

2.9 Nutritional Diseases

2.9.1 Malnutrition

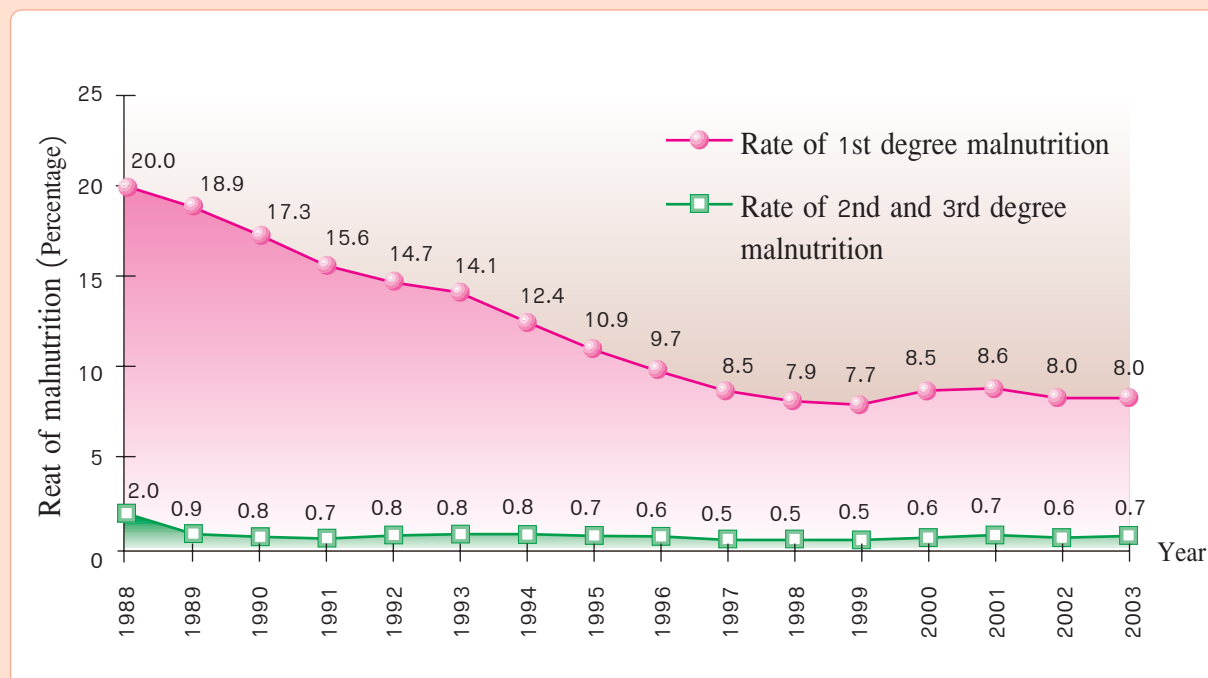
The nutritional status of preschool children has generally improved (Figure 5.54). However, with respect to geographical variation, preschool children in the Northeastern and Northern regions are more likely to be malnourished than those in other regions. In particular, the malnutrition rate among preschool children on the highlands (hilltribes) are almost eight times greater than that for Bangkok (Tables 5.30 and 5.31).

According to the World Health Report,²⁰ it was estimated that in 2000 approximately 27% of children under 5 years of age worldwide (168 million) were malnourished (weigh-for-age scale), making them more vulnerable to death due to diarrhoea and pneumonia.

²⁰ Pathom Sawanpanyalert (editor). World Health Report 2002: Reducing Risks and Promoting Health. 2003 (in Thai).



Figure 5.54 Situation of protein and energy malnutrition among children aged 0-5 years, Thailand, 1988-2003



Source: Department of Health, Ministry of Public Health.

Table 5.30 Rate (percentage) of malnutrition among children aged 0-5 years by region, 1989-2003

Year	Bangkok		Central		Northeast		North		South		Hilltribes	
	1st degree	2nd & 3rd degree	1st degree	2nd & 3rd degree	1st degree	2nd & 3rd degree	1st degree	2nd & 3rd degree	1st degree	2nd & 3rd degree	1st degree	2nd & 3rd degree
1989	13.08	1.25	9.45	0.28	24.91	1.67	18.76	1.33	16.38	1.37	-	-
1990	5.65	0.43	8.19	0.18	23.46	1.12	17.50	0.96	14.80	0.58	-	-
1991	5.10	0.37	7.30	0.34	21.52	0.89	16.78	0.97	12.56	0.56	-	-
1992	4.33	0.19	6.82	0.18	20.88	0.96	15.87	1.07	11.87	0.54	-	-
1993	3.56	0.19	6.11	0.18	19.51	0.94	15.28	1.12	11.29	0.62	-	-
1994	3.66	0.31	5.56	0.18	17.55	0.99	14.77	0.92	10.47	0.68	-	-
1995	3.76	0.33	4.62	0.17	14.48	0.87	13.56	1.14	9.25	0.62	-	-
1996	2.89	0.23	4.35	0.15	12.56	0.71	10.67	0.83	8.21	0.52	-	-
1997	4.50	0.45	4.04	0.14	10.82	0.65	10.05	0.81	7.27	0.44	30.3	10.6
1998	4.01	0.38	3.86	0.12	10.26	0.65	9.52	0.78	6.55	0.44	18.92	2.84
1999	4.01	0.38	3.79	0.16	10.20	0.65	9.33	0.63	6.61	0.44	23.2	2.48
2000	4.66	0.31	4.19	0.16	10.61	0.85	8.95	0.73	7.35	0.59	17.24	2.55
2001	4.54	0.39	4.94	0.29	10.53	0.92	7.81	0.42	6.09	0.53	14.00	3.02
2002	-	-	3.89	0.24	9.93	0.83	8.52	0.69	7.06	0.56	-	-
2003	-	-	3.62	0.21	9.82	0.95	8.49	0.73	7.28	0.71	-	-
Ratio compared with Bangkok in 2001	1	1	1.1	0.7	2.3	2.4	1.7	1.1	1.3	1.4	3.1	7.7

Sources: ⁽¹⁾ Department of Health, Ministry of Public Health.

⁽²⁾ Bureau of Policy and Strategy, Ministry of Public Health.

Notes: For 1989-1996 and 2002-2003, there was no survey on the hilltribes.

For 2002-2003, there was no survey in Bangkok.

Table 5.31 Nutritional status (weight-for-age, percentage) of children aged 0-6 years by region, 2004-2006

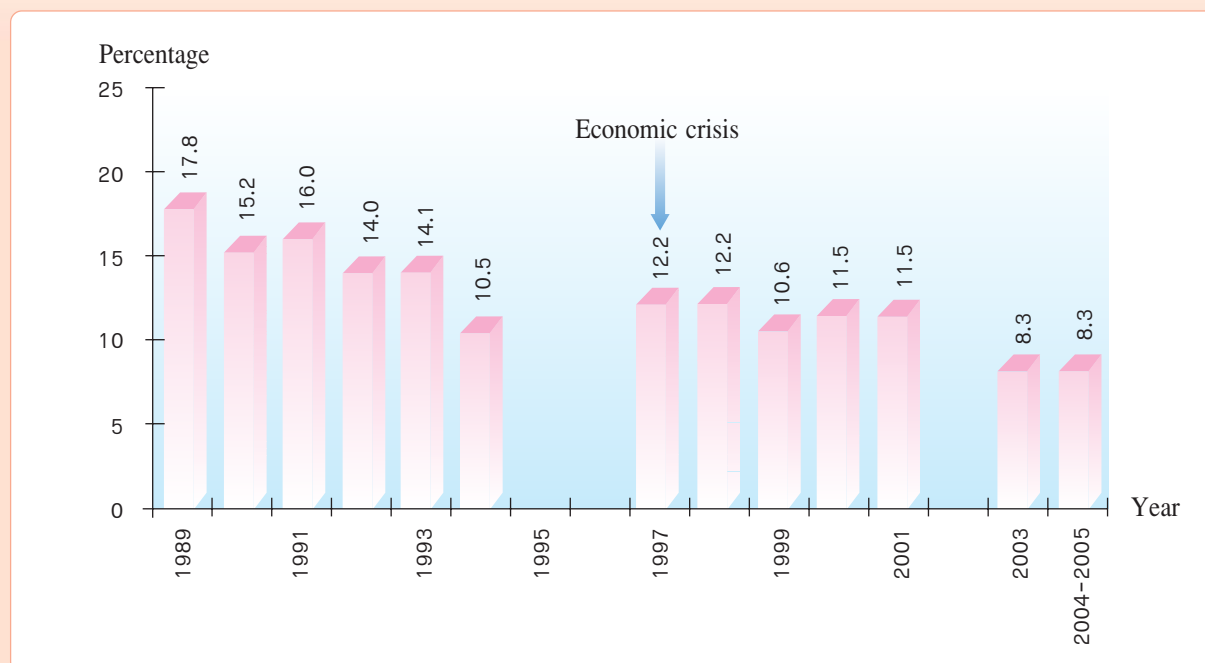
Year	Central		Northeast		North		South		Total	
	Rather low	Lower than standard	Rather low	Lower than standard	Rather low	Lower than standard	Rather low	Lower than standard	Rather low	Lower than standard
2004	2.68	1.35	8.02	3.03	7.56	2.67	5.24	2.81	6.23	2.53
2005	3.01	1.91	6.58	3.23	5.98	3.39	4.99	2.68	5.30	2.83
2006	2.90	2.81	6.44	2.98	4.74	2.72	4.36	3.27	5.19	2.94

Sources: Department of Health, Ministry of Public Health.

Note: Since 2004, the Department of Health has changed the criteria for assessing nutritional status of children.

The rate of underweight primary schoolchildren dropped steadily from 17.8% in 1989 to 10.5% in 1994. Nonetheless, during the economic crisis, such a rate increased slightly (Figure 5.55).

Figure 5.55 Proportion of underweight primary schoolchildren, 1989-2005



Source: Department of Health, Ministry of Public Health.

Note: For 1995, 1996, and 2002 there were no surveys on malnutrition among primary schoolchildren.

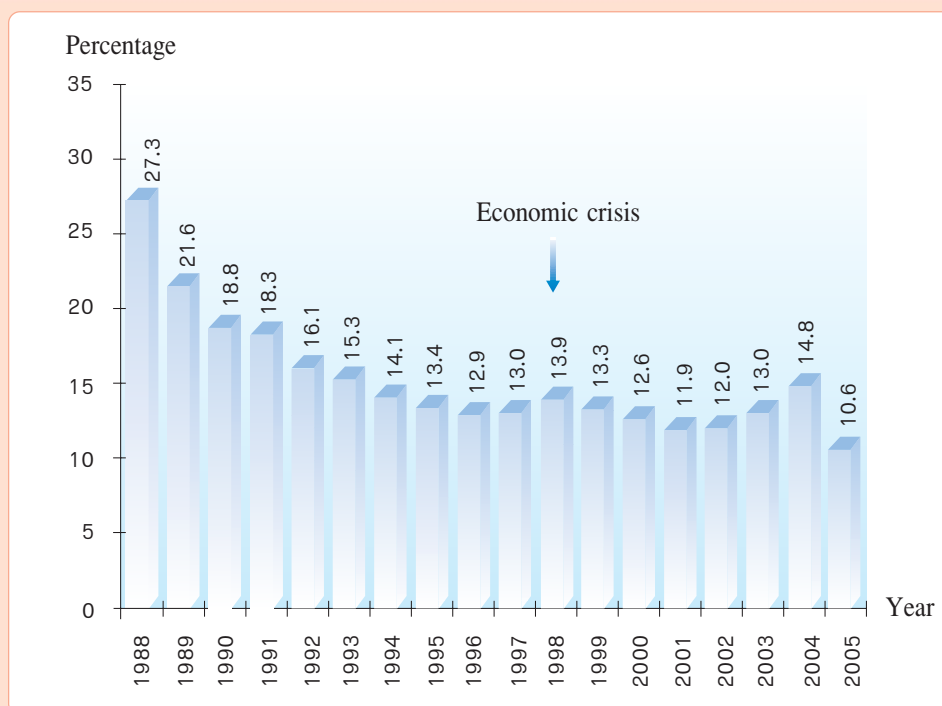
For 2003, data were derived from Thailand Diet and Nutrition Survey, Fifth Round, Department of Health, MoPH.

For 2005, data were derived from Child and Youth Survey, 2004-2005. Thai Health Promotion Foundation, 2006.

2.9.2 Anemia among Pregnant Women

The rate of anemia among pregnant women had a declining trend, i.e. dropping from 27.3% in 1988 to 12.9% in 1996, but it rose slightly during the economic crisis. However, the rate dropped again to 10.6% in 2005 (Figure 5.56).

Figure 5.56 Proportion of anaemic pregnant women (Hct <33%), 1988-2005

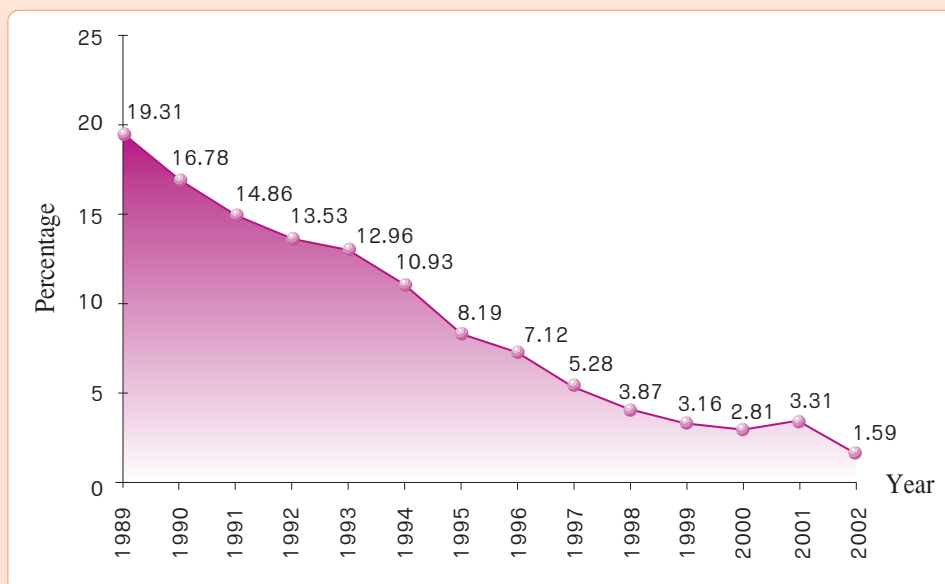


Source: Department of Health, Ministry of Public Health.

2.9.3 Iodine Deficiency Disorders

As a result of strong efforts on the elimination of iodine deficiency disorders (IDD), the prevalence of IDD in primary schoolchildren in 15 provinces with high rates of severe goitre dropped from 19.31% in 1989 to 1.59% in 2002 (Figure 5.57); and the national average of goitre prevalence rate also dropped to 1.3% in 2003. But the IDD surveillance programme for preventing intellectual problems among newborn babies revealed that the trend in iodine deficiency among pregnant women is rising (Figure 5.58).

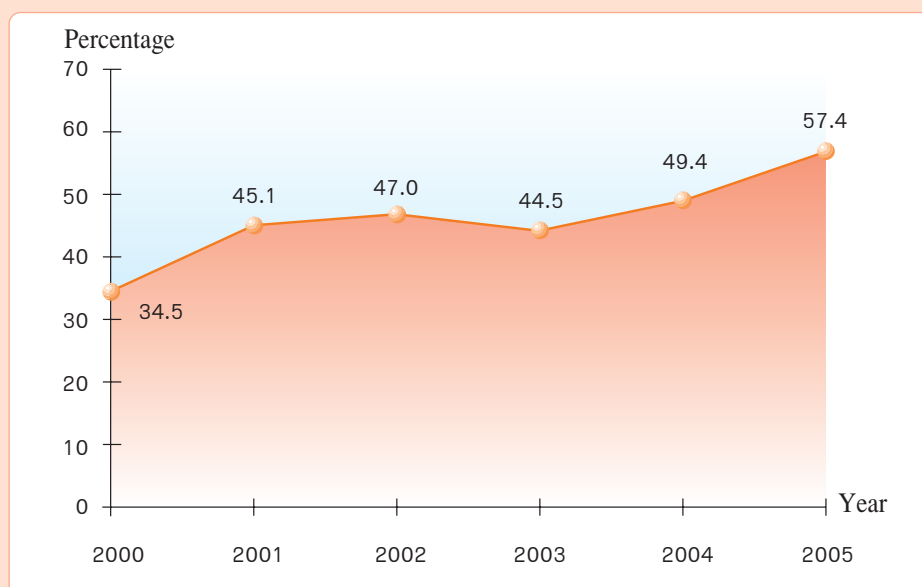
Figure 5.57 Situation of iodine deficiency disorders among primary schoolchildren, 1989-2002



Source: Department of Health, Ministry of Public Health.

Note: Data were collected only from 15 provinces with a severe goitre problem.

Figure 5.58 Percentage of pregnant women with iodine deficiency ($<10 \mu\text{g/dl}$), 2000-2005



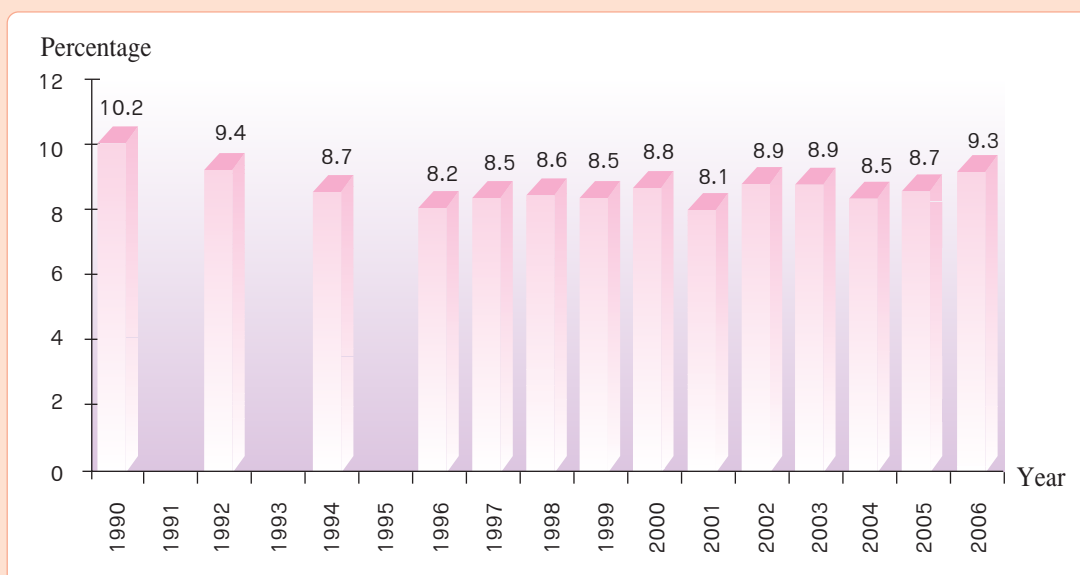
Source: Department of Health, Ministry of Public Health.



2.9.4 Neonates with Birth Weight under 2,500 Grams

Even though the rate of low birth weight (below 2,500 grams) in general has declined from 10.2% in 1990 to 9.3% in 2006 (Figure 5.59), after the economic crisis the rate of low birth weight in Thailand has been on a rising trend, particularly among the poor and unemployed population groups whose rates are higher than that among the non-poor; and the rates are highest in the South and the Northeast.

Figure 5.59 Percentage of newborns with low birth weight (under 2,500 grams), 1990-2006



Source: 1. Department of Health, MoPH.

2. For 2006, data were derived from the Child Situation Survey in Thailand, Dec 2005 - Feb 2006, National Statistical Office.

