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Programme Committee

EGYPT

Recommendation of the Executive Director  
for an Apportionment for Assistance in a Pilot Project  
for Control of Communicable Eye Diseases. Including Trachoma

1. In this paper the Administration recommends, subject to the availability of funds, an apportionment to Egypt of \$19,000 from the Eastern Mediterranean Area allocation for the procurement of equipment and supplies for a pilot project for the control of communicable eye diseases, including trachoma. If this recommendation is approved, it will constitute the first UNICEF assistance of this type to Egypt and the first in the Eastern Mediterranean area.

The Problem of Trachoma and Acute Conjunctivitis in Egypt

2. Trachoma is pandemic among the poorer classes in Egypt. It is almost invariably contracted in infancy. Repeated infections, both with trachoma and acute (Koch-Weeks and gonococcal) seasonal conjunctivitis are the rule in early childhood. In many cases, the viral and bacterial infections are transmitted together. There is a weight of circumstantial evidence that the common fly, particularly musca sorbens, is an important vector. No immunity is acquired in either disease but, with increasing age and change in habits, the children become less liable to re-infection. Infectious stages of trachoma are mainly found in young children, and it is millions of young children which constitute the main reservoir of infection from which the infants acquire the disease.

3. There is no evidence of any racial susceptibility to trachoma. Predisposing factors are merely those conditions which favour the transmission of infective secretions: overcrowding, lack of hygiene and environmental sanitation, uncontrolled fly breeding and the corresponding seasonal epidemics of acute conjunctivitis. More than 70% of all blindness in Egypt is the result of corneal ulceration complicating acute conjunctivitis in childhood. Trachoma, in its late stages with complication,  
/is the greatest

is the greatest single cause of reduction in visual acuity, short of total blindness.

Efforts of the Government.

4. The first attempt of the Government to deal with ophthalmic diseases among the population through a specialized organization dates back to 1905, when the Department of Health, at that time an integral part of the Ministry of Interior, decided to create a mobile ophthalmic hospital to serve the Giza district, near Cairo. In addition to its main function, i.e. serving as a curative unit, this hospital was used as a training centre for ophthalmologists. During the subsequent years, a few similar mobile hospitals were established in several provinces of Upper and Lower Egypt.

5. In 1914, the Giza hospital ceased to be a mobile unit and was transformed into a permanent ophthalmic hospital. In the course of the years which followed, an arrangement was made between the central Government and the provincial authorities whereby they would share the cost of establishing in the main town of each of the sixteen provinces of Egypt, a static and permanent ophthalmic hospital. It was decided that, within the financial means of each province, the smaller towns and rural areas would be served by one or several mobile "tent" ophthalmic hospitals. At a later stage, several of the mobile units were stabilized in the towns of the provinces, usually becoming a specialized branch of the local general hospital. In 1952, orders were issued to stabilize the last sixteen existing tent ophthalmic hospitals. Therefore, at the present time, the facilities offered by the Government are the following:-

16 static ophthalmic hospitals, one in each of the main towns of each province;

85 ophthalmic branches in general hospitals;

16 stabilized "tent" ophthalmic hospitals.

6. In addition, there is one municipal ophthalmic hospital in Alexandria. Finally, mention should be made that the school health service, administered by the Ministry of Education, maintains 22 ophthalmic clinics in Government primary schools. These are staffed by one full-time 'tamargi' (dresser), and one medical officer attends two to three times a week.

7. The routine treatment of communicable eye-diseases with sulfa drugs, in Government clinics and hospitals, was introduced in 1940, and the routine treatment with anti-biotics in 1952.

### The Solution Proposed by the Government

8. Trachoma can be cured but, even with the most effective therapeutic agents now available, response to treatment is relatively slow. From our present state of knowledge, the minimum effective course of treatment consists of local application of anti-biotics, three times daily without interruption, over a period of two months. The common bacterial infections of the conjunctiva respond readily to appropriate sulphonamides and to the same anti-biotics used in the treatment of trachoma.

9. It is generally accepted that trachoma is only slightly contagious, except under certain transmission conditions. In an anti-trachoma campaign, therefore, the control of these conditions is at least as important as the treatment of established cases. Application of chemo-therapeutic drugs and anti-biotics is time-consuming and demands the service of large numbers of auxiliary staff. The Government has therefore requested international organizations to assist it in conducting a pilot project to determine the best administrative methods within the financial means of the country of controlling this group of diseases, especially during the childhood period. Based on this pilot project and on two other similar programmes already in operation in Morocco and Tunisia, it is hoped that an efficient and economical method of control will be developed which will be applicable not only to the whole area of Egypt but also to other countries in the Eastern Mediterranean region and to the countries of the Mediterranean coast in general, where many conditions are comparable. Efficient control of this group of diseases will materially reduce the incidence of blindness and partial blindness, and thus relieve the country of a considerable economic burden, and will prevent interruption of schooling through illness during childhood. It is estimated that this project will last for two years in order to allow assessment of the results achieved.

### Proposed Plan of Operations

10. The objective of this project is to set up a pilot project in a limited area to evolve a practical plan, within the economic-possibilities of the country, to control trachoma and associated infections and to mitigate their effects, more specifically:-

- a) to organize prophylactic control of purulent ophthalmia in pre-school children during the pre-epidemic period;
- b) to undertake a treatment campaign against trachoma in schools;

/c) to undertake

- c) to undertake an extensive programme of health education of the people;
- d) to set up a process of continuous evaluation during the course of the project.

#### Planning and Extent of the Project

11. The project will be carried out in a selected area of the Calioub markaz, north of Cairo, which has a total population of about 200,000 people. The area selected for demonstration will have a population of about 50,000 people, and will include villages together with their main market town, in order to allow for the factor of regular migration to and from a market area. The area chosen is very densely populated (2,750 inhabitants per square mile). The part of Calioub markaz to serve as a check area for comparison purposes has a population of 30,000 to 40,000 people.
12. This project will be carried out within the health demonstration area in the Calioub markaz. This demonstration area has as its objectives the organization and development of an integrated programme of health services in a rural area, the demonstration of methods of health administration adaptable to the people of the area, the study and demonstration of methods of coordinating health services with other social and economic services, the provision of field training for personnel from Egypt and other Eastern Mediterranean countries, and the evaluation of these integrated services.
13. The participating organizations in the demonstration area are the Government and WHO. The first, or developmental phase, is presently underway, and the full operational phase will come into effect shortly.
14. The eye-disease control programme described in this recommendation will therefore benefit from the concentrated services being made available in the health demonstration area. Attention is however being paid to the fact that this pilot project is not limited in its purpose to this demonstration area, but is being physically conducted here to serve Egypt as a whole as soon as the methods used and the results achieved have been shown to be successful and applicable to the whole country. It is not planned to delay the application of the results of the pilot project to other areas in Egypt until the overall health demonstration area has fulfilled its complete programme.
15. During the period of the pilot project, two major methods will be used in an attempt to reach the above-mentioned objectives:-

/a) A mass

- a) A mass chemoprophylactic campaign will be conducted to prevent the onset of seasonal ophthalmias in pre-school children, utilizing a three to four day sulphonamide treatment. It is proposed to treat in this way 7,000 children, twice a year, during pre-epidemic seasons (March and August), two years successively.
- b) During the first year, antibiotic treatment will be administered to 7000 to 8000 school children suffering from trachoma, selected at a stage which is most amenable to treatment, i.e., before any irreparable damage is caused by the infection. The antibiotic ointment will be administered three times a day, for 60 to 90 days according to the stage of the disease. During the second year, the treatment will be administered to new school pupils and to resistant and relapsed cases.

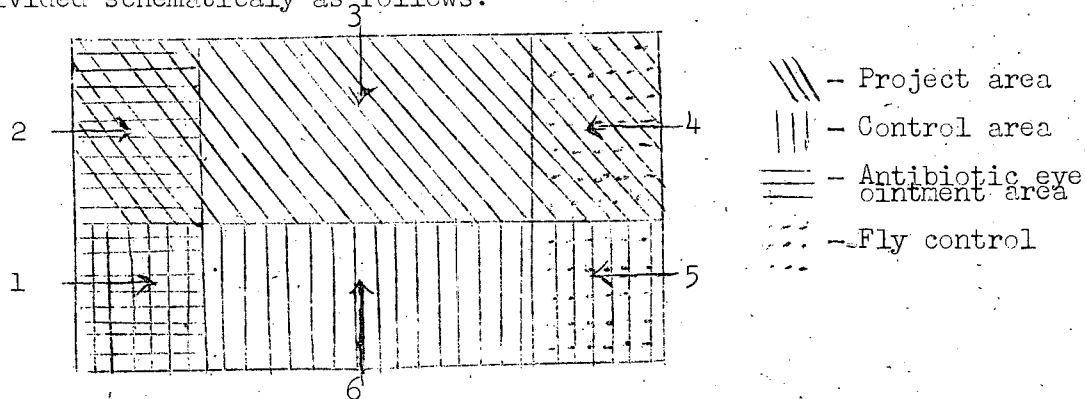
16. In addition to the two major types of treatment described above, a special study will be carried out on a small scale and for comparison purposes, consisting of:

- a) Antibiotic ointment during the pre-epidemic period: (i) together with chemoprophylactic treatment in a group of children within the test area (area 2 of scheme below), and (ii) without any other treatment in another group of children in the control area (area 1 of scheme below).
- b) Attempts to improve environmental sanitation and to control the possible mechanical spread of infection by insects, especially various species of fly. This method will be carried out in a small area overlapping part of the project area (area 4 of scheme below), and part of the control area (area 5 of scheme below).

17. It is realized that permanent insect (fly) control cannot be achieved even in a restricted area in a period of two years. Nevertheless for purposes of this project, temporary control might be aided by the judicious use of insecticides. However, long-term work will be commenced and this will include intensive education by all possible methods, including house-to-house visiting by selected teams, establishment or use of existing village committees and by improving village hygiene, by construction of latrines and introducing scavenging systems. In view of the predilection for the discharge of purulent ophthalmia exhibited by musca sorbens (a species breeding mainly in /human faeces

human faeces), education and sanitation will be especially directed towards prevention of promiscuous defaecation and toward securing the use of methods of excreta disposal suitable to the economy of the Egyptian villages (this part of the programme will be carried out by other WHO-assisted projects in the area - Health Demonstration Area and Bilharzia Control).

18. Thus the total project area may be, for the planning of the project, divided schematically as follows:



a. The upper half of the scheme represents the test or demonstration area within which pre-school children will receive a three to four day course of sulphadragms during the pre-epidemic period, and school children suffering from trachoma a 60/90 days local treatment with antibiotic ointment. The lower half of the scheme represents the control or check area, where no treatment will be carried out.

b. Overlapping a small part of the test and control areas, the zones 1, 2, 4 and 5 are meant to be study areas; on the left side (1 and 2), antibiotic ointment will be administered during the pre-epidemic phase; on the right side (4 and 5), control of flies will be attempted.

19. The prophylactic and curative treatments used will be the oral administration of sulfa drugs and the local application of antibiotics in ointment form, as recommended by the WHO Expert Committee on Trachoma, with such minor modifications as may be deemed advisable under local conditions.

20. The Government will make arrangements for the Memorial Institute for Ophthalmic Research, Hiza, Cairo, to be available for laboratory work; the Director and the staff of this Institute will act in a consultative capacity, whilst three laboratory assistants, provided by the Government, will be temporarily assigned to the Institute to carry out the necessary bacteriological investigations. Facilities for work within the area will be offered to the staff of the Institute.

/Hospital facilities

21. Hospital facilities will be made available for the treatment of complications and the more serious cases discovered. For this purpose the existing facilities in Calioub town (1 ophthalmic hospital - 24 beds) will be utilized. A small ward for treatment of ophthalmic cases will also be made available at Sindibis and possibly at Shubra el Kheima.

22. Based upon this pilot project, the Government will develop an efficient method of control and will apply it towards the expansion of control activities in the whole of Egypt.

23. The prophylactic treatment among pre-school children will be carried out by house-to-house visiting. The personnel used will be tamargis (dressers), working under the direction of bash tamargis (chief dressers) and under the supervision of ophthalmologists. Dressers will be organized in teams of two dressers each; able to administer normally prophylactic treatment to 2,000 children per day. Owing to special circumstances in Egyptian villages (one holiday and one market day per week) it is estimated that one team will deal with one village per week.

24. As regards school children, the selection of cases to be treated will be made by an ophthalmologist or specially trained tamargis and the treatment carried out by the dressers and to some extent by teachers properly trained in the treatment of trachoma. It is hoped, by administrative action, to obtain attendance of most children of school age, also those not normally attending school.

25. The assessment phase of the project will consist:

- a. as regards acute conjunctivitis, of random sampling of about 1,000 children in each of six different areas covered by the project (including demonstration and check areas);
- b. as regards trachoma, in selecting about 1,000 cases to be followed during two years, at different stages.

#### Administration and Assignment of Responsibility

26. The project will be conducted under the responsibility of the Government who will appoint a medical officer of suitable experience as director of the project. The senior adviser appointed by WHO will act as chief technical adviser to the Government in the operation of the project. Other advisers provided by WHO will, under the direction of the senior adviser, act as advisers on the project in their respective specialties. The project /will be

will be under the overall direction of the Caliouba Health Demonstration Area and a technical advisory committee, grouping representatives of all the bodies concerned, will be formed to advise on the technical conduct of the project.

UNICEF Commitments

27. If this recommendation is approved, UNICEF will provide the following, at an estimated cost of \$19,000:-

- i. antibiotic ointment (aureomycin or terramycin 1%) - 210 Kgs - \$9,000.

Basis of calculation:

- a. first course: 7/8000 children to be treated  
3 times per day for 60/90 days;  
b. second, third and fourth course: about 2,000  
children to be treated 3 times per day  
for 60/90 days;  
c. 2,000 children to receive prophylactic 4 days  
treatment twice a year for two years.

- ii. Compound sulphonamides 180 kgs. 4,000.

(100 kgs. in emulsion 125 mg/cc)

(100 kgs. in tablets of 125 mg.)

Basis of calculation: average 1.5 gr. per child per day.

7,000 children to receive four days treatment twice a year  
for two years.

- iii. 25 graduated automatic syringes )  
iv. 20 special emulsion containers ) 300.  
v. Transport for the personnel: 2 jeeps  
1 pick-up truck 5200.  
Contingencies 500.

TOTAL 19000.

WHO Commitments

28. This project has the technical approval of WHO. WHO will provide the following personnel, subject to availability of funds, at a cost of \$30,000:

one ophthalmologist for two years;

one public health nurse for two years.

The services of the international personnel to be recruited by WHO for the health demonstration area at Caliouba (same geographical situation as the project under consideration) will be available for advice, especially in the field of health education, epidemiology, environmental sanitation and statistics.

/The Govt.

Government Commitments:

29. The Government has made the following estimates of its contribution in the course of the two years. Most of these commitments will be met by the "Health Demonstration Area" budget.

a. Personnel: In addition to the staff employed by the local health service and the Memorial Ophthalmic Laboratory in Cairo, the Government will make available full-time:

- 1 ophthalmologist (full-time from the Calioub Health Demonstration Centre)
- 1 assistant doctor
- 3 laboratory technicians
- 1 supervisor (field administrator)
- 10 chief dressers
- 20 dressers (for the treatment of trachoma; temporarily increased to 40 during the three month pre-epidemic season)
- 5 drivers

Secretarial clerical and auxiliary staff as needed.

Total personnel estimated at	\$31,000
b. <u>Premises</u> : The Government shall make available a central office at the Calioub Centre and rural offices at various health centres, estimated at	\$500.
c. <u>Laboratory facilities</u> at Memorial Institute	\$840.
d. <u>Office furniture and Stationery</u>	<u>\$560</u>
TOTAL (approx)	\$33,000

30. Not shown here as direct Government matching for the UNICEF apportionment are the following:

- a. Part use of Ophthalmic Hospital services within the project area - \$14,000
- b. Allowances for international staff 5,600
- c. The health education, sanitation, statistical and other services of the "Health Demonstration Area".

Duration of Project and Target Time Schedule

31. The project will have a duration of two years: a preliminary assessment of results achieved will be possible within that period. It is tentatively planned that the project should commence in October 1954 and comprise the following phases:

Phase I - Preliminary survey: (October to November 1954):

- a. examination of random samples of pre-school children in each village to establish the incidence of trachoma and assess the carrier rate for pathogenic bacteria. Clinical findings will be recorded and smears taken;
- b. examination of school children and recording in conformity with the new WHO classification. Stages of infection 1-3 to be listed for treatment;
- c. education of untrained staff, medical and non-medical, in the methods of treatment to be used.

Phase 2 - Treatment of all suitable cases in the schools (December 1954 to February 1955).

Phase 3 - Preparation and organization for mass campaign of prophylaxis against seasonal ophthalmia which should commence at the beginning of March, 1955.

Phase 4 - The campaign of mass prophylaxis against seasonal ophthalmia in pre-school children which should be carried out in the demonstration area during March 1955.

Phase 5 - From April 1955 onwards: examination and treatment of remaining suitable cases in school children. This phase should terminate before the commencement of school holidays.

Phase 6 - August 1955: second mass prophylactic treatment against seasonal ophthalmia.

Phase 7 - From October 1955 onwards: examination and treatment of new school pupils plus resistant and relapsed cases.

Phase 8 - March 1956: third mass prophylactic treatment against seasonal ophthalmia.

Phase 9 - From April 1956 onwards: fourth treatment of all necessary cases in school children.

Phase 10 - August 1956: fourth mass prophylactic treatment against seasonal ophthalmia.

/Progressive evaluation

Progressive evaluation and assessment of results should be commenced after the completion of the mass prophylactic campaign in March 1955 and be continued until the end of the project.

UNICEF Representation

32. UNICEF-aided programmes in Egypt will continue to be serviced by regular visits from personnel of the Eastern Mediterranean Area Office and the Sub-Area Office opened in Cairo.

Previous allocations

33 Previous allocations to Egypt have been as follows:

	<u>Shipped</u>	
	<u>Through 1953</u>	<u>1954 and after</u>
<u>LONG RANGE:</u>		
Maternal and Child Welfare	\$98,500	\$81,500
Mass Health Campaigns:		
Malaria	107,700	27,300
Tuberculosis	290,300	15,700
DDT Production	12,200	237,800
Milk Conservation Plant		131,000
<u>EMERGENCY:</u>		
Feeding	<u>78,800</u>	<u>121,200</u>
TOTAL	\$587,500	\$614,500

Recommendation

34. The Administration recommends, subject to the availability of funds:

a. The apportionment to Egypt of \$19,000 from the Eastern Mediterranean Area allocation for the purchase of supplies and equipment for a pilot project for the control of Communicable eye diseases, including trachoma, in the years 1954-1956.

b. that the Administration be authorized to approve a plan of operations as outlined above.