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ASSIGNMENT REPORT

BILHARZIASIS CONTROL IN LEBANON

23 November 1962 - 22 January 1963

by

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WHO Short-term Consultant

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I INTRODUCTION

1. History

The presence of *Bulinus* snails in Lebanon was first recorded, according to Pallary (1939) about a hundred years ago when Ehrenberg found a population of *Bulinus* S.S. in the environment of Beirut. Pallary further reported that the snails existed in the region of Saida, and *Bulinus* shells, believed to be carried from upstream, were found at the mouth of the Litani river.

In 1950 and 1951 M. Abdel Azim surveyed various streams in the coastal plain of Lebanon, south of Beirut, with the aim of finding the snail vectors of Bilharziasis. He found *Bulinus truncatus* in cemented irrigation channels taking their water from Ras El Ain, south of Sour. Snails of the same species were also recovered from the mouth of the river Samar and nearby pits in the close vicinity of Sour and from the Litani river itself near Qarabon bridge in the Bekaa. Enquiries showed that symptoms of Bilharziasis were entirely unfamiliar to the Lebanese population. This was confirmed by Abdel Azim, who, in collaboration with Dr. E. Rizk and Dr. J.M. Watson of the American University, Beirut, examined with negative results 579 specimens of urine obtained from both the Lebanese population and the Palestinian refugees school-children inhabiting Sour and its outskirts.

During the last decade, a few cases of urinary bilharziasis were discovered in Lebanon and these were either Palestinian refugees or Lebanese who had previously lived for some time in neighbouring countries where Bilharziasis was known to be endemic.

The presence of the vector snails in Lebanon, a fact which was already known, together with the discovery of these sporadic cases of Bilharziasis have apparently stimulated the interest of some workers to investigate the possibility of finding bilharzial patients who acquired the infection locally in Lebanon. The first authentic case of urinary bilharziasis contracted in Lebanon was discovered early in January 1961 by Azoury and Moadie in a sixteen-year old boy from the village of Sarafand in Southern Lebanon. In April 1961 Azar and collaborators examined single urine specimens obtained from 591 inhabitants of this village among whom were 171 school-children aged 6-14 years. They reported an overall rate of infection with *Schistosoma haematobium* of 14.6%, the largest number of infected individuals being in the 10-19 year age group. These workers conducted a survey of the snail vector as well, and shells identified as those of *Bulinus truncatus* (Audouin) were recovered from the sediment which has been removed from the Kasimieh canal of the Litani irrigation project at some locations along its whole length (35 kms). Living *Bulinus* snails were found in other parts of the canal in October 1961 and at later dates.

Dr. A. Halawani, Deputy Regional Director, who visited the area late in August and early in September 1962, examined single urine specimens from 78 young individuals from Sarafand, among whom 26 were found infected with *Schistosoma haematobium*, i.e. an overall rate 33.3%. Again in this series of cases, the highest rate of infestation was recorded in the 10-19 year age group, the figure obtained was almost identical with that found by Dr. Azar in the same age group (33.2%). Dr. Halawani also found shells of *Bulinus truncatus* in the Saida branch of the Kasimieh canal at Sarafand and Adloon among debris of grass, vegetations and mud which were dug out of this canal in the process of cleaning. He examined specimens of urine obtained from inhabitants of neighbouring villages along the canal, namely, El Kasimieh, Abul Aswaad, Adloon, Saksakieh south of Sarafand, and from Akbieh and Ghazieh north to it, and no cases positive for *Schistosoma haematobium* ova were found in any of them.

Dr. A. Halawani outlined in his report the epidemiological aspects of the problem and the suggested methods of control.

2. Project Lebanon 45

The discovery of a number of cases of urinary bilharziasis among the inhabitants of the village of Sarafand in Southern Lebanon has aroused much concern in that country which was considered, up to this time as being free from the disease.

In 1962, the World Health Organization agreed to provide the Lebanese Ministry of Health with the services of a short-term consultant for the combat against Bilharziasis. He would study the incidence of the disease, particularly in the area of the Kasimieh irrigation project from which cases were reported. After studying the circumstantial aspects of the problem, the consultant would recommend the appropriate methods of snail control, health education, environmental sanitation and treatment of patients. A programme has to be elaborated concerning the formation of a national team to deal with the different aspects of Bilharziasis control. The Lebanese Ministry of Health would supply the funds necessary to put the proposed scheme of control into operation.

II THE PROJECT AREA

1. Description

The village of Sarafand is located about 10 kms south of Saida, northern branch of the Kasimieh irrigation project (Saida branch) bisects it in a north-south direction running approximately parallel to the Beirut-Saida highway. It has a population of about 3000, the majority of the inhabitants live at the hill-top sector of the village, about 100 metres above sea level, in crowded houses under less than optimal sanitary conditions. The rest of the inhabitants live, under definitely better housing conditions, in scattered houses amid plantations on either side of the Beirut-Saida highway.

The Kasimieh irrigation project, which has been operating since 1953, is now the chief source of irrigation with its 40,000 donoms in Saïda and Sour areas. The part of the Saïda branch of this project which is used by the population of Sarafand for irrigation is about three kilometres in length, one and a half metres in width and has slanting sides in most of its course. All the canals of this project are cement lined. There is a winter closure period of four months, from December to March, the very low water level that is occasionally present during this period is due to rain and to seepage from around the canal. Manual cleaning of the canals from mud and debris and mending of its walls takes place every year during the winter closure period. Though aquatic plants are absent, yet plenty of algae grow on the irregular non-smooth sides of the canal. It is of special significance to mention that one side of the canal widens in many places along its course, it was designed thus to facilitate the watering of cattle, and there are two such constructions, or artificial basins, in that part of the canal which is used by the inhabitants of Sarafand.

At the hill-top sector of the village, where most of the population live as mentioned before, there is a small spring which is the main source of water for drinking and domestic purposes in winter time. This spring practically dries up during the summer months of the year. An artesian well, situated in the village of Lubieh, one and a half kilometres to the south, provides another source of potable water. Its water reaches Sarafand through pipes and is pumped into a specially erected reservoir. The amount of water which reaches this reservoir is, however, very small and hardly suffices the needs of two or three houses.

The fewer inhabitants living in the other sectors of the village, particularly in the cultivated strip lying between the highway and the sea, get their water for drinking and domestic purposes from small underground springs which are numerous in this area along the seashore. They, however, depend upon tributaries from the canal for irrigation.

The predominant plantations in the area, similar to the rest of the cultivated coastal plain in Southern Lebanon, are citrus fruits and bananas.

2. Epidemiological Considerations

The focus of Bilharziasis discovered lately in Southern Lebanon is closely related to the establishment of the new irrigation scheme known as the Kasimieh project. A dam was erected at the Litani river and water was diverted into a new main canal nine kilometres in length. This canal divides at Kasimieh into two branches, the Sour branch which runs southwards for twenty kilometres and the Saïda branch which runs northwards for thirty-five kilometres to end at Darb El Sim near Ghazieh just to the south of Saïda.

There is ample evidence that sporadic cases of infestation with *Schistosoma haematobium* were discovered in Lebanon in the past ten years i.e. since the irrigation project went into operation and a short time before, but it was claimed that these were individuals who contracted the infection in neighbouring countries where the disease is known to be endemic. The exact method through which Bilharziasis has been introduced

into the only focus discovered up to the present time, namely in the area of Sarafand, could not be definitely elucidated at present. Apart from the different possibilities discussed in this connection, which are all hypothetical, there are a few facts that helped the introduction and establishment of the disease in this particular area:

(1) Every summer, since 1953, when the irrigation project went into operation, agricultural labourers from neighbouring countries have been employed in this area. These include Syrians, Iraqis and wandering Palestinian refugees among whom cases of Bilharziasis may be found. These cases constitute a potential source of danger of the spread of the disease in places where the vector snail exists in its water channels.

(2) The main bulk of houses at Sarafand which are located at the hill-top sector of the village is definitely nearer to the canal as compared with the other villages which depend upon the canal as the main source of irrigation. This fact facilitates more frequent contact with the water infested with the vector snails.

(3) The lack of water for drinking and for domestic purposes in the summer months at Sarafand obliges most of the inhabitants of the village to use the canal water as a substitute.

(4) The widening parts of the canal, already referred to, greatly facilitate contact with water and are frequented by the women for washing clothes and utensils. They are also used by the children as artificial swimming pools in summer. The consequent organic pollution in these particular spots of the canal offers favourable circumstances for *Bulinus* snails to flourish. The inhabitants of the shore sector of the village, approximately 500, who get water for drinking and for domestic use from underground springs as already mentioned, usually swim in the sea, which is, at the same time, far away from and not easily accessible to the children living at the hill-tops sector.

(5) The main Kasimieh canal, nine kilometres in length, has a gradient of eighty metres from the point of its origin at the dam erected on the Litani river to its termination at Kasimieh village where it bifurcates into the Sour and Saida branches. The Saida branch is twenty metres above sea-level at its origin, it runs northwards for thirty-five kilometres to end at Darb El Sim near Ghazieh. The water velocity varies from five to eight kilometres per hour in the main canal according to the steepness of the gradient in its different parts. It is apparently much in the Saida branch especially in its northern terminus where Sarafand is located. Moreover, at the northern edge of this village, the Saida branch passes beneath the highway to allow for irrigation of large gardens by the sea-side. In this area, the canal crosses a deep valley in a channel built underground, and a siphon with high-walled reservoirs was erected to maintain the water level of the canal. Another siphon is also present along the course of the canal after it crosses the highway on the way to its termination. The presence of these siphons is undoubtedly a major factor which results in slowing down the water current in that part of the canal which bisects the village of Sarafand.

(6) Though the cement lining of the canal has definitely led to a marked reduction in the growth of the water plants, yet its rough surface could neither prevent the growth of algae nor the establishment of stable colonies of *Bulinus*.

The absence, as yet, of Bilharziasis in Adloon, a village next to the present focus, which appears to be an illogical situation, could be partly explained by two facts:

a) Potable water is sufficiently supplied all the year round to Adloon inhabitants who never use the canal water for drinking or for domestic purposes. More than 60% of the houses in this village are supplied with indoor installations of potable water.

b) The village houses are located at a hill-top 500 metres away from the canal.

It is thus apparent, that a number of factors have created the necessary conditions favourable for the introduction and establishment of a Bilharziasis focus in Sarafand which lies in an area where a new irrigation project has been established.

The previous data, already referred to, have shown that Bilharziasis infection is most prevalent in the age group 10-19 years. It is impossible, however, to predict at present the role played by each of the factors responsible for the spread of the disease. The various practices and habits related to the incidence and spread of the infection could only be clarified by a house-to-house search of the village of Sarafand.

3. Situation Before the Start of the Project

On my arrival in Lebanon, I was informed that the Lebanese Ministry of Health has allotted the sum of 175,000 L.L. for Bilharziasis control in the budget of 1962. This sum provided for the salaries of personnel, cost of equipment needed and means of transport. A team composed of one doctor, two laboratory assistants, four sanitarians, two assistant sanitarians, four drivers and twenty labourers were already enlisted as candidates to join the project. Apart from an attempt to treat some patients which was discontinued as a result of side-reactions to the drug used, no other activity was started in so far as the control of the disease was concerned. Both the authorities at the Ministry of Health and the people living in the infected area were anxious to see activities in this direction start as early as possible.

III SUMMARY OF OBJECTIVES

1. Field study of the factors that have direct relation to the problem in the project area and a study of the extent of the problem itself.

2. The establishment of a Bilharziasis control centre whose main activities would be to carry out snail population and transmission studies, prevalence surveys and treatment of patients. It has as well to participate in health education and to study environmental sanitation and housing conditions for the population at risk.

IV METHODS

1. An orientation with the problem of Bilharziasis was communicated to the personnel appointed to work in Bilharziasis control in a series of lectures which included the following information:

- a) historical note,
- b) discovery of the causative fluke, the snail vectors, and the life cycle of the parasite,
- c) distribution of the disease all over the world with particular reference to its occurrence in Middle Eastern countries,
- d) the habits and practices which promote the spread of the disease among the population,
- e) the effect of the different stages of the life cycle on the human body organs and the complications of the disease,
- f) the repercussions of the problem upon national income and production,
- g) Bilharziasis in Lebanon and its relation to development of new irrigation schemes.

2. The authorities at the Ministry of Health agreed to establish a Bilharziasis control centre at Saida, and two rooms were chosen for this purpose at the first floor of Saida General Hospital. A laboratory was equipped with the necessary facilities for identification of snails, examination of urine specimens and other minor investigations needed to be performed for patients before and during treatment. An adjoining office was arranged for the sanitarians to be used for mapping and registration of data. The available irrigation and survey maps for the area of Sarafand were obtained in due time from the responsible departments of the Lebanese Government. Nets to be used for collection of snails were locally made according to the specifications that were found suitable and adequate. The centre was supplied with drugs for the treatment of Bilharziasis, and for dealing with the side effects that may occur during treatment. Sodium antimony dimercapto succinate (Astiban) and para-amino-phenoxy-thalimidopentane (Schistomid) were available, the latter to be used for oral therapy when indicated.

3. Detailed theoretical and practical training was given to the doctor, sanitarians, assistant sanitarians and the laboratory assistant (only one was appointed) as follows:

a) Systematic snail population studies: mapping of water channels, favourable habitat for *Bulinus* snails, collection and identification of snails registration and interpretation of data.

b) Prevalence studies:
House-to-house search, the proper method for collection of urine specimens, methods of examination of urine for *Schistosoma* ova, and the relation of infection to age, sex, occupation and habits. Special forms were elaborated for registration of data which included a family record, a personal record of each patient, and a table for snail population studies.

4. The staff of the centre was also informed about the methods of health education of the population that could be applied to combat Bilharziasis. Environmental sanitation with regard to the Bilharziasis problem, especially the supply of potable water to inhabitants at risk was also emphasized. The methods of application of molluscicides were outlined. The importance of the ecological studies that should precede successful molluscicidal control was stressed.

5. The doctor in charge of the centre was well acquainted with the therapy of Bilharziasis. This included the following:

a) A review of the different drugs in common use.

b) The pharmacological effects of antimony compounds, contra-indications to antimony therapy, its side reactions, toxic effects, and signs and symptoms of intolerance.

c) Side reactions of Miracil B and para-amino-phenoxy-thalimidopentane.

d) The standard dosage schemes of anti-bilharzial drugs.

e) Follow-up of treated cases and evaluations of results.

6. Two jeeps and station wagons were put at the disposal of the project when the centre at Saida was finally established and equipped in the middle of December 1962. The patients to be treated were transported from Sarafand to Saida in the cars of the centre. After receiving their injections, they were again carried back to their village.

N.B.

All the lectures and information detailed above were delivered in Arabic. The Lebanese Ministry of Health has published them in manuscripts to be circulated to doctors and sanitarians in touch with the Bilharziasis problem in Lebanon.

V ACCOMPLISHMENTS

A Bilharziasis control centre was established at Saida and provided with trained personnel, equipment and means of transport to carry out snail population and control studies, prevalence studies and treatment of patients. The staff of the centre are acquainted with the methods of health education of the population and with the role played by environmental sanitation in so far as the Bilharziasis problem is concerned.

Work started at the centre by the middle of December 1962, and, during my presence in Lebanon, the part of the Saida branch of the Kasimieh project that bisects the village of Sarafand was already mapped and surveyed for vector snails. Numerous shells of *Bulinus* were found in different locations in the main canal, but no living *Bulinus* were met with. The tributaries of the canal are absolutely dry at this time of the year.

House-to-house survey and search for infected individuals has already systematically started as well at Sarafand. Till the 20 January 1963 about one third of the population was registered in house-hold forms. Specimens of urine obtained from 296 individuals of different age groups were examined among these were 152 males and 144 females. 28 were found positive for *Schistosoma haematobium* ova, of whom 7 were females and 21 were males, i.e. an overall incidence of 9.46% among the group examined.

Number of persons examined and prevalence rate by sex

	Number examined	Number positive	Number rate %
Males	152	21	13.8
Females	144	7	4.9
Total	296	28	9.5

Cases of Bilharziasis by sex and age

Age Group	Males		Females		Total	
	Number	%	Number	%	Number	%
- 10 years	5	23.8	1	14.3	6	21.4
10 - 19 years	11	52.4	5	71.4	16	57.2
20 years or above	5	23.8	1	14.3	6	21.4
Total	21	100.0	7	100.0	28	100.0

Treatment of these patients was carried out as soon as conveniently possible. Before the end of the assignment, 25 patients had already started, among whom 7 had already finished the prescribed course of treatment. Astiben was used for treatment in the spaced dosage scheme which has been lately recommended, i.e. an individual dose of 8 mg per kg body weight was administered intramuscularly twice weekly for 5 doses.

Minor side-effects were occasionally met with, and the seven patients who completed the course of treatment proved to be apparently cured from Bilharziasis when their urine samples were examined one week after finishing the course of treatment. Oral therapy with Schistomid, which is much less therapeutically effective than antimonial drugs, is to be used for patients to whom antimony compounds are contra-indicated or are not tolerated by them.

All the patients met with at the centre and at the village of Sarafand were examined clinically and questioned the short history of the symptoms, two years on the average in the majority of cases and the absence of signs and symptoms of chronic urinary bilharziasis indicate that the disease has been only recently introduced into the area.

I had the facility to examine, at the Central Laboratories at Beirut, specimens of urine obtained from school-children in other villages just to the north and south of Sarafand. A total of 170 urine samples, among which 60 were from Adloon, 50 from Ghazieh and 40 from scattered houses just to the south of Sarafand, were found negative for *Schistosoma haematobium* ova.

The authorities at the Lebanese Ministry of Health have already taken active measures to ensure the supply of potable water to the inhabitants of Sarafand. The methods of health education of the population adaptable to local conditions are the subject of concurrent study.

VI - COMPARATIVE SUMMARY AND ASSESSMENT OF RESULTS

The evidence available as a result of the studies carried out indicates that Bilharziasis has been only recently introduced into Lebanon. The establishment of the Kasimich irrigation project has undoubtedly helped the creation of the favourable habitat for breeding of the snail hosts.

Sanitary engineering methods, from the point of view of the possible spread of Bilharziasis in a place where the snails already existed in some of its water channels, were apparently not taken into consideration during the planning of the irrigation project.

The extent of the Bilharziasis problem in Lebanon is, as yet, very limited, infected individuals were discovered only among the inhabitants of the village of Sarafand. The systematic prevalence study that has already started in that village has revealed an overall infection rate of 9.5% among 296 individuals. Most of the cases, 57.2% was recorded in the age group 10-19 years. The house-to-house search of the village, already in progress, will definitely illustrate the present situation. The practices, habits and factors responsible for the spread of the disease would be more clarified.

Bulinus shells were found in different localities in the Saida branch of the Kasimieh irrigation project, the winter closure of the canals and the prevailing weather conditions in December and January did not permit of more extensive snail population studies.

During the period of my assignment the staff of the newly established centre at Saida were adequately trained on prevalence survey and treatment of patients, on snail work in the field, on control measures and health education. Practical training on transmission studies, however, could not be conducted because of the difficulty of finding living snails at that time of the year.

Coordinated efforts of combat against Bilharziasis in its present phase in Lebanon, should provide an excellent chance for control of the disease.

VII RECOMMENDATIONS

1. House-to-house search and mass treatment of the infected population are the most important means of combat against Bilharziasis in such a localised focus as at Sarafand. These procedures are, at present, in progress and it is recommended that treatment of patients be accomplished at the village itself. This latter arrangement will help treatment of all the infected people of the village before summer which is the apparent season of transmission of infection.

Astiban could be replaced by Stibophen (or a similar compound), to be administered according to the standard course of treatment. Miracil D could as well be substituted for para-amino-phenoxy-thalimido-pentano for oral therapy.

2. The supply of safe water for drinking and for domestic purposes to the inhabitants of Sarafand stands paramount as a control and preventive measure. Potable water should be available as early as possible and before summertime when the only spring at the main sector of the village practically dries up. Potable water should also be supplied to all the population potentially at risk in the different villages along the Kasimieh irrigation project.

3. I understood that cleaning of the canals of the irrigation project is due to start next March. This cleaning, if properly and adequately carried out would lessen exposure to infection to a considerable extent. Special attention should be paid to mending the numerous crevices in the concrete sides and it would be advisable to extend the side of the canal to cover the widepans previously mentioned.

4. A search for cases of Bilharziasis among the inhabitants of the other villages, about 70,000 in the vicinity of the Kasimieh irrigation project, should be carried out. Assuming that the infection rate, if present, would approximately be 10% as revealed in the present study, a sample comprising 5000 individuals of different age groups is adequately representative. An alternative method is to search for cases of Bilharziasis in the mostly infected age groups of 10-19 years. Arrangements should be made to perform similar surveys among the Palestinian refugees in their different camps.

The use of serological tests for diagnosis of Bilharziasis may be considered in special circumstances, the circumoval precipitin test and the cercarial halo reaction are recommended in this respect. Should other foci of infection be detected, house-to-house survey and mass treatment are to be promptly carried out.

5. Snail population studies, breeding and ecology of the vector snail have to be extended to both branches of the Kasimieh irrigation project, to the main canal and to other areas undergoing agricultural development in Lebanon. The effect of the drying of the canals during the winter closure, and of their cleaning as well, upon the snail population has to be ascertained. The location of the breeding places in relation to human dwellings and to accessible places along the canals has to be verified.

6. The use of molluscicides could be considered only after completion of the ecological and transmission studies under local conditions of the environment. It is recommended that the doctor, laboratory assistants and sanitarians working at the Bilharziasis Control project should attend a short-term training course which would include:

- a) Examination of snails for cercariae.
- b) Susceptibility of snails to infection under various conditions.
- c) Practical application of molluscicides.

A period of one or two months to be spent at Egypt 49 Project and at the Research Institute for Tropical Medicine in Cairo will be adequate for the proposed essential training course.

7. The present situation of the problem would make it justifiable to recommend the instalment of a mechanical barrier at the intake of the Saida branch of the Kasimieh irrigation project to obstruct the passage of snails into it. The barrier consists of a screen of galvanised steel wire netting, 8 meshes to the linear inch, stretched over a wooden frame and braced with angle iron. It could be built in three sections to be placed at the mouth of the Saida branch. This barrier would not impede in any way the flow of water coming from the main Kasimieh canal.

8. The importation of agricultural labourers from neighbouring countries where Bilharziasis is endemic has to be subjected to a sort of medical control in so far as Bilharziasis is concerned.

FUTURE PREDICTION AND RECOMMENDATIONS

The available evidence indicates that the present Bilharziasis problem in Lebanon could be controlled within a relatively short period of time. In view of the geographical position of the country and of the development of many irrigation schemes in the near future, the potential risk of the spread of Bilharziasis should always be under consideration. A permanent centre has to do wide-spread snail population studies, to conduct health education of the population in general, and to deal with any, presently unforeseen events that may arise. Such activities may spread to many parts of the country and this should be centrally directed and supervised by the Ministry of Health.

The role of environmental sanitation in the control of Bilharziasis has no need for emphasis, the aid and advice of sanitary engineers should, as well, be sought when the irrigation projects are planned.

ACKNOWLEDGEMENT

I am greatly indebted to His Excellency Ali Bazzi, the Minister of Public Health; Dr. Anouti, Director-General, Dr. Hosni Jalloul, Director of Preventive Medicine and the staff of the Ministry of Health for the close cooperation and assistance that I have received during my stay in Lebanon. Dr. Fouad Abou Zahr, Provincial Medical Director, Dr. Khalil El Shami, Deputy Provincial Medical Director of Southern Lebanon and Dr. Elias Hayek, Director of Central Laboratories have rendered a most valuable contribution to the establishment of a Bilharziasis control centre at Saida. Dr. Khalil El Rif, in charge of the newly established centre and the rest of the staff have undertaken their work with great interest and a true sense of responsibility.

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WHO EMRO

ANNEX I

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ANNEX I

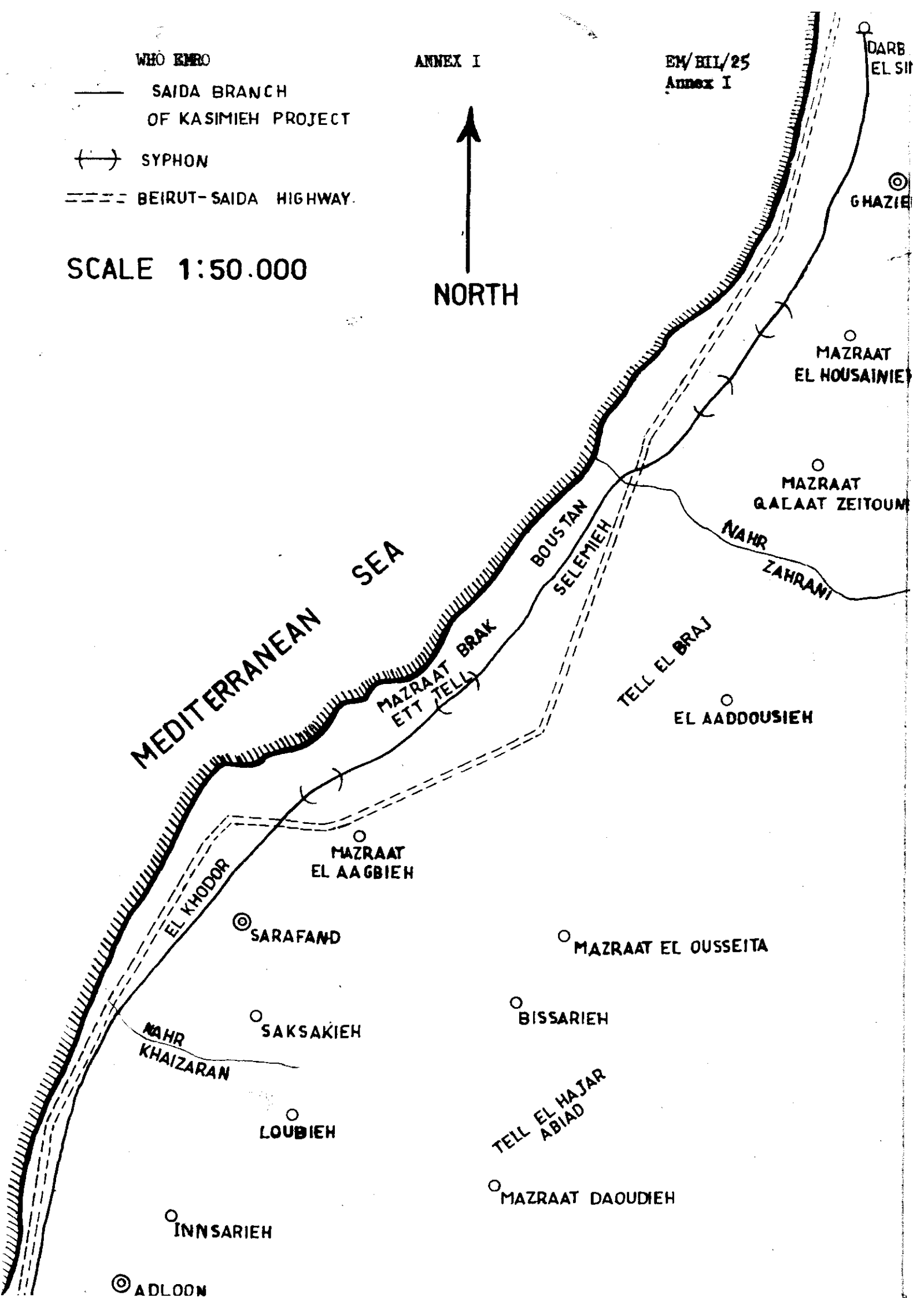
— SAIDA BRANCH
OF KASIMIEH PROJECT

(=) SYPHON

--- BEIRUT-SAIDA HIGHWAY

SCALE 1:50.000

NORTH



MEDITERRANEAN SEA

MAZRAAT BRAK
MAZRAAT ETT JEL

BOUSTAN
SELEIMIEH

NAHR
ZAHRAWI

TELL EL BRAJ

EL AADDOUSIEH

MAZRAAT
EL AAGBIEH

SARAFAND

MAZRAAT EL OUSSEITA

BISSARIEH

NAHR
KHAIZARAN

SAKSAKIEH

TELL EL HAJAR
ABIAD

LOUBIEH

MAZRAAT DAODIEH

INNSARIEH

ADLOON

DARB
EL SI

GHAZIEH

MAZRAAT
EL HOUSAINIEH

MAZRAAT
GALAAAT ZEITOUN

Lebanese Republic
Ministry of Public Health
Schistosomiasis Control Project

Serial No.:
Date:

WHO EMRO

E/BI/25
Annex II

ANNEX II

Household Form

Serial No.	Name and Surname	Sex	A.e	Profession	No. and Date of Individual Form
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Signature of Officer in Charge

