



WORLD HEALTH ORGANIZATION

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COOPERATION IN THE PREVENTION OF BLINDNESS

THE ARAB GULF PROGRAMME FOR
UNITED NATIONS DEVELOPMENT ORGANIZATIONS (AGFUND)

and

THE WORLD HEALTH ORGANIZATION (WHO)

FINAL REPORT

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CONTENTS

	<u>Page</u>
I. INTRODUCTION	3
II. AGFUND/WHO COOPERATIVE PROGRAMME	5
III. PROGRESS MADE IN PARTICIPATING COUNTRIES:	
Bangladesh	6
Indonesia	6
Mali	7
Nepal	8
Thailand	9
IV. FUTURE ACTIVITIES	9

I. INTRODUCTION

There are at least 28 million blind in the world today, more than 75% of whom live in developing countries (see Figure 1). The common presence of blinding diseases, together with poverty and ignorance and a general shortage of health services, are the roots of the existing overburden of blindness in many developing countries. Yet it is a fact that 80% or more of this blindness is avoidable, i.e., either preventable or curable.

The most important causes of loss of vision are shown in Figure 2. The most common cause is cataract, a clouding of the lens of the eye. In its most common form, cataract develops with age, usually in the 6th or 7th decade of life. In tropical areas, where most developing countries are situated, visual loss from cataract may, however, be of earlier onset and more severe. There are no known preventive measures against cataract, but vision can easily be restored through surgery. The operation is relatively simple and can be done at a low cost, usually around US\$ 10.

Cataract surgery can be provided in a variety of settings, such as mobile teams arranging eye camps.

Trachoma is a very common infectious eye disease in developing countries. The disease starts in early childhood and eventually leads to blindness at adult age, if not treated. The blinding complications of trachoma can be prevented by regular application of antibiotic eye ointment. Cases of advanced disease and threatening visual loss may also be treated by simple surgery of the eyelid.

Vitamin A deficiency is the leading cause of childhood blindness in the world. This condition, "xerophthalmia" meaning "dry eye" with the conjunctiva and cornea losing their normal smoothness, is particularly common in parts of Asia and in many African countries, owing to the insufficient content of vitamin A in the diet of infants. Blindness due to vitamin A deficiency is preventable by means of periodic dosing of the vitamin in capsules to infants, and through education about the improved use of local sources of vitamin A and their inclusion in food.

The World Health Organization's Programme for the Prevention of Blindness, established in 1978, is focusing on the fight against avoidable blindness in developing countries. To this end a primary health care approach to blindness prevention has been developed, the corner stones of which include the provision of simple eye care and education on eye health in the community and with its active support, together with the build-up of a referral system for cases of complicated eye diseases needing further examination or treatment. The eye care provided as part of primary health care depends on the local situation, in order to control the most common blinding diseases with available personnel and facilities.

There are at present some 50 countries that have developed national programmes for the prevention of blindness. In its work together with Member States, the WHO Programme also collaborates closely with some 10 major international nongovernmental organizations active in this field.

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Figure 1

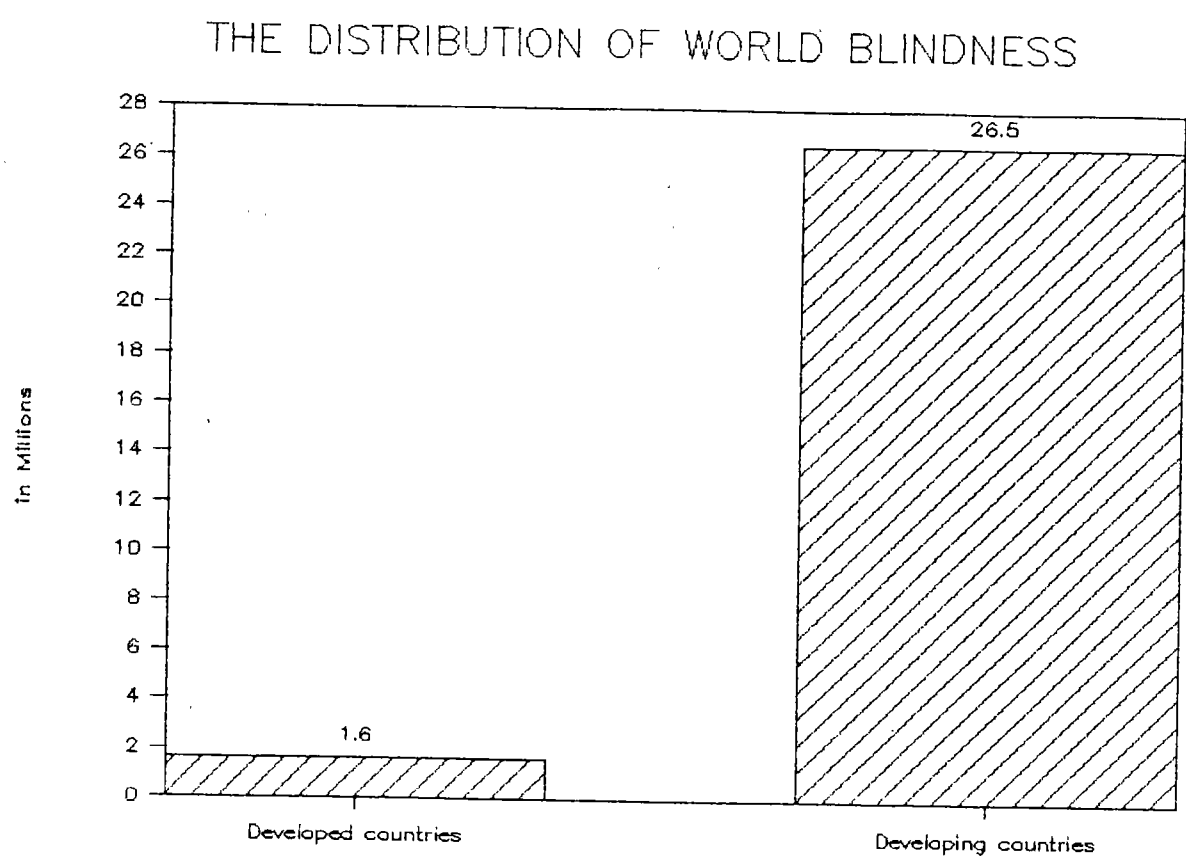
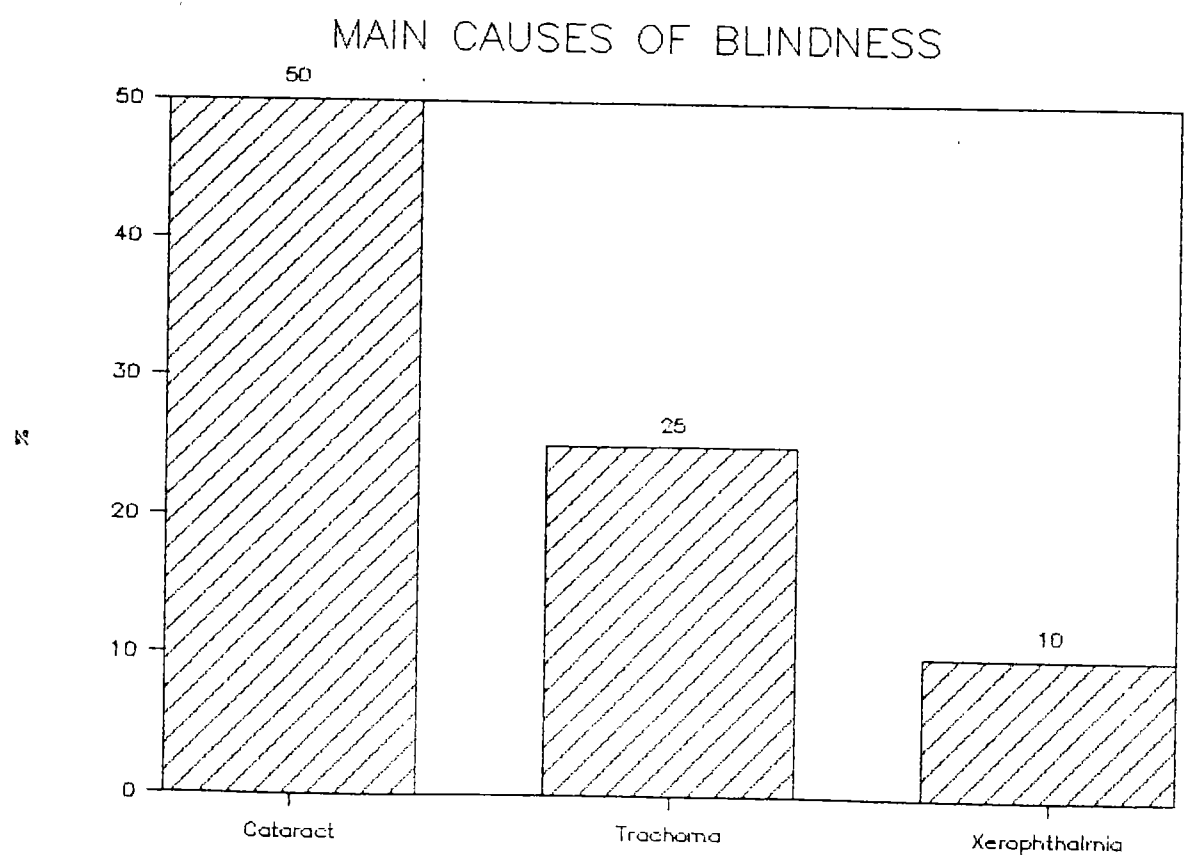


Figure 2



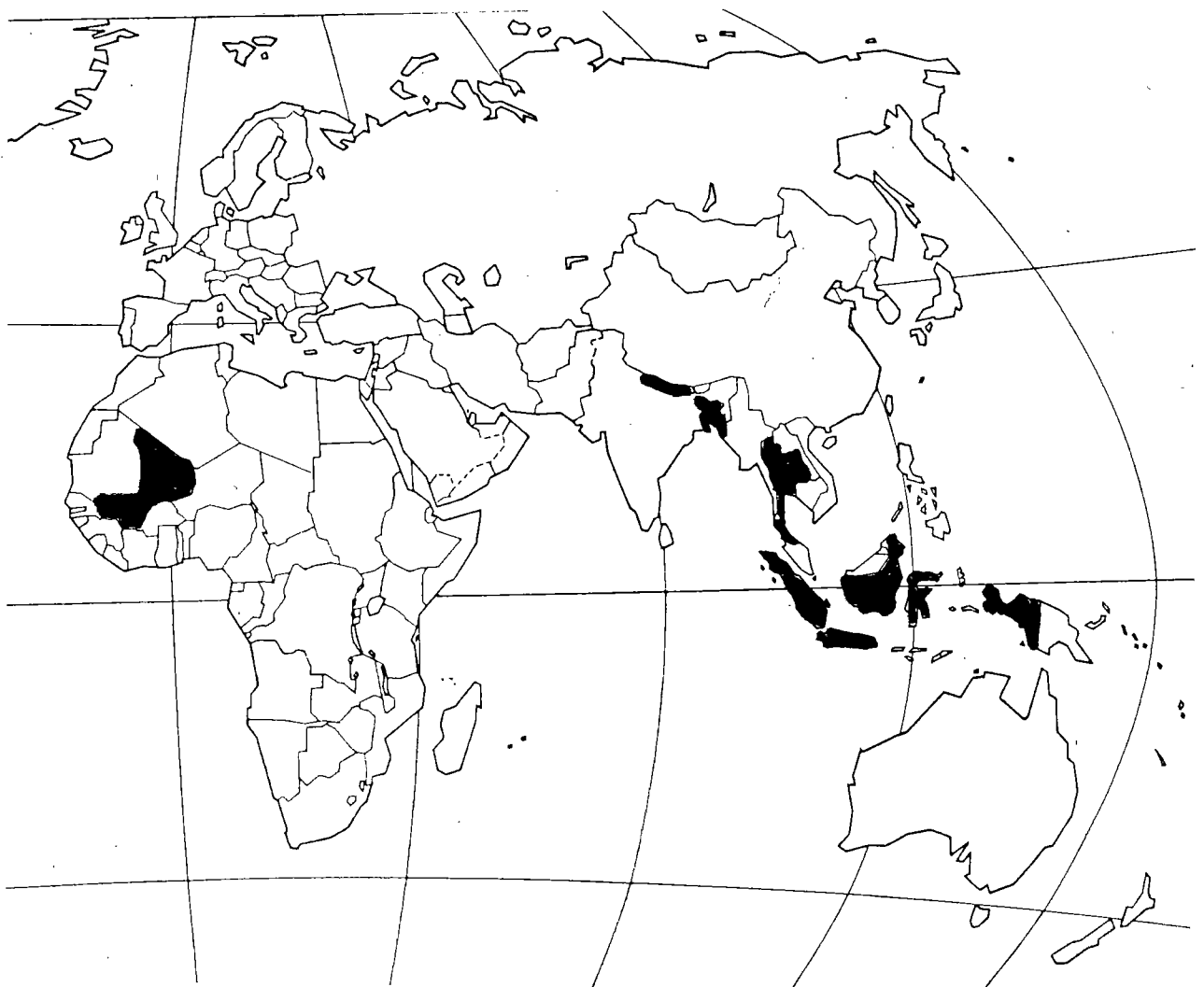
II. AGFUND/WHO COOPERATIVE PROGRAMME IN BLINDNESS PREVENTION

In 1983, AGFUND joined in WHO's action against avoidable blindness by making a contribution of US\$750 000 in support of certain countries and their national programmes for the prevention of blindness.

The following countries, which are shown in Map 1, have benefitted from the support provided by AGFUND during the period 1983 to 1986.

	<u>Population</u>	<u>Children (under 5 years)</u>
Bangladesh	90 million	20.0 million
Indonesia	160 million	21.2 million
Mali	7 million	1.4 million
Nepal	14 million	2.8 million
Thailand	50 million	5.4 million

Map 1



III. PROGRESS MADE IN PARTICIPATING COUNTRIES

Bangladesh

A national programme for the prevention of blindness in Bangladesh was established in 1983, focusing on the provision of eye care as part of primary health care. The two major known causes of visual loss in Bangladesh are vitamin A deficiency in children, and unoperated cataract in adults.

The contribution made available by AGFUND (US\$ 100 000) has permitted the much needed strengthening of the national programme, particularly in relation to training of personnel in eye care, and the provision of ophthalmic supplies and equipment.

The utilization of the AGFUND contribution for the prevention of blindness in Bangladesh has focused on the strengthening of eye clinics and departments. Thus, in 1985, supplies and equipment were provided to medical college hospitals, district hospitals and "Upasilla" health complexes to strengthen their capacities to deal with eye conditions. The supplies included essential drugs for treatment of eye infections, glaucoma and the pre- and post-operative management of cataract both in the institutions and in eye camps. Surgical instruments supplied enabled a large number of patients to be operated on in eye camps. Support has also been provided to the conducting of workshops for training health workers in eye care at various levels.

Indonesia

Blindness has been declared a public health problem in Indonesia, following an assessment carried out in 1982. The overall rate of blindness is high, being estimated at 1.2% of the total population. The main cause of visual loss and blindness is unoperated cataract (76%) and corneal blindness (13%).

The AGFUND supported project in Indonesia has the objective of advancing the knowledge of physicians, paramedical staff and community volunteer personnel, to support the prevention of blindness programme in Indonesia. Training courses in eye care have, thus, been arranged for these categories of personnel. The courses are of 1-4 weeks' duration, and will focus on how to prevent and cure blinding diseases at the community level.

The contribution made available to Indonesia by AGFUND (US\$ 150 000) has also been used to set up a pilot project for the provision of cataract surgery in Bali. This island, with a population of 2.7 million, has very limited eye care services, and a growing problem of a backlog of unoperated cataract. The project supported by AGFUND has been developed on the basis of close community participation, making use of the existing primary health care system for the identification and referral of patients with cataract in need of surgery.

This project in Bali, which is still ongoing, should eventually lead to a "cataract free" zone in Indonesia, and will allow similar developments in other parts of the country.

Mali

The Republic of Mali is situated in West Africa, stretching from the Sahara desert in the north to savannah areas in the south. All major blinding diseases are present in this country, with an estimated overall blindness rate of more than 1% of the population. In addition to having a public health problem of blinding diseases, Mali is one of the least developed countries in the world.

A national programme for the prevention of blindness was set up in 1980 under the name of "Yeelen", meaning "light" in the local Bambara language.

The "Yeelen" programme was started in 1980 to make eye care available in rural areas. Several regional eye centres have been established, each with a small mobile team which undertakes eye examinations and treatment of the local population. There are at present 5 regional eye centres in operation.

In addition to the contribution from AGFUND, this programme receives support from the Ministry of Health, the African Institute of Tropical Ophthalmology in Bamako and a French nongovernmental organization "l'Organisation pour la Prévention de la Cécité". The AGFUND contribution of US\$ 100 000 has been utilized for the following purposes:

- The training of national ophthalmologists at the African Institute of Tropical Ophthalmology (IOTA) in Bamako.
- Support to transport of local field teams and patients in need of further treatment at one of the regional centres.
- Support to the local costs of field work, including equipment for the mobile teams.
- Educational material for the training in eye care of nurses and physicians; this equipment is partially being used at the African Institute of Tropical Ophthalmology for lecturing purposes, but also in rural centres for the training of local health personnel.

The support provided by AGFUND to the Yeelen programme in Mali has allowed for a marked increase in the number of patients examined and treated against blinding disease. Thus, whereas in 1983 some 3200 patients were taken care of, the increased resources made available to the programme allowed for almost 8000 patients being examined and treated during the first half of 1986. During the same period of 1986, eye surgery was carried out on 331 patients, making use of the facilities in the seven established rural eye centres.

As from 1986, the Yeelen programme has been placed under the full responsibility of national staff, with continuing activities as part of general health developments in Mali.

Nepal

Following the recognition by WHO and His Majesty's Government (HMG) of Nepal that blindness is a health area of high priority and that the blind had in the past received too little assistance, the WHO/HMG Nepal Prevention and Control of Blindness Programme was initiated in 1980. The broad objectives of this Programme are (a) a 90% reduction of preventable blindness, (b) the elimination of the backlog of untreated patients, and (c) the establishment of a nationwide self-sufficient eye care system in Nepal.

There are over 117 000 blind persons in Nepal - 0.84% of the population - and roughly twice that number of people are blind in one eye. Approximately 80% of this blindness is avoidable (curable or preventable), its main cause being cataract, which can easily be operated if adequate resources are available.

The contribution from AGFUND (US\$ 300 000) to the national programme for the prevention of blindness in Nepal has been used primarily to supply ophthalmic drugs, equipment, sutures and instruments for eye camps and rural eye centres.

Two main strategies have in particular been developed in the Nepal programme:

- The training of ophthalmic assistants to overcome the shortage of eye specialists. The ophthalmic assistants are based in rural eye clinics, performing general treatment and simple surgery for patients with eye disorders. They also arrange field visits and examination of patients with threatening blinding disease.
- The use of eye camps to reach the entire country's population. Nepal is one of the poorest countries of the world, and in addition has several mountainous areas where access is limited. The eye camp approach is, therefore, used to reach those patients in need of surgery.

The first part of the contribution from AGFUND to the Nepal programme was used primarily to supply drugs, equipment, sutures and instruments for eye camps during the 1983-1984 eye camp season. During the previous seasons, there had been less than 30 camps, but already during the 1984 season, thanks to the support received from AGFUND, a total of 54 eye camps were carried out.

The contribution from AGFUND made this expansion of activities possible. Furthermore, there are often insufficient quantities of surgical instruments at the centres to meet the needs both of the eye camps being staged by a centre and the regular activities of that centre. The instruments for cataract surgery contributed by AGFUND for 6 eye care centres have eliminated this problem.

Given the provision of basic instruments and equipment procured as a result of the AGFUND contribution, and the increased support for eye camps from the Government of Nepal, it has been possible to expand the scope of mobile team activities to increase the number of eye camps from 54 in 1984 to more than 60 in 1985. Reports on the 22 eye camps, from which data are now available for that season beginning in November 1984, show that 26 910 patients were examined/treated and 2531 patients operated; 2087 (or 82%) of these were cataract operations. This is an average of 115 operations per camp, and represents an increase of 15% over the average number of operations per camp performed in previous seasons.

The funds provided by AGFUND have also allowed other ophthalmic equipment to be purchased, such as portable slitlamps for field use and spectacles at low cost for patients operated for cataract. In addition, a systematic screening of children for vitamin A deficiency was undertaken in 1984-1985 in the Eastern Terai region of Nepal. More than 16 000 children were examined to detect cases of threatening blinding complications of vitamin A deficiency. Those cases detected were given full treatment and followed up later in the rural eye clinics; all children examined were given a prophylactic dose of vitamin A.

Thailand

A national blindness prevention programme was established some eight years ago in Thailand, based on the well-developed system of primary health care in the country. Considerable progress has been made in Thailand with regard to the control of the major causes of avoidable blindness, but increased facilities for the training of personnel at various levels have been required for a number of years.

The prevention of blindness programme in Thailand is aiming to integrate eye care into primary health care activities. The training of personnel is, therefore, given priority, and to this effect an Institute of Public Health Ophthalmology in the Korat province has been set up. This institute, which will be linked to a provincial hospital, will undertake the training of several cadres of personnel, particularly ophthalmic nurses and community health workers. The courses will last from a few days (for community volunteers) to up to 6 months (for ophthalmic nurses). General physicians working at the district hospital level will also be given short courses in primary eye care at the Institute. Special courses in refraction will be arranged for ophthalmic nurses as part of the development of a low-cost spectacle project in Thailand.

The following courses are being given at the Korat Institute:

1. Course for ophthalmic nurses (6 months)	20 persons/year
2. Refresher courses for ophthalmic nurses (3 days)	50 persons/year
3. Refraction courses for ophthalmic nurses (2 months)	12 persons/year
4. Primary eye care course for general physicians (3 days)	300 persons/year
5. Health workers course in primary eye care (3 days)	300 persons/year
6. Health volunteers course (2 days)	2400 persons/year

The contribution made available by AGFUND (US\$ 100 000) to the Thai national programme, has allowed the national Institute of Public Health Ophthalmology in Korat to be strengthened. Teaching equipment and training aids have been procured for the various training courses, and ophthalmic supplies and equipment have been purchased for the clinical part of the training courses, where the trainees are given practical demonstrations in examination techniques for patients with eye disease.

IV. FUTURE ACTIVITIES

In 1984 AGFUND pledged another contribution in support of WHO's action against avoidable blindness, this time for 9 countries in the Region of the Americas. This contribution is being used primarily for development of "primary eye care" in those countries, with an important component of training of health workers in eye care at the community level.

In 1985, further support was pledged by AGFUND to support the national programmes for the prevention of blindness in six Asian countries.

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The generous and continuing support provided by AGFUND to the WHO Programme for the Prevention of Blindness has made a crucial contribution to the development of programmes and services in developing countries. The restoration and preservation of sight is a precious gift, and the partnership of AGFUND and The World Health Organization has made this gift possible to thousands of people. It is on their behalf that our appreciation is expressed to AGFUND.