

# 9

# Water shortages

Prepare by Health Public Policy and Health Impact Assessment Program

Although northern and southern Thailand experienced floods in 2005, Thailand faces an increasing problem of water shortages



If Thais simply seek new sources of supply, and do not address the ever-increasing demand for water, or consider the natural resource base, then Thailand will face severe water shortages.



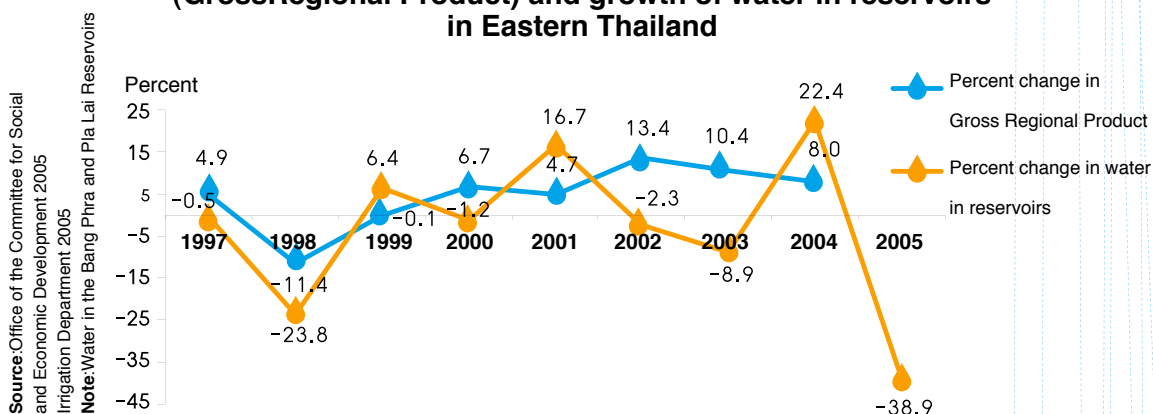
The question of water shortages has two sides supply and demand. The source of supply is rainfall. Over the last 50 years, the quantity of rainfall has been declining. In response to the decline in naturally-occurring rain, the government has resorted to artificial rain-making. In the year 2005 alone, there were 3,118 attempts at artificial rain-making, which was 2.5 times higher than in 1996. The demand for water increased 15% between 1996 and 2006, leading to a likely shortfall of 12,560 million cubic meters in 2006.

Eastern Thailand is a clear example of water shortages leading to social conflict. Regional economic output increased by 10.4%, but water levels in the Bang Phra and Nong Pla Lai dams were 8.9% below their usual levels. The government decided to divert water from neighboring areas to address the problem, but then faced protests from people in the neighboring areas, who were also experiencing water shortages.

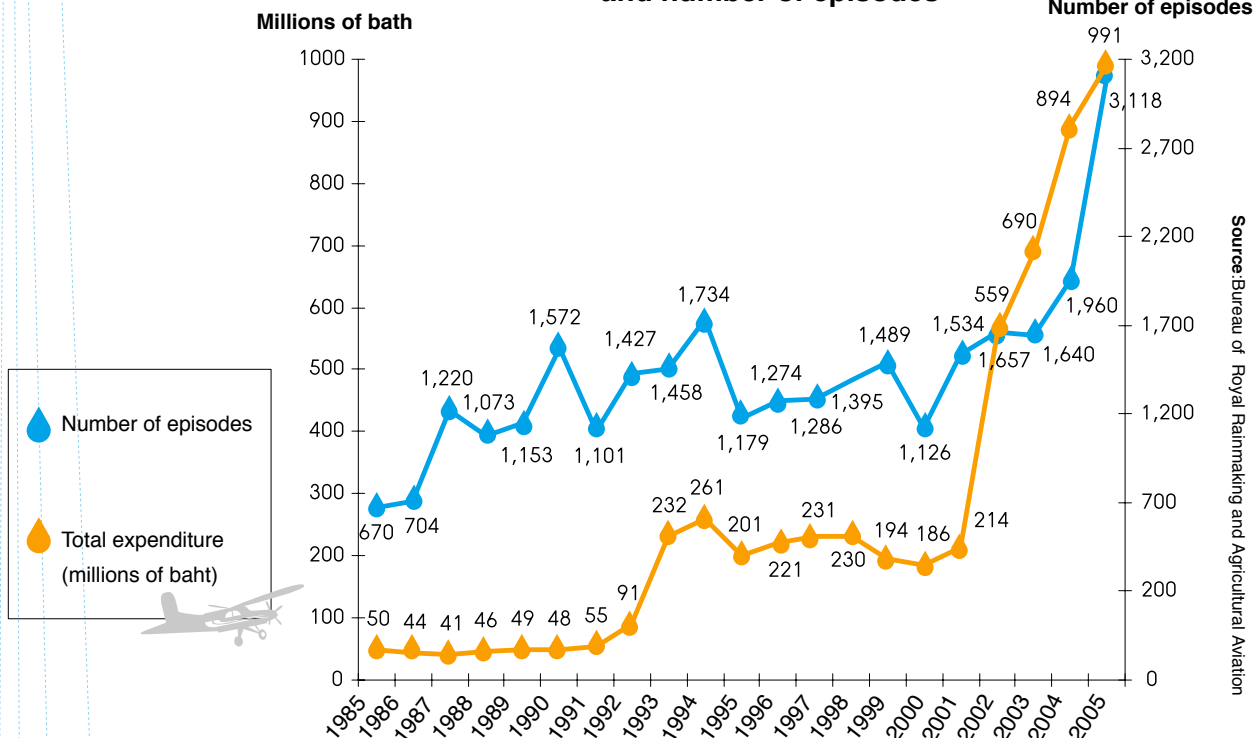
When faced with the ever-increasing demand for water, is the government capable of managing water equitably? Could it effectively enforce water rationing? If the answer to these questions is no, then we should prepare ourselves for severe water crises in the near future.



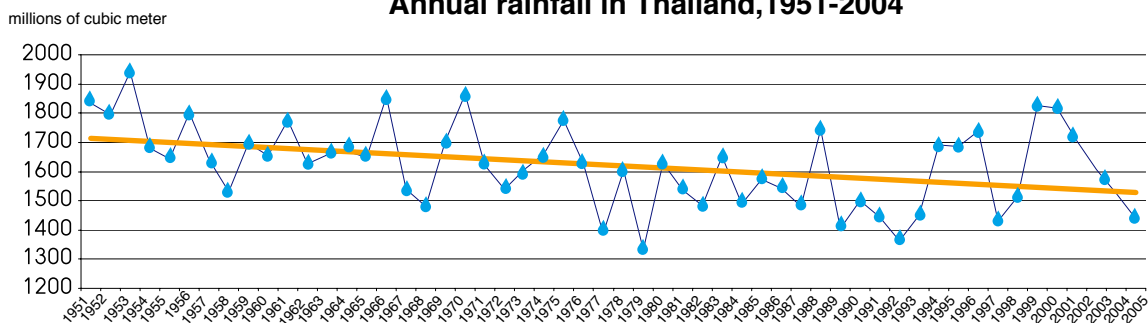
**Comparison between growth in regional output (Gross Regional Product) and growth of water in reservoirs in Eastern Thailand**



### Expenditure on rain-making, and number of episodes



### Annual rainfall in Thailand, 1951-2004



### Demand for water, by river basin, 1996 and 2006

River basin	Demand for water		%	Shortfall		%
	Millions of cubic meters per year			Millions of cubic meters per year		
	1996	2006	increase	1996	2006	increase
North	10,655	13,065	22.6	1,408	2,792	98.3
Center	45,613	47,336	3.7	2,179	3,089	41.8
Northeast	8,409	11,814	40.5	1,003	2,637	162.9
East	4,761	5,935	24.6	591	756	27.9
South	6,282	9,345	48.7	1,132	3,286	190.3
Overall	75,720	87,495	15.5	6,313	12,560	98.9

Source: Department of water resources, 2004