

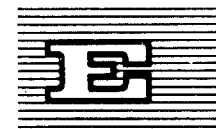
UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



DISTR.
LIMITED

E/ICEF/L.1158
3 February 1958

ORIGINAL: ENGLISH



UNITED NATIONS CHILDREN'S FUND

Programme Committee

Recommendation of the Executive Director for an Allocation

SYRIA

Malaria Eradication

1. The Executive Director recommends an allocation to Syria of \$80,000 to provide additional insecticides, sprayers and transport for the continuation during 1958 of the malaria eradication programme aiming at the protection of 1,150,000 persons. The amount of \$80,000 now recommended for allocation reflects a deduction from the total cost of 1958 requirements of \$32,000 which is available as a result of funds allocated but not yet utilized for the purchase of insecticides in previous years. (see para.13) The calculation of net additional insecticide requirements for 1958 operations also takes into account a balance of insecticides earlier provided by the Fund for this programme and not yet utilized. The Executive Board in March 1956 approved an allocation of \$154,000 (including freight) for the first two years of the eradication programme (E/ICEF/L.866). (Allocations totalling \$209,000, exclusive of freight, had earlier been allocated by the Board for malaria control work in Syria.)

2. The launching of the eradication programme encountered serious administrative difficulties in the first year (1956) during which only a small proportion of the target protection figure was attained. The work in the second year was more encouraging without attaining, however, the total coverage envisaged. A special organizational decree, currently under consideration by the Government to complement the plan of operations, will provide the National Malaria Eradication Service with the means to carry on the programme in a satisfactory way. The WHO advisers have also established a plan for a surveillance system, to begin in 1958, which would ensure effective evaluation of the programme.

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3. The Government's obligations under this programme would be equivalent to approximately US \$334,000 for the period covered by this recommendation. This commitment is automatically included every year in the Government budget in accordance with the terms of the plan of operations which has been ratified as a law by the Syrian Parliament.

The malaria problem in Syria

4. As pointed out in previous recommendations to the Board regarding this programme, malaria in Syria is widespread and, in certain villages of the northern and coastal districts, it reaches hyperendemicity. Studies carried out during the past three years by Dr. M. E. Farinaud, Dr. Paul F. Russell, Professor G. Livadas and by the International Bank for Reconstruction and Development have unanimously stressed the importance to Syria, an essentially agricultural country, of dealing with malaria in a radical manner in order to improve not only its health standards but also its national economy. Dr. M. E. Farinaud suggested that the elimination of malaria would likely bring about a better stabilization of the semi-nomadic population living in the fertile plains of the Northeast, in line with Syria's policy of settling these groups.

5. Since Syria has common borders with five other countries of the Eastern Mediterranean region, the anti-malaria work in Syria has an important bearing on regional eradication of the disease in which the bordering countries are also engaged. Active participation of Syria in the regional effort is indispensable for the following reasons:

- a) The hydrography of Syria shows that it shares with its five neighbours the waters of its major rivers, - the Euphrates, the Tigris, the Yarmuk and the Orontes. While these rivers, their tributaries and the related irrigation works are a source of fertility within a large zone of inhabited localities along the common border, they also constitute a permanent threat as breeding places for various types of anopheline vectors.
- b) Syria's borders are constantly crossed by large groups of nomads, seasonal workers and trade caravans, and unless appropriate protective measures are undertaken jointly and simultaneously, the whole regional eradication programme would be seriously endangered.

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Plans and accomplishments

6. Until 1955, the anti-malaria activities in Syria were carried out on a control basis and were limited to the Mohafazats (districts) of Damascus and Homs with plans for the gradual expansion of the work to reach all malarious parts of the country. In line with the findings and recommendations of Dr. M. E. Farinaud and Dr. F. Russell who, as WHO short-term consultants, studied the problem that year, the Syrian Government decided to convert the control activities into an eradication programme beginning in 1956. The Board gave its approval to the plans in principle in March 1956 and approved an allocation for aid in the first two years of the programme. The plan of operations was ratified by the Syrian legislature on 11 December 1956.

7. Although the plan of operations provided the basic financial and administrative structure for orderly conduct of the eradication campaign, the actual transition from control to eradication proved to be a slow and complex process. Besides the lengthy groundwork necessitated for the introduction of the new concept at the various levels, the requirements of special measures and arrangements for the eradication work itself often conflicted with conservative policies and procedures. Delays were experienced in the recruitment and training of personnel, the availability of transport and drivers in the field when they were needed, and ultimately in the evolution of epidemiological surveys and protection operations.

8. Progress in 1956: The result was that in 1956 only 37,735 houses and structures in 625 villages were sprayed protecting directly 203,657 persons against the target protection figure of 1,150,000. Nevertheless, the 1956 operations made possible the "consolidation" of the sprayings carried out in previous years and helped to maintain the limited protection measures provided in the past under the control programme. The 1956 operations also gave the WHO team an opportunity to assess and readjust certain basic points in the plan of action, in the light of actual field experience.

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9. Progress in 1957: Operations in 1957 showed a marked improvement over previous years although many of the programme's administrative shortcomings had still to be overcome. The protection operations were in fact carried out on a large scale in the northern and north-eastern districts and, for the first time on record, these operations, during the month of June, were going on simultaneously in all the malarious areas of the country. District authorities gave their full backing to the work and municipalities in certain instances contributed to the labour force in their areas. As a result, 870,652 persons were directly protected in 2,387 villages where 144,367 houses and structures were sprayed. The protection figure thus reached was more than four times that of the previous year but remained short of the programme target by about 300,000 persons. Furthermore, the operations were criticized for their over-extended duration and because, in some areas, the spraying work was not done along the right technical lines.

10. Although operations fell far short of the plan in 1956 and 1957, enough information was collected during those two years to ascertain that malaria is prevalent in various degrees of intensity throughout the country with dangerous pockets of hyperendemicity along the Turkish border and in the district of Lattakia. Among other things, the entomological surveys showed that the main vectors are A.sacharovi, A.superpictus and A.sergenti. The presence of A.claviger is also confirmed but there have been no indications of its being active as a vector.

Plan of operations

11. In the light of the experience during 1956 and 1957, the following changes are being made to strengthen and adapt the plan of operations:

- a) Increase in per caput metrage: The average superficial area to be sprayed for the protection of each person has been increased to 70 square metres from the 45 square metres which had previously been adopted on theoretical grounds as the basis of calculation for the eradication programme.
- b) Amalgamating district malaria centres: The original plan called for the establishment of one malaria centre in each of the country's nine Mohafazats. Field experience indicated, however, that it was preferable to amalgamate some of these centres so as to make best use of the prevailing geographical conditions as well as of the medical and technical supervision available. Consequently, the number of centres has been reduced to six, one located in each of the following: Deraa, Damascus, Homs, Lattakia, Aleppo and Qamishli. The officers at Deraa, Homs and Qamishli have jurisdiction over two districts each.
- c) Re-organization of field work: The spraying force of 700 men has been organized in 100 squads, each comprising a foreman, five spraymen and one mixer. The 100 squads are in turn grouped into 25 teams each consisting of four squads and supervised by one inspector. Each team is given a 3-ton truck or two 1½-ton stake trucks. Two 3-ton trucks and six stake trucks which had served for several years in the control work before the eradication campaign was commenced are now out of use. It is proposed that UNICEF provide ten stake trucks for replacement of these vehicles along with five jeep-type cars to be assigned to the various district centres for supervisory work. Twenty motorized bicycles are to be provided for surveillance work.
- d) Organizational decree: A group of WHO and UNICEF officials, including the WHO Medical Adviser to UNICEF, visited Syria in November 1957 and made a careful assessment of the situation with the various departments concerned. Recognizing the lack of authority of the National Malaria Eradication Service as the basic problem, this group worked out, in agreement with the Syrian authorities, the terms of an organizational decree to supplement the plan of operations

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with the purpose of giving that service the latitude and autonomy it required for administrative, financial and transport matters. The decree also calls for the setting up of a Malaria Eradication Board which would convene periodically under the chairmanship of the Minister of Health and would act as a supreme executive body for the programme. This Board would also take over the responsibilities which were assumed in the past by the Malaria Coordination Committee, including matters relating to the intra-regional co-ordination of the work in the field of malaria eradication.

- e) Surveillance: The WHO advisers currently engaged in the programme are making preparations for the establishment of a surveillance system which will include detection of fever cases, gathering of blood specimens, checking on spraying work and distribution of drugs for prophylaxis and treatment. The prophylactic drugs will be administered intensively among the nomadic population. It is calculated that a surveillance agent provided with a mechanized bicycle can cover approximately 25 villages each month. The first phase of these activities will be organized during 1958 in the Mohafazats of Damascus and Homs where spraying operations have been going on for several years. The work would be extended in the following year to cover the whole country, and it is estimated that the system should become fully operative by 1960. The initiation of the surveillance activities will also bridge the gap which occurred in connexion with the gathering during 1956 and 1957 of epidemiological data because of the limited work in this field.

12. The original plan of operations approved for the programme will be maintained and expanded to embody the changes outlined above. The yearly target protection figure of 1,150,000 persons remains unchanged for 1958 and it is estimated that the protection operations to be carried out during that period will cover approximately 192,000 houses and structures in 3,300 villages. The scope of the protection work and the basis on which the programme should be continued in 1959 and the following years will be determined during the second half of 1958 and will eventually be reflected in recommendations to the Board for aid in the succeeding phases of the eradication programme.

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UNICEF commitments

13. UNICEF would provide the following supplies and equipment for the continuation of the eradication programme to the end of 1958:

	<u>US\$</u>
a) <u>DDT technical, as formulation (paras.11a and 12)</u>	68,000
i) required for 1958 operation	357,600 pounds
ii) carry-over from 1957	<u>153,000 "</u>
iii) net additional requirement for 1958	204,600 pounds
b) <u>Transport (para.11c)</u>	33,000
i) 1½-ton trucks with spare parts, 10	
ii) utility vehicles with spares, 5	
iii) motorized bicycles with spares, 20	
c) <u>Equipment</u>	4,000
i) sprayers, 60	
ii) standard spares, 20 sets	
iii) nozzle-tips, 3,960	
Total supplies and equipment required for 1958	<u>105,000</u>
Unexpended balance of previous allocation (para. 1)	<u>32,000</u>
Net additional requirement supplies and equipment	73,000
d) <u>Freight</u>	<u>7,000</u>
Total recommended allocation	80,000

WHO approval and participation

14. The plan for 1958 has the technical approval of WHO. The WHO team attached to the programme will be strengthened by the addition of a laboratory technician and an assistant sanitarian whose posts will be financed out of the Special Malaria Fund. WHO is also earmarking for this programme two fellowships for studies in malariology and one fellowship for studies in entomology.

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Government commitments

15. In accordance with the terms of the plan of operations, the annual cost of the programme, calculated at L.S.736,000 (equivalent to US\$334,000) is automatically included in the national budget and is made available to the programme at the beginning of every year, regardless of whether the budget is passed by that time. This amount covers adequately the Government obligations under the present conditions of the programme and is considered as matching the recommended allocation. The introduction of surveillance work in 1958 will not entail substantial extra costs because the plan calls for the using of the programme's foremen as surveillance agents particularly in the periods preceding and following the spraying season.