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**REPORT OF THE**

**SECOND MEETING OF THE**

**WHO ALLIANCE FOR THE**

**GLOBAL ELIMINATION OF TRACHOMA**

*Geneva, Switzerland*  
*12 - 14 January 1998*

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PROGRAMME FOR THE PREVENTION OF BLINDNESS AND DEAFNESS  
Geneva, Switzerland



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## TABLE OF CONTENTS

INTRODUCTION .....	<u>4</u>
I. ACTIVITIES UNDERTAKEN FOR THE GLOBAL ELIMINATION OF TRACHOMA (GET) (1 July-31 December 1997) .....	<u>4</u>
1.1 Secretariat of the World Health Organization's Alliance (1 July- 31 December 97) .....	<u>4</u>
1.1.1 Country visits for national programme development .....	<u>4</u>
1.1.2 Preparation/production of documentation .....	<u>5</u>
1.1.3 Operations research and field studies .....	<u>6</u>
1.1.4 Progress on the Geographic Information System (GIS) for trachoma mapping .....	<u>7</u>
1.1.5 Strengthening of Information Communication Systems .....	<u>7</u>
1.2 Activities reported by endemic countries present at the meeting .....	<u>9</u>
1.2.2 Burkina Faso .....	<u>10</u>
1.2.3 The Gambia .....	<u>11</u>
1.2.4 Mali .....	<u>11</u>
1.2.5 Morocco .....	<u>12</u>
1.3 Participating Organizations of the Alliance .....	<u>13</u>
1.3.1 African Medical and Research Foundation (AMREF) .....	<u>13</u>
1.3.2 Al-Noor Foundation .....	<u>13</u>
1.3.3 Christoffel Blindenmission e.V. (CBM) .....	<u>13</u>
1.3.4 Conrad N. Hilton Foundation .....	<u>14</u>
1.3.5 The Edna McConnell Clark Foundation (EMCF) .....	<u>14</u>
1.3.6 French Ministry of Cooperation .....	<u>14</u>
1.3.7 Helen Keller International (HKI) .....	<u>15</u>
1.3.8 International Agency for the Prevention of Blindness .....	<u>15</u>
1.3.9 International Organization Against Trachoma (IOAT) .....	<u>16</u>
1.3.10 International Eye Foundation (IEF) .....	<u>16</u>
1.3.11 Organisation pour la Prévention de la Cécité (OPC) .....	<u>16</u>
1.3.11 Sight Savers International (SSI) .....	<u>17</u>
1.3.12 Swiss Red Cross .....	<u>17</u>
2. DEVELOPMENT OF A TRACHOMA RAPID ASSESSMENT METHODOLOGY .....	<u>17</u>
2.1 Report on field use .....	<u>17</u>
2.1.1 Recruitment of trichiasis cases in adults .....	<u>18</u>
2.1.2 Diagnosis of active trachoma .....	<u>18</u>
2.2 Discussion .....	<u>18</u>
3. TRICHIASIS SURGERY .....	<u>19</u>
3.1 Field testing of low-cost surgical kits .....	<u>19</u>
3.2 Monitoring of training and quality of surgery .....	<u>19</u>
3.3 Availability of a trichiasis surgery video .....	<u>19</u>

4.	UPDATE ON AZITHROMYCIN .....	<u>20</u>
4.1	Resistance .....	<u>20</u>
4.2	Field results from Morocco .....	<u>20</u>
4.3	Development of topical preparation .....	<u>20</u>
4.4	Other developments .....	<u>20</u>
	4.4.1 A family disease .....	<u>20</u>
	4.4.2 A mathematical model of mass treatment .....	<u>21</u>
5.	ELABORATION OF COMMON APPROACHES FOR THE ALLIANCE .....	<u>21</u>
5.1	Rational use of systemic antibiotic treatment .....	<u>21</u>
5.2	District programme model development .....	<u>22</u>
	5.2.1 At national level .....	<u>22</u>
	5.2.2 At the district level .....	<u>22</u>
	5.2.3 Surgical training .....	<u>23</u>
	5.2.4 Community-based personnel .....	<u>23</u>
	5.2.5 District coordinator .....	<u>23</u>
5.3	Development of national health policies for trachoma elimination .....	<u>23</u>
5.4	Mobilization of resources .....	<u>24</u>
	5.4.1 Development of funding proposals .....	<u>24</u>
	5.4.2 Human resources for national trachoma elimination schemes .....	<u>25</u>
	5.4.3 Monitoring and evaluation .....	<u>25</u>
	5.4.4 Potential funding sources .....	<u>25</u>
6.	UPDATE ON OPERATIONAL RESEARCH PROJECTS .....	<u>25</u>
6.1	Rapid Assessment .....	<u>25</u>
6.2	Surveillance .....	<u>26</u>
6.3	Antibiotic distribution .....	<u>26</u>
6.4	Barriers to surgery .....	<u>26</u>
6.5	Other research areas .....	<u>26</u>
6.6	An alternative method for treating trichiasis .....	<u>27</u>
7.	TRAINING AND PROMOTION .....	<u>27</u>
7.1	Teaching and information package about Trachoma Rapid Assessment .....	<u>27</u>
7.2	Update on the trachoma newsletter .....	<u>27</u>
8.	ANY OTHER MATTERS .....	<u>27</u>

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8.1	Geographic Information Systems .....	<a href="#">27</a>
8.2	Views on the progress of the Alliance .....	<a href="#">27</a>
8.3	Date and place of next meeting .....	<a href="#">28</a>
	CONCLUSIONS AND RECOMMENDATIONS .....	<a href="#">29</a>
Annex 1:	Agenda .....	<a href="#">32</a>
Annex 2:	Final List of Participants .....	<a href="#">33</a>
Annex 3:	Trachoma Assessment and Programme Development in Guinea-Bissau, Malawi, Mozambique and Nigeria (excerpted from a report prepared by IEF) .....	<a href="#">38</a>

## INTRODUCTION

The *Second Meeting of the WHO Alliance for the Global Elimination of Trachoma* was opened by Dr R. H. Henderson, Assistant Director-General who, in view of the expanding growth of the Alliance meetings, expressed his pleasure for seeing such momentum and commitment toward global elimination of trachoma. He pointed out that this Alliance which is based on pluri-disciplinary and multi-sectorial collaboration (including research institutes, governmental and nongovernmental organizations, foundations, UN agencies and the pharmaceutical industry) was perceived as a new opportunity likely to serve as model for other WHO programme areas. He then reviewed the progress made so far by the Alliance and listed the ongoing and planned developments. Finally, he mentioned that a WHO resolution on trachoma would be submitted to the Executive Board for consideration and possible adoption on the occasion of its 101st session in January 1998.

Mr R. Porter, Executive Director of Sight Savers International (SSI) and Dr L. Pizzarello, Medical Director of Helen Keller International (HKI) served as Chairman and Vice-Chairman respectively, and Professor G. Johnson, Director of the International Centre for Eye Health as Rapporteur. The draft agenda (Annex 1) was adopted without modification and the list of participants is included in Annex 2.

### I. ACTIVITIES UNDERTAKEN FOR THE GLOBAL ELIMINATION OF TRACHOMA (GET) (1 JULY-31 DECEMBER 1997)

#### 1.1 SECRETARIAT OF THE WORLD HEALTH ORGANIZATION'S ALLIANCE (1 JULY- 31 DECEMBER 97)

##### 1.1.1 *Country visits for national programme development*

(a) *Within the framework of GET, as follows:*

**Burkina Faso:** *Dr S. P. Mariotti (October 97).* Presentation of the WHO Alliance's objectives and framework to the National PBL Programme ophthalmologist, and to Ministry of Health authorities. Identification of collaboration opportunities for the National PBL Programme with a review of available data. Drafting of a plan of action for the coming months with the National PBL Programme Coordinator.

**Chad:** *Dr S. P. Mariotti (October 97).* Meeting with the Minister of Health and other responsible staff of the Ministry to present the WHO Alliance, to discuss the status of trachoma in the country. Establishment of future collaboration with national and international resources.

**Mali:** *Dr S. P. Mariotti (October 97).* Discussion with Ministry of Health authorities on the WHO Alliance. Working sessions with the National PBL Programme Coordinator to (i) review the status of endemic trachoma in the country, (ii) identify priorities, (iii) draft a tentative plan of action for trachoma elimination related activities.

**Morocco:** *Dr A.-D. Négrel & Dr B. Thylefors (Oct. & Dec. 97)* to review information concerning trachoma control, particularly the setting up of the specific programme for the elimination of trachoma by the year 2000. Review of the randomized clinical trial on the use of azithromycin vs tetracycline in trachoma treatment.

**Niger:** It was not possible to pay a visit to Niger due to illness of the National Coordinator.

(b) *Other activities:*

**Italy:** *Dr S. P. Mariotti (Rome, November 1997):* Discussion with the Italian Board of Ophthalmology on the WHO Alliance. Communication to the 77th Annual National Congress of the Italian Ophthalmological Society.

**Mauritania:** *Dr S. Resnikoff (October 1997):* Presentation of GET activities to national authorities who have expressed very strong interest for trachoma control.

**Oman:** *Dr A.-D. Négrel (November 1997):* Within the framework of a consultation for data analysis of the national survey on prevalence of blindness, Dr Négrel presented the WHO Alliance to the National Coordinator of the Prevention of Blindness National Programme. The results of this survey, which will be available by the end of the year, will provide needed data on trachoma for planning of intervention.

### 1.1.2 *Preparation/production of documentation*

(a) *Development of a Trachoma Rapid Assessment (TRA) manual*

A tentative methodology for Trachoma Rapid Assessment was presented at the first meeting of the WHO Alliance for Global Elimination of Trachoma in June 1997 based on the outline given by the Global Scientific meeting, but modifying the methodology in using trichiasis (TT) instead of scarring (TS) as indicator; this change was made in view of the feedback obtained from the initial field testing carried out in Morocco and the modified methodology was evaluated in Mali through a field test conducted by the Institut d'Ophtalmologie tropicale de l'Afrique (IOTA) (WHO Collaborating Centre).

(b) *Preparation of teaching material or "demo" package" on SAFE and the Alliance*

This had been carried out through :

(i) Dis semination of trachoma general information to all WHO Regional Offices, Alliance members and mailing list recipients, through the above-mentioned reports;

(ii) Development of a country questionnaire sent to all trachoma endemic countries via the WHO Regions to announce the formation of the Alliance and to request available data on trachoma and its severity; so far, replies had been received from 11 countries in 3 regions.

(iii) Production of a slide set on the WHO Alliance and the SAFE strategy for advocacy purposes; this slide set had been "field tested" as to its usefulness in several of the country visits undertaken and listed under section (iv).

(c) *Data bank on trachoma*

Work had been initiated for the establishment of a data bank on trachoma; data is presently being received by countries and cleared for further dissemination. A first edition of a document with global data on trachoma should be available in the fall of 1998.

(d) *Guidelines*

Discussions and consultations had been held with the WHO Division on Environmental Health with a view to the development of a manual on "Basic Sanitation". An outline had been produced for further consideration and for completion by a suitable consultant. It was envisaged to have a first draft available for the third Alliance meeting in October 1998, pressing on community-based action for sanitation, in particular simple measures for fly control.

(e) *Publication of a Trachoma Newsletter*

The first draft of a trachoma elimination newsletter had been prepared with support of the Editor, Dr L. Schwab, in collaboration with the Alliance secretariat. There have been several suggestions as to the title and format of this newsletter.

### **1.1.3 Operations research and field studies**

- (a) The validation of the Trachoma Rapid Assessment (TRA) methodology had so far been undertaken only in Mali; there was, therefore, a need to identify two more countries for the completion of needed field work and validation. The Gambia and Burkina Faso had expressed interest in this regard.
- (b) There was an ongoing assessment of cost/quality considerations for trichiasis surgical kits; the "very low-cost" surgical kit identified by the Alliance secretariat was presently being used in surgical outreach activities organized by the Institute of Tropical Ophthalmology in Bamako, Mali. The same field evaluation would shortly be applied to a titanium set of comparable instruments. The evaluation results could be discussed at the next Alliance meeting.
- (c) The development of protocols for monitoring of national programmes for the elimination of blinding trachoma had been initiated in Morocco and Oman. This work would require further collection of background information before being presented to the Alliance. The same goes for the evaluation of **progress** towards elimination of trachomatous blindness, which should be the subject of further consideration at a forthcoming Alliance meeting.

### **1.1.4 Progress on the Geographic Information System (GIS) for trachoma mapping**

This activity was carried out in collaboration with the Health Map unit in the WHO Division of Control of Tropical Diseases; it was already ongoing in 4 countries, namely, Burkina Faso, Mali, Morocco and The Gambia. Mapping of trachoma at the regional level had already been completed for Morocco, Mali and The Gambia and a training session had already taken place in Morocco. Burkina Faso will forward their available data on completion of the data collection.

It was pointed out that the software on which GIS is running had been updated making its use more user-friendly, faster and more flexible.

### **1.1.5 Strengthening of Information Communication Systems**

An E-mail discussion group has been initiated and an "on-line chat" (Internet Relay Chat) has been developed. Work was presently ongoing for a WWW-posted data retrieval system with restricted access. Furthermore, a WWW site had been created to promote the activities of the WHO Alliance and to inform the general public on technical and general developments via the availability of press releases.



## Planned Activities for the Period 1 January - 31 December 1998

### ***COUNTRY VISITS FOR NATIONAL PROGRAMME DEVELOPMENT***

- # Presentation of the WHO Alliance and GET 2020
- # Initiation of TRA
- # Promotion of the SAFE strategy
  - in
    - Niger
    - Mauritania
    - Sudan
    - Oman
    - East Africa (Uganda, Kenya, Tanzania, Malawi, pending further consultations)

### ***DOCUMENTATION***

- # Finalization of the draft Manual of Operations for TRACHOMA RAPID ASSESSMENT (TRA) including the necessary field testing
- # Finalization and dissemination of informational material on:
  - < the WHO Alliance for the Global Elimination of Trachoma by the Year 2020
  - < the SAFE strategy
  - < the GIS
- # Issuing of a compilation of information available in the trachoma data bank
- # Further work on the Guidelines for Basic Sanitation at village level in trachoma endemic areas
- # Development of guidelines for quality control of trichiasis surgery
- # Publication of the first issue of the Trachoma Newsletter

### ***OPERATIONS RESEARCH AND FIELD STUDIES***

- # Validation of final TRA methodology in 2 countries
- # Further development of protocols for:
  - < Monitoring and surveillance system for national programme for the elimination of blinding trachoma
  - < Evaluation of national programme progress towards GET elimination

### ***STRENGTHENING OF INFORMATION COMMUNICATION SYSTEMS***

- < Maintain E-mail discussion groups
- < Maintain "on-line chat" ( Internet Relay Chat)
- < Further develop WWW- posted data retrieval (restricted access)
- < Maintain Internet-based press releases on incoming events and activities
- < Ongoing WWW-based promotion of the WHO Alliance activities and technical developments

### ***INFORMATION & COORDINATION ACTIVITIES THROUGH THE ALLIANCE MEETINGS***

- < Prepare and host the 2nd Meeting of the WHO Alliance for GET, Geneva (30 June - 1 July 97)
- < Prepare the 3rd Meeting of the WHO Alliance for GET, Ouarzazate, Morocco (October 98)

## **1.2 ACTIVITIES REPORTED BY ENDEMIC COUNTRIES PRESENT AT THE MEETING**

### **1.2.1 Brazil (Dr Medina)**

Trachoma is endemic in many areas of Brazil. In the north-east states of the country, where trachoma prevalence was at least 30% 10 years ago, trachoma control programmes have been established by the Ministry of Health. Since, the prevalence of active disease among the population examined has been reduced considerably, i.e., from 33% in 1991 to 13% in 1996, and the total prevalence of trachoma from 44% in 1995 to 17% in 1996. The highest prevalence was registered in 1993 in the State of Pernambuco with active disease rates of up to 70% and a total prevalence of all forms of trachoma of 87%.

The São Paulo State Health Secretariat has a trachoma control program in which the cases detected are referred to the Epidemiological Surveillance System. Trachoma has been detected and confirmed in 150 cities of the state showing a maximal detection rate of 32.1/100 000 inhabitants in 1991. The prevalence surveys undertaken showed rates ranging from 1.5% in Franco da Rocha (a city near São Paulo city) to 19% in the rural area of Bebedouro (a city in the north-west of the state).

The surveys carried out in 1987 in specific areas of the country have shown a prevalence of trachoma of 47% in a municipality of the State of Bahia (north-east of the country). In 1989, a study in the village of the State of Ceara (north-east of Brazil) showed a prevalence of trachoma of 47%, including 2% of TT and 1% of CO.

Information on prevalence of blindness due to trachoma and more specifically prevalences of TT and CO in the general population are not available. Even in the State of São Paulo, where all forms of the disease are of compulsory notification, there is a lack of information. In fact, data to assess the trachoma situation are not available in most of the states except where a trachoma control programme is active.

**National Foundation of Health - Trachoma Control Programme,  
Brazil (1979 - 1996)**

Year	States studied	Municipalities studied	Population examined	individuals treated
1979	13	97	580 225	91 092
1980	13	79	440 358	78 748
1981	14	108	468 994	83 788
1982	13	116	511 544	95 371
1983	13	113	682 289	133 397
1984	13	104	631 261	202 804
1985	12	106	638 251	258 857
1986	11	145	567 273	195 769
1987	11	103	410 715	108 989
1988	11	109	419 795	148 124
1989	11	115	452 177	162 192
1990	8	100	356 141	136 822
1991	9	70	359 534	149 441
1992	7	84	456 590	184 930
1993	8	84	556 573	198 150
1994	7	75	434 900	176 811
1995	6	72	365 955	138 930
1996*	6	47	176 672	43 273

\* Partial results

### 1.2.2 Burkina Faso (Dr Ilboudo)

A national survey on the prevalence of trachoma carried out in 1997 in collaboration with the Institut d'Ophthalmologie tropicale de l'Afrique (IOTA), as well as an anthropological study, have allowed for a more precise picture of the trachoma situation in Burkina Faso. The results showed that over 90% of children suffered from trachoma and that over 20% of women over 15 had trichiasis. Aware of this public health problem, the national authorities have since listed trachoma as one of the main objectives of the national eye care policy, and established a National Trachoma Control Programme (NTCP). The action of the NTCP is based on the SAFE strategy as well as information campaigns at the regional and national levels, and mapping of the disease in endemic and risk areas. Through funding received from the European Union in the framework of the sub-regional network on prevention of avoidable blindness, activities have already started in the initial zone (Sanmatenga). Each trichiasis case detected is being operated on by one of the 10 health workers trained for this purpose. It is hoped that this activity, which is subject to the availability of funding, will be extended at the national level. Mass treatment with tetracycline ointment is already ongoing in endemic areas and distribution at a larger scale is planned in areas at risk depending on the resources. Other partners such as Helen Keller International, the Edna McConnell Clark Foundation, Christoffel-Blindenmission (CBM) and the Organisation pour la Prévention de la Cécité (OPC) are also supporting, or taking part, in the above-mentioned activities.

### **1.2.3 The Gambia (Dr H. Faal)**

Mapping of communities has been completed for 70% of targeted communities. Preliminary data analysis has shown the burden of disease and in conjunction with the results from the national survey in 1996, divisions and districts can now be ranked by endemicity and by burden of disease. This will be used for priority setting of areas for intervention. Data analysis of community profiles for risk factors remains to be finalized.

Available data will be used to develop strategies for location of surgery points, for the development of the Geographical Information System (GIS) and for surveillance.

A trachoma control plan has been completed as part of a third five-year eye care plan and support has been mobilized from Sight Savers International and the Edna McConnell Clark Foundation for the first two years. Collaboration is actively encouraged with the water and sanitation group and UNICEF.

Research projects are ongoing on trichiasis and trachoma scarring and genetics in collaboration with the International Centre for Eye Health and the Medical Research Council. Research on flies and their role in disease transmission have yielded results which may show the need for intervention in terms of fly control as an operational research theme. Data collected from a study on peri-urban trachoma is undergoing analysis.

Opportunities for validation of the Trachoma Rapid Assessment methodology, field testing of surveillance strategies and development of an integrated GIS are being offered by the National Programme for Blindness Control (NPBC).

The programme will need assistance with data management and capacity building. The "S" component of the SAFE strategy is fairly implemented. Operational research will be required for the "A", "F" and "E" components.

### **1.2.4 Mali (Dr D. Sacko)**

So far, no national prevention of blindness survey has taken place. However, regional surveys conducted between 1980 and 1990 have allowed to estimate the national blindness prevalence at 1.2% and at 2% in some regions. Trachoma, the second leading cause of blindness in Mali after cataract, is considered among the priorities of the National Programme for Blindness Control (NPBC) (established in 1994). Therefore, with the perspective of trachoma elimination by the year 2020, a specific trachoma control programme is being established.

The NPBC, in collaboration with the Institut d'Ophtalmologie tropicale de l'Afrique (IOTA), conducted a national survey on trachoma prevalence and its risk factors (1996-1997). The results of this survey showed that :

- 37% of children aged 0-10 years had inflammatory trachoma (TF/TI), and that
- 2.3% of women and 1.9% of the overall population aged 15 years and over had trichiasis.

The backlog for trichiasis surgery is estimated at 86 000 cases nationally. In 1996, 1004 cases were operated on countrywide.

Ongoing trachoma control activities are based on the SAFE strategy. All trichiasis surgery cases are operated on by ophthalmic assistants in the ophthalmic centres of the region and in some district centres where there is an ophthalmic assistant. Antibiotic treatment is carried out within the framework of primary eye care. Systematic treatment of conjunctivitis with tetracycline

ointment has been emphasized. Information, communication, and educational messages concerning trachoma (transmission, treatment, complications, and trichiasis) are also being elaborated based on a survey on Knowledge, Attitude and Practice (KAP).

The pilot zone for trachoma control activities is Koulikoro. The aim is to halve the prevalence of TT in 5 years with trichiasis surgery conducted by ophthalmic assistants. Seven specialized surgical health centres will be set up, each performing 300 cases per year.

### **1.2.5 Morocco (Dr J. Mahjour/Dr Y. Chami Khazraji)**

Most of the trachoma control activities carried out by the National Blindness Control Programme (NBCP) during the last six months have taken into account all the main elements of the trachoma control strategy:

(a) *Rapid assessment and distribution of resources:*

Studies on the prevalence and severity of trachoma and on the assessment of hygiene conditions and risk factors have been carried out. Related reports are in the process of finalization.

Thirty trichiasis surgical kits have been provided as well as the needed drugs for the treatment of active cases of trachoma.

(b) *Implementation of the SAFE strategy*

A large-scale campaign taking into account the various elements of SAFE was carried out. It covered the three aspects of trachoma control: curative, preventive and educational. This campaign which had been announced by the media, was the most successful ever organized by the NBCP. Furthermore, meetings were convened with representatives of ministries, such as the Environment Ministry, the Education Ministry, etc. The purpose of these meetings was to bring trachoma control to the attention of all these sectors for their consideration when developing projects in endemic provinces.

(c) *Training*

The training process on information, education and communication (IEC) has been completed and a training session on trichiasis surgery has been organized. Training on GIS has raised interest among senior staff of the NPBC and senior staff of the administrative health services of five endemic provinces.

(d) *Assessment of intervention methods*

The randomized clinical trial on the use of oral azithromycin vs topical tetracycline (1%) was completed satisfactorily in accordance with the protocol. The results of the preliminary analysis of the study conducted with the assistance of the Programme for the Prevention of Blindness were presented. Final results should become available by October 1998.

## **1.3 PARTICIPATING ORGANIZATIONS OF THE ALLIANCE**

### **1.3.1 African Medical and Research Foundation (AMREF) (Dr P. M. Loolpapit)**

Support from Pfizer Inc. facilitated by AMREF-USA has enabled AMREF to expand the Trachoma Control Programme (TCP) in Kenya involving an additional 3000 people at O/Kiramatian,

60 km south of the existing community-based activities at O/Tepesi which comprises about 3500 people. An AMREF/Lions Initiative Steering Committee, including representatives from the Kenya Ophthalmic Programme of the Ministry of Health and the Department of Ophthalmology of the University of Nairobi has been established to identify strategies aimed at increasing countrywide control of trachoma in endemic districts. This latter initiative has been made possible with the support received from the Edna McConnell Clark Foundation facilitated by Helen Keller International.

### **1.3.2 AI-Noor Foundation (Dr P. Courtright)**

The AI-Noor Foundation plans to undertake a survey on prevalence of blindness, including a component on trachoma in Menofiya Governorate, Egypt.

### **1.3.3 Christoffel Blindenmission e.V. (CBM) (Mr C. Garms)**

#### *(a) Current situation*

CBM support 165 projects involved in Trachoma Control in over 20 countries. Approximately 40 000 surgeries for trichiasis are performed each year.

#### *(b) Proposed action plan for trachoma control*

In 1998, CBM will continue to support all its existing projects involved in trachoma control. Information on the WHO Alliance for the Global Elimination of Trachoma and the SAFE strategy will be disseminated to each project and project partners.

- < **Ghana (1998):** Further development and evaluation of the pilot Trachoma Programme which is implementing the SAFE strategy in West Gonja District of northern Ghana. It is proposed to gradually expand this project while evaluating how to implement the SAFE strategy as an integral part of district health care programmes.
- < **Ethiopia (1998):** Proposal for a new initiative on trachoma control in Ethiopia. A workshop for all the existing CBM medical projects in Ethiopia will be organized for presentation of the SAFE strategy and development of action plans for the future three years. It is proposed to work closely with the National Prevention of Blindness Programme through Dr Lignaw Adamu.
- < **1999 and beyond:** Other countries to be considered by CBM for specific Trachoma control programmes in the future are Niger, Northern Nigeria, Tanzania and a project in China.

### **1.3.4 Conrad N. Hilton Foundation (Mr D. Hubbs)**

The Conrad N. Hilton Foundation has expressed its recent interest in trachoma elimination efforts and will consider taking part in the work of the Alliance.

### **1.3.5 The Edna McConnell Clark Foundation (EMCF) (Dr J. Cook)**

In March 1997, the Trustees of EMCF approved a five-year extension on trachoma control activities with a budget to be in principle equivalent to US\$15 million. Such funding is planned to provide support to the following areas:

- (i) promotion/strengthening of trachoma national programmes,

- (ii) coordination of trachoma elimination activities through the WHO Programme for the Prevention of Blindness and Deafness,
- (iii) operational research issues identified for attention by the Alliance, and
- (iv) communication, including information and education activities, e.g., through technical manuals produced by WHO/PBD.

### **1.3.6 French Ministry of Cooperation (Dr P. Eozenou)**

In the framework of the Fond d'Aide et de Coopération (FAC) three-year mobilization programme for blindness control (1995-1998) (Programme mobilisateur de Lutte contre la Cécité), the French Ministry of Cooperation, in collaboration with the Organisation pour la Prévention de la Cécité, the Institut d'Ophthalmologie tropicale de l'Afrique (IOTA) and WHO, has been involved in trachoma control activities (indirectly) through the support of the following activities:

- (i) creation and coordination of a eye health network in francophone Africa in collaboration with OPC & IOTA for production and dissemination of teaching, information and technical material;
- (ii) training of personnel;
- (iii) implementation, and/or strengthening, evaluation of National Blindness Control Programmes;
- (iv) operational research;
- (v) external evaluation of project.

Any funding for a similar project will be subject to the results of the external evaluation of the project. Based on the results of the latter, support to trachoma control activities could be proposed as one of the priority activities as is presently the case for onchocerciasis.

### **1.3.7 Helen Keller International (HKI) (Mr J. McCaskey)**

Helen Keller International's (HKI) work in trachoma aims to strengthen national efforts to prevent and eventually eliminate this blinding disease. With major support from EMCF, Hilton, McKnight Foundations and Pfizer Inc., HKI currently works with partners in Tanzania, Morocco, Kenya, Niger, Mali, Burkina Faso and Viet Nam. In addition, HKI helps advance the emerging trachoma research agenda and foster wider awareness about the disease and its control through the Trachoma Task Force.

HKI's work in Tanzania involves a combination of strengthening national planning capacity and support for program development. A major activity is replication of the "Kongwa Model" for implementing the SAFE strategy in Singida and Arusha regions. HKI is also working with PRIDE to expand the Kongwa Women's Credit Program, an effort that enables credit scheme members to raise community awareness about trachoma and refer trichiasis cases for surgery.

In Morocco, HKI collaborates with the Ministry of Public Health for elimination of trachoma by the year 2000. In addition to facilitating donor coordination, HKI staff works with Moroccan academics as well as Ministry officials to answer key operation research issues.

In Kenya, HKI is working with the Kenya Ophthalmic Program and AMREF to pilot local trachoma control activities in conjunction with the Lion's Clubs SightFirst Program. In Niger, Mali and Burkina Faso, HKI work has focused primarily on Information, Education and Communication,

though has also included collaboration with IOTA to expand access to surgical services. Finally, HKI has begun working with the Ministry of Health in Viet Nam to support its effort to control blinding trachoma in that country's central highlands.

### **1.3.8 International Agency for the Prevention of Blindness (Dr R. Parajasegaram)**

Being one of the major causes of blindness and visual impairment, IAPB at its inception identified action against trachoma as one of the priority areas for action. In its advocacy role, the global elimination of trachoma has figured prominently in discussions with government leaders, professional bodies and the public. In addition, the *IAPB NEWS* which has a circulation of over 3500 copies worldwide has included write ups on the global elimination of trachoma efforts and will periodically publish reports of interest. The IAPB will facilitate, through sharing of its mailing list, the dissemination of the *Trachoma Newsletter*.

### **1.3.9 International Organization Against Trachoma (IOAT) (Professor G. Coscas)**

IOAT wishes to welcome all contributions likely to be published in its "*Revue Internationale du Trachome*" (*International Review on Trachoma*), a bilingual publication, in order to disseminate all the scientifically relevant information on trachoma (medical & epidemiological) and also to make known the activities of the Alliance to its readership. IOAT also looks forward to collaborate to the work of the forthcoming newsletter of the Alliance.

### **1.3.10 International Eye Foundation (IEF) (Ms V. Sheffield)**

Since the last meeting, the International Eye Foundation (IEF) has worked with the Ministries of Health and local interested NGOs of Guinea-Bissau, Malawi, Mozambique and Nigeria for assessment of the trachoma situation and implementation of trachoma control programmes.

Country profiles have been prepared based on the forms developed by the WHO secretariat and providing both general information (such as the health care and eye care infrastructure) and trachoma-specific information. A detailed report is attached for further information (see Annex 3).

### **1.3.11 Organisation pour la Prévention de la Cécité (OPC) (Dr M. Chovet)**

OPC is involved in trachoma control through the provision of tetracycline eye ointment to all its supported health centres. It is also funding two trachoma control programmes in Guinea and in Cambodia, as follows:

- C Guinea:                   Serving the school population of Kankan and its surroundings (High Guinea).
- C Cambodia: Taking part, jointly with Médecins du Monde, in the screening and treatment of trachoma as part of a primary eye care programme in the region of Sihanoukville (450 000 inhabitants) The first results concerning this activity are expected during the second semester of 1998.

With regard to the application of the SAFE strategy, OPC is looking at the possibilities of working in the following countries:

- C Senegal:                   High Casamance (Kolda, Velingara)  
Eastern Senegal (Tambacounda)
- C Guinea:                   High Guinea (5 departments focused on Kankan)
- C Mali:                       Western part of Mali (Kayes region)



C Gabon:	Regions to be determined
C Congo:	Regions to be determined
C Chad:	Moyen Chari, Tandfilé, Salamak (Am Timan), Guera (Mongo, Melfi).

### **1.3.11 Sight Savers International (SSI) (Mr Kyndt)**

SSI reported that trachoma-related country reports had been received from The Gambia and Mali. Trachoma was apparently not a general public-health problem in Pakistan, but did occur in pockets, mainly in the dry areas of Baluchistan.

### **1.3.12 Swiss Red Cross (Mr K. Baral)**

The Swiss Red Cross is involved in eye care programmes in 6 countries of Asia and Africa. In 1996, a population-based survey was undertaken in the districts of Banke and Bardia (Bheri Zone) and Kailali (Seti Zone) of Western Nepal, to evaluate the impact of over a decade of trachoma control interventions. The results were compared with the findings of the Nepal Blindness Survey carried out in 1981, which at the time indicated a prevalence of trachoma of 31.1% in Bheri Zone and of 18.9% in the adjoining Seti Zone compared to the national average of 6.5%. The disease was found to be highly clustered and more prevalent in females than in males. All three districts have similar geographical features, climates, and socio-economic composition/status. However, in Kailali district, the Indian community is not so present as in the Banke and Bardia districts.

It was reported that during the past 10 years, different methods of trachoma control had been implemented in the 3 districts under consideration. In Bardia (Bheri zone) a community-based control programme had been initiated, with local supervision and participation of local volunteers. In Banke (also Bheri zone), the WHO recommendation of hospital-based mobile surgical intervention teams had been employed. In Kailali (Seti zone), entropion surgical camps had been carried out in 1982-84, but since then only hospital-based services have been available.

Furthermore, a cluster sample survey had been conducted in the 3 above-mentioned districts, with 89.1% of the total sample of 9,625 having been examined. The prevalence of active trachoma in the districts of Banke and Bardia had decreased to the level where it is no longer a public health problem. The community-based programme, delegating the process to the community (Bardia) had been significantly more effective in reducing the prevalence of trachoma than an approach utilizing mobile teams with the support of hospital-based services (Banke) or the provision of hospital-based services alone (Kailali).

## **2. DEVELOPMENT OF A TRACHOMA RAPID ASSESSMENT METHODOLOGY**

### **2.1 REPORT ON FIELD USE**

The Trachoma Rapid Assessment (TRA) methodology is one of the operations research questions with Surveillance, Antibiotic Administration, and Surgery, which had been agreed upon for further development at the previous Alliance meeting.

The results of a second field testing carried out for validation purposes by the Institut d'Ophthalmologie tropicale de l'Afrique (IOTA) in Mali, taking into account the modifications suggested after the first field testing in Morocco, were presented. The study consisted in comparing the results obtained from the national prevalence of blindness survey conducted in 1996, which revealed a prevalence of active trachoma in children under the age of 10 of 37%, with those obtained from the application of TRA in a region considered of medium endemicity. For this

purpose, six villages of the Oua arrondissement in the Mopti area were selected and investigated. In this study TRA was carried out in two phases:

The first phase was undertaken by a team composed of an ophthalmic nurse, a secretary and a chauffeur whose tasks consisted in:

- (i) the identification of trichiasis patients through a system of auto or community recruitment whereby the village responsible people were invited to identify those likely to have trichiasis with the help of an eye painting specifically made for that purpose. They were subsequently requested to bring them to a central place for examination by the ophthalmic nurse;
- (ii) the screening of active trachoma through examination by the ophthalmic nurse of 50 children aged between 0 and 10 years and selected among the poorest of the village.

The second phase which was carried out by another team composed of an ophthalmologist, an ophthalmic nurse, a secretary and a chauffeur, included a second visit to the same villages as above. The entire community was then screened and examined by the ophthalmologist.

### 2.1.1 Recruitment of trichiasis cases in adults

The identification of trichiasis in adults by the ophthalmic nurses gave a sensitivity of 34.6% and specificity of 97.9% when compared with the survey involving the ophthalmologist despite the fact that there was almost always a local word for trichiasis and that epilation was a well-recognized practice. Besides, the participation of resource persons in the villages proved difficult. However, the painting of the eye with trichiasis was found very useful. The Kappa statistic between the ophthalmologist and the nurse was 0.34.

### 2.1.2 Diagnosis of active trachoma

For rapid assessment of active trachoma, the method was to have equal numbers of school children and pre-school children if less than 80% of the children went to school. In fact, there was no community in this part of Mali where school attendance reached 80%. Of the 7 villages with over 20% of active trachoma, the nurses identified 5 out of 7, and the doctor 6 out of 7. The overall evaluation of prevalence was very close. Furthermore, the concept of a "poor neighbourhood" was very difficult to get over on first entering the village and prior sensitization and education was found necessary. The mobilization of traditional healers also proved to be very difficult.

## 2.2 DISCUSSION

The importance of focusing on positive predictive values was stressed. Emphasis was also put on the fact that in assessing rapid assessment, validity should not consist of precise comparisons with classical trachoma prevalence surveys, but rather determine how well rapid assessment **identified** and **ranked** regions, zones and villages with severe trachoma.

The Alliance was presented to the group who requested that further validation be carried out in other settings and that the draft TRA manual be disseminated to interested collaborators.

### **3. TRICHIASIS SURGERY**

#### **3.1 FIELD TESTING OF LOW-COST SURGICAL KITS**

Instrument kits have been made available for \$100 and field testing should be complete in 2-3 months. Titanium instruments are 6-10 times more expensive than stainless steel, but might still be worthwhile considering the high quality and durability. The results of the field testing of instruments would be presented at the next Alliance meeting.

#### **3.2 MONITORING OF TRAINING AND QUALITY OF SURGERY**

Recurrences after trichiasis surgery (20-40%) which had been noticed in visiting existing trachoma programmes have raised the issue of monitoring of training and quality of trichiasis surgery and the need to develop the relevant evaluation protocol.

The following criteria were mentioned for inclusion in the protocol:

- (i) The duration after which the efficacy of lid surgery should be assessed (after one year? 2 years?);
- (ii) The duration of surgical training and the need for surgeon's supervision;
- (iii) Patient's perception and satisfaction concerning lid surgery;
- (iv) Optimal degree of scarring before performing trichiasis surgery.

Experience with training for extra-capsular cataract extraction indicated that there was wide variation in the number of cases which it was necessary for a surgeon to do under supervision. The standard, with which results other than bilamellar tarsal rotation should be compared, was 80% success after 2 years.

#### **3.3 AVAILABILITY OF A TRICHIASIS SURGERY VIDEO**

A video describing the bilamellar tarsal rotation procedure, produced by Orbis International, and entitled "*Damage Control: Trichiasis Surgery for the Prevention of blindness from Trachoma*" is available, on request, from the WHO Programme for the Prevention of Blindness & Deafness (PBD).

### **4. UPDATE ON AZITHROMYCIN**

#### **4.1 RESISTANCE**

From Pfizer's point of view, the use of azithromycin in the treatment of trachoma was field led, rather than being a commercially-driven development. The first country to register azithromycin for this purpose had been Australia, for specific use in Aborigine children. Pfizer Inc. is continually monitoring its effectiveness, and will update WHO on the emergence of any resistant strains.

#### **4.2 FIELD RESULTS FROM MOROCCO**

The preliminary results of a clinical field study in Morocco were presented by Dr Chami Khazraji. This study started in September 1996. There were 3 arms to the trial: tetracycline (1%) twice daily for 6 weeks, azithromycin orally once (AZx1), and azithromycin repeated at 6 months (AZx2). Within each arm there were 2 study groups: the general population group and the school population group aged under 10 years. The participants were examined at

recruitment, at four, six and 12 months. Results were presented as “reduction in prevalence of disease”.

In brief, in the **general population**, at 6 months there were no differences between the 2 arms; at 12 months both tetracycline and AZx2 were better than AZx1.

In the **school children**, there were again no differences at 6 months. At 12 months, AZx2 was much better than AZx1 or tetracycline, which gave similar reductions in prevalence.

Further analysis of data was going on, and a more detailed presentation of the study would be made at the third Alliance meeting in October 1998.

### 4.3 DEVELOPMENT OF TOPICAL PREPARATION

There had been delays in manufacturing a topical preparation; in fact, although there was agreement from Pfizer Inc. to allow for licensed production of such a preparation, it would have to be developed first, at a considerable cost. It was agreed to continue to try to identify an interested manufacturer to develop and make available a topical preparation.

### 4.4 OTHER DEVELOPMENTS

#### 4.4.1 A family disease

It was emphasized that treatment needs to be family-based, and the target should be “**all infected family units**”. The aim should be to examine the children in each family of a selected community. As soon as one affected child is found, then the whole family should be treated. Only if **all** children in the family are negative do you not treat. It was most important to reach the children and women - treatment of men could be optional. Those treated are then re-examined after one year, and retreated if necessary.

#### 4.4.2 A mathematical model of mass treatment

A mathematical model of trachoma transmission was described. The frequency of mass antibiotic treatment necessary to ensure eventual elimination depends on the pre-treatment prevalence. The model also implies that children under the age of 8 years constitute a “core group” in the transmission of trachoma; if antibiotics are given at a frequency such that active disease is eliminated in children under the age of 8, then it should eventually disappear in the rest of the community

## 5. ELABORATION OF COMMON APPROACHES FOR THE ALLIANCE (Reports of 4 working groups)

### 5.1 RATIONAL USE OF SYSTEMIC ANTIBIOTIC TREATMENT (Group 1: Dr C. Dawson/Dr D. Mabey)

Antibiotic distribution should be based on a high priority region, that children were a priority, and strategies would depend on prevalence and costs. Ideally, only affected families should be targeted.

The main discussion in the group had revolved around the advantages and costs of mass treatment compared with targeted treatment. One example was given from the Mopti region of Mali, with a population of 1.2 million. The prevalence of active trachoma was 37% in the population aged under 10. Here, the mass treatment of children would cost CFA 5 million (US\$8250), but the cost

of treating only those with TF/TI would be CFA 2.3 million (US\$3500). However, the cost of screening would be CFA 3 million (US\$5000). Therefore if the prevalence was lower, it might be cheaper to target only those affected.

Another example was Morocco where screening of all the population would have been very expensive. The policy had therefore been to focus on the most severely affected province and, where the prevalence of TF/TI in children was over 20%, to treat all the women and children. If the prevalence was between 10 and 20%, the school children and their families were treated, and if it was less than 10%, they would get individual treatment.

On the basis of this information and discussion, a matrix of different strategies was drawn up, depending on the priority, on the one hand, and cost of drugs on the other.

#### Strategies for rational use of systemic antibiotic treatment: prioritization scheme

COST OF DRUGS	PRIORITY		
	High	Medium	Low
Cheap	Mass	Targeted	Targeted
Medium	Mass	Targeted	Nil
Expensive	Targeted	Nil	Nil

Priority is determined by:

- (i) prevalence of TF/TI under 10 years
- (ii) population size
- (iii) resources and feasibility

Although the basis of the above prioritization was emphasized, it was suggested that criteria such as the availability or restricted availability of the drugs should also be considered as there are many aspects of availability besides actual costs.

The integration of different eye care activities was regarded as important as it could allow for cheaper trachoma screening carried out in conjunction with other surveillance mechanisms, such as, for instance in The Gambia, the bi-annual screening of children's nutritional level. Furthermore, it was felt that family-based screening might be a useful option in some settings.

## 5.2 DISTRICT PROGRAMME MODEL DEVELOPMENT

*Group 2: Professor L. Cerulli/ Professor S. West*

### 5.2.1 At national level

- (i) There is an urgent need to prevent blindness and visual impairment due to trachoma. This concerns in the first instance, the timely treatment of trichiasis. It involves training of needed personnel, identification of cases, surgical treatment, and follow-up.
- (ii) The other priority is to prevent potentially blinding trachoma (TF/TI). This involves the **A**, **F**, and **E** of the **SAFE** strategy. It requires the promotion of eye health by education to achieve behavioural and environmental changes.

The implementation of trachoma control is based on the following premises:

- (i) It is modelled on **SAFE**;
- (ii) It is in agreement with the public health framework, i.e., community-based, including monitoring and prevention as well as treatment;
- (iii) It requires a national initiative;
- (iv) It takes into account the fact that trachoma affects the most disadvantaged.

It was pointed out that the cost of start-up projects and tackling the backlog of trichiasis cases might be borne by NGOs at first, to allow for a build-up of political commitment and involvement of national authorities.

### 5.2.2 At the district level

- (i) The magnitude and distribution of the problem is determined by rapid assessment;
- (ii) The resource availability is determined;
- (iii) This information is fed back to the national committee.

### 5.2.3 Surgical training

- (i) Training in trichiasis surgery should be done at the district level;
- (ii) A manual should be developed to cover all relevant training components;
- (iii) The standard for adequate training could be short-term success (1-2 years) in 10 supervised lid surgeries.

### 5.2.4 Community-based personnel

The community “contract” to work on trachoma allows volunteers to be elected. These volunteers are trained in case recognition and on how to mobilize the village; this activity is sustained by social recognition or payment in kind.

### 5.2.5 District coordinator

A district coordinator is required for:

- (i) coordination of the **A**, **F** and **E** components;
- (ii) training of the community health workers;
- (iii) interfaces with the village leaders;
- (iv) providing data for programme monitoring.

## 5.3 DEVELOPMENT OF NATIONAL HEALTH POLICIES FOR TRACHOMA ELIMINATION (Group 3: Dr J. Mahjour/Dr A. Auzemery)

Recognizing that trachoma is a community disease, particularly a mother and child disease which is often considered as a minor eye disease in some endemic countries and an indicator of poverty and marginalization, the group agreed that for trachoma elimination to be effective, a

national health policy including a national trachoma control component to commit the nation's resources was required. In order to achieve this, decision makers should be:

- (i) informed about the importance and severity of trachoma in their country,
- (ii) convinced that a solution exists through the support of the Alliance for the Global Elimination of Trachoma and the implementation of the SAFE strategy,
- (iii) explained the need for a multi-sectorial approach in carrying out this strategy and its potential benefit to other domains,
- (iv) offered assistance for identification of possible support through the Alliance for programme planning and implementation,
- (v) informed about the importance of seeking the cooperation of all health professionals, the community as well as that of NGOs (e.g., ophthalmologists, who often disregard trachoma as a main problem, should be sensitized through participation in surveys).

For trachoma control to be effective, a National Trachoma Control Programme (NTCP) should be prepared within the framework of a National Blindness Control Programme. It should be drafted by the NBCP Coordinator, in collaboration with a technical committee, or external expertise when required.

The development of the the NTCP should take into account the following main considerations (components):

- (i) SAFE strategy
  - (a) S & A for short-term intervention (curative) through health care services
  - (b) F & E for long term intervention (preventive) through community support and multi-sectorial/pluri-disciplinary involvement to consolidate results obtained from S & A.
- (ii) Strengthening of existing health services and development of new infrastructures
- (iii) Strengthening of manpower resources

#### **5.4 MOBILIZATION OF RESOURCES**

*(Group 4: Dr J. Cook/Dr L. Shwab)*

Part of resource mobilization was recognition of the problem, and the WHO Alliance has been instrumental in raising recognition throughout the world.

##### **5.4.1 Development of funding proposals**

This should be done through the Ministry of Health and the National Prevention of Blindness Committee. Key information required should be obtained from the following sources:

- (i) Trachoma Rapid Assessment
- (ii) **SAFE** strategy
- (iii) WHO Alliance interaction
- (iv) Rationale of the programme
- (v) Geographical Information System

- (vi) Other programmes are integrated with trachoma elimination (e.g. mother and child health)
- (vii) Cost effectiveness
- (viii) Sustainability

#### 5.4.2 Human resources for national trachoma elimination schemes

- (i) The National Coordinators should attend Alliance meetings for exchange of information and collaboration.
- (ii) A travelling team for teaching and advocacy would be desirable.
- (iii) Several WHO Collaborating Centres could collaborate to develop teachers.
- (iv) A course syllabus should be prepared.

#### 5.4.3 Monitoring and evaluation

To show donors the effectiveness of intervention, the following reports should be produced:

- (i) Rapid assessment before and after, supplemented by a detailed survey
- (ii) Number of trichiasis surgeons trained
- (iii) Number of lid surgeries performed
- (iv) Environmental changes with community support
- (v) Behavioural changes

#### 5.4.4 Potential funding sources

- (i) The WHO Alliance for Global Elimination of Trachoma should be a vehicle for raising visibility, awareness and carrying out advocacy for the elimination of trachoma and the use of the **SAFE** strategy;
- (ii) In-country funding, including community sources, should assure sustainability;
- (iii) External funding is often required to launch the elimination scheme;
- (iv) UN (WHO/UNICEF & World Bank);
- (v) Local NGOs such as Lions and Rotary Clubs;
- (vi) Water and sanitation organizations;

### 6. UPDATE ON OPERATIONAL RESEARCH PROJECTS

The situation in four major areas of operational and field research were outlined as follows:

#### 6.1 RAPID ASSESSMENT

The available results were presented; in reviewing this matter, it was emphasized that the validity question must focus on the ranking of communities. There was good correspondence of rapid assessment with a proper survey, except when school children were included in the rapid assessment. The planned continuation of the field testing of the Trachoma Rapid Assessment methodology in another three countries was agreed upon.

#### 6.2 SURVEILLANCE



It is necessary to monitor and evaluate the effectiveness of trachoma control systems, and for this an unbiased estimate of true change of disease pattern over time is required. An example was given from Tanzania and further studies are taking place in Morocco.

### 6.3 ANTIBIOTIC DISTRIBUTION

The cost of the drug and the manpower required to identify cases and to deliver the drug must be included; this should be the subject of research as to optimal distribution schemes in terms of prevalence of disease, population distribution and community involvement.

### 6.4 BARRIERS TO SURGERY

Information from Malawi was presented (Dr P. Courtright), indicating that according to a small survey carried out in 1994, only 38% of women with trichiasis who were encouraged to have surgery at the district hospital, actually followed through with this. Similar information on women in Tanzania was presented (Prof. S. West) indicating that after 7 years, only 27% had accepted surgery, even though surgery had been brought to the village. Those who had been treated identified the following benefits: (i) lack of pain (66%), (ii) could now see better (59%) and (iii) could now work (28%).

The subject of disease surveillance was recommended for inclusion in the agenda of the next meeting. The importance of field testing methods of surveillance was emphasized as well as the development of indicators and proxy indicators.

### 6.5 OTHER RESEARCH AREAS

The following suggestions were made:

- (i) Basic cost of trachoma control, applying the **SAFE** strategy;
- (ii) Definition of outcomes for the control of trachoma;
- (iii) Work on the **F** and the **E** of the **SAFE** strategy, including fly control;
- (iv) Visual function tests applicable to measuring changes of function of patients with trichiasis;
- (v) Different utilization patterns for water. This was a health education and behavioural issue;
- (vi) Basic sanitation: how can inter-sectorial cooperation be ensured?
- (vii) Does the fact of keeping cattle close to houses make any difference?
- (viii) Understanding of behavioural patterns in general terms for further application to trachoma. Much of this behaviour is specific to the country but information is available in other branches of development work;
- (ix) Patients and communities' perception of the interventions taking place, as included in the **SAFE** strategy.

## **6.6 AN ALTERNATIVE METHOD FOR TREATING TRICHIASIS**

Dr Graz of the Institute of Social and Preventive Medicine at Lausanne and Geneva presented an alternative treatment for trichiasis, usable by non-specialists, as an interim measure. This involved a small band-aid (sticky on both sides) to stick back the in-turned eyelashes. This was protected with a normal band-aid. After 12 weeks, lids which had been epilated were back to the previous state, whereas 67% of those taped by the new method were still satisfactory. Further follow-up of this study was envisaged; it would be useful to know whether this method could also be used by patients as well as health workers.

## **7. TRAINING AND PROMOTION**

### **7.1 TEACHING AND INFORMATION PACKAGE ABOUT TRACHOMA RAPID ASSESSMENT**

A teaching package developed by the Alliance secretariat was presented to the group which found it very useful especially for the sensitization of administrators. It was envisaged to produce several versions and languages for this material with the possible support of the Task Force of the Partnership Committee to the WHO Programme for the Prevention of Blindness.

### **7.2 UPDATE ON THE TRACHOMA NEWSLETTER**

Dr Schwab, Editor, presented a draft of the first issue. Two issues per year are planned for the moment. The target audience is anyone interested in trachoma, including political leaders. It was therefore suggested to obtain mailing lists from other organizations, and to include articles from sanitation and water people. The secretariat will also arrange to make it available on the Internet.

## **8. ANY OTHER MATTERS**

### **8.1 GEOGRAPHIC INFORMATION SYSTEMS**

Following requests for feedback on the use of Geographic Information Systems, the group recommended that this item be included in the agenda of the next meeting.

### **8.2 VIEWS ON THE PROGRESS OF THE ALLIANCE**

Dr Cook expressed the satisfaction of the Edna McConnell Clark Foundation with the progress of the Alliance.

On behalf of Pfizer Inc., Ms P. Luff expressed that their participation in the WHO Alliance had been a very positive experience for her company.

The secretariat explained in reply to a question on the growing number of participants in the Alliance meetings, that following the adoption of the trachoma resolution in the forthcoming 51st World Health Assembly, some by-laws and criteria for future participation and collaboration would be developed; this could be considered at the next meeting of the Alliance.

### **8.3 DATE AND PLACE OF NEXT MEETING**

Dr Mahjour extended a warm invitation to the Alliance to hold the next meeting in Ouarzazate, Morocco, in October 1998. The dates 19-20 October 1998 were suggested, followed by a one-day field visit.

It was suggested that the agenda should include the following items :

- (i) District control programmes: model developments;
- (ii) Update on azithromycin administration (should be a regular item);
- (iii) Costs of trachomatous blindness and benefits of control;
- (iv) Outcomes and trachoma-specific benefits. Mr Mecaskey offered a working paper on this subject.

## CONCLUSIONS AND RECOMMENDATIONS

The Second Meeting of the WHO Alliance for the Global Elimination of Trachoma brought together representatives of affected countries together with those of a wide variety of institutions and organizations interested in combatting trachoma. From the proceedings, it was very encouraging to note the progress which had been made in many countries in either preparing for, or implementing trachoma control programmes. The deliberations of the meeting resulted in the following recommendations:

### 1. National Coordinators

In order to allow for the sharing of experience and recognizing the contribution with valuable information by national coordinators of trachoma control programmes, the Alliance recommends the inclusion of those coordinators in future meetings.

### 2. National Policy

The Alliance recognizes the importance of strong political and professional support for national trachoma control programmes.

The group also recognizes the importance of a multi-sectoral approach to trachoma elimination. It is therefore critical to cultivate support amongst political leaders (by reinforcing the cost-effectiveness of such programmes as well as their impact on community development), ophthalmologists (by involving them in the assessment of trachoma severity) and health and related policy-makers such as water, sanitation, and education partners and women's groups (by emphasizing the public health benefits of control programmes).

### 3. Data collection and Trachoma Rapid Assessment methodology

The participants noted with interest the data that had been collected from selected countries.

It was also noted that the Trachoma Rapid Assessment (TRA) methodology which is an essential operational tool for identifying target endemic communities, had been field tested and partially validated. It is recommended that further validation be carried out in different settings and the draft TRA manual be disseminated.

### 4. Trichiasis surgery

The participants emphasized the need to standardize training in and "certification" of competency in trichiasis surgery.

It is recommended that a set of training guidelines be prepared to supplement the existing manual on "*Trichiasis Surgery for Trachoma. The Bilamellar Tarsal Rotation Procedure*" (WHO/PBL/93.29). These guidelines should include a simple protocol for monitoring the quality of the outcome of trichiasis surgery.

## 5. Azithromycin

### *Availability*

The Alliance noted with appreciation the continuing interest of Pfizer Inc. to make azithromycin available for trachoma elimination in selected countries. It was recommended that additional operation studies, which could facilitate further developments in this direction, be undertaken, as applicable, through the Alliance network.

### *Topical preparation*

It was noted that the development of a topical preparation of azithromycin had been delayed for several reasons since the previous Alliance meeting. It was reiterated that such a topical preparation might represent an important fall-back option for trachoma control, and continuing efforts were therefore recommended to advance this matter.

### *Morocco results*

The group took note with interest of the preliminary results of the azithromycin field trial carried out in Morocco, comparing once or twice yearly doses with topical tetracycline.

It is recommended that collected data be further analysed and reported at the next meeting.

### *Rational use of systemic antibiotics as part of the SAFE strategy*

A rational use of systemic antibiotics will recognize that trachoma is a family-based disease. It is therefore recommended that trachoma control be integrated with primary health care such as mother and child health care programmes. Ideally, all members in infected family units, in the prioritized villages, should be targeted.

The current preliminary information suggest that a single annual dose of azithromycin may be adequate, although further operational research is required, including cost-benefit implications of twice yearly dosing.

## 6. District model for integrated trachoma control

The meeting took note of the experiences of some countries in this regard. The need for further development of human resources and intersectoral activities, to implement the SAFE strategy, was stressed.

### *Coordination*

It was recommended that trachoma control be integrated with public health activities, and be coordinated at the district level by a designated person.

### *Cost-recovery*

The group stressed that trachoma affects the most economically disadvantaged communities and families. This has repercussions for attempting cost recovery for programmes, and further work in this area is needed.

### *Barriers to access*

Continued efforts are needed to reduce the barriers limiting access to trachoma control services, in particular for women and children.

## **7. Awareness**

In order to optimize available funds and to mobilize more resources for the elimination of trachoma, there is a great need to create more awareness about the disease, and the socioeconomic and developmental gains that can be derived from its control. It is therefore recommended that these aspects, together with the availability of an effective intervention strategy, be highlighted in forwarding proposals to governments and to potential donors.

## **8. Resource mobilization**

The participants stressed the need to mobilize more resources for GET. As a step in this direction, it is recommended that consideration be given to having an extra half day, in conjunction with an Alliance meeting, for a non-technical progress report on GET programmes. This might be of interest to agencies capable of providing additional support.

## **9. Operations research**

Of the four major areas recommended for operations research, progress has been reported on Trachoma Rapid Assessment and the barriers to trichiasis surgery. Antibiotic distribution is under consideration. More work is required on the monitoring and evaluation of trachoma control systems. It is recommended that surveillance be included as an agenda item for the next meeting and that the secretariat of the Alliance prepare a working paper in advance.

## **10. Training**

It is of critical importance that training opportunities for Trachoma Rapid Assessment and the implementation of the SAFE strategy be created for national programme managers and interested NGOs. It is therefore recommended that workshops be initiated through the Alliance network, involving interested organizations and WHO Collaborating Centres.

## ANNEX 1

**SECOND MEETING OF THE WHO ALLIANCE FOR  
THE GLOBAL ELIMINATION OF TRACHOMA****Geneva, 12-14 January 1998****AGENDA**

Opening of the meeting  
Introduction of participants  
Administrative announcements  
Adoption of agenda

1. Reporting of activities undertaken since the previous meeting:
  - C WHO secretariat
  - C endemic countries (as present)
  - C member organizations of the Alliance
2. Development of a Trachoma Rapid Assessment Methodology
  - C report on field use
  - C draft manual material§§
3. Trichiasis surgery
  - C field testing of low-cost surgical kits
  - C availability of video
  - C monitoring of training and quality of surgery
4. Update on azithromycin
  - C resistance
  - C field results from Morocco
  - C development of topical preparation
  - C other developments
5. Elaboration of common approaches for the Alliance (4 working groups):
  - (i) Rational use of systemic antibiotic treatment
  - (ii) District programme model development
  - (iii) Development of national health policies for trachoma elimination (French working language)
  - (iv) Mobilization of resources
6. Update on operational research projects
7. Update on the trachoma newsletter
8. Outline of work plan for 1998
9. Any other matters

Conclusions and recommendations  
Date and place of next meeting  
Closure of meeting

**ANNEX 2****SECOND MEETING OF THE WHO ALLIANCE FOR  
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***Trachoma Assessment and Programme Development  
in  
GUINEA-BISSAU, MALAWI, MOZAMBIQUE & NIGERIA***

***Excerpted from a report prepared by the  
International Eye Foundation (IEF)\****

## **I. GUINEA-BISSAU**

### **1.1 Prevalence of trachoma and trachoma-related blindness estimates**

It is estimated that those affected/at risk constitute 1/4 of the population or 282 000 people. It is further estimated that the number of blind from trachoma is between 1800-2000 (see Table 1).

### **1.2 Trachoma survey in Farim (1994)**

A trachoma survey undertaken in 1994 in Farim sector, Oio region (Northern Guinea Bissau) by the School of Public Health in Lisbon revealed an overall prevalence of inflammatory trachoma of 15% in school children aged 5-14 years.

A survey of household members of trachomatous and non-trachomatous school children showed that, as expected, trachoma clustered in households. It appears that the prevalence of trachoma in same age non-school attending siblings was double that of the school-children. A study of risk factors showed a relationship between trachoma and latrines, clean faces, socio-economic status, etc. Young girls had higher rates of inflammatory disease than young boys. There has been no other survey nor other data collected to give an impression as to the geographic distribution or magnitude of the problem.

### **1.3 Review of the surgical registry**

It is possible to estimate which sectors have more serious trachoma problems based on the proportion of trichiasis surgery cases of all eye surgery cases. Sectors in which trichiasis surgery comprised over 20% of all eye surgeries were in the regions of Cacheu, Oio, the northern sectors of Bafata, and the Bijagos Islands.

### **1.4 Overview of proposal for development of a national trachoma programme**

#### **1.4.1 Goals**

Elimination of trachoma as a public health problem over the next four years in five targeted sectors accounting for approximately 122 000 people, or 43% of the currently active/at risk population in Guinea-Bissau. An infrastructure will be established to reach the goal of eliminating trachoma as a public health problem in the rest of the country by the year 2020. It is also the goal of the programme to build the capacity of Guineans to sustain, technically and programmatically, trachoma control activities until trachoma ceases to be a public health problem.

**Table 1. Assessment of trachoma in Guinea Bissau**

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\* Since the last meeting, the International Eye Foundation (IEF) has worked with the MOH and local interested NGOs to assess the trachoma situation and make recommendations for control programs in Guinea-Bissau, Malawi, Mozambique, and Nigeria. Support for these assessments and program proposal development has been provided by the Edna McConnell Clark Foundation.

REGION	SECTOR	POPULATION	POPULATION AFFECTED <sup>1</sup> & TRACHOMA SEVERITY*		BLIND DUE TO TRACHOMA <sup>2</sup>
<b>Bissau</b>		261400	0	0	640 <sup>3</sup>
<b>NORTH PROVINCE</b>					
<b>Biombo</b>	Quinhamel	34 200	25650	H	103
	Prabis	15 400	-	0	-
	Safim	12 100	-	0	-
<b>Cacheu</b>	Bigene	43 000	32 250	H	129
	Bula	18 600	13 950	H	56
	Cacheu	16 500	12 375	H	50
	Caio	12 000	1 800	L	7
	Cantchngo	38 500	15 400	M	62
	S. Domingos	28 000	11 200	M	45
<b>Oio</b>	Bissorã	46 700	35 025	H	140
	Farim	43 200	32 400	H	130
	Mansaba	29 000	21 750	H	87
	Mansoa	31 000	12 400	M	50
	Nhacra	17 600	7 040	M	28
<b>EAST PROVINCE</b>					
<b>Batafa</b>	Bafata	53 000	21 200	M	85
	Bambadinca	26 800	4 020	L	16
	Contuboel	37 000	14 800	M	59
	Gamamudo	21 300	3 195	L	13
	Galormaró	13 800	-	0	-
	Xitole	10 400	-	0	-
<b>Gabu</b>	Boe	8 900	-	0	-
	Gabu	54 000	-	0	-
	Pirada	26 000	-	0	-
	Pitche	34 200	-	0	-
	Sonaco	33 300	-	0	-
<b>SOUTH PROVINCE</b>					
<b>Bolama</b>	Bolama	8 700	3 480	M	14
<b>Bijagos</b>	Bubaque	8 400	6 300	H	25
	De Caravela	4 800	3 600	H	14
	Uno	5 700	4 275	H	17
<b>Quinara</b>	Buba	12 400	-	0	-
	Empada	14 300	-	0	-
	Fulacunda	6 900	-	0	-
	Tite	14 000	-	0	-
<b>Tombali</b>	Bedanda	20 400	-	0	-
	Catio	33 400	-	0	-
	Cacine	16 000	-	0	-
	Quebo	6 000	-	0	-
<b>TOTAL</b>			282 110		1 770

<sup>1</sup> Population affected = severity (%) per population

<sup>2</sup> Blind due to trachoma = 0.4% per population affected

<sup>3</sup> Bissau (urban) is calculated at 0.24% per population

\* Coding of trachoma severity  
 0 = no/little recorded disease  
 L = low (15% of population affected)  
 M = moderate (40% of population affected)  
 H = High (75% of population affected)

## 1.4.2 Objectives

- (i) Develop a National Trachoma Control Committee.
- (ii) In nine first and second priority sectors (see table 2), the program will develop Sector Trachoma Control Committees (STCC). The STCC, with supervision from Bissau, will provide:
- C surgical services for trichiasis at the sector level,
  - C antibiotics for treatment of severe active disease during field visits,
  - C promotion of facial cleanliness as part of hygiene education (through MOH & MOE),
  - C promotion of environmental change in the form of assistance in the construction of latrines.
- (iii) Undertake a trachoma service delivery survey and initiate a sentinel site evaluation programme in all targeted sectors.
- (iv) Create educational messages for schoolchildren that will employ the "child-to-child" approach of health education and behavioural change.
- (v) Undertake a number of operational research studies to help identify the best approaches to intervention and evaluation.

Table 2. Priority sectors for Guinea-Bissau

REGION	SECTOR	POPULATION	POPULATION AFFECTED	BLIND DUE TO TRACHOMA
<b>FIRST PRIORITY</b>				
<b>Biombo</b>	Quinhamel	34 200	25 650	103
<b>Cacheu</b>	Bula Cantchno	18 600 38 500	13 950 15 400	56 62
<b>Oio</b>	Bissora Farim	46 700 43 200	35 025 32 400	140 130
<b>Sub-total</b>		<b>181 200</b>	<b>122 425</b>	<b>491</b>
<b>SECOND PRIORITY</b>				
<b>Cacheu</b>	Bigene Cacheu	43 000 16 500	32 250 12 375	129 50
<b>Oio</b>	Mansaba	29 000	21 750	87
<b>Bijagos</b>	Bubaque De Caravela Uno	> 18 900	14 175	57
<b>Sub-total</b>		<b>107 400</b>	<b>80 550</b>	<b>323</b>
<b>TOTAL</b>		<b>288 600</b>	<b>202 975</b>	<b>814</b>

## 2. MALAWI

### 2.1 STATEMENT OF THE PROBLEM OF TRACHOMA

Clinical and anecdotal experience supports the idea that trachoma constitutes a major public health problem in parts of Malawi. A survey carried out in 1983 in the Lower Shire Valley (LSV) revealed that 48.7% of children aged 1-2 years had inflammatory trachoma. A small study conducted in 1994 revealed that only 38% of women with trichiasis who were encouraged to go to the District Hospital for surgery actually followed through with this. Aside from the 1983 survey there is no population based data.

Ophthalmic medical assistants (OMAs) were surveyed in Malawi to find out how much trichiasis/entropion surgery was being undertaken in the last 2 years in each district. This helped identify 5 districts where the problem may be the worst. These include Chikwawa and Machinga in the Southern Region, Mchinji in the Central Region, and Mzimba in the Northern Region. Interviews with the OMAs in the latter three districts revealed that the problem is very focal within those districts. The ophthalmologist of the Central Region reports that trachoma also exists in pockets of Nkhota Nkhota and Salima Districts.

### 2.2 Overview of proposal for the development of a national trachoma programme

#### 2.2.1 Goals

- (i) Apply the SAFE strategy to reduce the problem of trachoma in the Chikwawa District (phase 1);
- (ii) Build up infrastructure in Nsanje District so that trachoma control activities may take place there in future (phase 2);
- (iii) Expand the control program into other areas of Malawi requiring intervention (phase 3).

#### 2.2.2 Objectives

- (i) **Provide training for new OMAs** in endemic areas, including trichiasis surgery.
- (ii) **Develop educational messages** for incorporation into existing NGDO water/sanitation activities, female literacy activities, primary school program, and HSA activities within Chikwawa District. Collaboration will be sought with existing community-based health, education, and sanitation programmes.
- (iii) **Increase the number of trichiasis surgeries in Chikwawa District** and implement trichiasis surgery service at the health center level in the district.
- (iv) **Ensure that sufficient tetracycline ointment is available for distribution** in Chikwawa.
- (v) **Map the areas of highest trachoma prevalence** within Chikwawa district and other trachoma-suspect areas of Malawi.
- (vi) **Investigate cultural beliefs and practices** which are related to acceptance of new hygiene practices.



### 3. MOZAMBIQUE

#### 3.1 STATEMENT OF THE PROBLEM OF TRACHOMA

In view of the absence of survey, of the large size of the country, and of factors associated with the war, estimates of the magnitude and distribution of trachoma must be generated primarily from records kept by the ophthalmic assistants (OAs). OAs were trained in trachoma recognition but it is clear that patients living distant from the provincial hospital rarely seek services. There are also significant population shifts still underway as a consequence of the cessation of hostilities. People who acquired trachoma in one area may have moved elsewhere (primarily the cities) due to the war. Some of these people have returned to their home villages while many have chosen not to. The large number of land mines in many areas will continue to delay resettlement. Trachoma endemicity will probably remain in flux for a number of years.

OAs do not currently record trachoma as TF/TI but as "active" trachoma, or trachomatous trichiasis for which surgery is provided. Cicatricial disease is not recorded. Trachoma is recorded only if it is the primary condition for which the patient presents himself which underestimates the true magnitude of the disease in the country. Furthermore, OAs do not have loupes; a few have slit lamps and the recording of inflammatory trachoma is generally unaided.

#### 3.2 Overview of proposal for the development of a national trachoma control

##### 3.2.1 *Potential for trachoma control*

There is significant potential for improving trachoma control in Mozambique. The Ministry of Health understands and supports the development of a national trachoma control programme. Eye care NGOs currently working in Mozambique are keen to assist with the development and implementation of trachoma control. Other potentials include:

- C the possibility of utilizing leprosy control workers for trachoma control in Cabo Delgado, Zambezia, and Nampula where leprosy endemicity is significantly higher than the rest of the country, is being explored;
- C the MOH is favourable with the idea of providing eye care training, in particular trachoma, to health center workers.

There are significant barriers to the successful implementation of trachoma control in Mozambique such as :

- C the internal displacement due to the war has led to much less community involvement;
- C the population in many parts of Mozambique is quite dispersed; single dwellings dot the landscape making it difficult to undertake community-based activities.
- C the health infrastructure in many rural areas was destroyed by the war and is, only now, being reconstructed. It will be years before much of the population has access to adequate health care.
- C the indiscriminate laying of land mines throughout the country impedes safe travel to and within many rural communities.

IEF is developing a number of strategies within the programme proposal to initiate trachoma assessment, prevention and training activities.

## **4. NIGERIA**

### **4.1 Statement of the problem of trachoma**

Table 1 shows trachoma rates found in the 10 surveys to range from a low 7% in Kano State to 69.8% in Kaduna State. A second survey in Kaduna State however, showed a prevalence rate of 10% (see Table 1).

### **4.2 Overview of proposal for the development of a national trachoma programme**

#### *4.2.1 Goals*

- (i) Reduce active inflammatory trachoma (TF/TI) in children under 10 years of age to less than 10% and trichiasis/entropion (TT) in women under 40 years of age to less than 5% in four years.
- (ii) Establish a framework and provide leadership for successful, collaborative, and sustainable trachoma intervention that leads to the Global Elimination of Trachoma goals by 2020.

#### *4.2.2 Objectives*

Specific activities have been described in the proposal to achieve the following objectives:

- (i) Develop a National Trachoma Task Force within the National Blindness Prevention Committee structure;
- (ii) Identify and map major infected areas;
- (iii) Develop an Information/Education/Communication strategy and materials according to the SAFE strategy;
- (iv) Coordinate with available ophthalmologists for the identification and referral of trichiasis/entropion patients for surgery;
- (v) Coordinate with Local Government Area authorities and communities for the distribution of tetracycline eye ointment in priority communities, adapting the Community-Directed Treatment with ivermectin approach developed for the Mectizan distribution programmes;
- (vi) Increase the knowledge and practice of face washing of children by mothers and children;
- (vii) Coordinate with implementing agencies involved in community sanitation/latrine construction;
- (viii) Undertake operational research study(ies) to identify the best approaches to intervention and evaluation.

Table 1. Data on prevalence and causes of blindness and low vision in Nigeria (1991-1996)

STATE /LGA	AUTHOR	ZONE	PREVALENCE (%)						
			Blind	Low vision	Cataract	Cornea l related	Glaucoma	Trachoma	Other s
Kaduna	<i>Abiose</i>	C	3.30	1.70	4.4	12.0	8.8	-	69.8
Ogun	<i>Ajibode</i>	B	1.92	2.59	57.7	0.0	42.3	0.0	0.0
Kwara	<i>Zubair</i>	C	1.70	5.80	64.9	17.6	5.9	13.6	11.6
Enugu	<i>Nkanga</i>	A	1.49	3.10	31.1	11.1	15.6	0.6	42.2
Kano	<i>Lawal</i>	C	1.14	2.05	54.0	24.0	15.0	17.0	7.0
Oyo	<i>Oluyadi</i>	B	1.10	5.60	49.5	11.5	19.2	-	19.8
Kaduna	<i>Mahmoud</i>	C	1.06	0.90	40.0	40.0	0.0	-	10.0
Anambra	<i>Ezepue</i>	A	0.90	1.70	60.0	0.0	15.0	-	25.0
Benue	<i>Adejar</i>	A	0.78	4.50	58.0	19.5	20.8	4.1	7.7
Edo	<i>Okpobrisi</i>	B	0.62	-	28.0	52.0	11.0	-	9.0
<b>TOTAL</b>			<b>1.4</b>	<b>2.8</b>	<b>44.8</b>	<b>18.8</b>	<b>15.4</b>	<b>-</b>	<b>20.2</b>