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8200

Malta - presents an oral contact

Bulgaria

Greece

Turkey

Yugoslavia

MALARIA COORDINATION IN SOUTH-EAST EUROPE

Report on a WHO ⁱⁿ Meeting

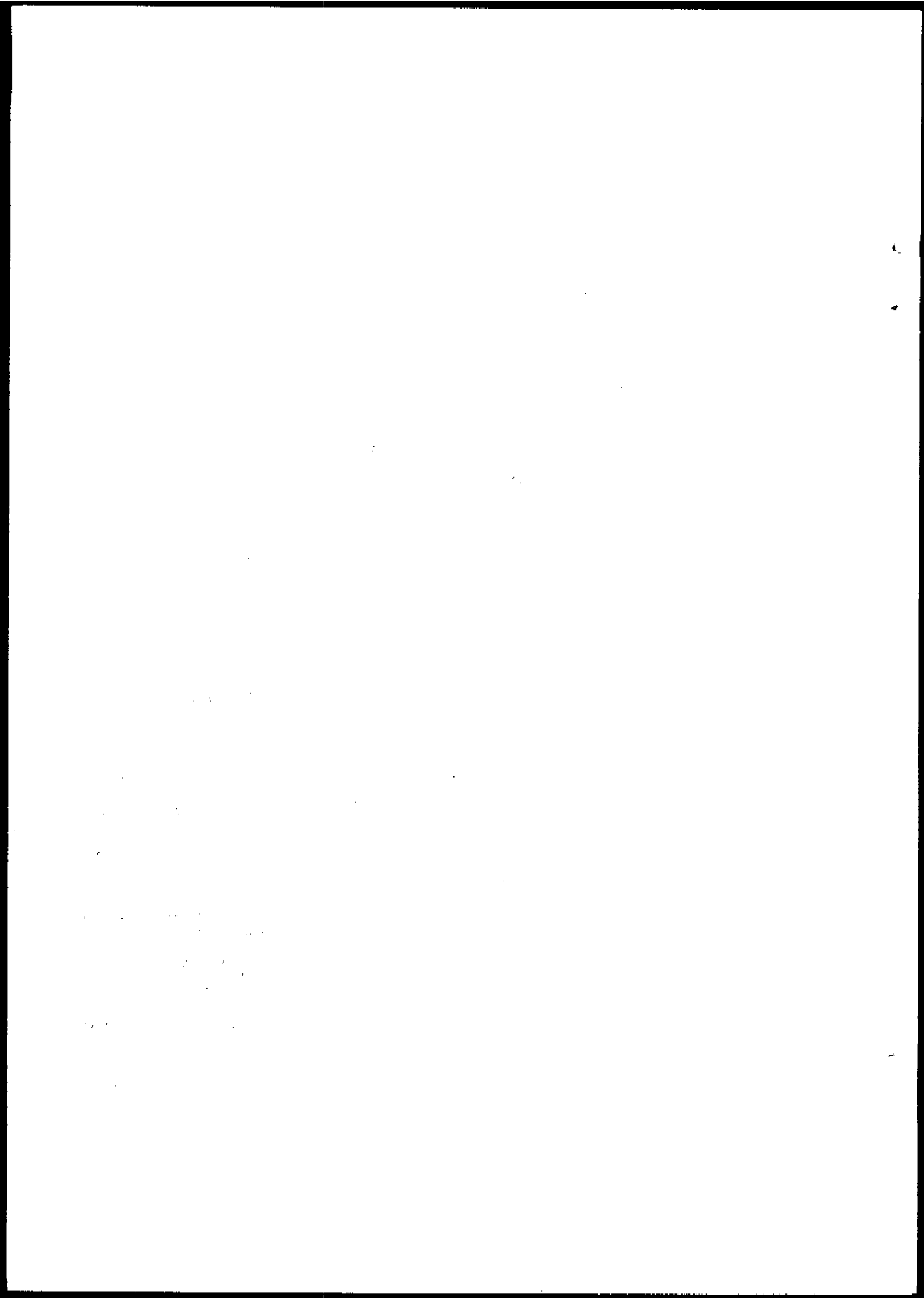
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1. Introduction

Given the present malaria situation, it is important that frequent communication of information takes place between the countries of south-east Europe, not only through border meetings of field staff but also through meetings and consultations among the managers of malaria control activities.

In accordance with the recommendations made at coordination meetings held in Sofia in 1980 and in Mahon in 1982 the present Meeting was organized by the WHO Regional Office for Europe in collaboration with, and with the support of, the Government of Greece and the United Nations Development Programme (UNDP).

The Meeting was held in Athens at the St George Lycabettus Hotel. The participants were representatives of Bulgaria, Greece, Turkey and Yugoslavia, and the technical staff of UNDP and WHO. At the opening ceremony Dr U. Marcelou-Kinti welcomed the participants on behalf of the Greek Government and Dr K. Lassen, on behalf of the WHO Regional Director for Europe, described the main lines of WHO intervention in malaria control and expressed WHO's gratitude to the Greek Government for its hospitality and generosity in hosting the Meeting.

Since the Meeting was a follow-up to the Sofia and Mahon meetings, its principal objectives were to update the relevant information on the malaria situation, discuss new problems caused by any changes and coordinate the action needed to remove the major constraints on, and obstacles to, the malaria control activities in the area.

There is no hope of a quick and easy solution to either old or new problems. The final victory has to be considered a distant objective. Resources, skill and efforts should be dedicated to coping with the threat that malaria represents for the entire world.

2. Malaria situation and surveillance systems in the participating countries

The reports presented by the participating countries are summarized below, excluding any information already contained in the Sofia report, which covered data up to 1979.

Bulgaria

There were 1155 cases of imported malaria reported between 1980 and 1983 (see Table 1). There were sporadic cases of induced malaria and relapses, all of them caused by Plasmodium malariae. A slight drop in imported cases was noted in 1982 and 1983. P. vivax was the most frequent species observed (69.1%), followed by P. falciparum (25.7%). One case was attributed to P. malariae, 26 (2.3%) were due to mixed infection, and 26 (2.3%) were unspecified. Cases were imported mostly from Asia (69.3%) and from Africa (27.7%); 3% came from Latin America. P. falciparum predominated in the cases imported from Africa and P. vivax in those from Asia. There were 122 cases of P. vivax infection in truck drivers returning from Turkey. Two deaths, both from P. falciparum, were recorded.

About 60% of the cases were found during the malaria season in people living in districts where the climate and vector conditions could favour spreading.

The entomological situation in the country has been changed by agricultural development, the construction of dams, the irrigation of large areas and the use of herbicides and pesticides. In some areas the anopheline population has increased and different biotopes have been observed.

Insecticide susceptibility tests have shown that individual anopheline populations in some districts show tolerance or resistance to DDT, lindane and, marginally, to bromofos and fenitrothion. Susceptibility to malathion and propoxur was within normal limits.

A carefully organized surveillance system operates as part of the public health and primary health care network. About 75% of cases are reported within 10 days of onset. The use of immunological tests has increased the efficiency of the search for carriers.

Entomological studies are routinely carried out, with particular emphasis on susceptibility testing. The surveillance network was described in detail.

Table 1. Reported cases of malaria in Bulgaria, Greece, Turkey and Yugoslavia

	1980				1981				1982				1983							
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D				
Bulgaria	128	0	0	0	417	2	1	0	368	0	0	0	242	1	0	0				
Greece	41	9	3	0	52	12	0	0	65	10	3	1	36	6	2	0				
Turkey ^a	1	0	-	34	415	1	0	-	54	415	7	2	-	62	038	9	0	-	66	681
Yugoslavia	82	1	0	0	56	1	1	0	51	0	1	0	69	0	1	0				

A - imported
B - induced
C - relapse
D - autochthonous

^a In Turkey, the figures for imported cases refer to P. falciparum only and the two induced cases were both P. malariae. Due to continuing transmission, no distinction is made between P. vivax cases imported from another province of Turkey and those imported from another country. There is no indigenous P. falciparum in Turkey.

Greece

Between 1980 and 1983, there were 240 reported cases: 194 imported, 37 induced, eight relapses and one autochthonous (see Table 1). P. falciparum predominated in the imported cases (47%), followed by P. vivax (38%) and P. malariae (11%). The species was not determined in seven cases. Africa was the source of infection in 66% of the cases, Asia in 31%, and the United States and Australia in 2.5%. One case came from Bulgaria (a relapse case of P. malariae, contracted 30 years earlier). No death was observed. Greek citizens, most of them sailors, accounted for 106 cases. Of all imported cases, 85% were in the 21-50 year age group. Cases occurred throughout the year, with a slightly higher prevalence in the summer. The fairly large number of induced cases was due to blood transfusion: the occasional donor had not been tested owing to urgency. Transmission of the only autochthonous case was traced, and it was decided that the source was an illegal foreign worker from Pakistan. Little systematic work has been carried out on the entomological situation owing to lack of personnel.

The surveillance system includes everyone coming from endemic areas. Cases with any type of fever are tested by blood smear; if this is positive, the case is followed up and entomological studies are carried out in the area. Blood samples are taken in high-risk areas.

Yugoslavia

There were 258 imported malaria cases reported between 1980 and 1983. There were also three relapses and two induced cases (see Table 1). P. falciparum predominated (48%), followed by P. vivax (36%), P. malariae (5.3%) and P. ovale (2.7%). There were 15 cases of mixed infection and in six cases the species was unknown.

No death was observed. About one third of the imported cases were in foreigners, mostly students. In 1983, more than half of the Yugoslav citizens with malaria were truck drivers coming from the Middle East through Turkey.

The surveillance system is under the supervision of the Institute of Health Care of Serbia. All foreigners who remain in the country for more than two weeks and all citizens coming from areas with endemic malaria must have a health examination within seven days, and they are kept under surveillance for the next two years.

Turkey

There were 217 288 cases of P. vivax reported between 1980 and 1983. In addition, 18 cases of P. falciparum and P. malariae infection were imported and two of P. malariae induced. In the European part of the country (Thrace), 160 cases were recorded in 1980, 344 in 1981, 388 in 1982, and 581 in 1983 (all P. vivax).

The surveillance system includes active, passive and activated passive case detection; about 2.8 million people have been examined yearly. There has been an improvement in passive case detection within the frame of primary health care. Radical treatment of the cases, anti-relapse treatment and mass drug administration continues. Entomological studies have confirmed the susceptibility of A. sacharovi to malathion and pirimiphos-methyl.

3. Vector control activities

Bulgaria

Biological measures, such as breeding gambusia and carp, are widely applied. Chemical mosquito control is not carried out on a large scale, but organophosphorus insecticides are sprayed on the borders of roads and in camping sites and hotels where trucks coming from endemic areas are expected to stop.

Greece

Spraying is carried out in villages around imported or induced cases. Gambusia affinis is also used.

Yugoslavia

There are no vector control activities, but insecticides are sometimes used against mosquitos for reasons other than malaria.

Turkey

Spraying is carried out systematically to protect about two million people (residual indoor and space spraying). Antilarval measures, in urban and peri-urban areas only, include the use of larvicides (Abate granules and emulsion), biological control measures and environmental modification and manipulation.

4. Training and research

Training and research activities have been pursued in all participating countries, although with different intensity and aims.

In Bulgaria, special training and refresher courses in the epidemiology, diagnosis, treatment and prophylaxis of malaria are available for parasitologists, doctors, sanitary inspectors, microscopists and rural doctors.

In Greece, training in malaria is regularly given to bacteriologists, parasitologists and public health personnel.

In Turkey, training courses in general malariology (lasting from one week to two months) are regularly run for public health doctors, primary health care doctors, nurses, midwives, biologists, microscopists, laboratory technicians and auxiliary staff.

In Yugoslavia, refresher courses are organized by the Institute of Health Care of Serbia for public health personnel.

Research has also been conducted in each country: clinical studies of malaria in non-immune patients and those with glucose 6-phosphate dehydrogenase deficiency, new immunodiagnostic methods for screening purposes, the sensitivity of vectors to insecticides, the effectiveness of antilarval measures, and the development of new source control methods and of insecticide spraying devices. The possibility of joint research programmes between institutions of bordering countries was discussed. The most interesting theme would be the susceptibility of local anophelines to infection with imported strains of Plasmodia.

5. Problems caused by the present situation

A session was devoted to discussing the main problems arising both in countries where malaria has been eradicated and in Turkey where epidemic conditions are not yet under control.

In Turkey, a shortage of trained personnel and the limited possibility of effective supervision of malaria control activities have been important problems for many years. Besides the constraints and difficulties discussed at the Sofia meeting, new and immovable obstacles are the inadequate cooperation by primary health care personnel and the imperfect integration of the antimalaria activities into the primary health care system; the shortage of transport facilities for equipment, personnel and mobile teams; the lack of a positive attitude on the part of doctors and other health personnel, as well as the population, particularly towards chemoprophylaxis and indoor spraying.

Administrative problems and a shortage of funds to buy goods not produced in Turkey are also major obstacles. In this connection, the UNDP Resident Representative in Greece pointed out that UNDP had supported the previous intercountry project for the control of malaria in south-east Europe in 1978-1982 from its regional funds, totalling about US \$430 000. Since the Member States of the European Region had not assigned any priority to this activity at their meeting in 1981 on the UNDP regional programme for the period up to 1986, no funds had been allocated for this period.

In countries where malaria has been eradicated, the main problems are the delay by general practitioners, rural doctors and hospital personnel in recognizing or suspecting malaria in imported or induced cases; the lack of facilities for the rapid screening of blood donors; a shortage of personnel for vector monitoring; and the lack of a reliable, rapid and standardized system of collecting and distributing information on malaria cases.

In some countries, it is difficult to locate citizens who conceal their re-entry into the country from endemic countries. In border areas, antivector activities are often neither coordinated nor synchronized by the staff on both sides.

To maintain trained personnel working on antimalaria activities, a career service structure should be promoted, with the opportunity of training in the control of other parasitic diseases. Governments may need to enforce and guarantee the rule concerning fellowship holders, i.e. that they must work for at least two years in the branch of public health for which the fellowship was awarded.

Based on the exchange of information between the participating countries, and particularly on the very detailed and analytical report presented by Turkey, strong recommendations were made for the improvement of malaria control in the Region.

6. Recommendations

- (1) Coordination meetings should be organized every two years, in each country in turn, to review the malaria situation and to update the plan of work.
- (2) Owing to the close contact between the countries represented at the Meeting (Bulgaria, Greece, Turkey and Yugoslavia), to the increasing number of people travelling between and/or through these countries, and to the increasing number of imported malaria cases, border meetings between the local authorities responsible for malaria control should be organized regularly and at least once a year. Antivector activities, monitoring of susceptibility of vectors to insecticides, and operational evaluation programmes should be periodically coordinated in the border areas.

Meetings should be arranged to discuss antimalaria activities, which must be implemented and synchronized whenever the epidemiological situation on the borders makes it necessary.

- (3) As suggested at the Mahon meeting in 1982, all clearly confirmed and documented imported cases of chloroquine-resistant *P. falciparum* malaria should immediately be reported to WHO, preferably by telex. WHO should in turn inform the exporting country concerned. Other imported cases of malaria that, according to their case history, appear to have been transmitted in areas not known to have transmission should also be reported immediately in the same manner.

- (4) In border areas where there is a risk of malaria, immunological surveys should be carried out. In the short term, advantage may be taken of the existing facilities in Bulgarian institutions, which could be made available to interested countries through the Bulgarian Ministry of Public Health. In the long term, the development of similar facilities in Turkey must be promoted, with WHO assistance.

(5) The participants greatly appreciate the Turkish efforts to implement full-scale antimalaria measures aimed at the complete interruption of transmission, the exhaustion of the existing parasite reservoir before the end of 1989, and the prevention of the re-establishment of transmission.

The group recognized that this can only be achieved by increasing the degree of training and the number of health personnel in general and of staff at the primary health care level in particular.

In view of the urgent need for the rapid training of primary health care personnel responsible for antimalaria activities, especially doctors (who can be used as tutors for training in local or national courses), microscopists and laboratory technicians, it is recommended that ways and means be found to use the facilities available in Bulgaria, with WHO assistance.

(6) International courses for national senior malaria staff should be continued. In view of the great world demand for expertise in antimalaria work, the possibility of running additional courses in malarious countries should also be taken into account.

(7) Multicentre research programmes on the parasitological, entomological and immunological aspects of the problem could be promoted by WHO with the cooperation of existing research institutions in the countries of south-east Europe. A specific investigation that was discussed was the identification of *P. vivax* strains existing in Iraq, Syria and Turkey and their characteristics, including determination of the incubation period.

(8) Taking into consideration the importance of the antimalaria activities in Turkey for the country itself, for its neighbouring countries and for other countries in Europe, it is strongly recommended that UNDP's assistance with the financing of the programme should be solicited. One possibility would be to propose to UNDP and the Turkish authorities that resources from the Turkish IPF funds be allocated with particular priority for the implementation of the antimalaria activities over the next five years.

The following suggestions were also made:

- that the use of UNDP funds in accumulated nonconvertible currency be requested to help the Turkish Government;
- that the possibility be investigated of using the funds of UNICEF and other international organizations for the antimalaria activities in Turkey;
- that the importance of international cooperation in the implementation of the antimalaria activities in Turkey be brought to the attention of the European Community, and its financial support be requested for the intercountry antimalaria programmes and for the Government of Turkey in the implementation of its own antimalaria activities.

Annex 1

LIST OF PARTICIPANTS

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