

Food production

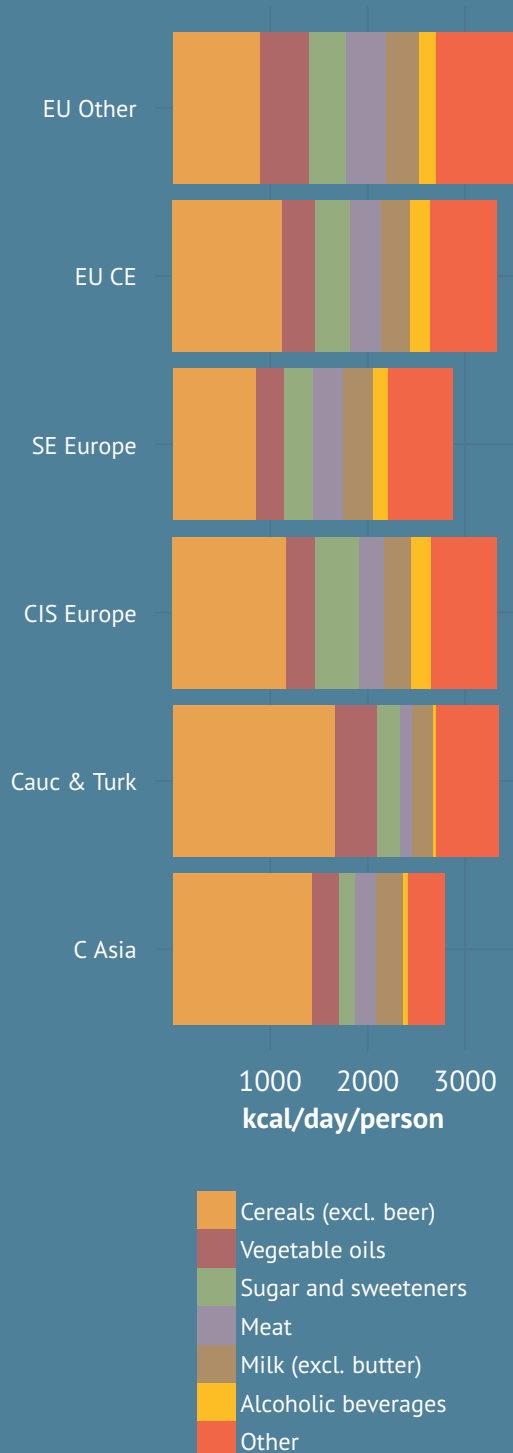
In the 21st century, the growing population is putting growing pressure on agriculture to produce enough food. In addition, changing consumption patterns and increasing land use for energy production purposes are putting further demands on agriculture.

Per capita food production has increased by more than 40 percent in the last 50 years, mainly due to the extensive expansion of irrigated land and to improved use of fertilizers. These trends are visible in all of the world's regions.

Since 1960, per capita food production has increased by 40 percent in the Caucasus and Turkey, by 68 percent in EU Central and Eastern, and by 75 percent in EU other and EFTA. In the last ten years production has increased by 60 percent in Central Asia and CIS Europe. Countries like Denmark, Hungary, France and Ukraine still have exceptional potential for food production, while at the bottom of the list are the small mountainous states and islands, like Montenegro, Georgia and Iceland.

In the structure of primary food production, cereals play the most important role. The dominance of this product group can be seen in all of the sub-regions where it accounts for the highest share in both the Caucasus and Turkey and in Central Asia. Beyond cereals, vegetable oils and sugar also have a large share of per capita food production in this region. In many of the EU countries, meat production accounts for a higher share than in the Caucasus and Turkey or in Central Asia.

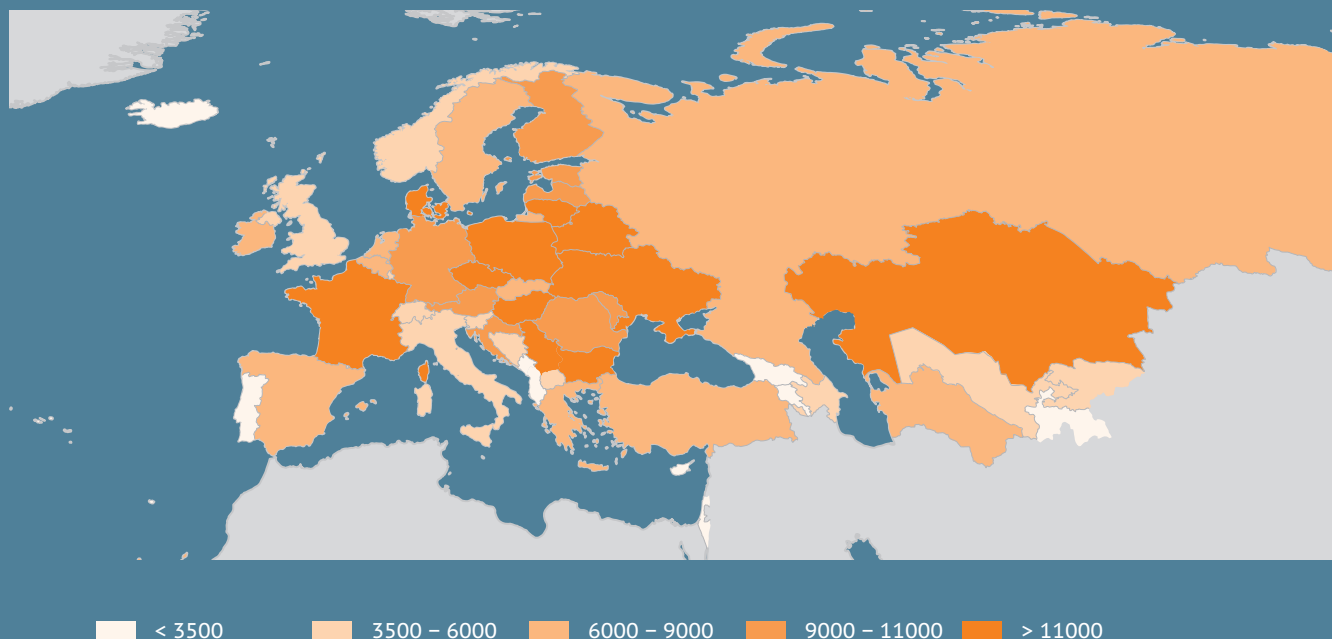
CHART 3: Per capita production of main primary food product groups (2010)



Source: Statistics Division (FAOSTAT)

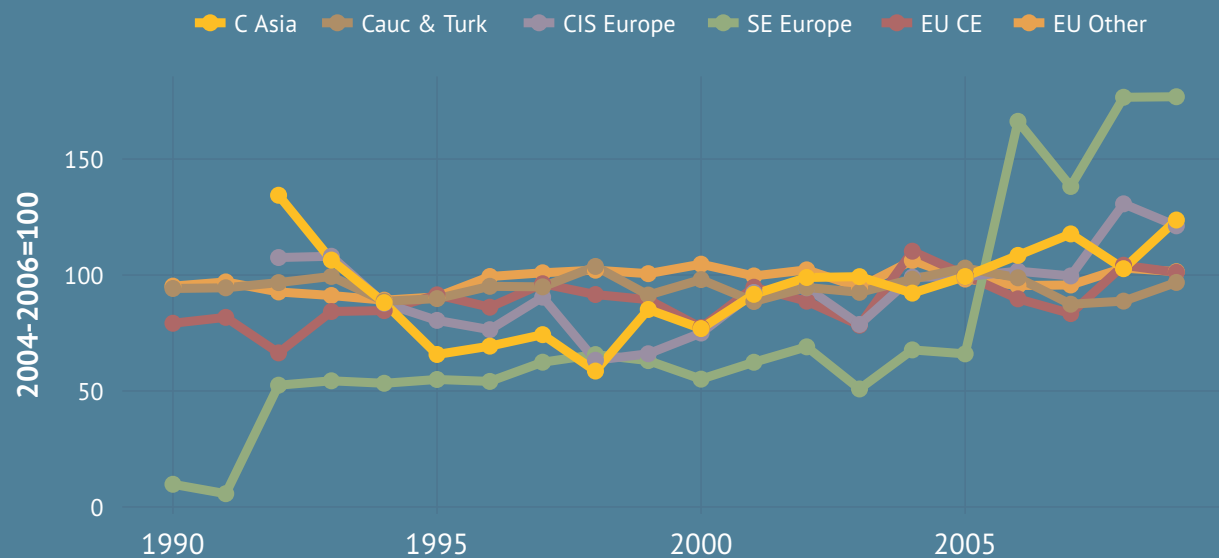
Metalink: P3.REU.FAO.ESS.MPP.PPP, p. 108

MAP 5: Per capita food production (kcal/day/person, 2009)



Source: Statistics Division (FAOSTAT)
 Metalink: P3.FEED.FAO.ESS.FD.QP.SHP, p. 105

CHART 4: Index of per capita food production (1990-2009)



Source: Statistics Division (FAOSTAT)
 Metalink: P3.FEED.FAO.ESS.FD.QP.SHP.IN, p. 105

Land

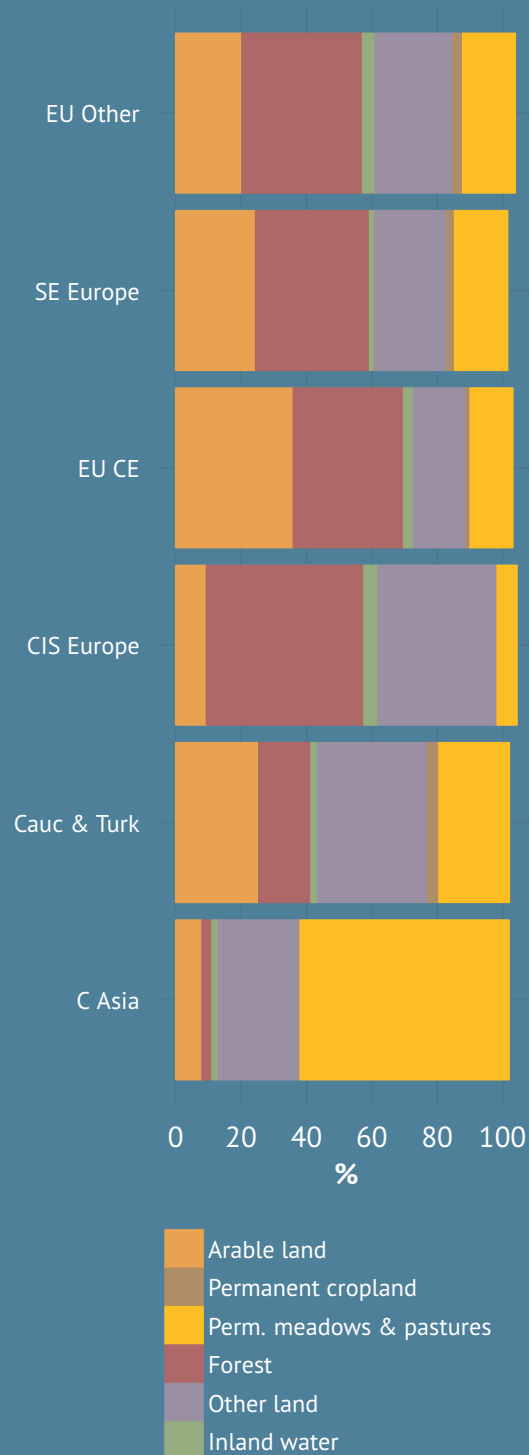
Almost 38 percent of the world's land surface is used for agriculture. Of this, 11 percent is arable land, 12 percent is permanent cropland and 26 percent is permanent pasture. As there is only a small amount of additional agricultural land left to be further used to meet the increasing demand for food of the world's growing population; technologically enhanced yields and intensive cultivation are options that must be, and are, considered and implemented.

The region of Europe and Central Asia covers 21 percent of the world's total land area, with 23 percent of the global agricultural land. On the whole, the proportion of agricultural land in this region is higher than the global average, with the exception of Central Asia and CIS Europe, which accounts for large shares of land surface but with smaller proportions of agricultural land. Nevertheless, due to its vast territory, CIS Europe has nearly half of all the agricultural land in this region. Another quarter of the region's agricultural land is in EU other and EFTA.

Over the last 50 years, per capita agricultural area in the region as a whole has decreased by half (in 2009 the regional average was 0.2 hectares per capita). CIS Europe has the largest per capita value with 0.8 hectares per capita. Largely due to the huge decrease in Kazakhstan, the per capita agricultural area in Central Asia has declined by 38 percent in the last two decades (0.5 hectares per capita in 2009). Similarly, the Caucasus and Turkey experienced a decrease of 29 percent. Even so, this indicator is still highest in Kazakhstan (1.5 hectares per capita), followed by the Russian Federation (0.9 hectares per capita) and Ukraine (0.7 hectares per capita). The lower index in EU other and EFTA can be explained by the high population density, urbanization and industrialization. In other parts, unfavorable geographical conditions (such as mountains) are responsible for the low values.

Globally, arable land accounts for almost 11 percent of the total land surface area, while 26 percent is permanent meadows and pastures, and 31 percent is covered with forests. Significant differences can be seen among the regions in terms of land use. Arable land dominates in EU Central and Eastern with a 36 percent share of the total land area. The share is also high in the Caucasus and Turkey, South East Europe, EU other and EFTA and in CIS Europe (with the exception of the Russian Federation). Permanent meadows and pastures have the highest share in Central Asia (64 percent), while in CIS Europe they account for only six percent. However, forested areas in CIS Europe, at 48 percent, are the largest of any of the sub-regions, while the Caucasus and Turkey and Central Asia are far behind the global average in terms of forests.

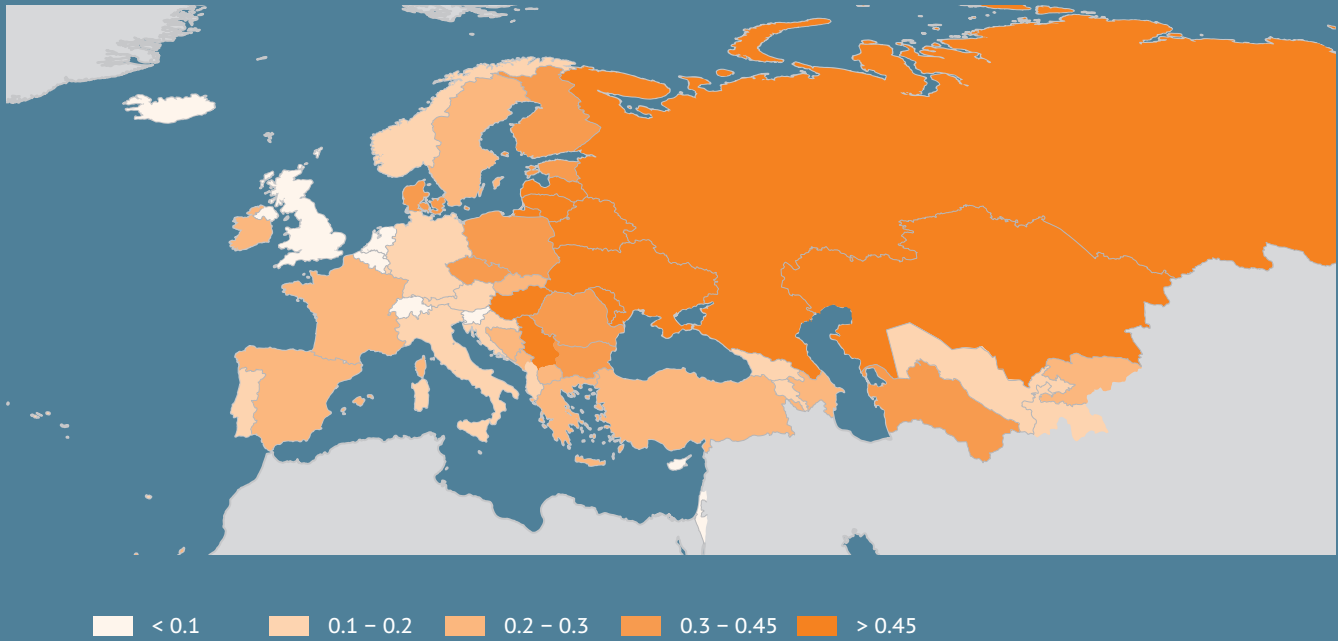
CHART 5: Land use, share of total land area (2009)



Source: Statistics Division (FAOSTAT)

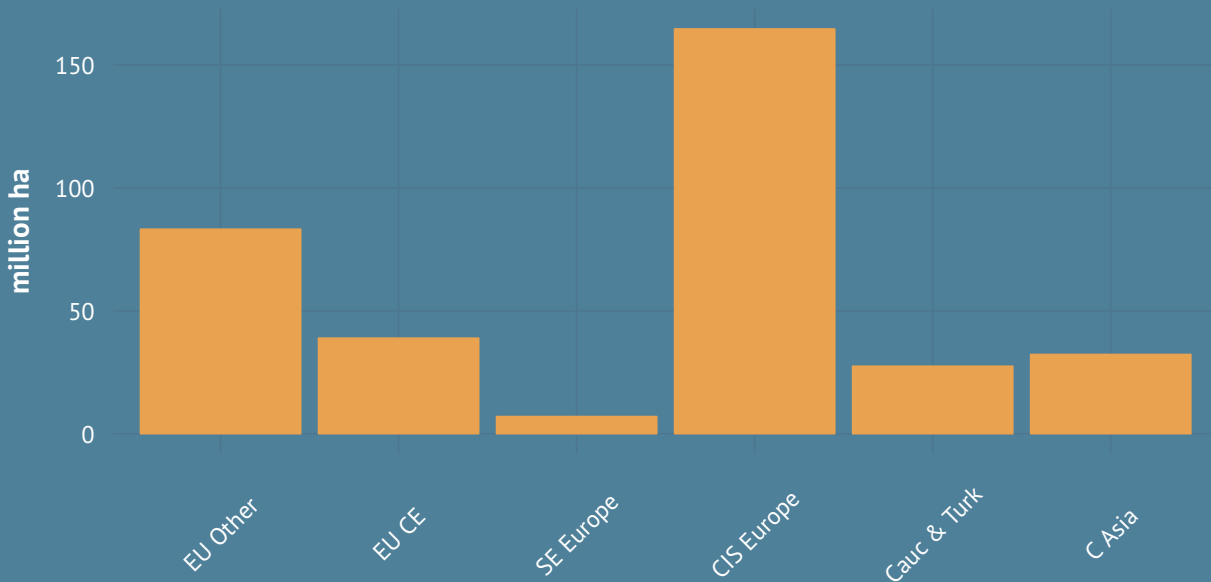
Metalink: P1.RES.FAO.ESS.LDAQ.ARL.SHL, p. 102

MAP 6: Per capita arable land (ha/person, 2009)



Source: Statistics Division (FAOSTAT)
Metalink: P1.RES.FAO.ESS.LDAQ_ARL.SHP, p. 102

CHART 6: Agricultural land area (2009)



Source: Statistics Division (FAOSTAT)
Metalink: P1.RES.FAO.ESS.LDAQ_ARPCL, p. 102

TABLE 3: Agriculture-in-aggregate production indicators

	Gross per capita production index number (2004-2006 = 100)							
	crops		livestock		food		non food	
	change	p.a. growth	change	p.a. growth	change	p.a. growth	change	p.a. growth
	%	%	%	%	%	%	%	%
	2009-2010	2000-2010	2009-2010	2000-2010	2009-2010	2000-2010	2009-2010	2000-2010
WORLD	-1.2	1.0	1.1	0.9	-0.5	1.0	3.3	0.8
Central Asia	-5.9	3.0	3.8	3.8	-3.0	3.7	4.9	0.9
Kazakhstan	-32.6	1.7	2.4	3.2	-17.0	2.5	-0.1	1.3
Kyrgyzstan	-6.9	-0.1	0.7	0.1	-3.8	0.4	7.0	-5.6
Tajikistan	4.0	5.2	4.7	7.9	4.7	7.0	2.0	-0.5
Turkmenistan	14.0	3.4	1.0	6.2	4.0	4.9	28.9	3.3
Uzbekistan	5.2	4.0	7.0	4.3	7.4	4.9	-0.4	0.6
Caucasus & Turkey	-3.1	-0.4	3.4	1.5	-0.8	0.4	-11.9	-5.7
Armenia	-30.5	4.6	-1.0	3.5	-19.1	4.2	-13.0	-9.2
Azerbaijan	-10.9	2.4	5.4	5.2	-5.2	4.1	3.2	-7.5
Georgia	-12.6	-4.3	-2.5	-2.1	-7.9	-3.1	-9.1	-12.5
Turkey	-2.0	-0.7	3.7	1.2	0.1	0.1	-12.8	-5.7
CIS Europe	-19.1	1.5	2.5	1.9	-10.0	1.7	7.1	1.7
Belarus	-3.0	3.2	3.9	4.5	0.4	3.9	-1.1	1.3
Republic of Moldova	0.3	1.4	12.6	2.0	2.9	1.8	39.0	-8.3
Russian Federation	-29.1	-0.4	2.1	1.8	-15.2	0.7	4.7	3.4
Ukraine	-5.0	4.3	2.6	0.9	-2.2	3.0	13.6	3.7
South Eastern Europe	-4.6	3.8	-0.2	3.3	-3.2	3.8	2.7	-2.6
Albania	11.2	4.4	1.8	0.9	6.2	2.7	9.5	-1.2
Bosnia and Herzegovina	-7.9	4.6	-6.7	5.2	-7.5	4.9	-11.1	-1.8
Croatia	-9.1	-0.4	-8.3	2.7	-8.4	0.6	-49.2	2.9
Macedonia, FYR	5.3	1.4	1.0	2.0	3.3	1.5	22.1	2.3
Montenegro	-2.3		14.4		5.5		4.0	
Serbia	-5.8		2.3		-3.4		4.6	
EU Central & Eastern	-7.1	0.1	-1.3	-0.0	-4.5	0.1	-11.2	-0.7
Bulgaria	14.1	3.0	-2.8	-4.3	9.4	0.2	-15.8	2.2
Czech Republic	-13.1	-1.6	-2.2	-1.4	-7.3	-1.5	-1.6	-9.1
Estonia	-13.7	-1.3	-0.1	1.8	-4.4	0.7	14.0	8.1
Hungary	-13.2	0.2	-6.6	-2.4	-11.0	-0.9	1.4	-0.3
Latvia	-10.2	2.4	1.4	2.6	-4.2	2.5	4.7	-5.6
Lithuania	-28.8	-1.2	-1.8	1.4	-12.7	0.3	-17.1	-16.9
Poland	-12.6	-1.3	2.0	1.1	-5.4	-0.2	-15.6	-0.7
Romania	4.5	2.6	-6.5	0.6	0.4	1.8	3.3	-2.1
Slovakia	-16.7	-0.5	0.1	-1.8	-8.6	-1.2	-2.2	-7.9
Slovenia	0.2	-1.5	0.9	-0.2	0.6	-0.7	-16.0	2.8
EU other & EFTA	-5.4	-1.3	1.3	-0.4	-2.0	-0.8	-5.5	-2.7
Austria	-10.5	-0.2	2.0	-0.6	-3.0	-0.5	-1.1	16.8
Belgium	-2.3	-0.9	2.5	-1.2	0.5	-1.1	-0.5	0.2
Cyprus	-1.9	-5.7	-1.3	-2.2	-1.6	-3.7	18.2	-6.3
Denmark	-12.2	-0.7	0.4	0.0	-3.0	-0.2	8.2	-4.2
Finland	-22.2	-2.3	0.3	-0.1	-7.2	-0.8	-1.5	-7.2
France	-6.2	-1.4	1.2	-1.4	-2.6	-1.4	-6.0	1.3
Germany	-11.4	-1.3	2.4	0.9	-3.1	0.1	-16.8	-0.7
Greece	-9.2	-3.7	0.1	-0.0	-7.3	-2.5	-7.2	-8.0
Ireland	-1.1	-3.2	4.0	-1.7	3.3	-1.9	0.0	0.0
Italy	-4.6	-1.6	-0.2	-0.8	-3.1	-1.3	-11.2	-1.0
Luxembourg	-12.3	-1.5	-7.1	-3.4	-8.2	-3.1	-1.0	-18.9
Malta	3.9	-0.9	-3.3	-1.9	-0.2	-1.5	3.8	0.3
Netherlands	-4.6	-0.6	3.3	0.2	1.0	-0.0	0.3	-1.0
Portugal	1.1	-1.0	1.7	0.3	1.4	-0.4	1.5	-2.4
Spain	-0.5	-1.0	0.6	-0.8	-0.1	-0.9	-0.3	-5.1
Sweden	-13.0	-1.9	-1.1	-1.2	-5.3	-1.4	17.8	6.5
United Kingdom	-2.8	-1.0	-0.2	-0.7	-1.2	-0.8	5.9	-0.3
Iceland	12.2	1.8	-2.2	-0.1	-1.5	0.1	-4.3	-6.1
Norway	-3.0	-1.4	0.4	-0.6	-0.3	-0.7	-8.4	-1.5
Switzerland	-13.5	-3.0	0.8	0.2	-2.7	-0.6	-11.4	13.3
Israel	-0.5	-0.6	-0.6	0.3	-0.6	-0.1	-1.0	-7.2

TABLE 4: Land availability

	Land area		Share of land area			Organic agriculture
	total	agricultural	permanent crops	arable	pasture	share of agric area
	million ha		%	%	%	%
	2009	2009	2009	2009	2009	2009
WORLD	13 003.5	37.6	1.2	10.6	25.8	0.7
Central Asia	392.7	72.1	0.2	8.0	63.9	0.1
Kazakhstan	270.0	77.2	0.0	8.7	68.5	0.1
Kyrgyzstan	19.2	55.4	0.4	6.7	48.3	0.1
Tajikistan	14.0	33.9	1.0	5.3	27.7	
Turkmenistan	47.0	69.4	0.1	3.9	65.3	
Uzbekistan	42.5	62.6	0.8	10.1	51.7	
Caucasus & Turkey	95.0	50.4	3.5	25.4	21.5	1.1
Armenia	2.8	61.6	1.9	16.1	43.6	0.0
Azerbaijan	8.3	57.6	2.7	22.7	32.1	0.4
Georgia	6.9	36.1	1.7	6.4	27.9	
Turkey	77.0	50.6	3.8	27.7	19.0	1.3
CIS Europe	1 719.2	15.6	0.2	9.4	6.0	
Belarus	20.3	44.0	0.6	27.3	16.1	
Republic of Moldova	3.3	75.2	9.2	55.2	10.8	
Russian Federation	1 637.7	13.2	0.1	7.4	5.6	
Ukraine	57.9	71.2	1.6	56.1	13.6	
South Eastern Europe	26.0	43.1	2.4	24.5	16.2	0.2
Albania	2.7	44.0	3.2	22.3	18.4	
Bosnia and Herzegovina	5.1	41.7	2.0	19.5	20.2	
Croatia	5.6	23.2	1.6	15.5	6.1	1.1
Macedonia, FYR	2.5	40.2	1.4	16.7	22.1	
Montenegro	1.3	38.2	1.2	12.9	24.2	
Serbia	8.7	57.8	3.4	37.7	16.7	
EU Central & Eastern	104.6	50.2	1.2	36.0	13.0	3.1
Bulgaria	10.9	46.3	1.6	28.9	15.8	0.2
Czech Republic	7.7	54.9	1.0	41.2	12.7	8.9
Estonia	4.2	22.0	0.2	14.1	7.7	10.4
Hungary	9.1	63.9	2.1	50.6	11.1	2.4
Latvia	6.2	29.5	0.1	18.8	10.6	8.7
Lithuania	6.3	42.9	0.4	32.8	9.7	4.8
Poland	30.4	53.0	1.3	41.2	10.5	2.3
Romania	23.0	58.8	1.6	38.2	19.0	1.2
Slovakia	4.8	40.1	0.5	28.7	10.9	7.5
Slovenia	2.0	23.2	1.3	8.7	13.3	6.3
EU other & EFTA	358.1	39.3	3.0	20.2	16.0	3.9
Austria	8.2	38.4	0.8	16.6	21.0	
Belgium	3.0	45.0	0.7	27.7	16.6	3.0
Cyprus	0.9	13.5	3.7	9.4	0.5	
Denmark	4.2	62.1	0.1	57.3	4.6	5.6
Finland	30.4	7.6	0.0	7.4	0.1	7.4
France	54.8	53.4	1.9	33.5	18.0	2.3
Germany	34.9	48.4	0.6	34.3	13.6	
Greece	12.9	63.6	8.9	19.8	34.9	4.0
Ireland	6.9	60.8	0.0	15.8	45.0	
Italy	29.4	47.3	8.9	23.4	15.0	8.0
Luxembourg	0.3	50.6	0.8	23.9	25.9	2.7
Malta	0.0	29.1	4.1	25.0		
Netherlands	3.4	56.8	1.1	31.3	24.5	2.6
Portugal	9.1	40.3	8.5	12.3	19.5	
Spain	49.9	55.5	9.5	25.1	21.0	4.8
Sweden	41.0	7.5	0.0	6.4	1.1	12.7
United Kingdom	24.2	71.6	0.2	25.0	46.4	4.2
Iceland	10.0	22.8		0.1	22.7	
Norway	30.5	3.3	0.0	2.7	0.6	5.6
Switzerland	4.0	38.1	0.6	10.2	27.4	7.3
Israel	2.2	24.1	3.6	14.1	6.5	1.1