990	53.51	256.55	310.06	1.67	230.57	542.31	128.13	510.78	638.91
1991	63.13	250.19	313.32	4.19	225.33	542.83	138.30	510.33	648.63
1992	64.81	272.21	337.02		272.18	609.21	104.56	578.66	683.22
1993	66.80	273.22	340.01		284.09	624.10	120.93	599.36	720.29
1994	57.51	281.63	339.15		277.11	616.26	148.63	589.57	738.20
1995	60.66	262.52	323.17		288.65	611.82	197.94	578.34	776.27
1996	50.97	277.82	328.79	Wells in	291.12	619.92	249.97	592.41	842.39
1997	34.36	244.20	278.56	Jujrud River	281.28	559.84	317.73	528.80	846.53
1998	61.66	275.97	337.63	Basin	289.06	626.69	288.22	597.93	886.16
1999	31.67	234.42	266.10	9.98	257.46	533.54	373.94	511.47	885.41