



WORLD HEALTH ORGANIZATION
Prevention of Blindness and Deafness
Geneva, Switzerland

WHO/PBD/GET/99.5
Distr.: Limited
Original: French

INTERNATIONAL WORKSHOP ON TRACHOMA CONTROL
FOR FRANCOPHONE AND LUSOPHONE COUNTRIES

Bamako, Mali
26-30 April 1999

REPORT



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ACRONYMS

AMA	Association Musulmane Afrique
CBM	Christoffel-Blindenmission e.V.
CRCAH	Centre de Réhabilitation communautaire des Aveugles et des Handicapés
SRC	Swiss Red Cross
EMCF	Edna McConnell Clark Foundation
EU	European Union
FAC	Fonds d'Aide à la Coopération
G2K	Global 2000
GET 2020	Global Elimination of Trachoma by the year 2020
HAI	HelpAge International
HKW	Helen Keller Worldwide
IEF	International Eye Foundation
IOTA	Institut d'Ophtalmologie tropicale de l'Afrique
ITI	International Trachoma Initiative
LCIF	Lions Clubs International Foundation
MSF	Médecins sans Frontières
NBCC	National Blindness Control Committee
NTCC	National Trachoma Control Committee
NBCP	National Blindness Control Programme
OCCGE	Organisation de Coordination et de Coopération pour la Lutte contre les Grandes Endémies/ <i>Organization for Coordination and Cooperation in the Control the Control of Major Endemic Diseases</i>
ONEP	Office National de l'Eau Potable (m
OPC	Organisation pour la Prévention de la Cécité
OSF	Ophtalmologie sans Frontières
SSI	Sight Savers International
UMA	Union malienne des Aveugles

INTRODUCTION

Trachoma is a blinding eye disease that has affected human kind since time immemorial. After some decades of relative neglect and marginalization on the international scene, there has been renewed interest in trachoma at the global level. A scientific meeting on *Approaches to Trachoma Control* was thus held in Geneva in June 1996. As a result, a new forum was established: the WHO Alliance for the Global Elimination of Trachoma by the year 2020 (GET 2020).

Since that date, the members of the Alliance have met three times: in June 1997 and in January and October 1998. Among the outcomes of these meetings was the proposal to establish the SAFE strategy (Surgery, Antibiotic treatment, Facial cleanliness and Environmental changes), the introduction of trachoma rapid assessment techniques and an acknowledgement of the leading role that azithromycin could play in a new generation of control programmes. The Alliance also recommended that workshops be organized to inform national coordinators of the latest developments and the current possibilities in trachoma control. The first workshop, with representation from nine English-speaking countries, was held in Cambridge, United Kingdom in December 1998.

This initiative was followed up by a second workshop for representatives of francophone and lusophone countries where trachoma is still endemic, despite all efforts, was held in Bamako, Mali, 26-30 April 1999. The funding of the meeting was made possible by a contribution from the Ministry for Foreign Affairs of the French Republic. The workshop which was held on the premises of the Institut d'Ophtalmologie tropicale de l'Afrique (IOTA), an institute of the Organisation for Coordination and Cooperation in the Control of Major Endemic Diseases (OCCGE) was attended by 16 coordinators of blindness/trachoma control programmes from three regions of the World Health Organization.

- The African Region (AFR) was represented by the following countries: Algeria, Burkina Faso, Cameroon, Central African Republic, Chad, Guinea, Guinea Bissau, Mali, Mauritania, Mozambique, Niger and Senegal.
- The Eastern Mediterranean region (EMR) was represented by the following countries: Djibouti and Morocco.
- The Western Pacific Region (WPR) was represented by the following: Cambodia and The Lao People's Democratic Republic.

Representatives of NGOs involved in blindness or trachoma control, such as the Global 2000 (G2K), Helen Keller Worldwide (HKW), the International Trachoma Initiative (ITI), and the Organisation pour la Prévention de la Cécité (OPC) were also present at the workshop (see list of participants in annex 1).

The aim of the workshop was to help coordinators of national blindness and/or trachoma control programmes to plan, establish or improve their control programmes.

The specific objectives were as follows:

- To review the epidemiological situation and the availability of resources for trachoma control in francophone and lusophone countries where the disease was endemic.
- To promote the SAFE strategy.
- To introduce the method and procedures for rapid assessment of trachoma.
- To promote and establish new partnerships.
- To help national coordinators define the strategy most suitable for their environment and their working conditions and to draw up a draft plan of action.

A bureau of moderators was appointed, comprising a chair (Dr Doulaye Sacko from Mali), two vice-chairs (Dr Justino Fadia from Guinea-Bissau, and Dr Mamadou Sall from Senegal) and two rapporteurs (Dr Alain Auzemery, Director of IOTA, and Dr Tiekoura Coulibaly,

Epidemiologist, WHO Office in Mali). The draft agenda was adopted without amendment (annex 2).

The meeting involved plenary sessions (presentations and discussions) and working groups. Presentations were focused on the epidemiological situation of trachoma throughout the world, the current epidemiological situation in participants' countries, the SAFE strategy and how to apply it in the epidemiological context. The aims and the partners of the WHO Alliance were also presented and the experience acquired by countries and nongovernmental organizations already successful in trachoma control were shared among all the participants. The fourth day of work, which was set aside for group activities (annexes 3, 4 and 5), identified the activities to be set up in each of the countries represented.

1. GLOBAL ELIMINATION OF TRACHOMA : GENERAL ISSUES

Trachoma is a communicable kerato-conjunctivitis leading to potentially blinding scars. It is due to interaction between people, the *Chlamydia trachomatis* germ and the environment.

Poor hygiene, water shortages, overcrowding and secondary infections by other pathogens are the most common risk factors for the spread and severity of the disease in the poorest or most neglected regions. Pre-school children are the main reservoirs of *Chlamydia trachomatis* in a given community. Women aged over 40 are the most exposed to the complications that lead to blindness.

According to the most recent estimates, 146 million people in the world present an active form of the disease. In addition, 6 million people are blind as a result of trachoma. This represents about 15% of the total number of blind people.

The WHO Alliance has made an inventory of 46 countries where trachoma is prevalent in its hyperendemic and blinding form. It has been proposed that 16 of them should be used as a basis for launching an elimination programme over the next five years. The programme will be the focus of control efforts and new resources will be mobilized to ensure that it promotes and introduces control activities.

The main functions of the WHO Alliance are the following: preparation of control strategies, identification of priority areas for implementation of projects, resource mobilization, the provision of appropriate technical support, the integration of specific activities within the primary health care sector and the improvement of programme follow-up/assessment and of operational research. The Alliance will also act as a forum and a sounding board for the dissemination of relevant information and for setting up rapid communication between the various partners.

2. TRACHOMA SITUATION AND PROGRESS OF TRACHOMA CONTROL PROGRAMMES IN PARTICIPATING COUNTRIES

(see country monographs: Annex 6)

2.1 Algeria

Algeria has over 650 ophthalmologists. In 1998, a rapid assessment was conducted in 12 communes of the province of El Oued. Active trachoma was estimated at 48.6%. Trichiasis was found in 4.6% of the population of these communes, and in 11.4% of women aged over 15. Plans have been laid to establish a national committee/control programme for trachoma in the near future. Trachoma is currently regarded as an urgent public health problem in the provinces of El Oued and Béchar. It is estimated that there are over 272,000 cases of active trachoma requiring treatment, and a backlog of 18,400 cases of trichiasis surgery.

2.2 Burkina Faso

Burkina Faso is a Sahelian country. Its National Blindness Control Programme was initiated in 1984. A national survey conducted in 1996/97 estimated the prevalence of active trachoma (TF/TI) at 26.8% and that of trichiasis (TT) at 5.1%. The number of TT cases requiring surgery is estimated to be 200,000. The problem is how to cope with such a backlog of surgical cases when the country is so seriously short of qualified staff (11 ophthalmologists and 76 specialized nurses for a population of 11.9 million). For the time being, priority is given to cases of transparent cornea trichiasis, i.e. where the patient is not yet blind but is at risk of becoming blind.

2.3 Cambodia

Cambodia has 11.4 million inhabitants. Epidemiological information on blindness and eye diseases is available only in the form of estimates. The prevalence of blindness is estimated to be 1.2%, the number of active trachoma cases is put at 270,000 (prevalence 2.4%) and the number of trichiasis cases at 175,000 (prevalence 1.5%). This represents an unusual epidemiological situation, in that the trichiasis number is "abnormally" high by comparison with the number of active cases. Thus, at least for trachoma, Cambodia appears to be in a phase of epidemiological transition: the inflammatory forms seem to be declining. By contrast, and in comparison, the estimated number of trichiasis cases is remarkably high. This is in line with the situation that prevailed between 15 and 30 years ago, when the endemic level was higher, with a larger number of trichiasis cases. Those have accumulated over the years owing to lack of appropriate surgical provision.

Trachoma now affects the provinces of Takeo, Pzey Veng, Battambang, Siewreap at Kampot.

2.4 Cameroon

Little is known about trachoma in Cameroon. Three provinces in the north of the country (North, Extreme North and Adamaoua) are particularly affected. Despite the involvement of several NGOs (OSF, HKW, LCIF/SightFirst, CBM), the efforts to control trachoma are lacking coordination and political support. An awareness-raising exercise was carried out recently among school children in a northern province and in the town of Kolofata. A school football tournament was organized – a cup being awarded to the winners – during which information about trachoma and its prevention was distributed to the participating pupils and to spectators. Initiatives of this kind must be repeated constantly in order to bring the situation to the attention of decision makers and the health authorities until a control programme is established.

2.5 Central African Republic

For a population of 3.2 million, the Central African Republic has two ophthalmologists, five ophthalmic nurses, only one ophthalmology department and one primary eye care centre. The Trabut method is used for trichiasis surgery.

A study conducted in three prefectures (Vakaga, Haut Kotto and Haut Mbomou) has estimated trachoma prevalence at 4%. The disease is not considered a priority health problem.

OPC and CBM are the only NGOs involved in blindness control in the Central African Republic.

2.6 Chad

Studies dating back a few years and analysis of routine clinical data, suggest that trachoma is prevalent in the regions of Kane, Batha, Bilitine, Abéché, Salamate, Guera and Ouadaï. Trichiasis surgery is performed in a large number of centres, using the Trabut method. A study is scheduled for 1999, supported by OPC, in the Ouadaï-Bilitine region.

The country has had a national blindness control programme since June 1992. There is not yet a national committee for trachoma control, although that is currently top priority. A national centre and six eye care centres provide treatment. These centres have at their disposal the services of four ophthalmologists (three national and one expatriate) and 16 ophthalmic nurses, seven of whom are specialized in cataract surgery and one in making spectacles. The Fonds d'Aide à la Coopération (FAC) of France, OPC, LCIF/SightFirst, CIMADE and SRC have been partners of the national programme for some time.

2.7 Djibouti

The Republic of Djibouti has only one ophthalmological centre and two ophthalmologists. Several years ago, the prevalence of blindness was estimated to be between 1.1% and 2% of the total population. There are no epidemiological data on trachoma but the disease does not seem to constitute a public health problem. Several cases of trichiasis are operated on in hospital using the Trabut method. Some patients come great distances for surgery: from Somalia, Ethiopia and Yemen. There is no national blindness control programme in Djibouti. There are no NGOs working on blindness control.

2.8 Guinea-Bissau

The country has only one ophthalmologist. The epidemiological situation for trachoma is not known. The northern belt, the regions of Oio, Cacheo and the Bijagos archipelago are likely to be endemic. Cases of trichiasis are operated on in the ophthalmology department, using the Trabut method. There are plans to establish a national blindness control programme.

2.9 Guinea

A medical doctorate thesis presented at Conakry estimates the prevalence of blindness at 1.5%. Trachoma would account for about 7.4% of eye disorders encountered during training courses. There are no epidemiological estimates on trachoma, which is very prevalent in Upper Guinea. The country has two eye-health centres, 10 ophthalmologists and six ophthalmic nurses. Three NGOs (OPC, SSI and Philanthropie Africaine) are taking part in the campaign against blindness in Guinea. The country has not yet established a national blindness control programme (NBCP).

2.10 Lao People's Democratic Republic

For a population of 4.8 million, staff resources amount to 23 ophthalmologists. A NBCP has been set up and the country has support from CBM and a bilateral cooperation partnership with Korea.

This country has no epidemiological data available on trachoma endemicity. Trachoma seems however, to be the second most common cause of blindness in the country. Some 100-150 cases of trichiasis from the mountain regions of the country are operated on each year with the bilamellar tarsal rotation technique.

2.11 Mali

Mali has an NBCP, 11 working ophthalmologists and seven currently undergoing training. Mali is an "advanced" country as regards the campaign against trachoma. In fact, a national epidemiological survey has been carried out (so the mapping of endemic trachoma and other blinding eye diseases is clearly shown) and a national trachoma control committee has been in operation since October 1998. The prevalence of active trachoma in children under 10 is estimated at 34.9%, while trichiasis in adults over 15 is 1.9%. Senior Malian health officials are preparing a file which will be submitted to ITI with a view to obtaining technical and financial support and donations of azithromycin. There appears to be some 1.35 million active cases to treat and over 86,000 cases of trichiasis awaiting surgery. The national epidemiological survey on trachoma in Mali has shown the factors responsible for the spread and persistence of the

disease in the poorest communities. The factors identified are: lack of water, low level of education and lack of facial hygiene. At present, 8,527 Malian villages have a water supply. A water distribution programme exists but efforts must still be made for cooperation between the trachoma control programme and the water service.

Many NGOs have been involved for a long time in the campaign against blindness (and trachoma) in Mali: OPC, HKW, SSI, EMCF, MSF, SRC, G2K/Carter Center and, more recently, ITI. In Mali, a number of associations are also active in the rehabilitation of blind people; they include the Union Malienne des Aveugles (UMA) and the Centre de Réhabilitation Communautaire des Aveugles et des Handicapés (CRCAH).

2.12 Mauritania

A blindness control programme has been in operation in Mauritania for several years. This programme comprises five ophthalmologists (soon to be supplemented by six students now undergoing training) and 17 specialised nurses.

No epidemiological data concerning trachoma exists, but the disease seems to affect the whole of the national territory. Trachoma is the second cause of blindness in the country. The Trabut method is used for trichiasis surgery. The main priorities defined by the Mauritanian programme are (1) an epidemiological assessment (mapping of trachoma), (2) the stepping up of training of specialized personnel, and (3) the development of new partnerships. In fact, few NGOs are developing projects for the prevention of blindness (with the exception of SightFirst). The regional programme of the European Union for Prevention of Blindness includes Mauritania. There are still only a few associations working in the field, although mention should be made of the efforts of the Boumatou Foundation for Blindness Control.

2.13 Morocco

Only a few decades ago trachoma was still prevalent over almost the whole of the national territory. The prevalences of blindness and trachoma were estimated in a national survey and a series of provincial surveys carried out between 1992 and 1998. The five southern provinces (Ouarzazate, Zagora, Tata, Errachidia and Figuig) are affected in varying degrees, by trachoma. Reportedly, some 287,000 people require treatment and 6,780 cases of trichiasis require surgery in the five provinces concerned. The current control programme lays emphasis on the integration of control with existing health services. The national programme has numerous partners, some resulting from bilateral cooperation (France, Belgium) but also NGOs and other institutions: HKW, EMCF, OSF, IMPACT, LCIF/SightFirst, the Hassan II Foundation and, more recently, ITI. Community participation and intersectoral collaboration have already produced tangible results in trachoma control in Morocco.

Participants have been made aware of the Information, Education and Communication Programme (IEC) developed by Morocco on the basis of the results of a KAP survey (Knowledge, Aptitudes and Practices). This programme covered the "F" and "E" components of the "SAFE" strategy. A whole range of complementary information and educational materials (films, speeches, booklets, posters, radio and television programmes) has been developed in the Arabic and Berber languages. The target audience was decision-makers and the general public, but also, and most of all, schools and the communities concerned.

2.14 Mozambique

Mozambique has nine ophthalmologists and 14 assistant ophthalmologists (trichiasis surgeons) for a population of 17.4 million. No reliable epidemiological data exists whereby the distribution of trachoma in the country can be estimated, but it would seem that trachoma affects only a part of the country. A survey of the prevalence of blindness and its causes is in the course of preparation with the support of IEF. Tetracycline is available everywhere in the territory; ocular and palpebral surgery is provided only at certain hospitals.

Currently, HKW and HelpAge are working in the country, and IEF seems prepared to take action there. There are no associations. The priorities set for the next two years are assessment of the epidemiological situation of trachoma, identification of partners, training of staff, and integration of trachoma control in school and community programmes.

2.15 Niger

According to the 1985 and 1989 studies, the prevalence of blindness is estimated to be 1.2%. Other studies have been conducted more recently but the results are not yet available. It is estimated that about 2.2 million people would have active trachoma and that the backlog of trichiasis surgery is between 65,000 and 100,000 cases. The health authorities are planning the following action in the immediate future: finalization of the national study and use of its results in the drafting of an action plan, training and, lastly, preparation of advocacy for trachoma control. Many NGOs are working in the field, including (OPC), Helen Keller International (HKW), Christoffel Blindenmission (CBM), Global 2000, Association Musulmane Afrique (AMA). The regional programme of the European Union includes Niger in its activities. The Union nationale des Aveugles is the only association operating in the country.

2.16 Senegal

A partial study has estimated the prevalence of blindness at 1.4%. The detailed distribution of trachoma is not known, but the disease seems to affect the whole of the national territory with the exception of Basse Casamance. It is planned to conduct a national study on the prevalence and severity of trachoma in the near future, as soon as a technical and financial partner can be found.

The country has a national blindness control programme, 21 ophthalmologists and 21 ophthalmic nurses. The blindness control programme has organized radio broadcasts in order to inform and raise the awareness among the population in all regions. A national committee for trachoma control is in the process of being set up. OPC is supporting the national programme and Senegal is part of the regional programme for blindness control of the European Union.

3. PARTNERS ATTENDING THE WORKSHOP

3.1 Carter Center/Global 2000 (G2K)

G2K has great experience in Guinea worm eradication, particularly in the area of community-based epidemiological surveillance. This organization intends to make its experience available for trachoma control and especially to focus its efforts and activities on the "F" and "E" components of the SAFE strategy. A certain amount of funding is already available. The target countries are: Mali, Ghana, Niger, Nigeria and Yemen. G2K is seeking other sources of funding for projects to be set up in Sudan and Ethiopia.

3.2 Helen Keller Worldwide (HKW)

This organization, which was established in 1915, is concerned with the prevention of blindness and the rehabilitation of blind people. Since its establishment it has worked in over 80 countries and has permanent representation in 15 countries in all the continents.

Its fields of competence include: avitaminosis A control, the establishment of basic eye care facilities, rehabilitation programmes for blind and partially sighted people and onchocerciasis and trachoma control. HKW collaborates with the International Trachoma Initiative (ITI) in the trachoma control programme in Tanzania, and also in Morocco and soon in Viet Nam.

3.3 International Trachoma Initiative (ITI)

The aim of the ITI, which was set up jointly by the Edna McConnell Clark Foundation and Pfizer Inc. in November 1998, is to focus its action within the WHO Alliance for the Elimination of Trachoma by the Year 2020, with a view to promoting the SAFE strategy, supporting trachoma control (including action through azithromycin donations), strengthening operational research and providing a number of countries with direct technical back-up. Ghana, Mali, Morocco, Tanzania and Viet Nam are preparing cooperation projects with ITI.

3.4 Organisation pour la Prévention de la Cécité (OPC)

This organization, which was established in Paris in 1978, supports blindness control programmes in many countries of West Africa, Central Africa and the Indian Ocean. OPC's fields of competence include, in particular, the provision of drugs and equipment for cataract, onchocerciasis and trachoma control.

4. MAIN THEMES DISCUSSED DURING THE MEETING

During the workshop, many tools used in epidemiological assessment, or more generally in direct control of trachoma, were presented and discussed. They are not set out in detail in this report, as many of them are already well known and have been described in previous reports or publications.

4.1 Simplified trachoma grading system

This system is based on five key-signs which are: TF, TI (inflammatory follicular trachoma), TT (trichiasis), TS (scarring trachoma) and CO (corneal opacity), each corresponding to different stages of the disease. Before conducting a prevalence survey using this simplified classification, the participants recalled that it was necessary to make a feasibility study (inter- and intra-observer comparisons) in order to assess the survey people's effectiveness in using the system.

4.2 Trachoma Rapid Assessment (TRA)

This is an operational tool which is still being developed and, when completed, should make it possible to assess, at low cost, the presence and severity of trachoma (and its risk factors) in a given locality or district. This tool will not replace the epidemiological survey, but where resources are lacking, it should make it possible to set priorities for action rapidly and to channel available resources towards the communities most affected by the disease.

The procedures currently used in some countries are still far from definitive and do not meet with unanimous agreement. They remain in the area of operational research and should be validated before being adopted and generally applied.

4.3 Trichiasis surgery through the Trabut method and bilamellar tarsal rotation

Many surgical procedures have been proposed for treating trichiasis cases. The Trabut technique is the one most commonly used in Africa (the method taught at the IOTA), while the bilamellar tarsal rotation method is most frequently used in other parts of the world. Both may be used with equal success by top "non-specialist" staff (nurses and general practitioners, for example) trained for that purpose and duly supervised, within a general community-based approach to trichiasis treatment. The success rate for these operations regularly exceeds 80%. IOTA has carried out an economic study on the cost of preventing blindness by timely surgery, i.e. when the patient does not have any visual impairment: this cost is estimated at FF84.

A kit containing the necessary surgical instruments has been prepared by the WHO secretariat. It will soon be available at a cost of US\$100 or less.

4.4 Antibiotic treatment in trachoma control: strategies and logistic constraints

In trachoma control, the "A" component (antibiotic treatment) of the SAFE strategy usually involved 1% tetracycline eye ointment. Operational research has recently shown that a new weapon can be added to the therapeutic arsenal: azithromycin, in a single oral dose of 20ml/kg body weight.

Tetracycline ointment can be obtained by all health services and distributed in most communities affected by trachoma. Unfortunately, it is particularly bothersome for patients and for their family members or the health workers responsible for applying the prescription, which takes six weeks if it is to be completely effective. This long period poses problems of compliance, which can be solved at a stroke by using azithromycin in mass distribution campaigns. However, the cost of this macrolid restricts its use in endemic countries, all of which have extremely meagre resources. At present, only donation programmes can be envisaged by the countries taking part in the workshop. The ITI intends to cover two of them in its donation programme (Mali and Morocco).

The strategies for distribution of that antibiotic are still in preparation; they will depend largely on the epidemiological features of the countries concerned (the severity and extent of the disease), and on identifying certain target groups: children under 10, women, an entire population, and also on logistics and on locally available staff.

4.5 Research projects

Operational research is there mainly to answer remaining questions on implementation of the "SAFE" strategy. Resources should therefore be devoted to it. Two types of research should be pursued in parallel.

First of all in epidemiology, most of the countries present would prefer to start their project with an acceptable level of scientific knowledge of distribution of the disease and its complications. The coordinators would like to be able to update regularly this initial mapping, to enable them to make a better assessment of their progress and the impact of their work, so that they can properly plan the subsequent stages leading to the final objective of eliminating blinding trachoma.

In order to ensure lasting results for the campaigns of trichiasis surgery and distribution of antibiotics, relying on a lasting change in collective and individual hygiene, most participants would like to see immediate research projects on knowledge, attitudes and practices, in order to get a better idea of local factors (cultural, socio-economic etc.) that are responsible for endemic trachoma in certain areas.

4.6 The principles of planning and managing a national programme

A presentation was made listing the various stages in the planning and management cycle of a control programme. Trachoma control had to be integrated with a blindness control programme, which should in its turn be part of a coherent group of primary health care services.

Many participants wished for a budgetary allocation for establishment of a strict management system, including regular follow up and periodic evaluations from the very start of a project.

CONCLUSIONS ET RECOMMANDATIONS

1. Like many other health problems, trachoma is closely linked with poverty. It is a mother and child disease.
2. The participants noted with satisfaction that trachoma control has taken a great leap forward, but that the problem posed by trachoma was perceived differently by the various countries participating in the workshop. In fact, the epidemiological situation and the severity of this disease are still not fully appreciated in certain countries. Others do not have a national blindness control programme. Resources should be made available to carry out epidemiological studies to make the situation clear and to enable trachoma control activities to be planned in all countries where it is considered a major (public health) problem.
3. The need to find, in the short term, a simple tool for measuring progress achieved in eliminating blinding trachoma in a community has been stressed. Similarly, the Trachoma Rapid Assessment method (TRA), an operational tool conducive to easy identification of priority areas for intervention, has been discussed at length. Further research is still necessary before this tool can be used by programmes in a routine and reliable way. The participants recognised the need to step up efforts in operational research in this domain.
4. In certain countries, a high number of cases of trichiasis are awaiting surgery. Despite a clearly expressed determination, those countries do not have the necessary resources to eliminate that backlog. The Trabut method is practised in most participating countries. A training manual in French on this technique is currently available at IOTA and is ready for distribution. Low priced surgical kits can be ordered through the WHO Alliance for the Global Elimination of Trachoma. The participants unanimously recognised that, as regards surgery, priority should be given to trichiasis cases diagnosed before any deterioration of sight has taken place.
5. To date, in all the countries participating in the workshop, the therapeutic strategy for dealing with the active forms of the disease relies on 1% tetracycline ointment. Two countries, which are to benefit from a donation of azithromycin, in partnership with the International Trachoma Initiative (ITI), are going to introduce the use of this antibiotic into their strategies. Their experience ought to be used to extend this form of treatment in the other countries.
6. The participants recognised that considerable efforts had to be devoted to effectively implementing the "F" and "E" components of the strategy, preparing arguments to defend trachoma control in countries where the problem is still not fully appreciated or is in competition with other public health problems, and developing practical tools for Information, Education and Communication (IEC) in all countries.
7. The participants recognised the need to intensify intersectoral collaboration (water, rehabilitation and education).
8. The participants unanimously reaffirmed that the trachoma control programmes ought to form an integral part of the blindness control programmes.
9. Analysis of the experience in onchocerciasis control and the eradication of guinea worm, showed that the experience acquired in those fields could be used for trachoma control. Community-based epidemiological surveillance, integration strategies and the knowledge of the community workers participating in those programmes, will be of the greatest use for implementing the components "A", "F" and "E" of the SAFE strategy.
10. The political determination of states to overcome the trachoma problem, and joint action by all concerned in the countries, are crucial to the success of the projects. Participants expressed their appreciation of the experience gained and the partnership projects

(cooperation, NGOs, research institutes) taking part in the workshop. Their statements mentioned financial and technical potential, as well as the existence of certain types of advocacy which should be systematically exploited.

11. The presence of two representatives from Portuguese speaking countries was useful and appreciated. It was hoped that Portuguese-speaking countries would participate in future meetings of the Alliance.

Annex 1

AGENDA		
DATE	ITEM	PRESENTER
Monday 26 April		
09h00-12h30	Opening of the meeting Election of Chair, Vice Chair and Rapporteurs Introduction of participants Administrative announcements Adoption of agenda Epidemiology of trachoma Global Elimination of Trachoma (GET) by the Year 2020 Presentation : Algeria Presentation : OPC Presentation : Burkina Faso	IOTA WHO Dr N. Hadj Hafji Dr C. Godin Dr L. Ilboudo
12h30-15h00	Lunch	
15h00-17h00	SAFE Strategy Trichiasis Surgery Technique Instrumentation Training Trabut results Antibiotic treatment Tetracycline Azithromycin Facial cleanliness Information, Education and Communication (IEC) Environmental change Water supply Risk factors (Mali) Presentation: Cambodia Presentation: Cameroon	WHO WHO IOTA IOTA IOTA IOTA ITI/WHO IOTA IOTA / ITI WHO Dr M. Bouaddi, Morocco WHO Mali IOTA Dr U. Yutho Dr L. Nkok
Tuesday 27 April		
9h00-12h30	Presentation: Djibouti Presentation: International Trachoma Initiative (ITI) Presentation: Guinea-Bissau Presentation: Global 2000/Carter Center Presentation: Guinea Conakry	Dr I. E. Faradji Mr D. Calcoen Dr J. Fadia Dr J. Zingeser Dr A. Goepogui
12h30-15h00	Lunch	
15h00-17h00	Presentation: Lao People's Democratic Republic Simplified trachoma grading system Presentation: Mali	Dr V. Visonnavong WHO Dr D. Sacko

AGENDA		
DATE	ITEM	PRESENTER
Wednesday 28 April		
09h00-12h30	Presentation: Mauritania Presentation: Mozambique Planning and management Presentation:HKW Presentation: Niger	Prof. Sidi Ely Ahmedou Dr M. Gomes WHO Mr MacArthur Dr A. Amza
12h30-15h00	Lunch	
15h00-17h00	Presentation Central African Republic Presentation: Senegal Presentation: Chad Research projects Resource mobilization	Dr G. Yaya Dr M. Sall Dr M. Madani IOTA WHO
Thursday 29 April		
08h30-10h30	Working groups 1 and 2 on planning	Participants
12h30-15h00	Lunch	
11h00-12h30	Reporting of working groups 1 and 2	Participants
15h00-17h00	Working groups 3 and 4 on planning	Participants
Friday 30 April		
09h00-10h30	Reporting of working groups 3 et 4	Participants
11h00-12h30	Final discussions	Participants
12h30-15h00	Lunch	
15h00-17h00	Conclusions and recommendations	Participants

Annex 2

LIST OF PARTICIPANTS	
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Annex 3

PRIORITY SETTING COUNTRY BY COUNTRY		
Algeria	1	Advocacy to the national authorities and designation of a national coordinator
	2	Analysis of the situation based on the available data
	3	Convening of an information seminar for possible partners
	4	Trachoma mapping
	5	Training of health workers in trachoma screening and treatment + SAFE strategy
Burkina Faso	1	Training in trichiasis surgery
	2	Outreach trichiasis surgery
	3	Antibiotic treatment, tetracycline plus azithromycin
	4	IEC (National Trachoma Elimination Day)
	5	Supervision and evaluation
Cambodia	1	Trachoma Rapid Assessment Survey (TRA)
	2	Trichiasis surgery
	3	Antibiotic treatment
	4	Preparation of the Information, Education and Communication (IEC) strategy (F,E)
Cameroon	1	Advocacy to Ministry of Health and presentation to provincial authorities
	2	Development of a pilot programme (Far-North Province)
	3	Appointment of a coordinator
	4	TRA
Central African Republic	1	Adoption of the NBCP
	2	TRA + KAP surveys
	3	Training of trainers of health workers
	4	IEC
	5	Trichiasis surgery
	6	Antibiotic treatment, tetracycline + azithromycin
	7	Supervision and evaluation
Chad	1	Advocacy to Ministry of Health of the establishment of a National Trachoma Control Committee
	2	Regional survey of trachoma prevalence (Ouaddaï – Bilitine)
	3	Training of health workers in trichiasis surgery
	4	IEC

PRIORITY SETTING COUNTRY BY COUNTRY		
Djibouti	1	Establishment of a NBCP
	2	Training of trichiasis surgeons (ISO) (IOTA)
	3	IEC
	4	Trichiasis surgery
	5	Antibiotic treatment, tetracycline + azithromycin
	6	Supervision and evaluation
Guinea-Bissau	1	Advocacy to national support (NBCP) + international support (technical and financial)
	2	Establishment of a NBCP
	3	Prevalence survey in the Northern regions and TRA elsewhere
	4	Intersectoral establishment of the SAFE strategy
	5	Equipment and development of human resources in ophthalmology
Guinea Conakry	1	Establishment of an NBCP
	2	Prevalence survey in Upper Guinea and TRA elsewhere
	3	Equipment and development of human resources in ophthalmology
Lao People's Democratic Republic	1	Establishment of the National Trachoma Control Committee
	2	TRA
	3	Development of IEC strategy (F,E)
	4	Trichiasis surgery training (ophthalmic nurses)
Mali	1	Trachoma mapping (TRA in several regions)
	2	Establishment of a National Blindness Control Committee, with a national coordinator for trachoma
	3	Organization of IEC (open days on trachoma)
	4	Appointment of a National Trachoma Control Coordinator and appropriate facilities
	5	Training of health workers in the SAFE strategy
	6	IEC
	7	Listing of needs and resources
Mauritania	1	National prevalence survey
	2	Initial and in-service training of ophthalmic nurses
	3	With the support of the Ministry of Health, establishment of partnerships with the Ministries of the Environment, Water Supply and with local communities
	4	Development of a PHC manual including the SAFE strategy
	5	Collaboration with the School Health Programme

Morocco	1	Advocacy of water supply and sanitation projects in endemic zones, to partners concerned
	2	Continuation of screening and treatment of active forms of trachoma, with general introduction of azithromycin
	3	Uptake of the backlog of trichiasis cases. Reduction of barriers and obstacles. Improvement of accessibility and quality and strengthening of the supervision of operators by ophthalmologists
	4	Establishment of an epidemiological monitoring system adapted to the current situation and for the future
Mozambique	1	Advocacy: National Support (NBCP) and international support (technical and financial)
	2	National Blindness Survey (national priorities plus preliminary data)
	3	TRA
	4	Development of human resources in ophthalmology and equipment
Niger	1	Finalization of the trachoma survey
	2	Trichiasis surgery training plus training of other health workers
	3	Trichiasis surgery
	4	Antibiotic treatment, tetracycline + azithromycin
	5	IEC
	6	Supervision and evaluation
Senegal	1	National Prevalence Survey
	2	Training of personnel: trichiasis surgery and nursing staff
	3	Involvement of partners in the F and E components
	4	KAP survey
	5	IEC

Annex 4

SUMMARY TABLE OF AVAILABLE RESOURCES BY COUNTRY AND BY WHO REGION								
WHO REGION COUNTRY	RESOURCES					ONG		BLINDNESS BUDGET Yes/No
	Ophthalmolo- gists		ON ³ (UT)	Trichiasis Surgeons (UT)	HR ⁴ Primary level	National	International	
	T ¹	UT ²						
AFRICAN REGION								
Algeria	200	200	U ⁶	Training planned	UD ⁷	Organisation Daouia Association des non-voyants	LCIF/SF Rotary	NO
Burkina Faso	11	6	76 (15)	10 (20)	20 (200)	ABPAM	OPC, HKW, SRC, UE, LCIF/SF, CBH	YES
Cameroon	30	5	13 (2)	0	UD	None	LCIF/SF, HKW, CBM, OSF, UE	NO
Central African Republic	2	0	5 (2)	0	UD	None	CBM, OPC	NO
Chad	4 (1 exp.)	0	16 (1)	0	40	None	OPC, CIMADE, SSI, CF, SRC, LCIF/SF	NO
Guinea-Bissau	1	1	0	0	0	None	None	Planned
Guinea Conakry	10	0	6 (2)	0	0	None	OPC, SSI, Phil. Africaine	NO
Mali	11	7	40 (10)	15 (20 ITI)	400 (500 ITI)	UMA, CRBAH	OPC, HKW, SSI, EMCF, ITI, MSF, SRC, G2K	NO
Mauritania	4	6	17 (2)	Training planned	0	Association de Lutte contre la Cécité, Fondation Bouamatou de Lutte contre la Cécité	LCIF/SF, UE	YES
Mozambique	9 (8 exp.)	3	0	14	11	None	HKW, IEF, HAI.	UD ⁷
Niger	8	2	18 (4)	10	UD	Union nationale des Aveugles	HKW, G2K, CBM, OPC, AMA, UE	UD
Senegal	21	3	21 (9)	U	0		OPC, UE	YES

- ¹ T : Trained
² UT : Undergoing training
³ ON : Ophthalmic nurses
⁴ HR : Human resources
⁵ U : Unknown
⁶ UD : Undefined
Exp. : Expatriates
Other acronyms: See page 2

Annex 4 (continued)

SUMMARY TABLE OF AVAILABLE RESOURCES BY COUNTRY AND BY WHO REGION								
WHO REGION COUNTRY	RESOURCES					ONG		BLINDNESS BUDGET Yes/No
	Ophthalmolo- gists		ON ³ (UT)	Trichiasis surgeons (UT)	HR ⁴ Primary level	National	International	
	T ¹	UT ²						
EASTERN MEDITERRANEAN REGION								
Djibouti	2	None	1 (0)	1	0	None	None	NO
Morocco	160	15	U	83	600	Hassan II Ophthalmology Foundation, Association marocaine de soutien à l'UNICEF	HKW, ITI, EMCF, OSF, IMPACT, LCIF/SF	YES
WESTERN PACIFIC REGION								
Cambodia	14	(1)	25 (30)	35	510	None	HKW, CBM, HAI	NO
Lao People's Democratic Republic	23	0	74 (0)	0	0	None	CBM, Coop.française	NO

- ¹ T : Trained
² UT : Undergoing training
³ ON : Ophthalmic nurses
⁴ HR : Human resources
⁵ U : Unknown
⁶ UD : Undefined
 Exp. : Expatriates
 Other acronyms: See page 2

Annex 5

SUMMARY TABLE OF TRACHOMA CONTROL RESOURCES BY COUNTRY AND BY WHO REGION							
WHO REGION COUNTRY	Population (millions) 1999	NBCP Yes/No	COLLABORATION		TRACHOMA		COMMENTS
			Intersect. Yes/No	Where?	Estimated number of TT	Estimated number of TF and/or TI	
AFRICAN REGION							
Algeria	>28,4	Ongoing	Ongoing	Eloued and Béchar regions	> 18 400	> 272 000	NBCP in preparation
Burkina Faso	>10,3	Yes	Yes	National	200 000	2 400 000	Survey conducted in 1996/1997
Cameroon	>14,8	Yes	No	3 provinces: North, extreme North and Adamaoua	UD ¹	UD	
Central African Republic	>3,2	Yes	No	Vakaga + Haute Kotto & Haut Mbomou	UD	UD	Funds being prospected for surveys
Chad	>6,4	Yes	Ongoing	Kane, Batha, Bilitine, Abéché, Salamate, Guera, Ouday	UD	UD	Imminent survey WHO/OPC /MOH
Guinea-Bissau	>1,1	No	No	North : Oio, Cacheo regions – Bijagos Archipelago	30 000	100 000	Establishment of NBCP after workshop
Guinea Conakry	>7,5	No	No	Haute Guinea Region			
Mali	>9,4	Yes	Yes	National	86 000	1 350 000	ITI
Mauritania	>2,3	Yes	No	National	UD	UD	Collaboration between Morocco and Mauritania (South-South)
Mozambique	>17,4	Yes	No	Localized	UD	UD	Survey planned with IEF
Niger	>9,2	Yes	Ongoing	National	100 000	2 200 000	National survey in progress
Senegal	>8,3	Yes	No	National	UD	UD	Collaboration between Morocco and Senegal (South-South) – imminent NBCP/OPC surveys

¹UD : Undefined
Other acronyms: See page 2

Annex 5 (continued)

SUMMARY TABLE OF TRACHOMA CONTROL RESOURCES BY COUNTRY AND BY WHO REGION							
WHO REGION COUNTRY	Population (millions) 1999	NBCP Yes/No	COLLABORATION	TRACHOMA		COMMENTS	
				Estimated number of TT	Estimated number of TF and/or TI		
EASTERN MEDITERRANEAN REGION							
Djibouti	>0,6	No	No				
Morocco	>29	Yes	Yes	Errachidia, Figuig, Ouarzazate, Tata et Zagora	6 780	287 000	ITI
WESTERN PACIFIC REGION							
Cambodia	>10,6	Yes	No	5 Provinces : Takeo, Pzey Veng, Battambang, Siewreap, Kampot	171 000	262 000	
Lao People's Democratic Republic	>4,8	Yes	No	Mountain areas	UD	UD	

¹UD: Undefined
Other acronyms: See page 2

MONOGRAPH OF COUNTRIES PRESENT AT THE WORKSHOP

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ALGERIA

POPULATION: 1995: 28.4M
2010: 40M
Density: 11.9 hab/Km²
Growth: 2.4%
Urban population : 50 %
Literacy rate: 57%
Per capita GNP: \$1972 (1993)

CAPITAL CITY : Alger: 2.5 M

MAIN CITIES:

- Oran : 600 000
- Constantine : 450 000
- Anaba : 320 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Survey: partial: Wilaya d'El Oued and Béchar
- Type of survey: TRA
- TF/TI prevalence: 48.6%, TT: 4.6%
- People with active trachoma: >272 000
- People requiring trichiasis surgery: >18 400

NATIONAL TRACHOMA CONTROL PROGRAMME : YES

- Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut Cuenod-N (hospital, health centres, doctors surgeries)	Tetracycline 1% eye ointment twice a day for 6 weeks (PHC)	Health education: TV, school	Secretariat of State for the Environment

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers
Trained	650	Unknown	Unknown	Undefined
Undergoing training	200	Unknown	Unknown	Undefined

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: LCIF/SF, ROTARY

COMMUNITY PARTICIPATION: Associations: DAOUIA, associations of non-sighted people

PRIORITIES

1	2	3	4	5
Advocacy to national authorities	Situation analysis based on available data	Information seminar for potential partners	Trachoma mapping	Training of health personnel, screening and treatment and implementation of SAFE strategy

BURKINA FASO

POPULATION: 1997:10.3M
2000:11.9M

Density : 35 hab/Km²

Growth: 2.6%

Urban population: 15 %

Urban growth: 5.2 %

Per capita GNP: 340\$ (1993)

CAPITAL CITY: Ouagadougou: 1 200 000

MAIN CITIES:

- Bobo Dioulasso : 700 000
- Koudougou : 200 000
- Ouahigouya : 150 000
- Banfora : 130 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Survey: national
- Mapping of trachoma
- Prevalence: TF: 26.8% ; TI: 3.5% ; TT: 5.1%.
- People with active trachoma: 2.4M
- People requiring trichiasis surgery: 200 000

NATIONAL TRACHOMA CONTROL PROGRAMME : YES

- ☐ Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (health facilities)	Tetracycline 1% eye ointment twice a day for 6 weeks (PHC)	IEC on trachoma	National policy on drinking water for all

NATIONAL BLINDNESS CONTROL BUDGET: YES

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	11	76	10	20	117
Undergoing training	6	15	20	200	241

NGOS/INSTITUTIONS INVOLVED IN EYE CARE:

- OPC, HKW, SRC, EU, LCIF/SF, CBM
- Associations: Yes, unspecified

COMMUNITY PARTICIPATION: Planned but not implemented

PRIORITIES

1	2	3	4	5
Training of trichiasis surgeons	Outreach trichiasis surgery	Antibiotic treatment, tetracycline + azithromycin	IEC (National Trachoma Elimination Day)	Supervision Evaluation

CAMBODIA

POPULATION: 1995: 10.6M
2010: 12.7M

Density : 60.1 hab/Km²

Growth: 2.8%

Urban population: 13 %

Literacy rate: 35%

Per capita GNP: \$221 (1993)

CAPITAL CITY: Phnom Penh: 1M

MAIN CITIES:

- Kompomg Cham: 300 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- In the provinces of Takeo, Pzev Veng, Battambang, Siewreap and Kampot
- Epidemiological data on Battambang province: sample of 5000 people
- TF/TI prevalence (children aged 0-10 years): 2.1%
- TT prevalence (>40 years): 0.8%
- Estimated number of people with active trachoma: 262 000
- Estimated number of people requiring trichiasis surgery: 171 000

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- Priority public-health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Tarsal rotation (hospital and eye camps)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital, health centres)	PHC	Primary health education

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	14	25	35	510	584
Undergoing training	1	30	Undefined	Undefined	31

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: HKW, HAI, CBM

COMMUNITY PARTICIPATION: Included in primary health education

PRIORITIES

1	2	3	4
TRA	Trichiasis surgery	Antibiotic treatment	IEC (F & E)

CAMEROON

POPULATION: 1990: 14.8M
2025: 20M

Density : 29 hab/km²

Growth: 2.9 %

Urban population: 41%

Literacy rate: 54%

Access to drinking water: 61%

Per capita GNP: \$787 (1993)

CAPITAL CITY: Yaoundé: 800 000

MAIN CITIES:

Douala	:	1 400 000
Nkongsamba	:	200 000
Maroua	:	150 000
Garoua	:	20 000



EPIDEMIOLOGY OF TRACHOMA

- Affects 3 provinces : North, Extreme North, Adamaoua
- No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- ❑ Non-priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospital)	Tetracycline 1% eye ointment twice a day for 6 weeks (eye health centres)	IEC on trachoma through sporting events	Village Water Supply Programme

NATIONAL BLINDNESS CONTROL BUDGET: NON

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	30	13	0	Undefined	43
Undergoing training	5	2	0	Undefined	7

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OSF, HKW, EU, LCIF/SF, CBM

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4
Advocacy Ministry of Health Reporting (province)	Drafting of a pilot programme (3 Northern provinces)	Appointment of a coordinator	TRA

CENTRAL AFRICAN REPUBLIC

POPULATION: 1995: 3.2 M
2010: 4.8M
Density: 5.14 hab/Km²
Growth: 2%
Urban population: 47 %
Per capita GNP: \$437 (1993)

CAPITAL CITIES: Bangui: 600 000

MAIN CITIES:

- Berberati : 79 000
- Bambari : 53 000
- Bossangoa : 51 000
- Bouar : 49 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Concerns Vakaga, Upper Kotto and Upper Mbomou regions
- No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME : NO

- Non-priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospitals and eye health centres)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital and eye health centres)	–	Urban sanitation

NATIONAL BLINDNESS CONTROL PROGRAMME: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	2	5	0	Undefined	7
Undergoing training	0	2	0	Undefined	2

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OPC, CBM

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4	5	6	7
Adoption of NBCP	TRA and KAP surveys	Training of trainers	IEC	Trichiasis surgery	Tetracycline + azithromycine	Supervision Evaluation

CHAD

POPULATION: 1995: 6.6M
2010: 10M
Density : 5.75 hab/Km² (1999)
Croissance: 3.1%
Urban population: 30 %
Literacy rate: 33%
Per capita GNP: \$228 (1993)

CAPITAL CITY: N'Djamena: 0.8M

PRINCIPALES VILLES :

- Moundou: 130 000
- Sarh : 90 000
- Abéché : 70 000



NATIONAL BLINDNESS CONTROL PROGRAMME : YES

EPIDEMIOLOGY OF TRACHOMA

- Concerns Kanem-Lac, Chari-Baguirmi ; Batha, Guéra; geographical Ouaddaï (Ouaddaï + Bilitine) and Salamat regions
- Partial surveys
- No useable data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- ❑ Non-priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospital, eye health centres, health centres)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital, eye health centres and health centres)	Undefined	Undefined

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	4 (1 exp)	16	0	40	60
Undergoing training	0	1	0	Undefined	1

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OPC, CIMADE, SRC, SSI, LCIF/SF, Coopération française

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4
Advocacy of the establishment of a National Trachoma Control Committee	National survey on the prevalence of trachoma	Training of health workers and ophthalmic nurses in trichiasis surgery	Promotion of community health through IEC

DJIBOUTI

POPULATION: 1995: 0.6M
2010: 0.8M

Density : 27.3 hab/Km²

Growth: 2.2 %

Urban population: 77 %

Urban growth: 5.2 %

Literacy rate: 30%

Per capita GNP: \$228 (1993)

CAPITAL CITY: Djibouti: 350 000

MAIN CITIES:

- Dikhil : 50 000
- Tadjoura : 40 000
- Ali Sabieh : 35 000



NATIONAL BLINDNESS CONTROL PROGRAMME: NO

EPIDEMIOLOGY OF TRACHOMA: No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- Not regarded as a priority public health problem at present

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospital)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital)	—	—

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	2	1	1	0	4
Undergoing training	0	0	0	0	0

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: None

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4	5	6
Establishment of NBCP	Training of ophthalmic nurses in IOTA	IEC	Surgery	Tetracycline + azithromycin	Supervision Evaluation

GUINEA-BISSAU

<p>POPULATION: 1995: 1.1M 2010: 1.5M</p> <p>Density : 39.3 hab/Km²</p> <p>Growth: 2.2 %</p> <p>Urban population: 20 %</p> <p>Literacy rate: 35 %</p> <p>Per capita GNP: \$228 (1993)</p> <p>CAPITAL CITY: Bissau: 150 000</p> <p>MAIN CITIES:</p> <ul style="list-style-type: none"> - Bafata : 15 000 - Gabu : 10 000 - Mansoa : 7 000
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NATIONAL BLINDNESS CONTROL PROGRAMME : NO

EPIDEMIOLOGY OF TRACHOMA

- Concerns Oio and Cacheo regions and Bijagos archipelago
- No epidemiological data
- People with active trachoma (estimate): 100 000
- People requiring trichiasis surgery (estimate): 30 000

NATIONAL TRACHOMA CONTROL PROGRAMME : NO

- ❑ Non-priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospitals)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital)	—	—

NATIONAL BLINDNESS CONTROL BUDGET: PLANNED

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	1	0	0	0	1
Undergoing training	1	0	0	0	1

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: None

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4	5
Establishment of NBCP	Preparation of advocacy	Prevalence of trachoma survey planned in the North & TRA elsewhere	Implementation of SAFE strategy	Development of human resources

GUINEA

POPULATION: 1995: 7.5M
2010: 9M

Density : 29 hab/Km²

Growth: 2.4%

Urban population: 25 %

Literacy rate: 24%

Per capita GNP: \$497 (1993)

CAPITAL CITY : Conakry: 1M

MAIN CITIES :

- Kankan : 90 000
- Labé : 70 000
- Kindia : 60 000



NATIONAL BLINDNESS CONTROL PROGRAMME: NO

EPIDEMIOLOGY OF TRACHOMA

- Concerns Upper Guinea region
- No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- Non-priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye health	Environment
Existing activities	Trabut (hospital)	Tetracycline 1% eye ointment twice a day for 6 weeks (eye health centres)	—	Village wells

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	10	6	0	0	16
Undergoing training	0	2	0	0	2

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OPC, SSI, Phil. Africaine

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3
Establishment of NBCP	Prevalence of trachoma survey in Upper Guinea + TRA elsewhere	Development of human resources

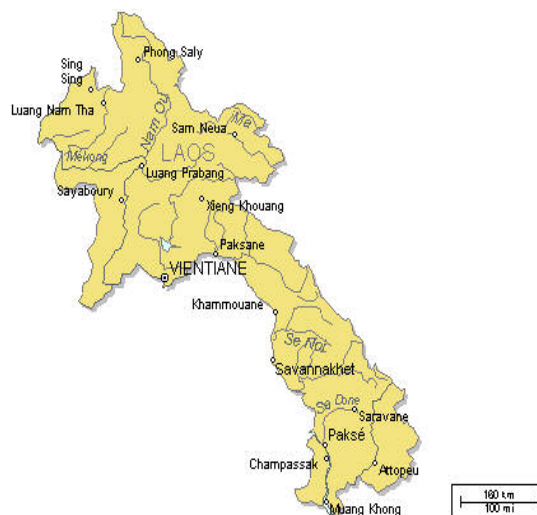
LAO PEOPLE'S DEMOCRATIC REPUBLIC

POPULATION: 1995:4.8M
2010: 7.1M
Density : 20.8 hab/Km²
Growth: 2.8 %
Urban population: 19 %
Literacy rate: 84 %
Per capita GNP: \$258 (1993)

CAPITAL CITY: Vientiane: 500 000

MAIN CITIES:

- Savannakheht : 60 000
- Paksé : 50 000
- Luang Prabang : 50 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA: No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Bilamellar tarsal rotation (hospital)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital)	Overall health education	Community hygiene

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	23	74	0	0	97
Undergoing training	0	0	0	0	0

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: CBM, Coopération française

COMMUNITY PARTICIPATION: Application of the principles of hygiene and environment protection

PRIORITIES

1	2	3	4
Establishment of NTCC	TRA	Development of an IEC strategy (F & E)	Training of ophthalmic nurses in trichiasis surgery

MALI

POPULATION : 1995: 9.4M
2010: 17M

Density : 7.7/Km²

Growth: 3.1%

Urban population: 22%

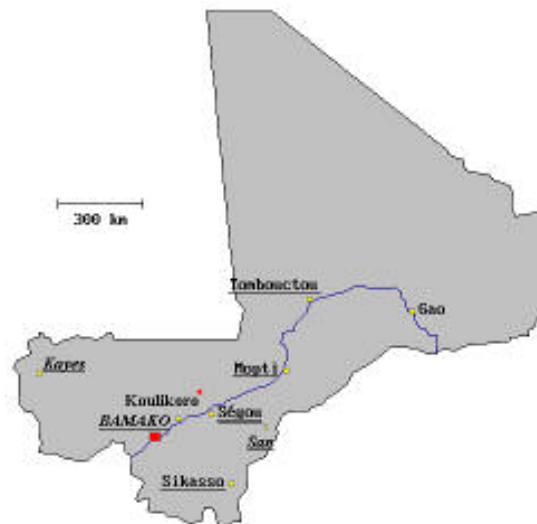
Literacy rate: 32%

Per capita GNP: \$294 (1993)

CAPITAL CITY: Bamako: 800 000

MAIN CITIES:

- Segou	: 90 000
- Sikasso	: 75 000
- Mopti	: 75 000
- Gao	: 55 000
- Gao	: 31 000
- Tombouctou	: 20 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Survey: national
- Mapping of trachoma
- Prevalence TF/TI/TT : TF/TI<10 years: 34.9%, TT>15 years: 1.9%
- People with active trachoma: 1.35M
- People requiring trichiasis surgery: 86 000

NATIONAL TRACHOMA CONTROL PROGRAMME: YES

- ☐ Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Trabut (hospital, health centres)	Tetracycline 1% eye ointment twice a day for 6 weeks (health centres)	IEC, PHC	Village water supply

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	11	40	15	400	466
Undergoing training	7	10	20 (ITI)	500 (ITI)	537

NGOS/INSTITUTIONS INVOLVED IN EYE CARE:

- OPC, HKW, SRC, SSI, EMCF, ITI, MSF, G2K
- Associations : UMA, CRBAH

COMMUNITY PARTICIPATION: Involved but little participation

PRIORITIES

1	2	4	5	6	7
Mapping of trachoma + TRA in several regions	Establishment of NBCC	Appointment of a trachoma control coordinator	Training of personnel in SAFE strategy	IEC	Identification of needs and resources

MAURITANIA

POPULATION : 1995: 2.3M
2010: 3.5M

Density: 2.2 h/Km²

Growth: 2.6%

Urban population: 39 %

Urban growth: 8 %

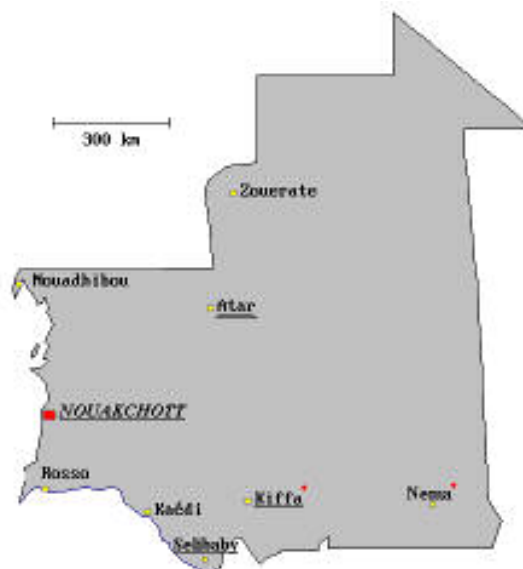
Literacy rate: 34%

Per capita GNP: \$553 (1993)

CAPITAL CITY: Nouakchott: 0,8M

MAIN CITIES:

- Nouadhibou : 90 000
- Zouerate : 45 000
- Kaedi : 40 000
- Rosso : 30 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Concerns the entire country
- No epidemiological data

NATIONAL TRACHOMA CONTROL PROGRAMME: YES

- ☐ Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Trabut (hospital)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital and health centres)	IEC and personal hygiene	Urban sanitation

NATIONAL BLINDNESS CONTROL BUDGET: YES

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	4	17	0	0	21
Undergoing training	6	2	Planned	0	8

NGOS/INSTITUTIONS INVOLVED IN EYE CARE

- EU, LCIF/SF, Associations: BOUAMATOU Foundation for blindness control

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4	5
National prevalence survey	Training of personnel + in-service training of ophthalmic nurses	Partnerships: Health, Environment, Education and Water Supply Ministries + Communes	Preparation of a guide for Primary Eye Care including the SAFE strategy	Collaboration with the School Health Programme

MOROCCO

POPULATION: 1999: 26.8M
2010: 33.2M
Density : 36.7 hab/km² (1994)
Growth: 2.06% (1992-94)/1,73 (1994-97)
Urban population: 51.4% (1994), 54% (1998-1999)
Literacy rate: 45.3% (1994), 51.7% (1998)
Access to drinking water: urban: 74.2% , rural: 4% (1994)
Per capita GNP: \$1260 (1998)

CAPITAL CITY: Rabat: 0.62M (1994)

MAIN CITIES:

- Casablanca : 2.90M
- Fes : 0.96M
- Oujda : 0.92M
- Marrakech : 0.80M

NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Prevalence survey: National and provincial: Errachidia, Figuig, Ouarzazate, Tata et Zagora
- National prevalence of active trachoma: 1.4%
- National prevalence of trichiasis among women of 15 and over: 0.2%
- People with active trachoma: 287 000
- People requiring trichiasis surgery: 6780

NATIONAL TRACHOMA CONTROL PROGRAMME: Trachoma control is part of the NBCP and is intersectoral.

- ☐ Priority public health problem

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Bilamellar tarsal rotation (PHC)	Tetracycline 1% eye ointment twice a day for 6 weeks (PHC)	Education campaigns: 3 per annum	Intersectoral commitment (Ministries of Health, Education, Agriculture and Trade and ONEP)

NATIONAL BLINDNESS CONTROL BUDGET: YES

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	160	Undefined	123	600	883
Undergoing training	15	Undefined	64	Undefined	15

NGOs/INSTITUTIONS INVOLVED IN EYE CARE: HKW, ITI, EMCF, OSF, IMPACT, LCIF/SF, Hassan II Foundation

COMMUNITY PARTICIPATION: Village committees involved in sanitation, water supply and education activities.

PRIORITIES

1	2	3	4	5	6
Trachoma mapping + TRA in several regions	Establishment of NBCC	Appointment of a trachoma control coordinator	Training of personnel in SAFE	IEC	Identification of needs and resources

MOZAMBIQUE

POPULATION: 1995: 17.4M
2010: 25M

Density : 22.2 hab/Km²

Growth: 2.6%

Urban population: 27%

Literacy rate: 33%

Per capita GNP: \$89 (1993)

CAPITAL CITY: Maputo: 1.3M

MAIN CITIES:

- Beira : 400 000
- Nampula : 250 000
- Nacala : 150 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Covers part of the country
- No epidemiological data
- Survey planned with IEF

NATIONAL TRACHOMA CONTROL BUDGET: NO

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	9 (8 exp.)	0	14	11	34
Undergoing training	3	0			3

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: HKW, IEF, HAI, no associations

COMMUNITY PARTICIPATION: NO

PRIORITIES

1	2	3	4
Advocacy to National Support (PNLC) + international support (technical & financial)	National survey on blindness	TRA	Development of human resources in ophthalmology and equipment

NIGER

POPULATION : 1995 : 9,2 M
2010 : 14 M

Density: 7,3 hab/Km²

Growth: 3,4%

Urban population: 20 %

Urban growth: 7,4 %

Literacy rate: 28 %

Per capita GNP: \$324

CAPITAL CITY: Niamey : 500 000 h

MAIN CITIES:

- Zinder : 121 000 h
- Maradi : 113 000 h
- Tahoua : 52 000 h
- Agadez : 50 000 h



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- National survey underway (TRA)
- Partial results
- Peoples with active trachoma: 2.2M
- People requiring trichiasis surgery: 100 000

NATIONAL TRACHOMA CONTROL PROGRAMME : YES

- ☐ Priority public health problem. Presence of a National Trachoma Control Committee

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Trabut (hospital, district health centres)	Tetracycline 1% eye ointment twice a day for 6 weeks (hospital, district health centres)	IEC, hygiene	Village water supplies

NATIONAL BLINDNESS CONTROL BUDGET: NO

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	8	18	10	Undefined	36
Undergoing training	2	4		Undefined	6

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OPC, HKW, EU, CBM, AMA, G2K, Union nationale des Aveugles (association)

COMMUNITY PARTICIPATION: Partial or total payment for surgery and drug treatment

PRIORITIES

1	2	3	4	5	6
Completion of trachoma survey	Training of trichiasis surgeons	Trichiasis surgery	Antibiotic treatment (tetracycline + azithromycine)	IEC	Supervision Evaluation

SENEGAL

POPULATION : 1995: 8.3M
2010: 12.2M

Density : 43.2/Km²

Growth: 2.9%

Urban population: 40%

Literacy rate: 54.3%

Per capita GNP: \$749

CAPITAL CITY: Dakar: 1.5M

MAIN CITIES:

- Thiès : 195 500
- Kaolack: 161 000
- St Louis: 134 000



NATIONAL BLINDNESS CONTROL PROGRAMME: YES

EPIDEMIOLOGY OF TRACHOMA

- Covers the entire country except Lower Casamance
- Partial surveys
- No useable data

NATIONAL TRACHOMA CONTROL PROGRAMME: NO

- ❑ Will be prepared after the national trachoma prevalence survey, to begin at the end of January 2000

	Surgery	Antibiotic treatment	Promotion of eye care	Environment
Existing activities	Trabut (hospital, eye health centres)	Tetracycline 1% eye ointment twice a day for 6 weeks (health centres and health posts)	IEC, hygiene schools and teachers	IEC

NATIONAL BLINDNESS CONTROL BUDGET: YES

HUMAN RESOURCES

	Ophthalmologists	Ophthalmic nurses	Trichiasis surgeons	Primary health care workers	Total
Trained	21	21	Undefined	0	42
Undergoing training	3	9	Undefined	0	12

NGOS/INSTITUTIONS INVOLVED IN EYE CARE: OPC, EU

COMMUNITY PARTICIPATION: YES

PRIORITIES

1	2	3	4	5
National prevalence survey	Training of trichiasis surgeons and ophthalmic nurses	Involvement of partners to take on F and E components	KAP survey	IEC strategy