

No. 1683

**WORLD HEALTH ORGANIZATION
and
CHINA**

Agreement for the operation of a malaria and insect control project. Signed at Taipeh, on 23 October 1951, and at Manila, on 25 October 1951

Official text: English.

Registered by the World Health Organization on 31 March 1952.

**ORGANISATION MONDIALE DE LA SANTÉ
et
CHINE**

Accord relatif à la mise en œuvre d'un programme de lutte contre le paludisme et les insectes. Signé à Taïpeh, le 23 octobre 1951, et à Manille, le 25 octobre 1951

Texte officiel anglais.

Enregistré par l'Organisation mondiale de la santé le 31 mars 1952.

No. 1683. AGREEMENT¹ BETWEEN THE GOVERNMENT OF THE REPUBLIC OF CHINA AND THE WORLD HEALTH ORGANIZATION FOR THE OPERATION OF A MALARIA AND INSECT CONTROL PROJECT. SIGNED AT TAIPEH, ON 23 OCTOBER 1951, AND AT MANILA, ON 25 OCTOBER 1951

The World Health Organization (hereinafter referred to as "the Organization"), desiring to give effect to Resolution WHA 3.116², adopted by the World Health Assembly on 23 May 1950, concerning the participation of the Organization in an Expanded Programme of Technical Assistance for Economic Development, and

The Government of the Republic of China (hereinafter referred to as "the Government"), having requested technical assistance in furtherance of its plans for economic development;

Being desirous of obtaining mutual agreement concerning a project, particularly with reference to the purpose and scope of the project and the responsibilities which shall be assumed and the materials and services which shall be provided;

Declaring that these responsibilities shall be fulfilled in a spirit of friendly co-operation :

HAVE AGREED AS FOLLOWS :

PART I

Plan of Action

1. *Objectives*

To assist the Government in :

- 1.1. The control of malaria and eventually the eradication of this disease in the whole island of Taiwan, with modern methods at the lowest feasible cost.
- 1.2. The control of other insect-borne diseases in Taiwan, particularly those whose vectors are affected by insecticides.

¹ Came into force on 1 January 1952 in accordance with Part IV, 2.

² *Official Records of the World Health Organization*, No. 28, p. 68.

- 1.3. The training of local professional and auxiliary personnel, and also, upon request, and as far as possible, personnel from other countries within the region, in the various phases of the programme envisaged in this project.
 - 1.4. The evaluation of the results of the programme later on, in terms of malaria and other insect-borne diseases, and insofar as possible in terms of the general health of the population, agricultural production, and general economy of Taiwan.
 - 1.5. The control of related diseases, on request and to the extent compatible with the attainment of the above objectives and availability of personnel of the Organization for the project, by giving expert advice on health and related problems.
 - 1.6. The integration of the malaria and insect control service in the local health facilities of Taiwan, with the view to ensuring the continuity and success of the programme.
2. *Planning, Extent and Administration of Project*
- 2.1. In the execution of this Agreement the Government and the Organization agree to be guided by and to observe the Observations on and Guiding Principles of an Expanded Programme of Technical Assistance for Economic Development set forth in Annex 1 to Part 'A' of Resolution 222 (IX) of the Economic and Social Council of the United Nations.¹
 - 2.2. A detailed plan for the administration of this project is attached to this Agreement as Annex 1.
 - 2.3. The project shall be conducted under the responsibility of the Government. The Government shall request the Senior Adviser furnished by the Organization to undertake on its behalf the technical and operational direction of the project. The Senior Adviser, with authority thus delegated by the Government, shall function as Project Leader until the transfer of responsibility as provided in paragraph 2.4 below.
 - 2.4. The method of operation shall envisage the gradual transfer of technical and operational direction to the team assigned by the Government to work with the Organization's personnel, at which time the team provided by the Organization shall function in an advisory capacity until final withdrawal of the international team at the termination of the project.
 - 2.5. The project is expected to operate over a period of four years.

¹ United Nations, *Treaty Series*, Vol. 76, p. 132.

PART II

Commitments of the Organization

1. The Organization shall provide under the Expanded Programme of Technical Assistance for Economic Development, the following personnel, equipment and supplies, provided that for the period of operations beyond 1952 these commitments shall be subject to the yearly budgetary limitations of the Organization :
 - 1.1. *Personnel*
 - 1 Malariologist
 - 1 Entomologist
 - 1 Public Health Engineer
 - 1.2. *Equipment, supplies and literature*

A detailed list of the equipment, supplies and literature to be provided by the Organization in 1952 is attached as Annex 2.¹ The lists of equipment, supplies and literature to be provided by the Organization for the succeeding years of operation shall be prepared and attached to this Agreement at a later date.
 - 1.3. *Technical Advice*

The Regional Director of the Organization and his Malaria Adviser shall provide such technical advice and guidance as may be useful to the project.
2. The Organization further undertakes, with regard to the commitments under paragraph 1 above, to pay and provide for the following :
 - 2.1. The salaries, allowances, insurance and travel outside Taiwan of the international personnel.
 - 2.2. The carriage of materials, supplies and equipment provided by the Organization, to and from Taiwan.
 - 2.3. Any other expenses outside Taiwan and necessary in connexion with the provision of technical assistance.
3. The equipment and supplies furnished by the Organization under this Part shall remain the property of the Organization unless and until title thereto is transferred under terms and conditions agreed between the Organization and the Government.

¹ Not published.

PART III

Commitments of the Government

1. The Government shall provide all personnel, materials, supplies and equipment necessary for the project, except as provided in Part II, provided that for the period of operations beyond 1952 these commitments shall be subject to the yearly budgetary limitations of the Government.
 - 1.1. *Personnel*
 - 1.1.1. The Government shall provide a parallel team (opposite numbers), composed of the best suitable trained local personnel to work with the international team. Such local personnel shall be made available to work in the programme for the duration of the project, and shall consist, as a minimum, of the following :
 - 1 Malariologist
 - 1 Entomologist
 - 1 Public Health Engineer or 1 Sanitarian
 - 1.1.2. The Government shall also assign the entire staff of the Taiwan Provincial Malaria Research Institute (exclusive of the Director), including all personnel assigned to its Branches in Keelung, Taichung and Chao Chow, and to its Local Antimalaria Stations, to the project.
 - 1.1.3. In addition to the above-mentioned personnel, the Government shall, to the extent that its resources will permit, provide and pay for such foremen and labourers as may be required from time to time in connexion with the execution of the project.
 - 1.2. *Equipment and supplies*
 - 1.2.1. All the supplies and equipment, including vehicles, laboratory and office furniture, of the Taiwan Provincial Malaria Research Institute with its Branches and Local Antimalaria Stations, shall be made available to the project.
 - 1.2.2. A list of additional equipment and supplies to be provided by the Government in 1952 is attached as Annex 3.¹ The lists of equipment and supplies to be provided by the Government for the succeeding years of operation shall be prepared and attached to this Agreement at a later date.
 - 1.2.3. The Government shall provide for the petrol, oil, lubricants, tools and spare or replacement parts for vehicles and equipment employed in the project, as well as for all office and laboratory supplies.

¹ Not published.

1.3. *Promises*

Suitable office and laboratory accommodation, storage space for supplies and equipment, and garage accommodation for vehicles.

1.4. *Other facilities*

- 1.4.1. The necessary local secretarial, interpreter-translator and related assistance.
- 1.4.2. Facilities for maintenance and repair of vehicles and equipment employed in the project.
2. The Government further undertakes, with regards to the commitments under paragraph 1 above, to pay and provide for the following :
 - 2.1. Suitable lodging accommodation for the international personnel.
 - 2.2. The cost of travel; including a *per diem* allowance for the international personnel while travelling on official business within the country away from their duty station.
 - 2.3. The cost of official telephone, telegraph, postal and other means of communication.
 - 2.4. The cost of medical care and hospitalization for the international personnel in the country.
 - 2.5. Payment of taxes or other duties or levies collected by the Government not covered by the privileges and immunities under Part IV.
3. The Government will authorise the publication, both national and international, of the results of the project and of the experience derived therefrom.
4. The Government shall continue the programme within the scope of available resources when assistance from the Organization is withdrawn.

PART IV

Final Provisions

1. Notwithstanding that the Government may or may not have already ratified or acceded to the Convention on the Privileges and Immunities of the Specialized Agencies,¹ the Government shall accord to the Organization, its personnel, property and assets in connexion with the performance of this Agreement and Supplementary Agreements, all the privileges and immunities normally accorded to the Organization, its property, assets, officials and experts under the provisions of that Convention.

¹United Nations, *Treaty Series*, Vol. 33, p. 261; Vol. 43, p. 342; Vol. 46, p. 355; Vol. 51, p. 330; Vol. 71, p. 316; Vol. 76, p. 274; Vol. 79, p. 326; Vol. 81, p. 332; Vol. 84, p. 412; Vol. 88, p. 446; Vol. 90, p. 323; Vol. 91, p. 376; Vol. 92, p. 400; Vol. 96, p. 322; Vol. 101, p. 288; Vol. 102, p. 322; Vol. 109, p. 319; Vol. 110, p. 314; Vol. 117, and Vol. 122, p. 335.

2. This Agreement, when signed by the authorised representatives of the Government and the Organization, shall take effect on 1st January 1952, and shall remain in force for a period of four years.
3. This Agreement may be modified by mutual consent of the Government and the Organization.
4. Toward the end of the project, the appropriate official of the Government, in collaboration with the personnel provided by the Organization, shall prepare a "terminal" report on the project, and into this report will be incorporated :
 - 4.1. A factual review of the achievements of the Project; and
 - 4.2. A detailed outline of what further steps should be taken to ensure that the maximum benefit from the project will have been derived. This will include the plan of the Government for continuing or expanding the work that has been done, and a mutual understanding on what (if any) further advisory or supervisory services the Government will welcome from the Organization.
5. This Agreement may be terminated by either party upon written notice to the other and shall terminate sixty days from the receipt of such notice.
6. This Agreement shall be transmitted by the Director-General of the Organization to the Secretary-General of the United Nations for registration in accordance with Article 102 of the Charter of the United Nations.

IN WITNESS WHEREOF the undersigned, being duly authorized to that effect, have signed this Agreement.

DONE in three copies in English at Taipeh, Taiwan, China,
on 23 October 1951

For the Government of the Republic of China :
(Signed) T. HSIANG WANG, M.D.
Director, National Health Administration
Ministry of Interior
Republic of China

and at Manila, Philippines, on 25 October 1951

For the World Health Organization :
(Signed) I. C. FANG, M.D.
Regional Director
Regional Office for the Western Pacific
World Health Organization

ANNEX 1

DETAILED PLAN FOR THE ADMINISTRATION OF THE MALARIA
AND INSECT CONTROL PROJECT IN CHINA (TAIWAN)1. *General Description of the Problem*

Malaria is known to be the most important endemic disease in Taiwan. It affects practically all the rural population of the island which is estimated to be no less than 5,300,000, or more than 70 % of the total estimated population of Taiwan (7,500,000). The disease has been undermining the health of the men, women and children in the rural areas and has been causing considerable morbidity among farmers and coal miners. It is obvious that this disease greatly hampers agricultural and industrial development and that it renders the people more susceptible to other infections.

The control of malaria on the island is under the responsibility of the Taiwan Provincial Malaria Research Institute, which has an administrative headquarters in Taipei and three Research Centres or Branches in Keelung, Taichung and Chao Chow. These three Branches were established jointly by the Chinese Government and the Rockefeller Foundation in 1946, but the latter withdrew its support in July 1949.

The functions of the Research Branches include :

1. Technical supervision of the Local Antimalaria Stations.
2. Training of malaria technicians.
3. Evaluation and demonstration of malaria control.
4. Study of various problems, epidemiological and ontomological, related to malaria and other insect-borne diseases.

A total of 144 Local Antimalaria Stations have been established in different parts of the island, each of which is in charge of a technician. These stations, which have been made a part of the Local Health Stations, have facilities for examining blood smears and for treating malaria cases, either in the dispensary or in the field.

Each of the three Research Branches of the Malaria Institute is in charge of a young malariologist. The Chao Chow Branch is the largest and best equipped, with a separate concrete building and essential laboratory equipment and supplies. The two other Branches, although not as elaborately furnished as the Chao Chow Branch, are also provided with essential equipment. Most of the equipment of the three Branches were provided by the Rockefeller Foundation and more recently by ECA/JCRR in Taiwan.

In general, three types of malaria control measures have been employed on the island; namely, DDT larviciding, DDT residual spraying, and the use of drugs either as suppressive or as therapeutic agents. Due to some reasons, a vigorous and extensive malaria control programme has not yet been undertaken on the island. Of the three methods of control that have been tried, it appears that DDT residual spraying of premises is the most effective and most economical.

Considerable entomological work has been done on the island. It has been reported that *A. minimus* and *A. hyrcanus sinensis* are the malaria vectors in Taiwan, but while the former species is conceded as an important malaria vector, there has developed some doubt as to the role played by the latter species in malaria transmission. The recent finding of flagellates (*Crithidia* species), which look very much like sporozoites, in the salivary glands of a number of *A. hyrcanus sinensis* specimens may require a revalidation of previously reported gland infections in this species.

Fleas, lice, culicine mosquitoes, bedbugs and other arthropods are prevalent on the island. Cases of Filariasis have also been noted. The proximity of Taiwan to the plague-infested areas along the eastern coast of the Chinese mainland constitutes a constant and serious threat to the health of the people on this island. The collateral effects of an extensive malaria control scheme by DDT residual spraying of premises are obviously going to be of great value in the control of these other vectors of disease.

A DDT factory (Taiwan Agricultural Chemical Works) was established in Kaohsiung a few years ago. It is, however, greatly handicapped by the lack of benzene which has to be imported, and although the other raw materials for DDT manufacture are locally available, its production is limited and the price of the insecticide is very much higher than those in other countries. Unless this factory can obtain an adequate and regular supply of benzene at a reasonable price, it is doubtful if it will be feasible to depend on this source of insecticide for the "island-wide" malaria eradication and insect control programme envisaged.

2. Plan of Work

It is expected that the programme will be conducted by the Government with the assistance of the Organization for a period of four years, starting in January 1952.

During the first year of operations, the personnel of the three Research Branches of the Malaria Institute, together with the parallel team of opposite numbers, will operate as one team in southern Taiwan, with headquarters at Chao Chow, under the technical and operational direction of the International staff of the Organization, leaving only a skeleton crew in Keelung and Taichung. An area with a population of around 150,000 will be selected as a demonstration area, and control villages of adequate size will be observed for comparison. If possible, arrangements will also be made to operate in the highly malarious coal mine district in the vicinity of Keelung during the first year.

A malaria survey, including epidemiological and entomological observations, will be conducted in the demonstration and comparison areas to obtain base-line data. Studies will be made on the bionomics of the conceded and suspected malaria vectors to obtain data essential for the effective and economical employment of residual spraying of premises. Observations will also be made regarding other insect carriers of disease.

Different dosages of DDT, as well as selective spraying of premises, will be tried with the view to determining the most effective and economical procedures to be followed in the subsequent spraying seasons. There will be continuous observations in the demonstration and comparison areas, in addition to re-surveys, to check and improve the methods used and to evaluate the results.

During the second year of operations, or earlier if the conditions will permit, the personnel of the Keelung and Taichung Branches will return to their respective stations and will start their individual malaria and insect control schemes along the lines demonstrated during the first year. The Chao Chow Branch, on the other hand, will expand the activities started the first year. The international staff, assisted by the local team of opposite numbers, will continue rendering supervision to the progressively expanding programme.

It is expected to spray the premises of around 1,640,000 people (four prefectures) during the second year of operations.

By the third year, it is expected to cover all the malarious areas of Taiwan, with an estimated population of 5,300,000, exclusive of the very sparsely populated mountainous region running along the eastern side of the island with an estimated population of 100,000.

The fourth year of operations will cover the same area as in the third year, but in addition, appropriate control measures will be undertaken in the mountainous communities through the facilities of the Local Antimalaria Stations in this region.

During the fourth year, or earlier if mutually agreed by the Government and the Organization, it is envisaged to transfer the responsibility for the technical and operational direction of a part or of the whole project, from the international staff to the local team of opposite numbers, at which time the team provided by the Organization shall function in an advisory capacity until final withdrawal of the international personnel at the termination of the project.

The project will be fully utilised to train local personnel in various phases of malaria and insect control work.

The control of other insect-borne disease will be undertaken in the light of the observations obtained from year to year. At the same time, the international staff will assist in enlarging the scope of activities of the Malaria Institute to include the prevention and control of insect-borne diseases in general, and the promotion of mass educational campaign concerning this group of diseases to obtain the co-operation and support of the public.

The project envisages the shifting of the primary function of the Local Antimalaria Stations from that of administering antimalaria drugs to malaria cases to direct supervision of residual spraying operations in their respective communities. It is also contemplated to draw all the foremen for the spraying campaigns from the Local Health Stations in different parts of the island with the view to integrating the malaria and insect control service in the sphere of activities of the Local Health Stations (of which around 343 have already been established), with the technical guidance of the Malaria Institute—thus to ensure the continuity and success of the programme. There is every reason

to believe that this arrangement, if carried out reasonably long enough, will result in the virtual eradication of malaria in Taiwan.

Upon specific request from the Government and provided that his duties relating to the operation of the team will permit, the public health engineer provided by the Organization will give practical assistance and advice on environmental sanitation problems.

3. *Malariologist*

The malariologist provided by the Organization shall serve as Project Leader and shall have the following responsibilities :

He shall :

- 3.1. Plan, organise, direct, co-ordinate and administer, on behalf of the Government, the activities of the team, including these of the local team of opposite numbers and other personnel assigned to the project, taking into account the objectives enumerated in Part I of this Agreement.
- 3.2. Organise laboratory facilities to suit the requirements of the project.
- 3.3. Carry out operations at the lowest feasible cost and establish careful financial account of the programme.
- 3.4. Ensure strict supervision of the operations, as well as of all surveys. In this connexion, he will ensure that the technical aspects of the programme are in keeping with those laid down from time to time by the Expert Committees and by the Regional Director of the Organization.
- 3.5. Supervise the use and storage of all equipment, supplies and transport.
- 3.6. Provide for the training of local personnel seconded by the Government, as well as personnel seconded by other countries within the region.
- 3.7. Collect data on the public health situation in general, with particular emphasis on insect-borne diseases.
- 3.8. Collaborate with the local services in the treatment of malaria and in the control of insect-borne disease in general.
- 3.9. Prepare and forward to the Regional Director of the Organization, monthly, quarterly, and such other reports that may be required, a copy of which shall be provided to the Government. These reports shall contain, as annexes, the reports of the entomologist and the public health engineer assigned to the team.

4. *Entomologist*

The entomologist provided by the Organization shall have the following responsibilities : He shall :

- 4.1. Investigate entomological problems related to the functions and objectives of the team, as directed by the Project Leader. He shall also advise the Project Leader on relevant entomological observations.

- 4.2. Carry out entomological surveys of the demonstration and comparison areas chiefly as regards malaria and other insect-borne diseases.
- 4.3. Assess in entomological terms, and particularly by observing the survival rates of anopheles caught in outlet window traps, the residual action of the insecticide.
- 4.4. Study the bionomics of the proved and suspected malaria vector species, particularly as it relates to residual insecticide methods.
- 4.5. Train local personnel seconded by the Government, as well as personnel seconded by other countries within the region.
- 4.6. Keep records of entomological observations and submit monthly, quarterly and such other reports that may be required, to the Project Leader.

5. *Public Health Engineer*

The public health engineer provided by the Organization shall have the following responsibilities : He shall :

- 5.1. Administer and supervise the residual spraying operations and such other measures that may be necessary for the control of insect-borne diseases, as directed by the Project Leader.
 - 5.2. Upon request of the Government, give practical assistance and advice on environmental sanitation problems, if his duties relating to the operation of the team will permit; give lectures and train local personnel on environmental sanitation activities, if so requested by the Government, without prejudice to the operation of the team.
 - 5.3. Compile maps of the area for the proper development of the project.
 - 5.4. Check by chemical and biological methods the efficacy of the procedures employed.
 - 5.5. Supervise the maintenance of equipment, supplies and transport.
 - 5.6. Train local personnel seconded by the Government, as well as personnel seconded by other countries within the region.
 - 5.7. Prepare and analyse reports of working costs of spraying operations.
 - 5.8. Submit monthly, quarterly and such other reports that may be required, to the Project Leader.
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