

REGIONAL COMMITTEE

WP/RC7/7  
22 June 1956

Seventh Session  
Manila  
7-13 September 1956

ORIGINAL: ENGLISH

Agenda Item 13

MALARIA ERADICATION

1 INTRODUCTION

1.1 During the sixth session of the Regional Committee, a document on malaria eradication<sup>1</sup> was presented, explaining the urgent need for governments to accelerate and intensify their antimalaria campaigns so that malaria eradication might be achieved before the development of resistance of the vector species to insecticides. It also summarized the status of antimalaria campaigns in the Western Pacific Region and the action taken by the Eighth World Health Assembly<sup>2</sup> and the Executive Board, at its fifteenth<sup>3</sup> and sixteenth sessions.<sup>4</sup>

1.2 Following consideration of the document, the Regional Committee adopted resolution WP/RC6.R13 as follows:

"The Regional Committee,

Having considered the report on malaria eradication submitted by the Regional Director,

Noting the recommendation of the Malaria Conference for the Western Pacific and South-East Asia Regions in Baguio, in November 1954, that the ultimate goal of a nationwide malaria control programme be the eradication of the disease,

Considering resolution EB15.R67, adopted by the Executive Board at its fifteenth session, calling attention to the urgency and importance of malaria eradication,

Noting resolution WHA8.30 of the Eighth World Health Assembly requesting governments to intensify plans of nationwide malaria control so that malaria eradication may be achieved and the regular insecticide spraying campaigns terminated before the potential danger of a development of resistance to insecticides in anopheline vector species materializes,

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<sup>1</sup>Unpublished document WP/RC6/15

<sup>2</sup>Resolution WHA8.30, Off. Rec. Wld Hlth Org. 63, 31

<sup>3</sup>Resolution EB15.R67, Off. Rec. Wld Hlth Org. 60, 27

<sup>4</sup>Resolution EB16.R16, Off. Rec. Wld Hlth Org. 65, 5

Realizing that in some countries in the Western Pacific Region, the problem of finding an effective and economical method of eradicating malaria has not yet been solved, but that pilot projects have been started, or are expected to start, in areas to help solve this problem,

Realizing, further, that lack of adequately trained local personnel as well as financial considerations have prevented many countries in the Region from undertaking a more vigorous malaria control campaign,

Taking note of the establishment of a Malaria Eradication Special Account for the purpose of assisting governments in undertaking research and in providing supplies, equipment and technical advice, to facilitate the world-wide eradication of malaria;

REQUESTS governments to intensify their plans of malaria control so that malaria eradication may be achieved as soon as possible;

STRESSES the importance of intra- and inter-regional co-ordination of malaria campaigns;

REQUESTS the Regional Director to obtain information from governments of malarious countries with a view to determining what assistance would be needed to expedite the eradication of malaria from the Region."

## 2 ACTION TAKEN BY THE REGIONAL OFFICE

### 2.1 Intra- and inter-regional co-ordination of malaria campaigns

In an effort to promote the co-ordination of malaria campaigns, particularly among countries with common borders, the Regional Office convened a malaria conference in Phnom-Penh, Cambodia in January 1956, and the First Borneo Inter-territorial Malaria Conference in Kuching in February 1956.

2.1.1 The Phnom-Penh Conference was attended by representatives of the Governments of Cambodia, Laos, Thailand and Vietnam, as well as representatives of the United States International Co-operation Administration (ICA) in the same countries. Among other things, the conference recommended<sup>1</sup> the establishment of an Antimalaria Co-ordination Board composed of a representative from each of the countries represented and requested WHO to serve as secretariat and to provide technical assistance. Three of the four Governments have agreed to the establishment of the Board and have nominated their representatives. The first meeting of the Board will be convened by WHO as soon as the remaining Government has communicated its agreement to the establishment of the Board.

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<sup>1</sup>The recommendations of the Phnom-Penh conference appear as Annex I to this paper.

2.1.2 The First Borneo Inter-territorial Malaria Conference was attended by representatives of Brunei, North Borneo and Sarawak, a representative of UNICEF, and WHO malaria staff. The conference stressed the need to co-ordinate antimalaria campaigns with particular reference to timing, geography and intensity in countries with common borders.<sup>1</sup> A second meeting was held in May 1956 with a view to discussing technical problems encountered in the field and co-ordinating the campaigns along the border areas. Hope was expressed by the Governments of Brunei, North Borneo and Sarawak that a further co-ordination of antimalaria programmes with the Government responsible for the administration of the remainder of the island of Borneo would soon be arranged, and WHO has taken steps toward this direction.

## 2.2 Intensification of antimalaria campaigns

2.2.1 Member States have been encouraged to intensify their anti-malaria programmes so that malaria eradication may be achieved as soon as possible. Technical information on malaria and its control or eradication has been sent to the government malaria services from time to time. Technical advice has also been provided by visits of the Regional Malaria Adviser. Malaria fellowships have been awarded upon request.

2.2.2 A questionnaire has been sent to Member States with a view to determining what assistance will be needed to expedite the eradication of malaria from the Region. Funds for supplies, equipment and staff, as well as trained personnel, appear to be the greatest needs of Member States in undertaking intensified antimalaria campaigns. The replies received have been transmitted to WHO Headquarters to permit a global planning of the foreseeable needs for assistance in malaria-eradication programmes.

2.2.3 A malaria advisory team and a malaria consultant are being assigned to Taiwan, China, in late 1956 and to the Philippines in early 1957 to assist in evaluating and assessing the eradication campaigns and to help in organizing a system of malaria surveillance. Short-term fellowships are also being awarded to senior staff to observe malaria surveillance activities in other advanced programmes. This assistance will be provided from WHO Headquarters funds for malaria eradication.

2.2.4 Good progress is being made in pilot programmes assisted by WHO in finding the answers to some technical problems related to stopping malaria transmission by residual insecticides in certain areas.

## 3 MALARIA PROGRAMMES IN THE WESTERN PACIFIC

3.1 The present status of malaria programmes receiving assistance from WHO in the Western Pacific under the United Nations Technical Assistance

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<sup>1</sup>A copy of the report of this conference appears as Annex II to this paper.

Programme has been described in the Regional Director's report.<sup>1</sup> Assistance from UNICEF and ICA has been of considerable value in the implementation of programmes which otherwise had to be postponed or carried out on a smaller scale. The malaria-eradication projects in Taiwan, China, and in the Philippines are proceeding satisfactorily, while the malaria-control programmes in Brunei, Cambodia, Netherlands New Guinea, Sarawak and Vietnam are gradually expanding; an excellent indication of the government's interest in the eradication of the disease. Efforts are also being made by other governments to train staff and to establish, or strengthen, malaria services with a view to undertaking an intensified programme. It appears that while eradication may be achieved in most areas in the Region by residual insecticides, additional measures may be found necessary in some cases.

#### 4 MALARIA ERADICATION SPECIAL ACCOUNT

4.1 The Executive Board at its seventeenth session adopted resolution EB17.R60,<sup>2</sup> establishing a Committee on Malaria Eradication to act between sessions of the Board and laid down its terms of reference.

4.2 At its seventeenth session, the Executive Board also considered and accepted two voluntary contributions to the Malaria Eradication Special Account offered by China and Brunei. The former contribution consisted of spraying equipment at a value of \$4,134 and the latter of 30,000 Straits dollars or the equivalent of \$9,901. Since the seventeenth session of the Board, a further contribution of 200,000 D. Marks, or the equivalent of \$47,619, was offered by Germany and a contribution of 1,500 Iraqi Dinars, equivalent to \$4,200, was offered by Iraq; both were accepted by the Committee. The total amount of contributions to the Special Account is now \$65,854.

4.3 The Ninth World Health Assembly adopted resolution WHA9.61 which among other things requested the Director-General again to invite contributions from governments, non-governmental organizations and private sources to the Malaria Eradication Special Account.

4.4 At its eighteenth session, the Executive Board adopted resolution EB18.R16 revising the terms of reference of the Committee on Malaria Eradication and authorizing the Director-General to use credits received in the Special Account for existing or new malaria eradication programmes or projects, wherever required.

#### 5 PROPOSED RESOLUTION

The following draft resolution is submitted for the consideration of the Regional Committee:

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<sup>1</sup> Unpublished document WP/RC7/3  
<sup>2</sup> Off. Rec. Wld Hlth Org. 68, 25

The Regional Committee,

Having considered the report on malaria eradication submitted by the Regional Director<sup>1</sup>,

Noting the development of more intensive malaria campaigns in some countries in the Region and the progress being made to promote intra- and inter-regional co-ordination of malaria programmes,

Noting with appreciation the valuable assistance given by the United States International Co-operation Administration and by UNICEF to some countries in the Region to intensify their malaria campaigns,

Hoping that UNICEF will continue to support the expansion of malaria programmes as a step to expedite the eradication of the disease,

1. ENDORSES the resolution adopted by the Ninth World Health Assembly<sup>2</sup> inviting contributions from governments, non-governmental organizations and private sources to the Malaria Eradication Special Account,
2. INVITES the attention of governments again to the need to intensify their malaria-control programmes so that malaria eradication may be achieved as early as possible, by stages under certain circumstances, with a view to ultimate economy in expenditure and to obviate the potential danger of development of resistance of anopheline vector species to insecticides,
3. REQUESTS the Regional Director to provide as much assistance as possible to Member States with a view to eradicating malaria from the Region as soon as possible.

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<sup>1</sup>Unpublished document WP/RC7/7

<sup>2</sup>Resolution WHA9.61

RECOMMENDATIONS AND RESOLUTION ADOPTED

1. Government Support

The Conference

Realizing that government support for antimalaria work should be continuous to provide proper control and surveillance;

Noting with satisfaction that plans for national antimalaria programmes with eradication of the disease as the ultimate goal are being developed;

RECOMMENDS that the participating governments establish permanent antimalaria services with adequate support to ensure their successful continuation toward malaria eradication.

2. Antimalaria Workers

The Conference

Recognizing the paramount importance of having adequate numbers of trained personnel to carry on the work of the antimalaria services;

Noting the lack of inducement for suitable personnel because of the unusual difficulties and hardships of the duties involved;

Noting, further, that the experience of the technicians would make them valuable workers in future control of other insect-borne and related communicable diseases;

RECOMMENDS

1. that the governments establish permanent positions for anti-malaria technicians;
2. that in establishing grades and salaries for these positions, suitable recognition be given to the high level of technical responsibility and the hardships associated with field work.

### 3. Training

The Conference

Recognizing that antimalaria services are highly specialized and technical;

Noting the insufficiency of trained personnel and training facilities;

RECOMMENDS that plans for permanent antimalaria services include adequate provision for the training of technical personnel through local and external facilities.

### 4. Malaria Statistics

The Conference

Realizing that reliable malaria statistics are essential to any country in which a malaria control programme is undertaken;

Noting a critical lack of uniform and accurate statistics for the proper development of effective programmes;

RECOMMENDS that the Ministries of Health concerned urgently consider this need and establish an effective malaria reporting system to obtain accurate morbidity and mortality data.

### 5. Standardization of Procedures and Exchange of Information

The Conference

Recognizing that the antimalaria services of all of the participating countries are directed toward malaria eradication, employ essentially the same basic methods, and encounter similar operational problems;

Noting that technical findings and experiences in meeting such operational problems can be exchanged advantageously among the national antimalaria campaigns;

RECOMMENDS that the Ministries of Health concerned give attention to

1. the standardization of procedures and reports to facilitate exchange of accurate and comparable information;

2. the dissemination of this information by exchange of publications, periodic reports and informal meetings.

## 6. Health Education

The Conference

Realizing the importance of having the co-operation of the public in antimalaria campaigns;

Noting that in some areas antimalaria activities have been hindered by lack of public co-operation;

RECOMMENDS that a strong health-education programme be incorporated in planning and implementing antimalaria campaigns, for the purpose of ensuring the public co-operation necessary for success.

## 7. Antimalaria Co-ordination Board

The Conference

Having discussed the importance of achieving close co-ordination of national antimalaria programmes, particularly among countries with common borders;

Realizing that co-ordination of antimalaria programmes with particular reference to timing, geography and intensity requires cordial co-operation among neighbouring countries;

Noting the desire of the members of the conference to share problems and assist one another in effecting successful antimalaria programmes;

RECOMMENDS

1. that there be established an "ANTIMALARIA CO-ORDINATION BOARD", composed of one member from each of the countries represented in this conference, to convene at least once a year for the purpose of co-ordination of antimalaria campaigns;
2. that the meetings of the Board be rotated among the co-operating countries;
3. that the World Health Organization assist in convening the meetings and in serving as the secretariat of the Board, as well as in providing technical advice;



4. that other neighbouring countries be encouraged to join the Board.

## 8. VOTE OF THANKS

### The Conference

Expresses its deep appreciation and thanks to all those who have made possible its success

1. to the Royal Government of Cambodia for their hospitality and the facilities provided for the meeting;
2. to His Excellency, the Minister of Public Health of Cambodia, the Director-General of Health and the staff of the Ministry of Public Health, for their hospitality and for the facilities and courtesies they have extended to the members of the conference;
3. to the Governments of Cambodia, Laos, Thailand and Vietnam, for their co-operation in facilitating the participation of their representatives;
4. to the United States Operations Missions in Cambodia, Laos, Thailand and Vietnam, for their co-operation and assistance in the arrangements for the conference;
5. to the Director of the United States Operations Mission in Cambodia and Mrs. L. Metcalfe Walling, for their kind hospitality;
6. to Miss E. Gilliat of the United States Operations Mission in Cambodia, for her valuable assistance in translation and interpretation during the conference.

WORLD HEALTH  
ORGANIZATION

CONFERENCE ON MALARIA  
KUCHING, SARAWAK  
22-24 February 1956

6 March 1956

REPORT OF THE FIRST BORNEO INTER-TERRITORIAL  
MALARIA CONFERENCE

The First Borneo Inter-territorial Malaria Conference, convened by the World Health Organization for the purpose of planning co-ordination of antimalaria campaigns in Brunei, North Borneo and Sarawak, was opened at the Council Chamber of the Secretariat Building in Kuching, on 22 February 1956, by His Excellency the Governor of Sarawak, Sir Anthony Abell. It was attended by the Directors of Medical Services of North Borneo and Sarawak, the State Medical Officer of Brunei, the Resident Representative of the UNICEF Thai Area Mission, the WHO malaria project staff from North Borneo and Sarawak, and the WHO Regional Malaria Adviser for the Western Pacific.

Dr. W. Glyn Evans, Director of Medical Services of Sarawak, was elected Chairman. The first two days of the conference were devoted to discussions on the progress and expansion of the antimalaria programmes in Brunei, North Borneo and Sarawak, and on ways and means of co-ordinating these programmes with a view to controlling malaria and ultimately achieving the eradication of the disease. A session was utilized to examine and discuss the sprayers used in the operations. The meetings were informal in character. Dr. F.J. Dy, WHO Regional Malaria Adviser, served as secretary.

COUNTRY MALARIA PROGRAMMES

Brief discussions were held on the progress and contemplated expansion of the malaria programmes in the three territories.

Brunei

The population of Brunei is estimated to be about 55,000, of which some 40,000 live in towns and about 15,000 in rural areas. Residual spraying with DDT was started in late 1953 with technical assistance from WHO staff. In 1955, the residual spraying operations covered 2,550 houses in 152 villages in an area of about 500 sq miles, giving protection

to approximately 15,500 people. Spraying was conducted every six months with a dose of 2 grams DDT per sq metre. In Kuala Belait and Seria, the British Malayan Petroleum Company undertakes the operations. Brunei town itself is claimed to be malaria free, but residual spraying is conducted upon request of the house-owners, chiefly for the control of nuisance mosquitoes.

The antimalaria operations are conducted by two antimalaria assistants with a complement of foremen and labourers working under the supervision of health inspectors. A malaria survey was conducted under the supervision of a WHO malariologist prior to the first round of spraying in 1953, and it was considered highly desirable to conduct another malaria survey with assistance from the staff of either the malaria team in North Borneo or that in Sarawak.

#### North Borneo

Preliminary observations are being made preparatory to the first residual spraying operations which will start in April 1956. Three areas have been selected in the Interior Residency for detailed observations, namely, an area to be sprayed with DDT, another area to be sprayed with dieldrin, and a third area which will not be sprayed but which will serve as a comparison area. In spite of the experience gained in the Sarawak malaria pilot project, it was considered essential to continue the observations in the pilot project in North Borneo for at least one year, in view of the apparent differences in the bionomics of A. leucosphyrus leucosphyrus (vector species in Sarawak) and A. leucosphyrus balabacensis (vector species in North Borneo). There are also some differences in the type of housing in the two territories which might affect the conduct of operations. The experience gained in the pilot project in North Borneo will be utilized in the development and expansion of the programme. This pilot project is also being utilized to train local personnel.

One of the objects of the pilot project is to determine if one round of spraying per year would be adequate to protect the people against malaria.

In addition to the pilot project, it has been planned to spray the houses of from 25,000 to 30,000 people in either the southwestern or western part of the territory in 1956.

Sarawak

The Sarawak malaria pilot project, which was started in 1952, has shown that malaria transmitted by A. leucosphyrus leucosphyrus can be controlled by residual insecticides. Observations are still being made in the Baram district where the first round of spraying was conducted. In 1955, the team sprayed the houses of about 12,000 people in the Baram district with a dose of 2 grams DDT per sq metre. The houses of the same number of people in an area in the First Division were sprayed with dieldrin water dispersible powder in March 1955. Two dosages were used, 0.25 gram and 0.50 gram per sq metre. Observations are being made to determine if one spraying a year with either DDT or dieldrin is sufficient to provide the necessary protection. Plans are being made for the expansion of the spraying operations in 1956.

SPECIFIC PROBLEMS

The conference discussed a number of problems connected with the antimalaria campaigns in the three territories, of which the most important are the following:

1. Personnel

There is a scarcity of trained antimalaria workers, and in at least one of the territories, it has been difficult to keep personnel after they have been trained, due to the temporary nature of the appointments. It was decided to raise this question with the respective governments with a view to attracting more suitable antimalaria personnel and retaining them in the service by providing security of tenure.

2. Movement of population

Great concern was expressed about the traffic in some areas across the border from Kalimantan (Indonesian Borneo), where it is believed that no active antimalaria campaigns are undertaken. It was feared that the absence of an antimalaria programme in the border areas of Kalimantan would adversely affect the campaigns, particularly in two of the three territories. This would be a serious problem when territory-wide spraying operations are undertaken for a limited number of years with the object of eradicating malaria before resistance of the vector species to insecticides can develop.

The conference agreed that the best solution to this problem was to have a well co-ordinated antimalaria programme with the Indonesian authorities, with particular emphasis on the operations in the border areas. Pending the implementation of this co-ordinated programme, it was considered advisable to make provisions for the treatment of all migrants crossing the border from Kalimantan. Hope was expressed that the Indonesian authorities would participate in future conferences.

### 3. Farm huts (sulaps)

Malaria transmission undoubtedly takes place in farm huts which are used as temporary living quarters during some parts of the year. The spraying of these huts has been a tedious job because they are sometimes located in very isolated places and far away from the kampongs. It was, however, considered essential to spray these huts as part of the campaigns.

### 4. Opposition to house spraying

There has not been any report of people in the rural areas refusing to have their houses sprayed with insecticides, except during special occasions when there is a "pantang", in which cases no visitors are allowed to enter a house. It was considered unwise to introduce legislation to force the house-owners to permit antimalaria workers to enter their premises to obtain malarimetric data or to spray, inasmuch as these cases are infrequent and have always been solved by other persuasive means.

In some towns, house-owners have refused to have their premises sprayed because of the inconvenience of moving their furniture and the whitish deposits left on the walls. It was felt that this objection would be minimized if the town officials and leading people in the community would agree to have their houses sprayed first.

## INTER-COUNTRY CO-OPERATION AND CO-ORDINATION

The conference agreed that co-operation among neighbouring territories and co-ordination of antimalaria programmes are essential to the success of the antimalaria campaigns in the island of Borneo. The three territories represented at the conference have agreed to co-operate fully with each other and to co-ordinate their respective

antimalaria programmes with a view to eradicating the disease. To this end, the three territories decided:

(1) to standardize, as far as practicable, the procedures, techniques, reporting system and equipment used in their programmes;

(2) to arrange for the exchange of scientific information, sharing of experience and frequent personal contacts between the various members of the different teams; and

(3) to work out a plan to co-ordinate the three programmes with particular reference to the area and the timing of the spraying operations.

#### DECISIONS

The following decisions were made by the conference:

##### 1. North Borneo pilot project

In view of the difference in the bionomics of A. leucosphyrus leucosphyrus and A. leucosphyrus balabacensis, the North Borneo pilot project is necessary and should be continued as planned.

##### 2. Expansion of operations in North Borneo

It is expected that the results of the North Borneo pilot project will be available in April 1957. It should be practicable, within the limits of available personnel, to extend the scope of the spraying operations in 1956. Close liaison should be maintained by the malaria teams, particularly when plans for the spraying of the villages near the common border are being made.

##### 3. Exchange of information

In addition to an exchange of reports, there should be frequent meetings between the personnel of the three territories with a view to sharing experience and co-ordinating their programmes. It was tentatively arranged to hold a meeting around the middle of May 1956, at Marudi, Baram, Sarawak, and it was hoped that as many as possible of those present at the first conference would attend.

#### 4. Standardization

The instructions suggested in WHO publications and documents regarding standardization of procedures, techniques and reports should be followed in the three territories.

#### 5. Sprayers

Tests will be made by Prof. T.L. Chang of the North Borneo malaria project to ascertain the best type of sprayers to be used throughout the territories.

#### 6. Antimalaria workers

Due to the difficulty of keeping junior antimalaria staff in the service, it was resolved by the conference that there should be, on the establishment, a nucleus of junior antimalaria personnel, trained in simple techniques. There will be, therefore, three categories of anti-malaria workers: (i) the trained technician (Form III standard), (ii) the semi-trained antimalaria worker on the establishment, (iii) the daily paid, locally recruited labourer.

#### 7. Movement of population

The difficulties caused by the movement of populations, especially across the Kalimantan border, were recognized. The best protection would be the simultaneous control of malaria in contiguous territories, and the conference resolved that this should be pressed for, through the World Health Organization. Meantime, antimalaria drugs should, whenever possible, be given to all migrants.

#### 8. Meeting with Indonesian authorities

It was resolved that every effort must be made through the highest authorities, to make contact with the Indonesian health authorities. A meeting, later in the year, of those present, together with the Indonesian delegate and the representative of the U.S.A. Operations Mission (ICA) to Indonesia, has been planned.

### RESOLUTION

The following resolution was adopted:

The Conference

Having discussed the importance of achieving close co-ordination of national antimalaria programmes,

particularly among countries with common borders;

Realizing that co-ordination of antimalaria campaigns with particular reference to timing, geography and intensity requires cordial co-operation among neighbouring countries;

Noting that the Governments of Brunei, North Borneo and Sarawak are implementing national antimalaria programmes with eradication of the disease as the ultimate goal;

Recognizing the fact that it would be extremely difficult if not impossible for such antimalaria programmes to succeed unless similar antimalaria campaigns are simultaneously carried out in contiguous areas:

RECOMMENDS that the World Health Organization be requested to

- (1) encourage the Government of the Republic of Indonesia to undertake a similar antimalaria programme in Kalimantan, and to co-ordinate such a programme to the greatest extent possible with those in Brunei, North Borneo and Sarawak, and
- (2) invite the Government of the Republic of Indonesia to participate in malaria conferences with the Governments of Brunei, North Borneo and Sarawak with a view to promoting and implementing a co-ordinated antimalaria campaign in the whole island of Borneo.

#### LIST OF PARTICIPANTS

##### State of Brunei

Dr. M.A. Rozalla, Acting State Medical Officer

##### Government of North Borneo

Dr. L.J. Clapham, Director of Medical Services



Government of Sarawak

Dr. W. Glyn Evans, Director of Medical Services (Chairman  
of the conference)

Dr. R. Dickie, Deputy Director of Medical Services

Mr. Joseph Yong, Senior Technician

UNICEF

Mr. S. Polak, Resident Representative, Thai Area Mission

World Health Organization

Dr. F.J. Dy, Regional Malaria Adviser, Western Pacific  
Region (Secretary of the conference, assisted by  
Miss M. Roach of the Secretariat of the Government  
of Sarawak)

Dr. W.J. Stoker, Project Leader, North Borneo Malaria Project

Prof. T.L. Chang, Entomologist, North Borneo Malaria Project

Dr. M.J. Colbourne, Project Leader, Sarawak Malaria Project

Mr. F. Lachance, Entomologist, Sarawak Malaria Project