



UNITED NATIONS CHILDREN'S FUND

Programme Committee

Recommendation of the Executive Director for an Allocation
SOMALILAND UNDER ITALIAN ADMINISTRATION
Malaria Control

1. The Executive Director recommends an allocation of \$77,000 to provide insecticides, sprayers and vehicles for continuing assistance to the UNICEF-assisted malaria control programme to extend protection by residual spraying to 230,000 persons during 1958. A first allocation of \$89,000 was approved for this programme in March 1955 (E/ICEF/L.756) for malaria control work in 1956 and 1957. The control work has been successfully carried out protecting 220,000 persons in 1957. The programme includes a mass spraying operation and a separate operation being carried out simultaneously in a "pilot zone". The pilot operation will be discontinued during 1958 after which this zone will be merged with the mass campaign. The Government's matching commitment for 1958 would be equivalent to US\$76,000.
2. It is the hope of the Government (see paragraph 14) to establish and carry out an eradication programme in the near future. The present recommendation is for assistance in malaria control work for one year only pending completion of the WHO evaluation on the effectiveness of the operation to date. Reports are awaited from the WHO adviser now in the country on the basis of which it may be found possible to develop an eradication programme beginning in 1959. The report is expected to clarify a number of factors about which more information is needed before additional UNICEF support can be recommended for an eradication campaign.

The malaria problem and the control efforts to the present

3. The previous recommendation for this programme, presented to the Board in March 1955 (E/ICEF/L.756), described the problems of malaria in Somaliland and its effect on the health of the population, especially in relation to infant mortality; also its impact on the economy of the Territory, which is largely dependent on crops requiring constant irrigation and on animal husbandry.
4. Since that time two years of pre-operational surveys and collection of malarimetric data, village by village, have completed the picture of malaria in Somaliland. In general, the findings have confirmed the earlier presentation. With respect to the degree of malaria infection, there are three distinct areas in the Territory: the alluvial lowlands near the rivers Webi Shebelli and Juba where the incidence of malaria is high; the higher land between the rivers, with medium incidence; and the desert-like parts of the North and the interior where malaria occurs only in epidemics.
5. Experiments have been made in the pilot zone with once-yearly and twice-yearly spraying cycles. The conclusion is that two sprayings are required yearly in Somaliland because of: the long transmission seasons; climatic and other factors limiting the potency of the insecticides; and the widespread habit of re-plastering the huts and thus disrupting the residual effects of the insecticides.
6. On the basis of extensive studies on the behaviour of the vectors, - Anopheles gambiae in particular, - of the inhabitants' housing conditions and of their sleeping habits, it has been determined that an average of 45 square metres of surface per person must be treated with insecticides.

7. Spraying in 1956 and 1957: The plan of operations agreed upon for the two years of pilot/control work (1956/1957) has been implemented with success. The malaria epidemiological survey was completed in the last malarious areas of the Territory by January 1957, and details mapped out for control measures. At the end of the February/March spraying cycle in 1957, all malarious areas had been sprayed one or more times as follows:

13,200	persons	have	had	their	houses	sprayed	three	times
54,500	"	"	"	"	"	"	two	"
155,000	"	"	"	"	"	"	one	"

Targets have been surpassed: spraying was initiated one transmission season earlier than expected, and the number of persons to be protected rose from 125,000, the number planned to be protected in 1956 (E/ICEF/L.756), to 222,000 actually protected in early 1957.

8. The National Malaria Service: A National Malaria Service, established in 1956, is part of the Directorate of Medical Services under the Ministry of Social Affairs. Under the direction of a qualified public health doctor, the Service has its headquarters in Mogadiscio with its own compound and with facilities for operations, administration and finance, warehousing and garage and repair facilities. Research and laboratory work and statistical consolidation and training, on behalf of the National Malaria Service, are carried out under a qualified malariologist by the Centre for Studies and Research in Mogadiscio, which is sponsored jointly by the Naval Department of the Italian Ministry of Defense and the Marchiafava Malaria Institute, Rome.

Proposed plan of operations

9. It is proposed to convert the present pilot/control programme into a full-scale control campaign. The National Malaria Service is considered to be of the high standard and efficiency required to meet operational and scientific conditions for such a campaign.

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10. The spraying schedule used up to now would be replaced by a programme of spraying twice yearly with DDT. Spraying operations would be carried out during the 60 days (January/March) before the "Gu" rainy season, and during the 70 days (June/August) before the "Der" rainy season.

11. The areas to be sprayed in 1958 are as follows:

<u>Pilot zone</u>	<u>Population to be protected</u>
a) DDT 2 sprayings	14,000
b) DDT 1 spraying	19,000
c) Dieldrin 1 spraying	9,000
d) BHC 1 spraying	<u>6,000</u>
	48,000
<u>Mass campaign</u> 2 sprayings	
e) Lower Shebelli	65,000
f) Upper Shebelli	30,000
g) Lower Juba	47,000
h) Upper Juba and mesopotamic area	30,000
i) Areas in the North and the control area	10,000
	<u>182,000</u>
Total population to be projected	230,000

The pilot zone would be discontinued during 1958 and merged with the overall spraying programme after which the twice-yearly DDT spraying schedule would apply generally throughout the Territory.

12. On the basis of past operational experience, complete coverage every six months of all malaria areas would be possible with only a modest increase of supervisory and labour staff, transport and other facilities.

13. Depending on the continuous evaluation to be carried out by the National Malaria Service, and on an assessment of results which will be made with the technical co-operation of a WHO consultant in 1957 and 1958, a decision would be taken regarding the additional number of spraying cycles necessary before sprayings could be discontinued and replaced by a system of permanent surveillance.

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Steps toward malaria eradication

14. The Government has the intention to institute a malaria eradication programme as soon as possible and has recently created a National Malaria Eradication Board which includes the following: the Minister for Social Affairs, chairman; the Chief of the Public Health Department, vice-chairman; representatives of the Ministry of Internal Affairs, the Ministry of Financial Affairs, the Agricultural and Animal Husbandry Department and the Public Works Department; the Director of the National Malaria Service; and the Director of the Centre for Studies and Research.

15. Being part of the African continent, and with Anopheles gambiae as the main vector, this Territory has been excluded heretofore from the regions of the world in which WHO regards malaria eradication as technically practicable. However, in climatic and other respects, the conditions in the Territory are very different from other parts of Africa and it is considered quite possible that malaria eradication measures would be successful in the Somalilands as in the eastern Ethiopian area. The northern part of the Territory, like the British Protectorate to the north and a large part of eastern Ethiopia (Ogaden), is arid or semi-arid, similar to the deserts of North Africa. The southern part of the Territory does not have the tropical conditions prevailing south of the Sahara where malaria transmission is continuous.

16. Entomological observations carried out by the Centre for Studies and Research and by WHO's Gambiae Research Team for Africa give hope for the ultimate success of an eradication programme through a systematic and total effort of residual spraying, carefully timed to meet the problems of the transmission seasons and supplemented possibly by chemoprophylaxis and larvicidal methods in certain selected areas.

17. A special problem is posed by the fact that there is no natural barrier against malaria transmission from areas sharing the frontier with the Territory to the north. Plans for international co-ordination of control and eradication in this entire natural malarious region, (comprising Ethiopia and the Somalilands) are at present under study by the WHO Regional Offices for the Eastern Mediterranean and for Africa and the countries concerned. The comparatively small problem of nomadism in this area is not considered by the experts to be insoluble even under present circumstances.

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UNICEF commitments

18. UNICEF would provide the following for spraying operations during 1958:

		<u>US\$</u>	<u>US\$</u>
a)	<u>Insecticides</u>		43,200
	DDT 75 per cent wettable powder, 177,500 pounds	42,600	
	Dieldrin 50 per cent wettable powder, 600 pounds	600	
b)	<u>Spraying equipment</u>		1,500
	Stirrup pumps with spares, 32		
c)	<u>Transport</u>		19,800
	Trucks, 3-ton, 2-wheel drive, 3	13,200	
	Station wagons with spares, 3	6,600	
d)	<u>Drugs</u>		3,000
e)	<u>Books and periodicals</u>		900
f)	<u>Contingencies</u>		<u>1,800</u>
	Total supplies and equipment		70,200
g)	<u>Freight</u>		<u>6,800</u>
	Total recommended allocation		77,000

WHO approval and participation

19. The proposed programme has the technical approval of WHO. WHO has closely followed the malaria control developments in the Territory during the past two years. A WHO entomologist studied vector problems in Somaliland during three months in 1956. In 1957 and in 1958, a special consultant of WHO will assist for three months each year in the assessment of results of the campaign and the organization of surveillance. WHO has been requested to provide short-term fellowships for the Director of the National Malaria Service and for a Somali supervisor.

Government commitments

20. The following table shows the Government's commitments for the expenditures of the campaign in 1958. Similar expenditures for 1957 are shown for comparison.

<u>Somaliland under Italian Administration</u>		
<u>estimated total expenditures for malaria control 1957 and 1958</u>		
(in Somalios)		
	<u>1957</u>	<u>1958</u>
a) <u>Salaries</u>		
i) <u>Fixed personnel: 2 full-time doctors,</u> <u>3 technical inspectors, 2 assistant</u> <u>technicians, 1 administrator, 1 store</u> <u>keeper, 8 laboratory workers, 5 drivers,</u> <u>6 watchmen, 8 squad leaders and 1 garage</u> <u>worker</u>	149,600	203,380
ii) <u>Temporary personnel</u> <u>(130 days yearly)</u>	91,200	143,148
<u>3 spraying units for pressure pumps,</u> <u>each composed of: 1 assistant squad</u> <u>leader, 1 driver, 1 clerk, 1 mixer,</u> <u>1 marker and 8 operators</u>		
<u>8 spraying units for stirrup pumps</u> <u>each composed of: 1 assistant squad</u> <u>leader, 1 driver, 1 clerk, 1 mixer,</u> <u>1 marker, 8 operators, 8 pumpers,</u> <u>4 watercarriers</u>		
b) <u>Allowances, in kind (food and uniforms for</u> <u>fixed personnel)</u>	10,000	20,250
c) <u>Maintenance, fuel and lubricants</u>	70,000	110,000
d) <u>Stationery, printing, cables, postage and</u> <u>other office expenses</u>	8,000	35,000
e) <u>Contingencies</u>	<u>25,000</u>	<u>20,000</u>
Total	353,800	531,778

The expenditures for these years are equivalent in US dollars to \$51,000 for 1957 and \$76,000 for 1958.

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21. The National Malaria Service has a special budget within the State budget which is jointly approved by the Italian Trusteeship Administration and the National Assembly of Somaliland. The budget is approved on a calendar year basis. For the purpose of the 1958 programme, the Italian Government and the Territorial Government have made formal undertakings to make budgetary provision to meet the costs outlined above.