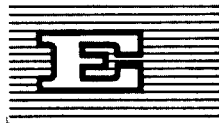


UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



LIMITED
E/ICEF/L.969
25 September 1956
ORIGINAL: ENGLISH



UNITED NATIONS CHILDREN'S FUND
Programme Committee

Recommendation of the Executive Director for an Allocation
BRITISH HONDURAS
Malaria Eradication

1. The Administration recommends an allocation to British Honduras of \$18,700 for dieldrin, vehicles, and sprayers for the first year of full coverage of a five year malaria eradication campaign consisting of one preparatory year and four years of total coverage, ending in February 1961. The Administration further recommends approval in principle of the entire project. The cost of the entire campaign is estimated at \$144,753, of which UNICEF would ultimately provide \$42,700 and the Government \$102,053. Full coverage will be carried out in the entire country all of which is considered an endemic zone. It covers an area of 8,866 square miles with a present population of 84,900 persons. The project envisages spraying 16,980 houses in the first year of full coverage beginning in February 1957. Government matching for the five year eradication project is estimated at \$51,000.

2. UNICEF has contributed \$22,800 (exclusive of freight) in an allocation made in 1949 (E/ICEF/W.73 Add.3) for a malaria control programme.

3. No separate Malaria Service exists at the present time nor is the formation of a special service considered necessary for the eradication campaign. The Government has given assurance of the necessary financial support and has revised its legislation to give adequate legal support to the campaign.

4. The project has been prepared with the technical assistance of WHO which will give technical guidance throughout the campaign. The operations will be conducted in conjunction with similar campaigns being carried out in Mexico, Guatemala and Honduras.

/5. The Government...

5. The Government began plans for the conversion from malaria control to eradication in 1956 and to carry out the activities of the preparatory year which will continue until December 1956.
6. This preparatory year will be followed by four years of full coverage (February 1957 to February 1961). This is the period for which UNICEF assistance will be requested. The present recommendation however, covers only the first year of full coverage.
7. In 1961 the campaign will enter the surveillance stage with suspension of the total coverage spraying. Emergency or foci spraying will be undertaken by the Government as necessary.
8. The preparatory year has been devoted to general planning; organization of the campaign; training of personnel and spraying on a limited basis. One spraying per year is considered adequate and spraying will be carried out with 50 per cent dieldrin and in a small proportion of houses with emulsified dieldrin.

Malaria in British Honduras

9. In 1950, with the help of UNICEF and WHO, the Government started a country-wide malaria control programme using DDT residual spraying. All the customary indices of malariometry show that the control programme resulted in an 80 per cent reduction in the incidence of this disease. While recognizing that the control programme has produced remarkable results the Government wishes now to go forward with the campaign for malaria eradication.

Organization of the campaign

General

10. On the basis of the recommendation of the XVI Pan American Conference and the VIII World Health Assembly, the Government has taken the following action towards the organization of a campaign for the eradication of malaria:

/a) Prepared...

- a) Prepared and presented to the Legislature an amended ordinance to cover completely the programme for the eradication of malaria and the house-to-house coverage contemplated therein.
- b) Approved the present project and given assurance of the necessary financial support to guarantee the successful carrying out of the programme.
- c) Assured the effective carrying out of the malaria eradication through the existing health services which are considered adequate to achieve the goal of eradication.

11. The entire Colony is considered endemic with an estimated population of 84,900 to be protected during 1957, the first year of full coverage. During the four years of full coverage houses will receive one spraying each year. On the basis of the estimated increase of population (2.95 per cent per annum) and 5 persons per house the population and number of houses to be sprayed for the four years of full coverage are estimated as:

<u>Year</u>	<u>Population</u>	<u>No. of Houses</u>
1957	84,900	16,980
1958	87,400	17,480
1959	90,000	18,000
1960	92,700	18,540

The increase in the number of houses shown above is an estimate which is to be verified each year of full coverage operations. The average surface area per house is calculated as 167 square metres.

12. The campaign will be carried out by the regular Services of the Health Department with the technical and material assistance of WHO and UNICEF respectively.

Field operations

13. The Medical Officer of Health will direct and co-ordinate all phases of the spraying programme to be carried out in the 6 districts, under the immediate supervision of 8 supervisors, 3 of whom will work in the district of

/Belize and...

Belize and one in each of the other five districts. All supervisors are trained sanitary inspectors. The Senior Sanitary Inspector of the Health Department will make periodic field visits and check the work accomplished and verify reports. Spraying will be carried on by 24 spraymen of whom 9 will work in Belize and 15 in the other 5 districts, that is 3 spraymen per district in each of the following: Corozal, Orange Walk, Cayo, Stann Creek and Toledo. Spraymen will be organized in teams of three with the district supervisor in charge.

Evaluation

14. The evaluation operations will have several facets and will be carried out under the direct supervision of the Medical Officer of Health and with the use of the regular public health personnel and services. The 8 Public Health Nurses, also resident nurses in rural government and private dispensaries, plus the personnel of the 6 Government Hospitals (1 in each District town) will be responsible, taking blood smears, performing chemotherapy, localizing and reporting cases or suspected cases.

15. The co-operation of all private doctors will also aid in the reporting of cases as well as in the medication of their malarial patients. Likewise it is expected that school teachers throughout the Colony will report cases both from schools and from the community.

16. Every September it is planned to conduct a mosquito survey in selected localities. An epidemiological study will be made of every reported case of malaria throughout the year.

17. All of the Government Hospitals and the Mission at Benque Viejo have facilities and material, including microscopes, for parasitological verification which will have to be carried out by the doctors in residence. In the Belize Hospital, laboratory technicians are available and if necessary slides may be sent there for verification.

18. Evaluation will be a continuing process, being conducted at all times of the year by the resident nurses and hospitals in their searching for malaria cases and by the other inspectors between spraying cycles.

/19. Present...

19. Present evaluation methods consist of compulsory notification of every malaria case, parasitological identification in those places where facilities exist, and through a study of hospital admission records.

Plan of operations

20. The campaign will be carried out in three stages:

- a) Preparatory and Conversion year;
- b) Period of eradication with 4 years full coverage;
- c) Period of vigilance and prevention.

21. During the conversion stage of the campaign, a geographic reconnaissance will be carried on during the last months of 1956, as well as a reduction of the number of houses to be sprayed in the urban areas through the techniques of the protective barrier. Procurement of insecticides by UNICEF will be determined by the conclusions of this reconnaissance.

22. For the purposes of the spraying operations the country will be divided into 6 Zones whose boundaries coincide with the District Boundaries. As indicated earlier, each Zone will have a spraying team composed of one sanitary inspector and Belize will have three such teams operating. In total there will be 8 teams in the country.

23. The main storage depot for insecticides and reserve items will be established in the capital, where there are three warehouses available, with zone storage depots containing materials for one month's operations in each district.

24. The insecticides that will be used for this programme are 50 per cent dieldrin and 18.2 per cent dieldrin emulsion. They will be applied in accordance with standard procedure, the dosage being 0.6 grammes technical dieldrin per square metre. 90 per cent of the houses will be sprayed with 50 per cent dieldrin and the remaining 10 per cent with emulsion. Each house will be sprayed up to a height of $3\frac{1}{2}$ metres. Roofs over this height will not be sprayed. Outside the house only the covered corridors will be sprayed.

/25. During

25. During the period of spraying there will be total coverage in the country. At the end of the regular spraying cycle and on the report of individual cases of malaria, selective spraying will be done, with the presumed location of infection receiving another spraying.
26. The spraying cycle for each year is governed by the rainy season. At the end of the rains or as close to February as possible, the cycle will commence and will be completed by the end of May.
27. Families will be notified in advance of the start of spraying operations in order that the maximum co-operation can be achieved.
28. During the year of conversion, that is 1956, all houses will be numbered. Then, beginning February 1957 full coverage will begin and continue for a four-month period. Similar timing of full coverage will continue during 1958, 1959 and 1960. After total coverage for a period of 4 years, the spraying operations for malaria eradication will cease. There will be maintained an epidemiological vigilance with radical treatment of each sick person encountered. Emergency spraying of locations will also be maintained where possible transmission may be effected.
29. The personnel of the Health Department involved in the programme for eradication will continue the post-eradication vigilance.
30. Health Education of the professionals will be through in-service-training and individual contact. All media will be used to keep the public advised of the campaign and to secure their full co-operation.

Legislation

31. The Government has prepared an amendment to the existing Public Health Ordinance of 1942 thus making provision for the spraying of premises with a view to the destruction of mosquitoes in British Honduras. This ordinance has received its first reading in the Legislature.

/UNICEF commitments...

UNICEF commitments

32. It is estimated that for the entire four years of the total coverage UNICEF would provide insecticides, transport, sprayers, and miscellaneous laboratory supplies at an estimated cost to UNICEF of \$42,700 (including freight). The calculations, however, will be reviewed each year before further recommendations are presented to the Board.

33. The allocation recommended in this paper would cover supplies for the first year of full coverage, for which UNICEF would provide the following:

Insecticides:	\$ 6,800.00
6,800 lbs. dieldrin 50%	
Transport:	8,950.00
4 vehicles	
spare parts	
Sprayers 40 and spares	1,220.00
Laboratory equipment	30.00
Total supplies & equipment	<u>17,000.00</u>
Freight	1,700.00
	<u><u>\$18,700.00</u></u>

Government commitments

34. The total expenditures of the Government for the 5 year eradication campaign are estimated at B.H. \$145,790 (US\$102,053) to be distributed as follows:

	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Personnel	B.H. \$15,741.00	23,100.00	23,100.00	23,100.00	23,100.00
Transportation		2,745.00	2,745.00	2,745.00	2,745.00
Materials	9,000.00	1,024.00	1,024.00	1,024.00	1,024.00
Drugs		353.33	353.33	353.33	353.33
Miscellaneous		1,446.67	1,446.67	1,446.67	1,446.67
	<u>B.H. \$24,741.00</u>	<u>28,669.00</u>	<u>28,669.00</u>	<u>28,669.00</u>	<u>28,669.00</u>
	<u>US \$17,339.00</u>	<u>20,068.00</u>	<u>20,068.00</u>	<u>20,068.00</u>	<u>20,068.00</u>

/35. The Government...

35. The Government is covering the entire cost of the conversion year, 1956, and has given a firm commitment to undertake the necessary expenditures for the period of vigilance. Supplementary resources will be used over and above this budget for the complementary purchases of protective equipment and dieldrin emulsion which are not provided by UNICEF.

36. Over the last three years of the malaria control programme (1953 to 1955) the Government expenditures have been an average B.H.\$14,586 (US\$10,210) per year. The Government expenditures for the malaria eradication programme represent, over the five-year period, an increase of B.H.\$72,860 (US\$51,000), over the previous level of expenditures for control. Government Matching for this eradication programme is estimated at \$51,000.

WHO participation and technical approval

37. The plan for eradication of malaria in British Honduras has been developed with the close co-operation of the WHO/PASB Zone Office in Guatemala, and the Co-ordinating office for the Malaria Eradication Programme (COMEP) which is an integral part of the Pan American Sanitary Bureau, Regional Office of WHO for the Americas. This project has the technical approval of WHO. Technical guidance will be provided to this programme during all its stages of implementation through the WHO Zone Office in Guatemala and COMEP. WHO has undertaken to provide consultants from the special personnel assigned to the inter-country malaria programme for Central America and Panama. Funds (\$29,460 in 1957) for the above field personnel will be provided under Technical Assistance.