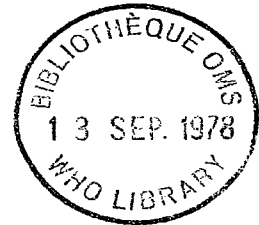




REPORT ON A VISIT TO THAILAND IN PREPARATION FOR THE
CERTIFICATION OF SMALLPOX ERADICATION, MAY 1978

by

Dr R. N. Basu



1. Introduction

In the recommendations of the Consultation on Worldwide Certification of Smallpox Eradication, convened in Geneva 11-13 October 1977, Thailand was included in a group of five countries which it was considered required "visits by Global Commission members or consultants and/or WHO staff . . . to verify and document the smallpox eradication status . . .".

The Extensive communications of Thailand with India and Bangladesh which were smallpox endemic until 1975 indicated the need for evaluation, particularly of the areas where Thailand borders Burma and Laos. A visit by a member of the Global Commission was suggested and in this capacity Dr R. N. Basu (Assistant Director-General of Health Services, Government of India, New Delhi), member of the Global Commission, visited Thailand 8-27 May 1978 for initial appraisal, field visits and preparation of documentation.

2. Activities undertaken

The main activities included discussion with senior officials of the Ministry of Public Health, study of related reports, visits to several health facilities and preparation of a document, Smallpox Eradication in Thailand.

2.1 Discussion. A discussion was conducted with senior officers including Dr Nadda Sriyabhaya, Deputy Director-General, Department of Communicable Diseases, Dr Sujarti Vatnasean, Director, Epidemiology Division of Ministry of Public Health, and Dr D. Stern, Acting WHO Representative to Thailand, regarding the programme of the three-week visit. This was followed by a courtesy call to the Deputy Under-Secretary, Dr Nuam Settachon. During the visit to various institutions it was possible to discuss the health programme in general and smallpox eradication in particular, with the local officers. Some of the key persons who were interviewed are named here:

Dr K. Chatiyononda, Virus Research Institute, Bangkok
Dr Prakorb Boonthai, Infectious Diseases Hospital, Nonthaburi
Dr Pralomp Sakuntanaga, Communicable Disease Centre, Bangkok Metropolis Area
Dr P. Kurasol, Chief Disease Investigation, Epidemiology Division
Mr Pichit Laksanasomphone, Deputy Governor, Nakhon Phanom Province
Dr Arim Swarachorn, Chief Medical Officer, Ratchburi Province
Dr Banyat Atiburanakul, Chief Medical Officer, Nakhon Phanom Province
Dr Lek Manomaindom, Chief Medical Officer, Songkhla Province

2.2 Study of reports. The "Country Profile" prepared by the Government of Thailand and the World Health Organization gave necessary background information on the health administration and smallpox eradication programme in the country. The report of Dr J. Cervenka, short-term consultant on health information systems provided the current epidemiological surveillance status. A pockmark and vaccination scar survey sponsored by WHO in 1969, not only presented

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the vaccination status of children, but also stated the inability to detect any child with facial pockmarks. The paper presented by the Government of Thailand during the interregional seminar on smallpox eradication, held in Bangkok in 1967, included epidemiological data related to eradication of smallpox in the country.

2.3 Field visits. In addition to visits to various departments of the Ministry of Public Health, Virus Research Institute, Infectious Diseases Hospital and Bangkok Metropolis Area, it was decided to select one border province from each region, for field study. The provinces of Chiangmai (bordering Burma), Nakhon Phanom (bordering Laos), Ratchburi (bordering Burma) and Songkhla (bordering Malaysia) were visited (Fig. 1). In each of these four provinces, the provincial health office, hospital, medical and health centre (which includes inpatient facilities), health centre, midwifery clinic, and other health institutions, as well as schools and villages, were contacted. The concerned officers including doctors, sanitarians, nurses, midwives, teachers, and village headmen, were interviewed regarding their knowledge of any smallpox case, and their role in disease surveillance and the immunization programme. The main activities, especially reporting of notifiable diseases and smallpox vaccination, were studied in each unit. During the visits four provincial health offices, one governor's office, two hospitals (350 beds), six regional offices (for tuberculosis, malaria, epidemiology and communicable disease control), three district health offices, three medical and health centres, two health centres (at tambon level), two midwifery clinics, six villages, one refugee camp, and one school were covered.

2.4 Report on smallpox eradication. A report on smallpox eradication in Thailand has been prepared providing background information including health infrastructure, history of smallpox eradication, epidemiology of smallpox, and surveillance and vaccination activities. This document aims to provide the Global Commission with the evidence necessary for certification of smallpox eradication.

3. Main field observations

The objectives of the field visits were:

- (i) to determine if there was any evidence of smallpox foci having occurred since the last reported case in September 1962;
- (ii) to study the disease surveillance system, with special reference to rash with fever cases; and
- (iii) to observe the smallpox vaccination programme.

Interviews with local staff, study of records, and field assessment in villages were carried out. The main observations are described below.

3.1 Inquiry of medical and paramedical staff and leading citizens. Medical officers, paramedical personnel and important citizens (village leaders) were asked if they knew about smallpox and whether they had seen a case in their lifetime. Further inquiries were made about chickenpox cases and persons with facial pockmarks. The answers are summarized below.

Category	Total interviewed	Seen smallpox case	Not seen smallpox case
Medical officer	31	10	21
Paramedical	32	2	30
Citizens	30	2	28

Among the 10 doctors who had seen smallpox cases four of them saw the cases outside Thailand during their training in India and Indonesia. Four others were involved in control of known smallpox outbreaks. The remaining two doctors remembered seeing smallpox cases during their young life, about 30 years previously. Of the two paramedical personnel who had seen smallpox, one was a sanitarian posted in Nakal district, Nakhon Phanom Province in 1946 when there was a smallpox outbreak with 50 cases. The other was a midwife who had seen three cases in 1959, in Prik tambon, Songkhla Province. The cases seen by the two villagers had occurred more than 20 years earlier.

3.2 Pockmark and vaccination scar survey. During the visits all encountered were examined but no facial pockmarks were noticed. A pockmark and vaccination scar survey of children was carried out on a limited scale in villages, clinics and a school. No child with pockmarks was detected. The vaccination scar survey findings are summarized below.

Age-group	Total examined	Vaccination scar		% unprotected
		Present	Absent	
0-1	15	8	7	46.6
1-4	77	57	20	25.9
5-10	118	107	11	9.3

Most of the vaccinations are performed in clinics, the majority (67.3%) in children older than one year. Data on vaccination performance, age-wise, was available at peripheral units.

3.3 Surveillance of notifiable disease. "Individual Morbidity Cards" for the 32 notifiable diseases are used in hospitals and medical and health centres. Epidemiological workers posted in the provincial health offices, incorporated the data in a Weekly Epidemiological Report, before sending the card to the Ministry of Public Health for detailed analysis. Epidemiological workers were able to say the total number of cards, classified by disease, received during a particular period. No register of notifiable disease was maintained at the district medical and health centres. The morbidity card is yet to be used in health centres and midwifery clinics, where there is no doctor. However, the sanitarians and midwives report some acute diseases like cholera, malaria and dengue to the higher authorities.

In Nakhon Phanom Province, out of a total of 4883 morbidity cards in 1977 there were three chickenpox cases and 27 measles cases. In Ratchburi and Chiangmai Province, during the same period, two chickenpox in each and 87 and 88 measles cases respectively were reported. The southern regional epidemiological office (covering 14 provinces) recorded 130 chickenpox cases in 1977 (0.23 per 10 000) and 399 measles cases (0.72 per 10 000) without any deaths. In the central region (covering 21 provinces) 4835 chickenpox and 243 measles cases were notified during the same year.

3.4 Refugee camp. There are several camps maintained by the Government of Thailand for international migrants, while a final decision is made about their future. Health services have been organized in the camps by the administration. One such camp was observed in Songkhla for the refugees from Viet Nam, who have reached the place by boat. Another camp at Nakhon Phanom was studied. The town is situated on the bank of the Mekong river and on the other side, villages and towns of Laos can be seen. Since the change in administration in Laos many people have started to migrate to Thailand. A camp at Napoe, which was visited, can accommodate 600 persons. On the day of the visit, 62 families with 356 persons were staying in the camp. Of the 62 families, 32 were from Laos, 18 from Viet Nam and 12 were Chinese. None of the family members had seen a smallpox case in their countries of origin.

A vaccination survey conducted in Napoe camp showed the following:

Age-group	Number examined	Number with vaccination scar
0-1	11	6
1-4	44	33
5-10	25	24

None of the camp dwellers had facial pockmarks.

3.5 Hospitals. The Infectious Diseases Hospital at Nonthaburi admits cases of all infectious diseases. The provincial hospitals and medical and health centres have no separate infectious diseases blocks but convert wards for admitting infectious diseases in times of need. During the visit, cholera and acute gastroenteritis cases were found in separate rooms of the hospitals. Except the Infectious Diseases Hospital, no institution had ever admitted a smallpox case. Chickenpox and measles cases were not routinely admitted. In each hospital there is a well-baby clinic where immunization including smallpox vaccination is performed.

There is a communicable disease section in each provincial health office which coordinates the disease control activities including investigation and immunization in the area. Hospital authorities are expected to fill Individual Morbidity Cards and send them to the provincial health office.

3.6 Regional epidemiological office. There are four regional epidemiological offices in the country, each serving 14-21 provinces. There is one medical officer and five to eight sanitarians in each office. Their main functions are to:

- (i) supervise, guide and follow-up epidemiological workers posted at provincial health offices;
- (ii) collect and analyse data on disease incidence;
- (iii) study disease problems and conduct field investigations;
- (iv) train health staff.

During the field visits, a three-day annual refresher course for epidemiological workers of the northeast region was observed at Chiangmai. Senior officers from the Epidemiology Division of the Ministry of Public Health participated in this training. A two-week orientation course in epidemiological surveillance was inaugurated at Ratchburi during the tour.

Regional offices have been provided with four wheel drive vehicles for sanitarians to visit provinces, to assist the local staff in disease investigation.

3.7 Regional Communicable Disease Control Office. There were four plague control units in the country. No case of plague has been reported from 1953. Three years ago these units were converted to regional communicable disease control offices. The main function of these units is to assist the provincial health office in controlling large or unusual outbreaks. At the time of the visits the unit at Banphong was found to be busy with a spraying operation for a large dengue haemorrhagic fever outbreak and disinfection and drug distribution in areas with large numbers of acute diarrhoea cases. The southern regional office was conducting a project for rabies control. Each unit has about eight health workers.

The regional malaria organization has separate field staff distributed throughout the country. These health workers are supposed to notify any dangerous infectious disease they come across.

3.8 Surveillance in remote areas. The Government of Thailand is very interested in extending health services to the remote areas. There are several types of mobile units functioning in the country to serve the rural populations which have no health facility nearby. The programmes of these mobile units are prepared in advance for a period of two to three months in the provincial health office. Each hospital organizes a mobile unit once or twice a week and the doctors also provide a voluntary service at weekends in selected areas. In addition there is a mobile unit which moves from village to village on a fixed schedule. In addition to treatment of minor ailments and immunization services, serious cases are referred to the hospital and a helicopter is utilized on certain occasions.

All medical and health centres have been provided with transport to take the staff to peripheral units. Eighty per cent. of the field staff are provided with motorcycles to facilitate periodic visits to the villages.

The border police force is concerned with serious sickness in the border villages. In 1961 this organization arranged for a visit of the Director, Epidemiology Division, by helicopter to a village near the Burmese border (Kanchanburi) for examination of a suspect smallpox case.

Malaysia - Thai border health conferences are held periodically to exchange epidemiological information concerning border provinces. In the eighth conference, in 1975, survey findings on smallpox immunization status in the border areas were presented.

3.9 Health volunteers scheme. In addition to the village headman, who receives an honorarium from the Ministry of the Interior, village health communicators and village health volunteers have been identified and trained for development of primary health care. The communicators' primary duty is to inform any sickness or health problem to the volunteer. The volunteer liaises with the health staff and arranges for necessary services. The volunteers interviewed were not aware of any smallpox cases in their areas. The death registers maintained at the sub-districts (tambons) were examined and no death due to smallpox was recorded. Health volunteers are also functioning in Bangkok Metropolis Area.

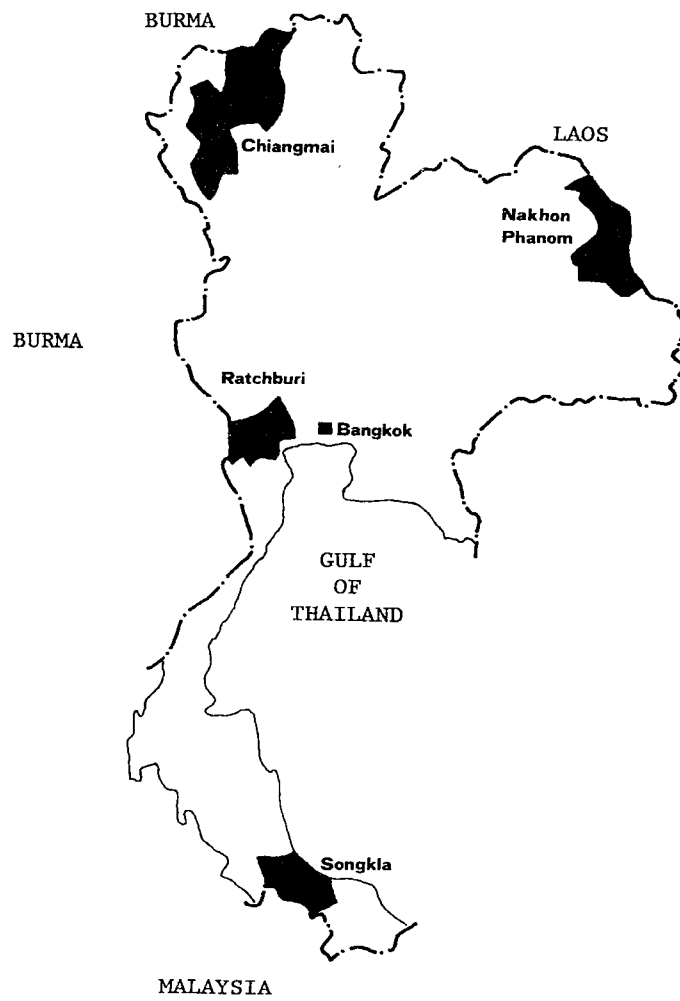
4. Conclusion

Smallpox is classified as a "dangerous infectious disease" to be notified immediately according to the Thai Public Health Act. In addition to the health organization, the general administration is concerned with this disease. No evidence of smallpox transmission (since the last reported case in September 1962) was discovered in any of the areas visited. With the increased utilization of general health services and specialized programmes including routine disease reporting, the surveillance network in Thailand has been sufficiently sensitive to have detected smallpox transmission, should it have occurred since then.

5. Acknowledgement

The Consultant is grateful to the cooperation rendered and courtesy shown by staff of the Ministry of Public Health, Virus Research Institute, Infectious Diseases Hospital, provincial health offices and other institutions visited. Dr Nadda Sriyabhaya, Deputy Director-General, Department of Communicable Disease Control, and Dr D. Stern, Acting WHO Representative to Thailand, provided the support necessary for the completion of the assignment on schedule. Special mention has to be made of Dr Sujarti Jatnasean, Director, Epidemiology Division, who prepared a useful field programme and accompanied the Consultant during the field trips to ensure all facilities for collection of necessary data and information.

FIG. 1. MAP OF THAILAND SHOWING BANGKOK AND PROVINCES VISITED BY COMMISSION MEMBER



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