Maidema Eye Health Centre
(Training Centre and Eye Clinic)

A summative evaluation

1996 - 2007

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Preamble

The report is the result of an external, summative evaluation of the operations at Maidema Eye Health Centre from 1996 to 2007. The review team consisted of Mr. Ole Kurt Ugland, a senior consultant of Kristiansand, Norway, (team leader) and Mr. Gebremeskel Fessaha, a senior consultant of Asmara, Eritrea.

The purpose of the evaluation is to assess whether the project has achieved its objectives or not. The evaluation should provide a summary of lessons learned during the 1996-2007 period, how they were solved, and of whether – and to what extent – original goals have been met – or have not been reached. The TOR for the evaluation is enclosed as appendix 1.

A number of recommendations are given in chapter 8 of the report. The team has based its report and recommendations on inputs and comments from a number of persons in Norway and in Eritrea. However, neither the administrator of the office in Asmara, nor the present eye doctor in Maidema was available for interviews during the team's fieldwork. We do not think that this has decreased the value of the information collected, but we do not rule out that their presence might have brought additional, relevant information to the team.

Acknowledgement

During our evaluation exercise numerous contributors have given valuable information. We have benefited greatly from the many discussions with these persons and our thinking, analysis and conclusions have been shaped through these interviews. We are indebted and grateful for the cooperation and encouragement everyone has given to us. The list of people met is enclosed as annex 2.

Some may find that their information is not adequately reflected in the report. We apologise for that, but have had to make a "holistic" assessment of all impressions, statements and responses that the team received during its discussions in Norway, and its stay in Eritrea.

We appreciate greatly the support and facilitation given to us by the MOH, NABP, WHO, Embassy of Norway and ERNAB. We are of the opinion that

the evaluation would have not been so extensive without that cooperation and encouragement.

Abbreviations

The following abbreviations have been used in the report:

CSR	Cataract Surgical Rate
ERNAB	Eritrea National Association of the Blind
GDP	Gross Domestic Product
HDI	Human Development Index
HDR	Human Development Rate
GDP PPP	Gross Domestic Product Per capita at Purchasing Parity
Maidema	Maidema Eye Health Clinic
MDG	Millennium Development Goals
MLHW	Ministry of Labour and Human Welfare
MOH	Eritrean Ministry of Health
NABP	Norwegian Association of the Blind and Partially sighted.
NCPB	National Committee for Prevention of Blindness
NGDO	Non-Government Development Organisations
NGO	Non-Government Organisation
NORAD	Norwegian Agency for Development
NPPB	National Program for Prevention of Blindness
OO	Ophthalmic Officers
PWD	People With Disabilities
SAFE	Surgical, Antibiotics, Face-wash and Environment.
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
WHO	World Health Organisation

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Executive summary

The hand-over of a project from an international development organisation to national authorities represents a milestone in any development project. For Maidema Eye Health Centre the process – when started – took nearly two years, with a gradual transfer over this period to MOH. That period was well utilised by both parties, and Maidema is as from 1st January 2008 a regular member of the Eritrean health system and without direct funding by NABP.

This summative evaluation gives a review of Maidema's performance since its start in 1996. The fieldwork was carried out in November 2007, and the team met during its visit to Eritrea both staff at Maidema as well as key administrative personnel in the Eritrean health sector. A series of interviews were conducted with heads of departments at both national and regional (Zoba) level. The team also made a visit to Maidema and met the clinical and administrative leaders there. The evaluation team, however, missed the responses of the clients (beneficiaries) of the project.

A (limited) study carried out by Dr. Albert Kolstad and Kashai Beraki in 1992, revealed substantial prevalence of blindness – up to 2% of the population - in some inland areas in Eritrea, and NABP started out from that point to establish the eye clinic in Maidema. NABP's strategy was to establish 5 eye-health clinics, and to train ophthalmic officers at the clinic to staff new clinics as soon as possible.

Overall goals

The overall goal and purpose of the project was to contribute to a reduction in the prevalence of blindness to 0,5% in the Southern Zone. This goal should be reached through five operating objectives:

1) Provide clinical services
2) Train ophthalmic officers
3) Produce eye-drops (being independent of import)
4) Initiate outreach activities for prevention of blindness.
5) Provide spectacles for its clients

Clinical activities

The number of patients treated at Maidema since 1996 is substantial. During the 12-year period (with many years losing several months of activity), 96403 people have been treated at the OPD - including the nearly 30000 people that have come back for revisits. More than 21.500 operations have been performed, of which 14.223 are major operations such as glaucoma.

The number is more than 7 times ERNAB's 2001 figures of the number of blind in the Southern Zone and about twice the number of blind in the zone if the 1% prevalence is used.

Adjusting for periods of war, no doctor present, and for other reasons for extreme low activity, the average number of surgeries per month is between 150 – 200 major (IO) surgeries. The number of IO operations was lower in 2003/2004, but has for the past 2 years increased again to around 650 OPD patients and 175 operations per month.

Of the total number of trachoma operations in the country in the period 2000 – 2004, approximately 50% was carried out in Maidema. This means that Maidema has to a large degree functioned as a national referral hospital, and has reduced the burdens of all governmental hospitals and clinics in Eritrea – even the national referral eye hospital in Asmara.

Human resources and training activities
Considering the size of the population and the rate of prevalence of blindness in Eritrea, the present number of ophthalmologists (7) is very small. The same is the case for ophthalmic officers. Maidema has since 1996 provided 1-2 eye doctors to work at the clinic and trained 23 ophthalmic officers. That is 64% of the total number of 36 ophthalmic officers in Eritrea.

According to the a government "Situational Analysis", Eritrea need to train/recruit

6 Ophthalmologists
21 O Officers
27 O Nurses
42 O Assistants

in order to staff regional hospitals and eye clinics.

Most OOs will work in a rural setting with a minimal professional support. A major concern is therefore how to develop and achieve some form of post-education. The need is strongly expressed both by the students and the authorities, but virtually nothing has been done either by Maidema, or by HRD/MOH. Realising the need for refresher courses, a short workshop is being planned for the coming year 2008.

Production of eye-drops
Production of eye-drops at Maidema was included already in the first agreement with Mohr - as early as in 1995. Delays have been caused by various reasons both within and outside Maidema's control. Not only the conflicts

Eritrea has had with Ethiopia have upset all plans, but also bureaucratic delays - which doctors in Maidema have had more difficulties to understand - have delayed production start-up. At the time of hand-over to MOH, eye-drops are still not produced in Maidema – or in Eritrea.

Blindness prevention activities

The evaluation indicates that blindness prevention activities were the weakest link in the Maidema project. Surgical activities alone are not enough in the fight to reduce blindness. Preventive activities therefore play a major and important role in all national plans. Outreach and preventive activities at Maidema have been low - and to a large extent missing - and have in any case not been carried out in a volume that we find is in line with the original goals. We acknowledge that the major reason is that Maidema has not had enough capacity than to follow up the number of patients at the clinic.

Funding Maidema

Since 1993 a total of nearly NOK 18 mill has been invested and expensed for the Maidema operations. Of this amount NOK 3,9 mill has been used for investments, NOK 12,5 mill for running costs and slightly over NOK 1 mill to cover technical and professional support provided by NABP, Oslo. Of the total, Norad has contributed about NOK 15 mill, while NABP has contributed about 2,5 mill from its own funds.

The invested amount is low considering the size of the clinic, and investments have been made as and when there have been needs for it. However, major rehabilitation work has been necessary after the two wars, and some – even large parts of the investments – could have been saved if the clinic had been located in a larger town, or had been established adjacent to an existing clinic or hospital. Mendefera would therefore have been a strong alternative already when the decision was taken in 1993 to build in Maidema.

The functions of the Asmara office

NABP established an office in Asmara relatively soon after the decision to build the clinic in Maidema was made. The role and duties of the administrator, however, were vague, and in the discussions the evaluation team had with key persons in Asmara, several remarks were made with regard to the status, visibility and value of the Asmara office. Some statements were clearly coloured by the fact that the administrator no longer lives in Eritrea, but even if due respect is made to this fact, the administrator does not seem to have been able to mirror the professional competence of NABP. People at MOH had expected more technical and consultative support from the repre-

sentative office. The "chemistry" between the administrator and department heads at MOH has clearly been weaker than expected.

Sustainability

Maidema's reputation and sustainability depends to a very large degree on the eye doctor and the medical quality, and on the doctor's reputation and influence on the organisation as a whole. Without a medical doctor – not necessarily full-time – and the financial resources of NABP, there is an uneasiness - and for that matter also uncertainty – as to whether Maidema is able to maintain its present statuesque and popularity.

There are several aspects of a discussion of Maidema's sustainability:

1) To what extent did NABP develop the clinic with technical and medical solutions that would be sustainable also under an Eritrean administration?
2) What will – in terms of sustainability - the future be for the physical and technical investments NABP has made in Maidema?
3) Will the Eritrean government be able to sustain the clinical qualities that NABP has developed in Maidema?
4) What are MOH's strategic thinking and plans regarding Maidema's functional structure related to blindness prevention?

We are of the opinion that all investments at Maidema have been made with sustainability considerations in mind. The foundation has therefore been laid for others to maintain and sustain Maidema's activities without the highest professional background.

Sustainability of the physical investments needs both money and qualified technical personnel. The hand-over process was (probably) weak on how to ensure the practical sustainability of investments, and the way these problems have been handled in 2007 indicates that the technical competence at Maidema must be strengthened if sustainability shall be maintained.

In sum, we are afraid that it may be difficult to maintain the reputation that NABP has built up in Maidema with no ophthalmologist at the clinic. In the future Maidema has to fight for funds and resources in competition with all other medical clinics under MOH, and these funds are limited. For the present year the management in Maidema presented a budget with a total sum of Nakfa 1.8 million, but only 0,8 million was made available for the clinic. When the generator, water supply and solar system broke down earlier in 2007, funds to repair it were not made available until NABP complained se-

verely to MOH. We are afraid that it is not the last time necessary maintenance is delayed, making the sustainability of all technical equipment quite questionable.

Communication with partners
Although communication between NABP and MOH has had its ups and downs, the general impression is that NABP and MOH have been team players. During the most difficult periods, NABP did show both patience and flexibility in its communication with MOH. MOH has from their end repeatedly supplied medicines and IO-lenses to Maidema free of charge.

The Management Committee
The creation of a Management Committee was looked upon as a valuable body for both Maidema and NABP. However, the Committee has not been as active as expected, and the evaluation team has not seen any documents showing what decisions and/or recommendations the committee has made. The administration at Maidema did not refer to any decisions made by the committee, or of visits made by the committee members to Maidema.

The hand-over process
The hand-over process itself has been carried out without severe problems on the policy level, but on the operational level it has been handled with less success than expected. One reason for that is that NABP's representative in Asmara did not involve himself to the expected degree. Even if we allow for expected start-up problems, we believe the hand-over process could have been smoother.

The future?
It would be a great loss if NABP's knowledge of - and network in – Eritrea ends with the hand-over of Maidema to MOH. However, the new agreement between NABP and MOH to recruit and fund an ophthalmologist for Mendefera is one step in a new direction. Further, NABP's competence in advocacy work for the blind is too valuable to be withdrawn from its network in Eritrea. This competence is found both on the organisational level and among its members and supporters both in Norway and in sister organisations all over the world. We recommend that NABP now go a step further to see how this expertise can be used to support the blind through the network it has developed in Eritrea.

Reference is made to chapter 8 for a summary of our findings and recommendations.

1. Introduction

The hand-over of a project from an international development organisation to national authorities represents a milestone in any development project. For Maidema Eye Health Centre (hereafter referred to as "Maidema"[1]) the process – when started – took nearly two years, with a gradual transfer over this period to MOH of responsibilities for staffing, financial resources and maintenance of investments. That period was well utilised by both parties, and Maidema is as from 1st January 2008 a regular member of the Eritrean health system and without direct funding from NABP. Indirectly, NABP is funding the ophthalmologist that is stationed in Mendefera, who will spend some time at Maidema as well.

In connection with the hand-over process, NABP has taken the initiative to carry out a summative evaluation of the results and lessons learned during the period NABP has been involved in Maidema. The following chapters contain comments, findings and recommendations made by the evaluation team for NABP to consider in their future or similar projects.

Maidema was officially opened on 1st April 1996 after a 3-year planning period. In order to facilitate its liaison with the government and to take care of procurement for the clinic as well as administering the monitoring and reporting activities from Maidema to NABP, a small office was established in Asmara.

The decision to establish the eye health centre at Maidema was partly based on reports of severe blindness problems in the Southern region, and partly on the general non-availability of health services in Eritrea's remote areas. With that background Dr. Albert Kolstad visited Eritrea in 1992 to make a report for NABP on blindness in the country. Rough and sketchy as the Kolstad/Beraki report was, it was a best estimate at that time, and the report was later incorporated in the project document on which the first agreement between NABP and MOH was based.

Other studies – for instance ERNAB's study in 2000 - showed surprisingly a much lower level of blindness – down to 0,34%. The common "best guess", however, is that the blindness in Eritrea is around 1%. This is also the prevalence figure THAT uses in their description of blindness in Eritrea.

[1] Maidema as a geographical area, centre or village is referred to as "Maidema Municipality".

Already in 1994 plans were made at Maidema to start a baseline study, and to follow it up with a second study in 1998. An evaluation of Maidema was also planned. None of these plans were implemented, mostly because the security situation worsened in the area. Such studies would, however, have given valuable information for later evaluations of the project.

While statistics of the activities at Maidema are well-kept, statistical material of the health situation in Eritrea remains limited both on a regional and a national level. However, available reports describe a remarkable systemic improvement in the Eritrean health sector over the last 4-5 years. There is, however, still a great scarcity of sufficient financial and human resources to implement all approved plans.

1.1 Evaluation methodology

For the evaluation a number of approaches were used. The evaluation team met during its visit to Eritrea 19th – 27th November 2007 both staff at Maidema as well as key administrative personnel in the Eritrean health sector. The present report is based on information from meetings held during the field visit and from available reports and documents obtained from NABP. The team has also used information from the 2004-evaluation of Maidema.

A series of interviews were conducted with the heads of departments and heads of divisions at both the national level (MOH), and the regional (Zoba) level. The team also made a visit to Maidema and met the clinical and administrative leaders there. The evaluation team, however, missed the responses of the clients (beneficiaries) of the project.

Documents consisting of policy guidelines, project plans, reports, surveys evaluation and reviews, etc related to the project have been consulted. Partner programme documents were also used as reference for the evaluation.

1.2 Report navigation

The structure of the report follows the terms of reference for the evaluation, although with some small changes in the sequence. The main chapters respond to the TOR in the following manner:

Chapter 2: Maidema: A contextual view of the past and present.

This chapter gives a summary of the context in which Maidema was established in 1993/96, and of the context in which is has operated – and

now operates. It gives a brief review of the prevalence of blindness and the culture related to blindness. Finally it gives a summary of national eye health plans.

Chapter 3: Maidema 1996 – 2007. Goals and achievements.

This chapter comments and assesses the original overall goals and objectives. It gives a brief summary of the technology used, the quantity and quality of patients treated, and of the training of ophthalmic officers. Maidema's plans to establish a medicine producing unit and its plans for blindness prevention activities are also commented on.

Chapter 4: Use of resources.

Chapter 4 gives a statistical review of investments made, of operating expenses during the period 2001 – 2007, and of activities since the start-up in 1996. The chapter also gives a review of the training of ophthalmic officers at Maidema, it comments on the needs for prevention of blindness activities, and shows how the needs for ophthalmologists have been covered since 1996. Finally, the activities of the Asmara office are assessed.

Chapter 5: Sustainability.

Several aspects of Maidema's sustainability are discussed. This includes the choice of technical and medical solutions, future maintenance challenges, clinical qualities and reputation, and Maidema's place in Moth's strategic plans.

Chapter 6: Co-operation with partners.

NABP co-operate with several partners in Eritrea. The chapter assesses the modality and contents of these partnerships.

Chapter 7: The future?

Some comments and proposals are made with regard to NABP's future engagement in Eritrea. It is the opinion of the evaluation team that NABP ought to use more of its core competence and experience on the systemic, policy level.

Chapter 8: Findings, summary and recommendations.

Chapter 8 contains 15 recommendations for further consideration for NABP.

2. Maidema. A contextual view of the past and present.

There are severe limitations and difficulties in assessing past decisions and results with the eyes of today. Over a period of 15 years available information, structures and resources have changed. Documentation of what were the arguments and reflections leading up to a decision made decades ago may have been lost, people have left the project and new technology has been introduced. Proper baseline studies and information would have been necessary – and would have given valuable information – for later assessments of whether goals and intentions have been met.

The "2004-evaluation" gave a brief summary of Eritrea's history and economic development up to 2002. Later developments have to some extent changed the outlooks as they were in 2002-3. Some areas show good progress, some show a state of "status quo", while others show a disappointing trend. UNDP describes the development (in the "UN Assistance Framework 2007-2010"[2]) in the following way: *"To address the development challenges Eritrea faces, the Government has taken important measures towards improving socio-economic development in the past 5 years"*, and: *"The border stalemate, the "no-war no-peace" has been the most important factor affecting the socio-economic development of the country with financial and human resources diverted to defence"*. Any assessment of activities at Maidema – and the results of these – must be seen in that light.

2.1 The context 1993

Eritrea was in a state of positive expectations following the referendum in 1993 where 99% voted for independency. However, infrastructure was poor, resources – both human, technical and financial – were scarce, and the Government had numerous external and internal problems to deal with. When NABP decided to set up the clinic in Maidema shortly after the referendum in 1993, national health plans were "ad-hock"-ish or based on too ambitious expectations or visions for the future.

In this context did NABP start their planning for an Eritrean clinic. No official study of blindness had been carried out to prove neither the necessity nor the most appropriate localisation of an eye health clinic in Eritrea, but "eve-

[2] UN Development Assistance Framework (UNDAF) 2007-2011 page vii

ryone" agreed that it was necessary. The limited study[3] carried out by Dr. Kolstad in 1992, revealed substantial prevalence of blindness – up to 2% of the population in some inland areas, and work to establish the eye clinic started out from that point.

NABP's strategy was to establish eye-health clinics in areas where the blindness prevalence was assessed to be highest, and to start to train ophthalmic officers[4] (OOs) in order to staff the new clinics as soon as possible. Training OOs in a rural setting – and not in Asmara – had a strategic purpose: students would, after graduation, most probably be placed in rural areas, and therefore they ought to be exposed to rural environments, and to be trained to use "appropriate technology" for their future postings. Infrastructure and access to technical assistance was expected to be very limited in all rural areas in Eritrea. That philosophy was not only based on NABP's experience from other developing countries, but also on a "realistic" assessment of how rural areas in Eritrea would continue to look for a long period.

The decision to establish the eye clinic in Maidema was a joint decision between MOH and NABP. In retrospect it is easy to argue that the clinic should have been located in a more central area – for instance in Mendefera where most of the infrastructure was in place - instead of in Maidema where everything had to be developed, supplied and maintained by the clinic. On the other hand, Maidema was closer to the higher prevalence of blindness areas, and could also attract patients from across the borders to both Ethiopia and Sudan

It is hard – or rather unfair - to use deliberations from 1992 as a basis for a 2007-discussion of "lessons learnt". The context was quite different, and both NGOs and governments are working along different policies today. Major investments are now in most cases made in accordance with nation plans and not as individual, non-government funded projects. Access to relevant infrastructure and support to national health plans are major considerations in establishing new clinics.

2.2 The context 2007

Between 1993 and 1997 Eritrea formulated and implemented socio-economic policies and strategies which led to a notable rise in economic

[3] Dated 14th August 1992.(Authors: Albert Kolstad and Kahsai Beraki)

[4] Different titles have been used for the students that finished their education at Maidema. Reference is made to chapter 3.5 where the formal titles have beend escribed in more detail.

growth – averaging 7,4%[5] annually. The border wars – and recurring droughts – reversed this development, and economic growth since 2000 has averaged only around 1%. External financial aid and support has to a large degree financed development projects, and in 2005[6] foreign aid financed 36% of the national budget.

Assessments of GDP per capita vary considerably due to unreliable and incomplete statistical materials. The UNDP "Human Development Report" (HDR) for 2005 says that Eritrea (based on estimates), had a GDP per capita (PPP US$) - for an estimated population of 3.66 mill - of US$ 1.109, up from the 2002 level of US$ 1.030 but down from the highest value of US$ 1.435 in 1997.

However, GDP (PPP US$) for Eritrea is still higher than for f. inst. Ethiopia and Tanzania, but about 10% lower than for Kenya and about 50% below Djibouti and Sudan.

While economic development in Eritrea has been slow since Maidema was established (average annual growth 1990 – 2004 is a mere 0,6%) Eritrea has made considerable progress in reaching the Millennium Development Goals (MDG). A progress assessment of results so far[7] shows that Eritrea is on track in 8 of the 10 MDGs. Two major areas, however, are lagging behind: primary school enrolment and poverty below poverty line. Poverty is to a large extent due to the continuous drought in Eritrea, but also the security situation is a drain on national financial resources and reduces greatly the financial capacity to provide necessary social services. The number of people in need of humanitarian assistance had increased from 1.1 million at the end of the war in 2000 to 2.2. million in 2005[8]. The MDG figures show that 66% of the population live below the poverty line in 2001-2003 as compared to 53% in 1995.

The Human Development Indicator (HDI) shows a slight, but steady improvement since 1995: In 1995 it was 0,435 while in 2005 it had increased to 0,483.

[5] UN Development Assistance Framework (UNDAF) 2007 – 2011. Page vii

[6] All figures in this chapter has been taken from UNDP Human Development Report 2007.

[7] "Millennium Development Goals Report", Issued in November 2006 by the Ministry of National Development

[8] UNDAF 2007 – 2011. Page 12

Most of Eritrea's GDP goes to defence. In 2005 it is estimated that 24% of GDP is spent on defence, while only 1,8% is used for health. The defence rate is the highest among all the 180 countries in the UNDP-statistics.

2.3. Blindness in Eritrea

Eritrean culture and blind people.

People's perception of blindness in Eritrea is to a large extent a reflexion of traditional culture. The Eritrean society as a whole, however, is not a traditional society. It is rather predominantly a society trying to adapt to modern influences, while keeping its tradition and culture. Its cultural heritage is the traditional, extended family system that is still strong in the 21st century. The nature of the extended family system still allows all members of a family to share equal opportunities in provision and care. The blind person is accepted within this family system and it is the duty of the family to maintain and support him or her. This traditional positive (caring) attitude - based on mutual responsibility and solidarity - is still prevailing, although there may be negative and even harmful practices in terms of negligent care and assistance to blind and visually impaired people.

Another aspect to be considered is the communities' traditional almsgiving as an expression of concern for the poor, which is still evident to day and practiced in both rural and urban areas. Blind people are allowed to - and invited to - share marriage feasts and other celebrations. These traditional values, developed through the teaching of religious institutions (both Christian and Muslim), have to date a great influence in Eritrea.

However, Eritrea - as is the case of other developing countries - is not free of negative cultural beliefs and attitudes. There are superstitious beliefs, misconceptions, fatalistic attitudes, hopelessness, ignorance, feelings of fear, shame, pity and sympathy that all may have its detrimental influence on equal opportunities and full integration into society of visually impaired and blind people. These factors may cause people to treat PWDs as abnormal persons, and therefore not "fully human". This may greatly affect their possibilities to overcome their disability and may bar them from living their lives as anybody else[9]. Out of these traditional beliefs and attitudes diverse explanatory models developed (e.g. punishment from God) or labels were given (the abnormal). The tales of proverbs and sayings give interesting in-

[9] (Gebremeskel Fessaha and Gebrebrhan Eyasu, 1995, p. 56).

sights into such belief systems[10]. Blindness is therefore not only a considerable health problem for Eritrea, but there is a major challenge to bring blind people into the Eritrean society.

As far as treatment for the disability is concerned the traditional remedies are bathing in holy waters (MAI-CHELOT) and visiting priests (DEBTERAS) as well as witch doctors and traditional healers.

Studies of prevalence of blindness

MOH is committed to control and prevent blindness in Eritrea in line with the programs that have been manifested in WHO's "Vision 2020 – The right to sight". WHO figures indicate that the global number of blind is approximately 45 million with another 135 million visually impaired people. WHO further estimates that by 2020 the number of blind may have increased to 75 million[11]. The main reasons for the increase are population increase, ageing population, inadequate resources to fight blindness and poor coordination structures. Blindness is predominantly an age-related problem with nearly 5% of people over 60 years of age blind. Up to 80% of all blindness and visual disability is either preventable or treatable[12], and although more than 70% of all new cases are treated, the number of blind people is still increasing[13].

It is not possible to provide reliable figure on the incidence and prevalence and causes of blindness in Eritrea. However, upon enquiries to Ministry of Labour and Human Welfare (MLHW), Ministry of Health (MOH), and the Eritrean National Association of the Blind (ERNAB), some statistical information exists on these areas. A national survey conducted by the MLHW in 1992 indicated that there were 15,213 (0.50%) persons with visual impairment is Eritrea. ERNAB conducted a national survey in 2001, and according to this study there were 10,419 (0.34% of the population) visually impaired persons in Eritrea. The same survey found 2900 blind and partially sighted persons in Debub. There is no doubt that this survey has greatly underestimated the number of blind[14].

[10] Examples are:
- A one eyed woman colors her only eye, which will only make her disability more visible
- If a blind persons is told that he is going to recover his eyesight, he will fall of the cliff on the eve of the day because he has no patience to wait.

[11] "National 5-year Strategic Plan". Page 16

[12] From "Vision 2020, Strategic Planning Workshop", Asmara, 2005.

[13] These statistical figures are quoted from "Vision 2020", a WHO report issued by the regional office in India.

[14] In comparison, Maidema alone carried out 6000 major operations in the first 4 years of existence.

MOH on its part give 30,000 (1%) as an estimated number of the blind and partially impaired persons in Eritrea. There is an assumption that the discrepancies of the figures of prevalence of blindness from the different sources could be due to differences both in terminology and methodology of the studies made.

WHO is presently negotiating with donors and MOH to fund a national blindness survey. This survey will be carried out in 2008 by a consultant from London School of Medicine with funding from both Fred Hollows Foundation and NABP. The evaluation team strongly supports the proposed intentions of the National Blindness Prevention Programme to make in-depth, reliable and scientific studies of blindness in Eritrea.

It is important to be aware of the medical and direct causes of blindness as they provide the pointers for prevention of blindness. A number of common eye diseases can be prevented - or their directing effects can be delayed - through proper and timely intervention. It is widely accepted that measures focusing on primary health care, prevention and cure will become even more important in order to prevent the most common diseases that cause visual impairments.

Table 1. Cause of visual impairment in Eritrea

Preventive cause	Non preventive
- Trachoma and others eye infection - Trauma and injuries - Glaucoma - Xeropthalma	- Cataract - Diabetes - Degenerative diseases - Certain eye diseases

Source ERNAB 2001

A survey of the prevalence of trachoma in Eritrea[15] provided valuable and urgently needed information for a national trachoma control programme. NABP supported this survey by letting Dr. Sameer participate in the survey. A strategy plan for trachoma reduction is expected to be presented in November/December 2007 – all with the technical support from WHO and funded by Fred Hollows Foundation.

[15] Ministry of Health, March 2007.

National Program for Prevention of Blindness

A national 5-year plan (2006 – 2010) for prevention of blindness was prepared in 2005 following a high-level strategic workshop on the "Vision 2020" targets for Eritrea.

The National Program for Prevention of Blindness (NPPB) started in 2003 when MOH established the National Committee for the Prevention of Blindness (NCPB) in an effort to co-ordinate the activities of active eye care. All plans to strengthen eye care and reduction of blindness programmes are built on – and follows - the three pillars of general health services in Eritrea: Human resources, infrastructure and prevention. Spreading the knowledge of how water, sanitation and hygiene can reduce blindness is therefore a main activity of all health plans.

Workshops - as well as surveys carried out - have been funded through a basket of funds from NGOs, private foundations and the Government. NABP has funded part of this basket, and the support has been given due public recognition.

Eritrea is a leading country – in relation to population - of cataract operation in Africa. Measured in terms of the "Cataract Surgical Rate" (CSR) Eritrea is among the top 5 in the whole African continent[16]. As cataract blindness is still the largest in terms of numbers, the government plans to make all regional hospitals capable to carry out such operations.

The main challenges facing Eritrea – according to NPPB – are:

- lack of primary eye care infrastructure
- lack of proper eye care training programmes
- shortage of equipment

This is consistent with - or in line with - MOH's position. Accordingly, the top priority activities under the 5-year plan are targeting at improving performance under these three areas. The 5-year plan contains 23 specific objectives and 6 key strategies to meet the objectives. Three of these are also major objectives of Maidema: Disease control, capacity building of human resources, and eye health promotion.

Funding is a major challenge for Eritrean development, and most plans – when proposed for implementation – need support from donors. The blind-

[16] Reference is made to the presentation at the National Blindness Workshop 2004.

ness prevention program in Eritrea is no exception. The total proposed budget for the national 5-year plan is US$ 11 million and little of this amount is secured so far. Fundraising at activity level still seems to be given more attention - or preference – than support at program levels.

2.4. National Health Plans

The process of turning single activity plans into systemic changes is slow in most developing countries. This is still the general case also for Eritrean development. For health care, however, the process has gone remarkably well over the past 4-5 years.

The Government has during the past 5 years built 5 new referral hospitals and has improved its health services through a three-tier system. A "Situational Analysis Report of National Eye Care Programme" was carried out in 2004. It described the state of the six Zoba eye-hospitals and the referral hospital in Asmara. The assessments made are comprehensive, and give clear recommendations for future eye health policies in Eritrea.

A general and serious limitation in implementing proposed plans is the shortage of human resources and domestic financial resources. In most cases the proposed activity depends on external funding. The future sustainability of Maidema's activities (see chapter 5) must be considered in light of that constraint.

Both UNDP and WHO give credit to the Eritrean government for its efforts to meet the development challenges Eritrea faces. The UN Development Assistance Framework (UNDAF) 2007-2011 says: *"The Government has taken important measures towards improving socio-economic development in the past 5 years"*[17]. The National Health Policy is among these plans. WHO is working closely with the Government to develop health plans, and assists the Government in securing funding for proper implementation of agreed plans.

Although Maidema is not specifically mentioned in the overall national plans, information given by MOH confirms that Maidema will be maintained as an eye health clinic with the referral chain to Mendefera Hospital.

So far the major focus of general health services has been on preventing communicable diseases. There is now a stronger recognition of the complexity of health problems with a more integrated approach to "the double bur-

[17] UNDAF 2007-2011. Page viii.

den of diseases" - that is: both communicable and non-communicable diseases must be addressed simultaneously in order to improve the health situation and reduce poverty. Prevention of blindness may therefore be given a stronger place in the general health care in Eritrea in the future.

Infrastructure, financing, and human resources
The "Situational Analysis" assessed both the structure, technical standard, and activities of the eye care work in the 6 Zobas. Lack of human resources is a major constraint according to the report, but also weak coordination structures and long distances to hospitals are main barriers to services. The report was presented at the July 2005 workshop.

There is a fee to be paid by patients who visit the clinics. The amount depends heavily on which hospital they go to – and the fee is waived if the patients can document that they are poor. The fee ranges from 2-300 Nakfa to 500 Nakfa, and the patient's transport costs are included, meaning that no patient should pay more than the amount set by the hospital - transport expenses included. Patients in "Maidema" pay a nominal fee of 5 Nakfa, but cover travelling expenses themselves. With negligible transport costs in Eritrea, Maidema is in terms of personal economy a priority choice for many people. In addition, with an expatriate doctor in the clinic, the professional services are also greatly appreciated by its clients. For these reasons Maidema has attracted patients not only from zoba Debub, but also from other corners of Eritrea and abroad.

Human resources

Every plan of action in Eritrea points to the shortage of qualified personnel. The need for health personnel is no exception.

There are at the moment only 6 ophthalmologists in Eritrea – 4 Eritrean (all in Asmara) and 2 expatriates (in Gash Barka and Keren). When the present ophthalmologist in Maidema returns in early 2008, and starts work in Mendefera there will be 7. Considering the population size and the rate of prevalence of blindness in Eritrea, the number of ophthalmologists is very small.

The need for more ophthalmologists is evident as there is a need to post ophthalmologists in each Zoba referral hospital. There are plans (although in the very early stages) to offer specialist education in ophthalmology at Orotta School of Medicine – a unit of the University of Asmara.

Maidema has since 1998 trained ophthalmic officers (OO). When the present class of students have finished their training in December 2007, a total of 23 OOs have graduated from Maidema. In addition to the graduates from Maidema there are 13 OOs from a previous field training activity, giving Eritrea a total of 36 OOs.

There is no clear assessment of the needs for OOs. A figure of 50 was mentioned during our discussions with MOH, and it will take another 4-5 years with the present training capacity to reach that number. There are ongoing discussions with regard to changes in and reviews of the curriculum. The Orotta School of Medicine is one of the alternatives now mentioned as the training school for OOs. We refer to chapter 5.5. for further discussions of the training aspect.

The decision to transfer the eye doctor to Mendefera will take place as from January 2008. The present facilities at Maidema will then be part of the first tier of community hospitals and health stations. It is not a regular community hospital as it will not be equipped for other activities than eye health activities. It will "on paper" be on the same level as the general health centre in Maidema with the referral hospital in Areza. However, as Maidema will still be a specialised clinic, the line of authority will go directly to the Director of Health South Zone, and the referral hospital for eye deceases will be the Mendefera Hospital. The ophthalmologist that presently is working in Maidema will be transferred to Mendefera, while the OO will stay in Maidema to continue the work there. There are plans to have the eye doctor in Mendefera spend one or two days a week in Maidema to continue eye operations also in Maidema.

The national referral hospital for eye operations is the Brhan Aini Ophthalmic Hospital in Asmara.

2.5 NABP's place in the national programmes

NABP has maintained a close relation with MOH during the period it has been responsible for Maidema. As one of Moth's close partners in eye health, NABP has co-funded national workshops and has funded individual activities through MOH, but most of all, NABP has developed Maidema to become a core institution within Eritrean eye care.

We are repeatedly pointing to the value of strengthening the coordinating structures for curing and preventing blindness in Eritrea. Since privately operated institutions may have access to far greater resources than the govern-

mental ones, it is an obligation for these institutions to participate financially and professionally with the government to develop and implement national plans for health improvements. The decision to transfer Maidema to the MOH is a therefore a bold and challenging, but also risky decision. As our recommendation therefore shows, NABP should even to a stronger degree than in the past endeavour to find financial and human resources to participate in national and international activities that are targeted at curing and preventing blindness in Eritrea.

3. Maidema 1996 - 2007. Goals and achievements.

NABP's initial plans were to establish five rural eye clinics before 1997, and have them fully staffed by 1998. The first one – at Maidema - should also serve as a training centre for ophthalmic officers. The advantage with Maidema was that students would have both theoretical and practical training in the same place. The total budget frame was estimated to US$ 469.000, and by 1998 five eye clinics were scheduled to be in operation. As the planning process progressed it proved to be more difficult than expected to implement the whole original plan, and building the clinic at Maidema was prioritised.

Maidema was developed and built during a period with recurrent conflicts with Ethiopia. In 1998 – only 2 years after the clinic was opened – Ethiopian troops looted and destroyed Maidema, and NABP had to reequip and rebuild considerable parts of the clinic. Training activities had to be delayed, and new investments had to be made. It is important to remember that in 1997 and 2000 as a result of the border conflict, Maidema was inactive (passive) for more than 5 months in each year respectively. The objectives and goals of Maidema remained, however, the same, and work resumed as soon as the hostilities stopped.

3.1 Objectives and strategies for Maidema

The overall goal and purpose of the project was to:

> **contribute to a reduction in the prevalence of blindness to 0,5% in the Southern Zone[18].**

The overall goal would be accomplished by establishing both curative and preventive services at the clinics. All eye care activities had to be accessible and financially affordable for its patients. In reality it has been free of charge – except the minimal charge of Nakfa 5 per visit required by MOH - compared to the government operated clinics where they had to pay up to 500 Nakfa. Patients from all over the country have for that reason favoured Maidema.

[18] Jfr. TOR for the review team.

As all types of infrastructure were poor, Maidema was established based on the principle of using "appropriate technology". The strategy was to use the least "complicated" methods and equipment in its operations in order to be independent of materials and spare parts for equipment that (in practice) had to be imported from abroad. One aspect of this independency strategy was the plan to start production of eye drops at the clinic.

The overall goal should be reached through the five operating objectives:

1) Provide clinical services
2) Train ophthalmic officers
3) Produce eye-drops (being independent of import)
4) Initiate outreach activities for prevention of blindness.
5) Provide spectacles for its clients

Four of the original objectives (clinical services, production of eye-drops, training, and preventive activities) are commented below. The fifth objective - to provide clients with spectacles - is a straightforward process and is not commented further. Spectacles were made at Maidema and provided free of charge. Also this support has helped Maidema's clients to save money.

3.2 Assessment of the overall goals

The project has been a success. One can make one's own judgement about the relevance of the project by answering the question: "What would have been the fate of the people and their families if Maidema had not been established?"

The number of patients treated at Maidema since 1996 is substantial. In total Maidema has reached its objective, but as patients come to Maidema from different regions in Eritrea, any verification of the goal to "reduce blindness specifically in the Southern Zone" is difficult because it is not possible to single out the ones who visited the clinic from South Zone alone. The total number of surgeries from 1996 to 2007 is more than 21.500, of which 14.200 are major operations. This volume proves that it has exceeded its objectives more than 7 times based on the ERNAB's 2001 figures of the number of blind in the Southern Zone, and twice the number of blind in the zone based on a 1% prevalence.

Based on the present population of approx. 850.000 people in the South Zone the number of blind people there should be around 8.500. A reduction from the initial and unconfirmed prevalence of 1% to the targeted 0,5%,

would mean that the clinic should have treated 4.250 people (+ the annual increase) for blindness. Even under such a broad-based assessment, the project has been a success.

There are no reliable statistics or indicators of the level of blindness either in 1996 or in 2007. No baseline study was carried out, nor have there been any monitoring of the prevalence, or survey of how many "new entries" of blind people Southern Zone has got.

More than 14200 major operations have been performed at Maidema by now. In spite of all statistical uncertainties, and the "think-of-a-figure" goal of 0,5%, we – and everyone we have talked to during the field visit – are convinced that Maidema has reached its overall goal in spite of a weak outreach programme.

The 2004-evaluation commented on the fact that quite a few cataract patients have got their second eye operated on, after being cured for blindness when the first eye was operated. That may indicate that the *backlog* of cataract blindness in the South Zone of Eritrea is being reduced (and is probably relatively low).

3.3. Appropriate technology

NABP has had a substantial international engagement in eye health activities since 1978. Eye clinics are directly supported in several countries, and national organisations of the blind are supported in more than 10 countries either bilaterally or through the regional unions in Africa and Asia.

The highest prevalence of blindness is in rural and remote areas. These areas are generally poor in infrastructure and lack most of the modern service providers; telephone, electricity, maintenance people etc. The principle of "appropriate technology" has therefore been followed in all eye-health programmes in order to be as much as possible independent of external assistance.

However, "appropriate technology" was far more relevant in 1993 than in 2007. Although all rural areas lag behind in technical development, more modern equipment and techniques have been introduced in NABP's clinics as and when such equipment is economically and medically safe to use in rural settings. Maidema has followed this development pattern – and seems to have introduced it as soon as the clinic was operationally capable to adapt it.

3.4 Patients treated

Maidema and its staff have since 1996 treated more than 96.000 patients in the OPD, and 21.500 persons have been operated for some kind of eye-problem – not necessarily blindness – of which more than 14.000 are major operations. A statistical summary over the past 12 years is shown in chapter 4.1 on page 32.

There is no reliable survey of how patients have been made aware of the facilities of Maidema. The assumption is that most of the patients have come there on their own initiative, but there are equally similar thoughts that information about Maidema has been spread by local health personnel and in local meetings.

Assessments of both the quantity and quality of Maidema's clinical activities are necessary in order to see whether Maidema has reached its clinical objectives.

Quantity of service delivery
From April 1996 to August 2007 21.544 people have had major or minor operations at Maidema. Dr. Sameer presented a paper at the National Blindness Programme Workshop in 2004 stating that of the total number of trachoma operations in the country in the period 2000 – 2004, 50% was carried out in Maidema. This means that Maidema has to a large degree functioned as a national referral hospital, and has reduced the burdens of all governmental hospitals and clinics – even the national referral eye hospital in Asmara. This clearly indicates that the results are numerically satisfactory.

Quality of service
There is no reliable survey of the quality of services at Maidema. Although the evaluation team did not meet any patients at Maidema, statements by people interviewed concluded that there is excellence in the quality of services, and that the treatment has greatly helped the needy people. The fact that more than 96000 visits have been made to the OPD, and more than 28000 (45%) of these are revisits, prove that also the quality of services has been highly regarded. Even if alternative places for treatment are few, the high percentage of returnees is a solid proof of Maidema's reputation.

"Quality" consists of many things. Most elements of it are not measurable, but depend on statements by the patients. Quality in terms of how long patients are allowed to stay at the hospital was assessed in connection with the NBBP study. It made a survey of the length of stay at the various eye units in Eritrea, and concluded that *"length of stay is known to increase the cost of*

cataract surgery and limit bed capacity. It can be reduced by retraining surgeons and strengthening follow-up services at primary and community levels"[19].

The study did not make any assessment of whether services improved as the length of the stay increased. Maidema has compared to other clinics a short length of stay. The average stay at the other eye clinics is according to the study:

Berhan	3-7 days (depending on distance from home)
Maidema	3 days
Keren	5 days
Barentu	4 days
Adi Keih	7 days
Massawa	5 days

The present management at Maidema said that they were now putting more emphasis on non-clinical services, such as improved meals and giving the patients the alternative of staying at Maidema 1-2 nights longer than in the past. This involves both cost and space (beds) elements. We do not want to give any in- depth comments to their policy changes, but limit our comment to say that it will put even more strain on future limited budgets for Maidema. The evaluation team did not see any professional justification for these changes in service policy.

3.5. Human resources and capacity building.

All studies and reports of health services in Eritrea refer to the general lack of qualified personnel. The shortage of personnel in eye health care is according to the National Five-Year Strategy Plan *"further compounded by the fact that except for the training of Ophthalmic Officers at Maidema, …., there are no local training programmes for other cadres of eye care workers in the country"*. NABP's decision to train ophthalmic officers has therefore been a major contribution to capacity building in the Eritrean health sector.

It is necessary to give a brief description of terminology used. The "Situation Analysis Report" describes the need for various groups of health personnel and has classified these with the following titles:

[19] National Five-year Strategic Plan. Page 28

Table 2. Classification of eye health personnel

Cadre	Minimum requirement	Training	Duration of training	Number to be trained	Postings
Ophthalmo-logists	Medical Doctor		3 years	6	1 per Zoba
Ophthalmic Officer	Nurse	Diploma	18 months	20	4 per Zoba 4 for Berhan
Ophthalmic Assistants	Nurse or assistant nurse	Certificate	3 months	36	8 per Zoba 6 for Berhan
Ophthalmic Theatre Nurse	Nurse	Certificate	3 months	7	1 per Zoba 1 for Berhan

The training of ophthalmic officers at Maidema has followed an 18-months program[20]. After graduation, students get a Diploma in ophthalmology and the title of Ophthalmic Officer.

All studies of the health sector in Eritrea are clear on the need for all types of health personnel. The National Five-year Strategic Plan has indicated the following regional needs:

Table 3. Status and training needs for eye health personnel[21]

	Ophthalmolo-gists		**Ophtalmic Officers**		**Ophthalmic Nurses**		**Ophthalmic Assistants**	
Zone	Actual	Needs	A	N	A	N	A	N
Berhan	5	1	2	0	21	0	0	6
Barentu	0	0	2	3	0	5	4	10
Adi Kieh	0	1	1	4	0	5	4	10
Maidema	1	1	0	2	1	2	4	2
Keren	0	1	2	3	0	5	6	4
Massawa	0	1	2	3	1	4	0	10
Assab	0	1	1	3	0	5	0	10
Edagahmus	0	0	1	3	1	1	2	2
Total	**6**	**6**	**11**	**21**	**24**	**27**	**21**	**42**

[20] The curriculum was explained in detail in the 2004-study of Maidema.

[21] National 5 year plan 2007 – 2011, pages 40-41.

According to the "Situational Analysis"[22], Eritrea need to train/recruit:

6 Ophthalmologists
21 O Officers
27 O Nurses
42 O Assistants

Maidema has been the only contributor to formalised training in Eritrea, and has trained and graduated 23 ophthalmic officers. Two wars and delays in recruiting new candidates – all beyond Maidema's control – have made it impossible to increase the training activity. Also on this point has Maidema met its original goal. Reference is made to chapter 5 on the sustainability of the OO-training, as training will no longer take place at Maidema.

Ophthalmologists
The low number of ophthalmologists has been a bottleneck in all eye health activities since independence in 1993. At the time NABP established the clinic in Maidema, all ophthalmologists worked in Asmara.

NABP has since 1996 recruited for shorter and longer periods a total of 11 ophthalmologists – mainly from India. The added capacity for eye treatment that NABP has created through expatriate ophthalmologists is considerable and has created a reputation for Maidema of being efficient, (virtually no wait list, while wait lists in Asmara were long), cheap (only 5 Nakfa paid for any operation), and professionally of a high standard.

In the future the market for recruiting ophthalmologists from India - or for that matter in other countries - may not be as easy as it is now. Thus the need to increase the number of ophthalmologists in Eritrea through specialists' education is as great as for all other types of health workers - and much more difficult. It must be addressed as one of the most important parts of the HRD process for eye health development in Eritrea.

The agreement between MOH and NABP to provide and fund an expatriate ophthalmologist for Mendefera must be highly commended. It is in our opinion one of the best ways NABP can serve the blind population of Eritrea.

[22] See chapter 2.4.

Ophthalmic officers

The Ophthalmic Officer training is an 18-months Diploma training in ophthalmology and cataract surgery.

Although military conflicts, lack of personnel or shortage of funds may have delayed implementation, the training activities has produced 23 OOs since 1998[23]. There were no mentioning of the expected volume of trained OOs in the early plans, and the training has been interrupted not only because of the war situation, but also because of the overload on the doctor, and at times delays in the Ministry to recruit new trainees and bring them to Maidema for training. The 2004-evaluation pointed out that in order to care for both clinical activities and training, there ought to be 2 doctors at Maidema – at least when training was in progress.

Maidema is the only place at the moment where there is an OO-study, and Maidema has produced 2/3 of all OOs in the country. We may therefore conclude that also the goal of training OOs has been fully met.

In-house training and continuous education

Most OOs will work in a rural setting with a minimal professional support. A major concern is therefore how to develop and achieve some form of post-education. The need is strongly expressed both by the students and the authorities, but virtually nothing has been done either by Maidema, or by HRD/MOH. Realising the need for refresher courses, a short workshop is being planned for the coming year 2008.

Students at Maidema complained earlier that practical handbooks were not available in the rural clinics. The situation has now improved as NABP now provides each student with his/her own textbook of ophthalmology - Kanski's standard textbook – that is widely used internationally. In addition, NABP provides 24 medical kits to MOH for distribution to the rural clinics where the OOs are working. The medical kit contains – in addition to the Kanski text book – Schiotz tonometer, ophthalmoscopes, binocular, loupes etc. The medical kit should not be a personal belonging, but be available at the clinic. The medical kits will be handed over to MOH shortly.

The ophthalmologists at Maidema have also been engaged in outside training activities. In 2007 three groups of students came to Maidema to participate in a primary eye care course. 9 students were trained, but the course had to be called off due to power shortage at the clinic.

[23] Total number of students have been 25, but 2 students did not finish the training.

3.6. Medicine producing unit

Production of eye-drops at Maidema was included already in the first agreement with MOH - as early as in 1995. Delays have been caused for various reasons both within and outside Maidema's control. Not only the conflicts Eritrea has had with Ethiopia have upset all plans, but also bureaucratic delays - which employees in Maidema have had more difficulties to understand - have delayed production start-up.

Reports from 1996 show that lengthy discussions were held with the pharmacy department in MOH, but the department did not allow production as the allocated production facilities were not up to standard and the samples of the same types of medicine produced in Mozambique showed substandard values for 4 of 5 tests. The negative test results were probably due to the fact that the validity date for the medicines had expired, and new samples passed the test. Space problems continued as the volume of operations increased, and the 1999 report from Maidema says that there is no space available for eye drop production until the Doctor's flat is built.

The war in 2000 delayed the construction work further, and only in 2003 were renovation completed and Maidema invited the pharmacy manager from their Nepalese clinic to set up the unit. His arrival was delayed as MOH wanted to inspect the premises first. The 2004-report from Maidema – as well as the reports for 2005 and 2006 - do not comment on the production unit, and it seems not to have been prioritised any longer by the management there.

We have not seen any calculation of the economic benefits of producing eye-drops at Maidema. Dr. Sameer, however, writes in his report that: *"NABP, however, had a very cost effective project of manufacturing some drugs locally at Maidema as per WHO quid lines, and the necessary equipment too was imported, but MOH did not support the idea, nor gave permission to commence it"*. The experiences from - among other places Nepal - show that production of eye drops is economically advantageous for the clinic. However, if authorities demand such production to be supervised by special pharmacologists, the result may be different. As the clinic will now be operated under the MOH umbrella, the question of whether or where eye drops shall be produced is no longer related to Maidema.

The National 5-year Plan includes plans to establish two eye drop production units in co-operation with NGDOs. The budget is estimated to US$ 140.000. There is no mentioning of production sites.

As time has passed, Maidema seems to have downplayed the importance of having its own production facilities. References to the eye-drop unit have been fewer in the latest annual or quarterly reports. Both easier import procedures and assistance from MOH have helped to overcome shortages. Such a production facilities at Maidema would have given the clinic a stronger feeling of being medically independent of outside influences, but the economics in it are still unclear.

3.7. Blindness prevention activities

Blindness prevention as a concept and practice is not new to the MOH. However, it is not yet widely articulated, researched or addressed at grassroots level under the umbrella of the National Blindness Prevention Programme. Findings show that prevention activities were also the weakest link in the Maidema project.

The trend is, however, promising. NBPP is already in place, and functional units are established under the program with the participation of relevant stakeholders. Working guidelines have been prepared after thorough discussions in a series of workshops. The project proposal is now ready for implementation.

Surgical activities alone are not enough in the fight to reduce blindness. Preventive activities play a major and important role in all national plans. Outreach and preventive activities at Maidema have been slow - and to a large extent missing - and have in any case not been carried out in a volume that we find is in line with the original goals.

The planned outreach activities had two purposes;

- to screen people for treatment at the clinic, and
- to create awareness of how to prevent eye sicknesses.

Very little is done in this field. Outreach activities could have provided valuable information of the perception of blindness in the local communities, and of problems people face at home and in the neighbourhood. Such information can be efficiently used in practical assistance for the blind.

It is necessary to have strong and competent promotion workers in order to start a prevention programme, and it would probably have been possible to find – and recruit – such people among the 64000 ++ visitors that have been

at Maidema. As NABP has the experience and knowledge needed to carry out this activity, it should have had a stronger priority at Maidema.

We acknowledge that there has been a shortage of human resources - as well as of fuel – to operate an extensive prevention programme, and the security situation has created problems during large periods. Realizing these issues of intervention measures, Maidema eye hospital, depending on its capacity and priority could initiate some activities. Accordingly, the staff feels that the following multi dimensional activities could have been carried out. Campaigns could for instance be initiated at the following 5 levels:

1. It may be a good idea to conduct so called trial scenarios or round table fora with the visiting clients on preventive issues of blindness
2. Outreach services on small scale could have been tried out
3. Local leaders in Maidema could have been influenced
4. In cooperation with the Maidema health centre conduct orientation on hygiene as an approach to prevention of blindness
5. Capacity building in the form of a gradual upgrading of the staff at Maidema on advocacy. The whole idea is that the campaign is not left to the ophthalmologists alone. Nurses could contribute to advocacy work if they had the necessary training on advocacy.

When proposing these potential activities, the evaluation team has not ignored the practical problems Maidema has had in terms of shortages of resources (among them: fuel).

Prevention of blindness is mainly related to cleanliness with regard to sanitation and cleanliness (the SAFE activities). The capacity at Maidema was first and foremost used to carry out a comprehensive operation programme and was never large enough to also carry out an extensive outreach programmes. However, Maidema ought to have played a stronger role in Eritrea's fight against blindness.

4. Use of resources

It is a great challenge to measure the relation between available resources and activity output in any rural clinic. One approach is to frame resources in terms of lost effectiveness. Maidema had in 2006 more than 8000 OPD patients, and performed a total of 2000 major and minor eye operations. This means that the monthly average was around 660 OPD-patients, and 170 operations. Similar figures for the first 8 months of 2007 were 570 patients in OPD and 180 operations per months. Resource input was basically two ophthalmologists that split their time between surgery, training of students, and administering the hospital. Available financial resources were approx. US$ 12.500 per month, including all personnel and medical expenses. From that angle Maidema has been a successful project.

Another approach is to assess the enduring features of the project. Sustainability will be dealt with in more detail in chapter 5, but the physical structures at Maidema show that NABP has followed an unyielding investment policy at Maidema.

This report shows only the financial cost. The joint costs made by the MOH in different ways (for instance through their free supply of medicines to Maidema) and the imputed cost (hidden cost) made by the patients themselves are not calculated and or reflected. It is beyond our mandate to make a comprehensive cost analysis of these economic costs of the project. Also, there are no records on the joint costs and imputed costs either.

The 2004-study tried to compare cost-efficiency at Maidema with that of a similar eye-health centre in Mozambique. The 2001-figures showed that Maidema performed more operations, but had fewer OPD-visits than Mozambique for the same amount of money. However, any comparison between Maidema and other clinics will give doubtful results.

Reference is made to the 2004-study of how Maidema was financed, and how the money was spent during the period 1996 – 2003. The picture does not change very much after 2003. The following comments are rough assessments of the activities during the last 6-7 years.

4.1. Financing Maidema operations

Since 1993 a total of nearly NOK 18 mill has been invested and expensed for the Maidema operations. Of this amount NOK 3,9 mill has been used for investments, NOK 12,5 mill for running costs and slightly over NOK 1 mill has been used to cover technical and professional support provided by NABP, Oslo. Of the total, Norad has contributed about NOK 15 mill, while NABP has contributed about 2,5 mill from its own funds. In approximate figures the accounts from 1993 – 2007 show the following:

Contribution from Norad	NOK 15,0 mill
Contribution from NABP	" 2,5 mill
Total funds for Maidema	NOK 17,5 mill
These funds have been spent for:	
Investments	NOK 3.9 mill
Running costs	NOK 12,5 mill
Technical support from Norway	NOK 1,1 mill
Total	NOK 17,5 mill

One must bear in mind that of the total investment since 1993 of NOK 3.9 million, a large part of this amount has been used to replace and repair damaged and looted equipment during the two wars with Ethiopia.

Project investments
NOK 3,9 million has been spent on buildings, cars, furniture, and medical and technical equipment. Without having the details, we have roughly estimate building costs to be around 2,5 million, cars around 0,6-0,8 million and furniture and equipment around 0,8 – 1,0 million.

The invested amount is low considering the size of the clinic. Investments have been made as and when there have been needs for it. Some – even large parts of it – could have been saved if the clinic had been located in a larger town, or had been established adjacent to an existing clinic or hospital. Mendefera would therefore have been a strong alternative already when the decision was taken in 1993 to build in Maidema.

The main concern at the end of 2007 is not the size of the initial investments, but how these investments will be maintained in the future. Reference is therefore made to chapter 5 for a discussion of the sustainability of physical investments at Maidema.

Project expenditures

There is no doubt that the activities at the clinic are carried out at a very reasonable cost-level. The expense report for the period 2000 – 2007 shows the following figures:

Table 4. Operating expenses at Maidema 2001 - 2007

All figures in 1000 NOK

Type of expense	2001	2002	2003	2004	2005	2006	2007
Personnel Expenses	874	681	466	562	553	819	354
Expatriate salaries	416	324	197	255	262	397	213
Project office support	174	74	13	52	46	13	0
Other social costs	87	48	-25	29	11	15	10
Travel and subsistence	33	37	75	93	97	144	47
Consultancies						53	63
Salaries national staff	164	198	206	133	137	197	21
Administrative expenses	291	385	914	246	186	83	122[24]
Buildings	0	180	745	0	84	0	0
Vehicles	222	0	0	-12	0	0	0
Furniture/equipment	32	166	127	231	59	58	110
Office expenses	26	21	27	17	22	14	4
Telecom and post	11	19	15	10	21	11	7
Operating expenses	315	463	515	537	612	296	367
Insurance		39	13	6	6	5	0
Fuel/maint/ vehicles	48	54	43	65	70	25	11
Maintenance buildings	10	13	25	2	35	11	3
Teaching aid	0	0	16	4	52	12	18
Food. Staff and students	53	14	67	58	26	34	34
Medicines and med eq.	118	290	285	247	263	131	112
Travelling expenses etc.	13	54	60	147	144	77	80
Other expenses	72	0	5	8	16	1	0
Surveys and campaigns							109
Total expenses	**1483**	**1529**	**1566**	**1345**	**1351**	**1198**	**842**

The project shows no income from operations. The amount of Nakfa 5,- which is collected from the patients were - until recently - transferred directly to the government as originally agreed and was therefore not part of the clinic's income statements. The 2004-report stated that a total of US$ 30.000 has been collected from patients and transferred to the government.

Activity analysis

The activity at the clinic has at various times during 1996-2007 suffered from lack of doctors, of war activities and of other delays. The following ta-

[24] Excluding evaluation expenses

ble shows the volume of annual activities. From the figures, an orderly comparison on a yearly basis cannot be made because of the delays and breaks in the activities. The 2004-report describes the variations in detail. The main purpose of the following table is to show the total number of people treated during the past 12 years:

Table 5: Patients treated at Maidema 1996 – 2003

Year	New OPD patients	Revisits	Total OPD	IO surgery a)	EO surgery b)	Total surgery
1996	5429	1131	6560	927	651	1578
1997	13029	6552	19581	2209	1505	3714
1998	3784	2297	6081	585	513	1098
1999	8892	3645	12537	2525	1233	3758
2000	4494	1714	6209	1268	629	1897
2001	6034	2781	8815	1561	962	2523
2002	5413	1897	7310	553	447	1000
2003	3584	1609	5193	342	237	579
2004	3803	2333	6136	590	269	857
2005	3639	1812	5451	792	241	1033
2006	5637	2330	7967	1643	423	2066
2007			4564	1228	211	1439
Total	**63738**	**28101**	**96403**	**14223**	**7321**	**21544**

a) IO (Intraocular) operations – originally reported as "Major operations such as glaucoma
b) EO (Extraocular) operations - up to 1999 reported as "Minor operations" (eyelid operations etc.)

During the 12-year period (with several of them missing several months of activity), 96403 people have been treated at the OPD - including the 28000 people that have come back for revisits. More than 21.500 operations have been performed, of which 14.200 are major operations such as glaucoma.

Adjusting for periods of war, no doctor present, and for other reasons with no or low activity, the average is between 150 – 200 major (IO) surgeries per month. The number of IO operations was lower in 2003/2004, but has for the past 2 years increased again to around 650 OPD patients and 175 operations per month.

Dr. Sameer worked at Maidema up to mid-2007 and wrote a report at the end of his stay with the following conclusion: *"Maidema eye hospital and training centre is now a success story."* In 2007 there were months where Maidema had more than 300 major surgeries. According to the administra-

tion at Maidema the flow of patients is now decreasing again, and there is a strong drop in activities when the ophthalmologists are not there.

The OPD activity has in general been kept running for longer periods than the surgery. The activity increased considerably in 2006 after some years with a lower number of new patients than the average over the 12-year period. 2006 had the third highest number of new OPD-visits, and the third highest number of IO surgeries since the start in 1996. We can only conclude that the reputation of Maidema is holding, and that the overall number of patients needing eye surgery does not seem to drop.

Use of resources
Table 4 (above on page 31) gives a detailed specification of how the financial resources have been spent.

Working on rough figures – and taking no notice of annual variations – (2003 and 2004 were years with very low surgery activity) the cost level over the past 5-6 years have been:

> **Average annual cost for personnel and medical supplies at Maidema is approximately NOK 1.000.000. Of this amount 40% is for expatriate personnel, 15% for local personnel, 25% for medical supplies and 20% for other costs. One must bear in mind that the cost of training OOs is included in this figure.**

For this amount Maidema has each year helped an annual average of about 9000 patients consisting of:

> **OPD patients: 7000-8000**
> **Major operations (IO-surgery): > 1000 (Varies between 340 and 2500)**
> **Minor operations (EO-surgery): About 600**
>
> **In addition, 23 ophthalmic officers have been trained at Maidema.**

There is no doubt that the activity at Maidema has been carried out under an efficient and economical management. During 2003-2005 the output was lower than for other years. There were some negative comments made about the doctor at that time, but the load on one doctor was during that period high, and the management did not act fast enough to improve the work con-

ditions for him. The 2004-report commented on the overload, and recommended to have two doctors at Maidema as long as the training went on.

4.2. Training of Ophthalmic Officers

The curriculum for training of Ophthalmic Officers was approved in 1998 after considerable delays in the approval process. The curriculum is very extensive and is based on a similar course operated in Malawi by Sight Savers. The structure of the program is based on 3 study terms, each of 6 months duration. The contents and structure of the training is described in detail in the 2004-study.

A total of 23 OOs have graduated from Maidema. The start-up of the training of the first batch of 7 students was delayed by the 1998 war. The course started in 1999, and 6 of the group graduated in December 2001.

The second group (7 students) started the training in August 2003, and graduated in 2005. The delay from December 2001 to August 2003 was due to a slow process in MOH in appointing the new students.

The third batch of 11 students started in February 2006 and 10 students graduated in December 2007. This means that 2/3 of all OOs in Eritrea have been educated at Maidema. The delay in appointing new groups of students may have been caused by the difficulty there is to take nurses out of their present position to spend 18 months in a new diploma course at Maidema.

There is no specification of how much of the annual expenses have been related to the OO training. The last group of students incurred direct expenses of approximately NOK 50.000 in each of the years 2006 and 2007. In addition to this comes the time used by the doctor. The set-up at Maidema, where the doctors – one or two – have taken their turns both in the clinic and in the classroom has been a very efficient arrangement. With an annual average cost of NOK 1.0 mill for both the clinic and the training activities, the financial burden of the latter activity has been low. With two doctors at Maidema (allowing for overlapping during annual leaves) and a faster process at MOH to appoint students, one – even two – more batches could have been trained without large additional costs.

The OO-study has been an important activity, and Maidema has been a forerunner for capacity building in the health sector. NABP should be proud of its achievements in this field, and we hope that the training continues uninterrupted in Asmara.

There is always the issue of continuous education for those who have a basic education – low level or high. No in-house training has been implemented for any of the OOs that have graduated from Maidema neither by Maidema nor MOH. The fact that most OOs will work in remote areas where professional follow-up is scarce, makes it necessary to offer fairly frequent "refill" courses for the staff. Maidema has unfortunately reserved no financial funds for such continuous education programmes.

4.3. Prevention activities

Both WHO and MOH emphasise the preventive activities of the blindness program. Maidema has not been an active partner for MOH in this field, and few references are made in reports to NABP on preventive policies.

People may argue that Maidema's overall focus has been – and should be - on clinical activities. That is understandable and acceptable. However, with the main focus on reducing the prevalence of blindness, prevention is a core activity.

Our negative comment with regard to Maidema's policies and achievements is therefore related to the lack of time for blindness prevention activities. As long as the main goal was to reduce blindness to 0,5% in South Zone, both clinical activities and prevention programmes should have been implemented side by side. We acknowledge, however, that the offensive clinical programme has greatly limited the available capacity to also cover or participate in any blindness prevention programmes in Eritrea.

4.4. Expatriate ophthalmologists

Maidema – and Eritrea - has benefited greatly from professionals coming from NABP's network of eye-clinics. Relatively short stays may have been a negative factor for other employees of Maidema as they have had to relate to a number of different persons over a relatively short period of time. The following schedule shows briefly how the coverage of doctors has been:

Table 6: Overview of doctors that have served at Maidema 1995 - 2007

Name of doctor	1995	1996	1997	1998	1999
Dr. Kolstad					
Dr. Bista					
Dr. Bijracharya					
Dr. Dhakal					
Dr. Hem Chandra					
Dr. Opsahl					
Dr. Vikram Khosla					

Doctors 2000 –2004

Name of doctor	2000	2001	2002	2003	2004
Dr. Vikram Khosla					
Dr. Rekhi					
Dr. Sennait					
Dr. Sameer Mohan					

Doctors 2005 – 2007

	2005	2006	2007
Dr. Sameer Mohan			
Dr. Sue			

To place surgery, training and administrative responsibilities in one doctor alone has been a too heavy burden on the doctor. This is the major reason for the lower operational activity in 2002 - 2004.

The 11 ophthalmologists that have worked at Maidema have been earnest and hard-working professionals. In one or two cases has the doctor faced some co-operation problems, but in general NABP has shown great skill in selecting doctors that could adapt so well to the rural setting at Maidema.

4.5 The Asmara office

NABP established an office in Asmara relatively soon after the decision was made to build the clinic in Maidema. It was located in an adjacent room to the Norwegian Church Aid's office, and was staffed with one person.

Some people would say that it had been natural to place the Asmara administrator in a joint office with the Eritrean National Association of the Blind. The association was, however, not established at the time Maidema was established, but NABP continued to have its office with NCA also after

ERNAB had been established. Apart from the lease agreement the value of being located in NCA's premises seems to have been limited.

The advantages – or disadvantages - of moving NABP's Asmara office to ERNAB's offices must have – or should have - been discussed after ERNAB was established in 1996. No changes, however, were made. We are of the opinion that a joint localisation would have been beneficial for all parts. Costs, lobbying resources, the daily operating environment etc., would have benefited from that, and far outweighed any negative consequences of having a joint office with ERNAB.

The role and duties of the administrator were vague. There was, however, no doubt about his responsibilities as to being the liaison officer between the suppliers of various materials for the clinic, and Maidema. The Asmara office also kept the cash and bank registers, and reported activities back to NABP, but there seems to have been repeated uncertainties as to any supplementary responsibilities for Maidema and the staff there.

In the discussions the evaluation team had in November 2007 with key persons in Asmara, several remarks were made with regard to the status, professionalism and value of the Asmara office. Some statements were clearly coloured by the fact that the administrator no longer lives in Eritrea, but even if due respect is made to this fact, the administrator does not seem to have been able to mirror a professional impression of NABP's policies and decisions. People at MOH did express their disappointment about the weak performance of the office as they had expected to get more technical and consultative support from the representative office. The "chemistry" between the administrator and department heads at MOH has clearly been weaker than needed.

There were unclear descriptions (may be no description) of shared responsibilities between the Asmara office and the administration at Maidema. After the 2004-evaluation the administration at Maidema was strengthened, and the need for an office in Asmara was probably less after that.

We have given some comments to the structure, purposes and effects of the Asmara office. As NABP may channel more of its support to – or through – the government, our comments may be "outdated". However, we want to keep them in the report as a reminder of what may be done to improve the value of a liaison office in other countries where NABP has its activities.

5. Sustainability

The Director of Health, South Zone is now fully responsible for the Maidema clinic. As such Maidema is an integrated part of all national health plans, and will continue to be run as an eye clinic in line with all other eye clinics that are part of Eritrean policies to combat blindness in the country. To maintain a sustainable operation at Maidema is therefore from now on the responsibility of the Eritrean government.

From 1996 to 2006 Maidema was completely funded and managed by NABP under NABPs financial cooperation with NORAD. Funding was in practice the smallest problem, and NABP provided simultaneously up to two expatriate ophthalmologists for Maidema. By doing so NABP provided both the professional reputation and operational capacity to make Maidema a core clinic in Eritrean eye health.

During the 1998 and 2000 wars, Maidema was looted, and the clinic was closed until the situation was safe. In a commendable way NABP rebuilt Maidema immediately after the hostilities stopped, and continued its operations in spite of a shaky security situation. The question of whether Maidema was a sustainable project was never put under debate, and Maidema gained enormous recognition and good reputation for that.

Even if funding normally is recognised as the most critical resource in a sustainability debate, Maidema's reputation and sustainability depends to a very large degree on the eye doctor, the medical quality, and on the doctor's reputation and influence on the organisation as a whole. Without a medical doctor – not necessarily full-time – and the financial resources of NABP there is an uneasiness - and for that matter also fear of uncertainty - that Maidema may not be able to maintain its present statuesque and popularity. The future reputation of the institution may be uncertain.

There are several aspects of Maidema's sustainability:

a) To what extent did NABP develop the clinic with technical and medical solutions that would be sustainable also under an Eritrean administration?
b) What will – in terms of sustainability - the future be for the physical and technical investments NABP has made in Maidema?

c) Will the Eritrean government be able to sustain the clinical qualities that NABP has developed at the Maidema Clinic?
d) What is the strategic thinking and plans of the MOH regarding Maidema's functions and structure related to blindness prevention?

Sustainability has both financial and professional aspects. Actually, it is a paradox to discuss sustainability for a specialised hospital. In most of the world, hospitals are financed through national budgets and patients' fees cover only a small part of actual expenses. Sustainability depends therefore fully on the government's ability and determination to prioritise health services in their rather limited budgets.

Sustainability depends on a regular flow of resources to the clinic. Even small delays in providing these may influence the smooth running of the clinic. The 1st quarter report for 2007, for instance, says that the budget for Maidema were not released during the first two months of that year, and NABP had to step in to prevent a halt in the activities. Dr. Sue's report (Feb/06 – Aug/07) refers to delays in training activity due to the fact that damages of the solar panels and generators were not repaired in time.

Professional sustainability is even more problematic for countries where human resources are scarce. Even NABP has no pool of ophthalmologists to draw from and has had to rely on external resources for its eye health clinics. Eritrea is not very much better off, and will have to prioritise activities to educate more ophthalmologists if the professional level at Maidema - and all other eye health clinics - shall be maintained.

5.1. Creating a sustainable technical and medical level.

Reference is made to chapter 3.3 commenting on the principle of "appropriate technology" that Maidema originally was founded on. As years have passed, Maidema has invested in new and more modern technology, however, without going beyond the manageable complexity. NABP also secured the expertise to operate generators, solar panels etc. We are of the opinion that all investments have been made with sustainability considerations in mind. The foundation has therefore been laid for others to maintain and sustain Maidema's activities without the highest professional background. Even that level of professionalism may be difficult to maintain in remote places like Maidema.

5.2. Sustaining the physical investments at Maidema

From 1993 to 2006 a total of 3,9 mill has been invested in Maidema. This consists of around NOK 2.5 million in buildings, and less than 1,4 mill in transport and other equipment. The challenge is now for the government to maintain these investments in a sustainable way.

So far the maintenance budget at Maidema has not been very large. Annually about NOK 15.000 has been spent on maintaining buildings and about NOK 20. – 30.000 on cars and other equipment[25]. In total this is not a very large portion of the budget. However, as the infrastructure at Maidema is poor, and all technical services have to be found outside Maidema, a properly designed plan for maintaining and sustaining the physical structures and technical equipment is therefore necessary – even if the amount is less than 5% of the total budget.

Although the buildings of the hospital are arranged in a very practical way they will need regular maintenance such as painting and cleanliness. The Doctor's flat and the students' quarters and classrooms are quite large and needs continuous upkeep even if students are not longer staying at Maidema. There were comments from the new administration at Maidema that the kitchen needed upgrading.

Two instances in 2007 – only months after MOH took over the management of Maidema – give reasons for concern. The generator broke down in early 2007 and the solar panels stopped to function as a result of a damaged inverter. We do not want to go into the discussions as to who or what was at fault; missing instructions and instruction books from the old "owner", or negligence by the new administration to take action when malfunctions started. The main problem, however, is that the equipment was not repaired until the MOH provided extra funds to repair it – after severe pressure from NABP. Unless the operating budget has provisions for maintenance expenses, maintenance – and especially preventive maintenance – may not be carried out properly. Breakdowns will most probably continue to occur and may not be repaired until extra until funds are made available from Asmara.

The solar panels were still not repaired in November 2007, even if the cost of a new inverter was in the range of US$ 1.200. Until solar panels are again producing energy, fuel expenses for the traditional generate will continue to run high and the $ 12.000 investment in solar panels is unnecessarily wasted.

[25] We expect that some maintenance work has been carried out and registered financially as "investments".

Sustainability of the physical investments therefore needs both money and qualified technical personnel. The hand-over process was (probably) weak on how to ensure practical sustainability of investments, but the way these problems have been handled in 2007 indicates that the technical competence at Maidema must be strengthened if sustainability shall be maintained.

Securing employment

For Maidema municipality, the clinic has been an important employer. In 2004 Maidema had a staff of 16 persons, of which only the government paid one. Three years later it had 21 employees. We do not know how many of these are residents of Maidema, but as an employer of local workforce Maidema is important – even if the number is less then 15 people - and the fact that Maidema now has increased its staff will be welcomed by the authorities of Maidema.

Some of the Maidema's staff was paid much higher salaries than government rates. This caused uncertainty when the government should take over, and some key personnel left to take up work in other places. This is a general problem in most NGO-managed activities all over the world; foreign organisations have the funds to pay a higher salary than the government in order to employ the best persons available. The problem is further accentuated in Eritrea as the security situation absorbs a great part of otherwise available manpower.

One reason for the difference in salary level is according to NABP found in the fact that the government a couple of years ago reduced salary levels for large numbers of its employees, and NABP did not follow suit at that time. In a national take-over process salary differences create serious problems, and so was the case also at Maidema. Some people were paid up to 100% more than the government rates. Some of the higher-paid staff members were not interested to work in Maidema for a lower salary, and Maidema lost valuable competence.

In general, NGOs have a strong responsibility to reduce the obvious problems that differences in salary levels represent, long before the actual take-over date. It means that in order to avoid inconveniences or loss of the most knowledgeable and experienced workers, the hand-over process must be implemented over a long period, and staff and salary levels must be adapted to government rates long before the actual take-over date.

Innovative use of local resources

The Oxford dictionary defines the term "innovate" as being "in novelty, or make changes". In the context of community based services, innovation in prevention of blindness would mean the unusual or creative ways by which prevention of blindness could be carried out in the homes of people and community. This approach is affordable and provides a coverage that is better than that of institutional intervention. Community-based intervention could be carried out by local people who have received some basic training, have some finance, and have access to available local resources. A sustainable programme for home-based blindness prevention is not in place yet.

5.3. Sustaining eye-health activities

The formal hand-over from NABP to MOH took place in September 2006. During the past 15-16 months all decisions with regard to funding, activities, maintenance etc. has been in the hands of MOH, represented by the Director of Health South Zone. Only recruitment and costs related to the ophthalmologist has continued temporarily to be in the hands of NABP.

As from 1st January 2008 the ophthalmologist will be transferred to Mendefera to work at the hospital there. There are, however, plans to let the doctor work one or two days a week also at Maidema.

There are no plans to move the other eye-health activities at Maidema to Mendefera, and Maidema will also after 1st January 2008 remain an eye health clinic. It shall continue to carry out both clinical and preventive activities, and its position will be on the same level as the other community hospitals in Eritrea. This means that Maidema will be one of three eye clinics and one of 8 health facilities in South Zone[26]. Accordingly, Maidema will report directly to, and will have the administrative linkage with the zonal health service branch in Mendefera.

It will be difficult to maintain the reputation and credibility of services at Maidema with no ophthalmologist at the clinic. People may – unless they live in the region - seek other facilities for most major and minor operations. We were also led to understand that Maidema might continue to provide services at a lower fee than in other eye health clinics. If so, it will certainly raise questions of whether such a practice – under a government operated health plan - is fair to people in other remote areas, and we believe that that decision has to be reviewed.

[26] Ther will be eye clinics in Adi Keih, Mendefera and Maidema.

5.4. Maidema's overall clinical sustainability

We have learned that the handover process was made with the intention of sustaining Maidema as an eye health clinic. The evaluation has proved that sustainability is possible with the expressed readiness and commitment of the MOH, but may easily be jeopardised if that support is delayed.

Ideally, sustainability of any project is seen in terms of its financial, organizational and institutional dimensions that are related to the levels of activity, output, and impact. It can be concluded that Maidema is meeting the abovementioned elements of sustainability. The good news is also that Maidema will continue its statutory clinical activity with one assistant ophthalmic officer on duty.

This situation may, however, trigger some concern or fear. With the absence of the ophthalmologist the flow of clients may decline and subsequently the reputation of Maidema may not keep its original statuesque.

We are afraid that it may be difficult to maintain the service and reputation that NABP has built up in Maidema. In the future the clinic at Maidema has to fight for funds in competition with all other medical clinics under MOH, and these funds are limited. For the present year the management in Maidema presented a budget proposal with a total sum of Nakfa 1.8 million, but only 0,8 million was made available for the clinic. When the generator, water supply and solar system broke down earlier in 2007, funds to repair it were not made available until NABP complained severely to MOH. We are afraid that it is not the last time necessary maintenance is delayed – or the concerns are not seriously taken into account – making the sustainability of all technical equipment quite questionable.

If Maidema is reduced to an eye health clinic without the services of an ophthalmologist, the building areas are too large. It is therefore a proper suggestion – also from a sustainability point of view – to have the ophthalmologist in Mendefera spend one or two days a week at Maidema to perform operations there. Even so, the building areas should be used also for other health purposes as well. May be preventive activities could be located in Maidema?

The number of patients will be lower in years to come. Patients may visit eye health clinics that are closer to where they live, or go the second tier hospitals where ophthalmologists are at work. Maidema's sustainability may come under pressure.

5.5. Sustainable training of Ophthalmic Officers

The present "batch" of OO-students is the last one at Maidema. From now on training will be moved to Orotta School of Medicine in Asmara[27]. That decision is understandable from the students' point of view. For students it is far better to stay in a more "central" place than Maidema. However, from the perspective of students being familiarised with their (most probable) future work places, it is different. Maidema was in that perspective a better solution.

MOH is working on a plan to change the OO study from a Diploma course to a Batchelor's level study. Although the TOR for the evaluation does not request it to comment on this, we still do so.

The present OO-diploma course has a comprehensive curriculum. In the 2004-evaluation, Dr. Opsahl of Ullevål University Hospital in Norway was even of the opinion that it tried to cover too much (reference is made to comments made in the 2004-evaluation). On the other hand students have asked to also have training in glaucoma surgery included in the curriculum (cataract surgery is). There are therefore good reasons to review the curriculum and – if necessary - amend it.

The main problem, however, is that there is an urgent need for more OOs in Eritrea. Converting the present diploma study to a Batchelor's degree will delay start-up of a new batch of students, training period will be longer and Batchelor's graduates will tend to seek jobs in more centrally located places.

Our comments, however, are not meant to suggest to scrap the plans for a Batchelor's study, but to postpone it. We would recommend that the Ministry until further continue to run the Diploma study as it is today (with necessary changes in curriculum) and starts to develop a Batchelor's study that builds on the Diploma course. A topping-up Batchelor's study could then also be offered to previous OO-graduates (now 36 persons). The main benefit would be that the Diploma training of OOs goes on uninterrupted to reduce the needs for OOs, and a shorter topping-up Batchelor's study is offered for both old and new graduates. To find identifying titles is a minor problem.

We are worried that the extended study time for a Bachelor's course may reduce the number of new OOs. They are urgently needed for the Eritrean blindness programme, and there will be a delay of a year or more to structure

[27] Mendefera could still be an alternative, according to some persons we talked to.

and implement the Bachelor's course. That period should be used to continue the present Diploma course.

Continuous education

To graduate from a specific course is a goal for all students, but only the beginning of a professional career for them. Any profession need constant "refill" of knowledge in order to cope with and understand new technology, new strategic policies or improved treatment processes. We have commented on the need for follow-up training in chapters 3.5 and 4.2. It is therefore necessary to establish a continuous education programme for OOs in order to maintain the knowledge and competence that the training in Maidema has provided.

5.6. Strategic thinking as an element of sustainability

One of the guiding elements and ingredients for sustainability is the issue of strategy. Looking from a strategic perspective, we are of the opinion that Maidema eye hospital is in the good hands of the MOH and it is well suited to the functional structure of the same ministry. The general trend is that MOH is following a combination of policy-driven and needs-driven approaches toward the strategy of blindness prevention, and that the Ministry in cooperation with other partners and stakeholders is committed to implement the plans of the national blindness prevention programme. Implementation needs both funds and human capacity. NABP could be a valuable partner in this process as the organisation has a lot of knowledge of how blind people may be trained, assisted and integrated in the society.

6. Co-operation with partners, and the phasing out process.

Although communication between NABP and MOH has had its ups and downs, the general impression of the evaluation team is that NABP and MOH have been team players. During the most difficult periods, NABP did show both patience and flexibility in its communication with MOH. There have been problems in enforcing certain points under the repetitive agreements between the two parties, and both parties should – and could – have shown more eagerness to honour the clauses of the agreement they had signed some months earlier.

6.1. Agreements and communication between MOH and NABP.

Correspondence between the parties during the early years indicates clearly that both parties had expectations of a much smoother project life than what actually took place. Some of the early communication between the two parties therefore shows clear signs of frustration – especially from NABP's side.

One reason for the troubles may be that the line of communication between NABP and MOH has not always been clear. Different questions have been handled by different departments in MOH, and have at times caused delays in making proper and necessary actions. We are afraid that those uncertainties are not only problems of the past. The signing of the 2008-agreement between NABP and MOH was delayed (however, only for a day or two) because of miscommunication or unclear areas of responsibility in the MOH.

The fact that the expatriate doctor – recruited and funded by NABP - will work in Mendefera under the South Zone Ministry of Health and Mendefera Hospital management (and probably part time also in Maidema) creates uncertainties as to who is the proper authority for NABP to communicate with, report to or "complain" to with regard to the doctor's conditions or activities. We therefore recommend that the next agreements between MOH and NABP clearly state the name of the person in the MOH system that is responsible for the smooth implementation of the agreement.

The proposal for a continued co-operation between MOH and NABP that the Minister of Health sent to NABP on 17th October 2006 raises a lot of inter-

esting areas for further co-operation. The proposal must be studied not only with a view to provide money, but also in light of the competence and capacity NABP has both as an organisation and among its member. Our recommendation number 17 is partly based on the plans that the October –06 letter describes.

6.2 The Management Committee

The initiative to establish a Management Committee for Maidema (also referred to as the "Technical Committee") was taken in a meeting between NABP and MOH in October 2001. The committee should consist of members appointed by MOH with representation from Maidema, ERNAB[28] and South Zone. NABP should be represented through the administrator in Maidema. Members of the committee were:

1.Dr. Girmay Tesfaslassie ; International Affairs
2.Dr. Desbele Tesfagergis Berhan Aini Hospital
3.Dr. Bsrat Gebru, HRD of MOH
4.Dr. Berhane Debru, Health services at MOH
5.Dr. Bernando Kifleyesus, Regulatory services of MOH
6.Dr. Tesfay Solomon, Former Medical Health Zoba Debub

At an early stage the group made a couple of visits to Maidema to make their assessments about the clinic. The committee held its meetings in Asmara and the reports were submitted to the concerned agencies including the zonal administration. After a relatively short period of time, more visits were - unfortunately - not made.

The creation of a Management Committee was looked upon as a valuable body for both Maidema and NABP. It would provide inputs for the doctor and management in Maidema in terms of both local customs and needs as well as to its place and operations under a national eye health programme. It could also provide a first rate insight to the members of the committee of how a successful eye health clinic was operated, and MOH could have used the experiences and information they got through the management committee to spread the knowledge of any good practices to other health clinics in the country.

However, the work of the Committee has not been as active as expected, and the evaluation team has not seen any documents showing what decisions

[28] We understand, however, that ERNAB did not take a seat in the committee.

and/or recommendations the committee has made. The administration at Maidema did not refer to any decisions made by the committee, or of visits made by the committee members to Maidema. In fact, they said that they were not aware that there had been a management committee for Maidema.

During formal and informal meetings, the team discussed the activities of the Management Committee, and of the follow-up after the formal meetings. It is the opinion of the evaluation team that the Management Committee never functioned as the management tool for Maidema it was intended for and designed for. NABP ought to have followed up the activities of the committee in a better way than what has been the case.

6.3 Handover of Maidema to national authorities

All agreements between MOH and NABP have been clear on the hand-over timetable. Even the first agreement (March 1993) referred to a take-over process within the first 2 years.

A proper timing of the hand-over and take-over process is difficult to make, and even more complicated to implement. In the case of Maidema, the formal and administrative take-over started as early as September 2006 when MOH appointed the new management at Maidema. The take-over process was finalised with the full financial and operational management and responsibility of Maidema being transferred to the South Zone as from 1st January 2008.

Handover committee.
There was no formal handover committee as such. The handover was a process, and MOH has in consultation with NABP played an active role to make the process successful. A unit consisting of an auditor from Asmara (MOH), a representative from Mendefera medical services, the administrator from Maidema, and the local representative of NABP was assigned to carry out – and administer – the handover process. The understanding of MOH is that the process was satisfactory. It was expected that some minor problems would be encountered during the process, but none were expected to be so large that they could not be solved in a proper way.

The hand-over process in itself has been carried out without severe problems on the policy level, but on the operational level it has been handled with less success than expected. One reason for that is that NABPs representative in Asmara – as far as we understand – did not involve himself to the expected

degree, and that – according to the new management at Maidema - written routines and instructions at Maidema were poorly documented.

Even if we allowing for general start-up problems, we believe the hand-over process should have had a stronger follow-up by both NABP and MOH. All over the world there are numerous examples of insufficient "hands-on"-cooperation that give grounds for later complaints. The "old" administration follows their "tacit" knowledge of how to run the activities, and the "new" administration has a different background with its own tacit knowledge. If the practical part of the hand-over process shall be successful, it needs a close follow-up over a long period.

The new administration of Maidema referred to several cases of insufficient information in connection with the take-over process in 2006. NABPs administrator in Asmara did not attend - or take part in – the process, and according to the new management at Maidema there were no operating documents (manuals), no list of inventories and little information given by the former administration. The problems were aggravated by the fact that both the local administrator and the technical expert at Maidema left when MOH took over the management.

We are aware that some statements by the new administration are "skewed" in order to defend the poor way technical problems were solved during the first year of the new administration, but NABP must also take some blame for not having had a strong hand on the wheels at Maidema during the take-over process. On the other hand – and in contrast to what was mentioned in Maidema - the evaluation team has been shown detailed inventory lists – just underlining that the hand-over process should have hand a firmer hand.

Timing the hand-over

An interesting question was raised during the interviews. Was it the right time to hand-over Maidema to the Eritrean Ministry of Health?

The "not-the-right-time"-scenario builds on the facts that a government take-over may be affected by the general lack of financial resources, lack of human resources, and an insufficient systemic co-ordination. A well-run organisation may can be "damaged" very soon after The opposite scenario focuses on the needs for a national co-ordination of health services, of a close contact with national policy making plans for prevention of blindness and on the fact that after 12 years any project should have reached the point of a national take-over.

The evaluation team is aware of the downside risks for a less efficient Maidema clinic. We agree, however, with the decision – and the agreement between NABP and MOH – to incorporate Maidema in the national health structure even if Maidema from now on has to "compete" with other Eritrean clinics for both money and manpower. We think the decision the two parties has made was the best one, and the subsequent agreement between NABP and MOH where NABP continues to fund an ophthalmologist at Mendefera only reinforces that decision. The question, however, is not part of the TOR for the evaluation. The immediate comments above are, however, not substantiated by any in-depth study of the process related to Maidema, but a quick response to a general – and important - question.

One argument for a hand-over at this time is that NABP will not withdraw their support to Eritrea. The new agreement between NABP and MOH is an outstanding example of how a project is being developed, strengthened and then handed over to the government, and after hand-over, a new project that actually supports professionally the old one, is designed.

A hand-over may also open up for new areas of co-operation, new target groups and support of new policies. At the same time as we support the decisions taken at Maidema, we encourage NABP to look for areas where NABP can support the blind people of Eritrea. We point to the challenges there are to support advocacy work, to support national policy organisations in their work to improve the lives of the blind, and to use NABPs organisational professionalism on policy levels within the Eritrean government. The challenges are numerous. The reputation NABP has in the MOH and in Eritrean circles that work with blindness programmes is so good that it should be used actively and professionally.

6.4 Cooperation with other organisations

There are several organisations that NABP have had, or should have had a close dialogue with while managing the Maidema clinic.

ERNAB
ERNAB is genuinely interested in the activities, progress and sustainability of Maidema. Representatives of ERNAB have visited Maidema several times and have had talks with both patients and staff. From ERNAB's point of view Maidema has been a key instrument in helping the blind.

NABP has since ERNAB was established been a strong supporter of it. Since ERNAB is the only membership organisation of the blind in Eritrea, one al-

ternative of where NABP should locate the office of its Eritrean representative would be to ERNAB's offices. The advantages with such a co-localisation would seem to be far greater than the disadvantages. It could have given several advantages to NABP, and could also have been a capacity building activity for ERNAB.

The National Blindness Prevention Programme is still in its infancy. To this end, an appropriate, adequate, and standardized advocacy manual on blindness prevention is not in place either. However, the team is optimistic that it will not take long to bridge the gap by creating a strong partnership between NABP, ERNAB and NBPP in the field of blindness prevention in Eritrea.

Although it is not part of the TOR for the evaluation it is necessary to point out that ERNAB must work hard to comply with the conditions NORAD sets for a proper gender balance in those organisations that receive financial support from NORAD. There were at the time of the evaluation no women's representatives in the board or governing bodies of ERNAB. However, ERNAB is well aware of this limitation and it is taking measures to correct the shortcomings.

WHO

WHO plays a leading role in providing technical competence to the blindness prevention programme. The evaluation team is of the opinion that NABP should have been more visible as a technical know-how partner for the Eritrean blindness programme – not mainly a financial partner. It is important to strengthen cooperation with WHO – not only with regard to Maidema, but also on prevention and elimination of avoidable blindness in Eritrea in general. WHO is a valuable partner for NABP – not only in Eritrea – but also in all countries where NABP has its activities.

Norwegian Embassy

There are comments that the communication between NABP and the Norwegian Embassy in Asmara seems to lack some "energy". NABP's projects represent major Norwegian development efforts in Eritrea, and the experience and results at Maidema ought to be of interest for all Norwegian development work there. On the other hand, NABP would benefit from relevant information from international development support to Eritrea, and the embassy could be a more active source for that.

During NABP's presence in Maidema the major flow of information has understandably gone from NABP to the embassy. If and when NABP increases its co-operation on the policy level to fight blindness, a closer contact with

the embassy is recommendable. The practical assistance NABP has had from the embassy (making cars available to go to Maidema for instance) is highly valued, but both organisations could benefit from a wider exchange of information, networks etc.

The main purpose for NABP is to strengthen its contacts to the international funding agencies, and the Norwegian embassy in Asmara is a strong partner of this network.

Other organisations working for the blind

NABP seems to have had less in-depth, professional contact with other organisations working for the blind in Eritrea. Fred Hollows Foundation is the major supporter of the NBPP, and works closely with MOH and the Blindness Committee. As our recommendations in chapter 8 show, NABP should actively strengthen its contacts and networking with organisations – governmental or non-governmental – that work to improve the status and inclusion of blind people in the Eritrean society.

The existing services for the blind in Eritrea are relatively few in number. At present there is only one boarding school that provides education at an elementary level. This residential school for the blind was opened in 1967 with the financial assistance of the German Christen Blind Mission.

This school (Abraha Bahta) has full boarding facilities, and provides health services for its students. It has a clinic, a Braille department, a library, a vocational training centre, an auditorium and a farmland for gardening. The school curriculum follows the national curriculum for primary schools. The capacity of the school is up to 150 students. However, the enrolment rate is lower than expected.

The Eye Hospital in Asmara gives a substantial contribution to the diagnosis and treatment of eye patients. The Hospital in co-operation with the MLHW and local health authorities provide outreach services for eye patients living in the periphery of the country.

Vision for All, a Swedish NGO became recently involved in the work among visually impaired people and work in close association with the Eye Hospital in Samara and ERNAB. Their activities focus on optometric services and provision of spectacles.

The CBR programme in Eritrea was launched as a pilot project in Zoba Debub in 1990 by the MLHW with the support of AIFO, an Italian NGO and

the World Health Organization (WHO). Currently the programme is active in all 6 regions of Eritrea. However, not all sub-regions are coved.

A good partnership takes time to develop. It is also a process that goes through a number of phases. Thus, partnerships must create the necessary synergy of purpose, value, skills and expertise, and must create a feeling of collective responsibility. The contextuality - and in particular the cultural barriers and behavioural problems – will remain as challenges for a long period.

7. What next?

Handing over Maidema to MOH marks the end of NABP's support to Maidema. NABP's role in Eritrea, however, is not over and a new agreement is already in place. To a large extent it is a limited continuation of the Maidema agreement but relieves NABP of the management responsibilities of eye health activities in Eritrea.

It would be a great loss if NABP's knowledge of - and network in – Eritrea ends with the hand-over of Maidema to MOH. NABP's competence in advocacy work for the blind is too valuable to be withdrawn from its network in Eritrea. This competence is found both on the organisational level and among numerous individuals.

As our recommendation show (chapter 8), there is a feeling that NABP has been too modest in how its organisational competence has been exposed. The genuine support to and identification with the blind in Eritrea has thoroughly been exposed through the Maidema project. Its experiences from policy and diplomacy work on the political level in Norway seem to have had second priority in its work in Eritrea. The time may now have come – as the management responsibilities for Maidema is over – to work through its network in Eritrea to transfer some of its vast expertise in policy matters for the blind.

The co-operation with ERNAB provides one outlet for such activities. We believe, however, that a stronger co-operation with other organisations, as well as with government or semi-government structures should be considered as a possible future activity.

International development assistance operates more and more through the national government structures. WHO for instance is a major technical (consultancy) resource for the government in issues related to prevention of blindness in Eritrea. NABP should seriously discuss to what extent it can provide long or short term based expert advise to the policy operators in Eritrea.

NABP is a strong organisation with vast resources among its members and supporters in Norway – and in sister organisations all over the world. We recommend that NABP now go a step further to see how this expertise can be used to support the blind through the network it has developed in Eritrea.

8. Recommendations and possible lessons learnt.

The findings of the evaluation may serve as discussion guidelines of how future programmes of cure and prevention of blindness might be structured. The comments and recommendations may also be useful for the planning and implementation of similar projects or activities both in Eritrea and in other countries.

The evaluation has identified a number of remarkable – and in some cases less satisfactory - results for the Maidema eye health clinic.

1. **The overall and general impression of NABP's and Maidema's work in Eritrea is that 12 years of work and support has given everyone that has been involved in the project a reason to be proud of - and very satisfied - with the results that have been obtained.**

In spite of that positive opening statement, we dare to raise issues and recommendations that could even have increased the overall outcome, and could also have reduced some of the pressure and strain people may at times have felt. We underline that these comments may not seem to be significant in light of the overall results shown, but they could be valuable points for reflection and action in other projects – both in Eritrea and in other countries.

Establishing the goals

The overall goal and purpose of the project was "to reduce the prevalence of blindness from 1% to 0,5% in the Southern Zones of Eritrea". Our comment to this is that it is impossible to verify whether the original goal has been met as no systematic base line study was ever made. Neither is there a project-end study showing changes in the prevalence. The lack of a baseline study makes all later assessments of whether the project has reached its goals fairly illusionary. Baseline studies have a financial cost, but such a study is extremely valuable for later internal or external assessments. The study carried out by Dr. Kolstad gave clear indications of a serious problem, and was probably never intended to give more information that that. Our recommendations for further discussions are:

2. **It is important to avoid goals that are specific but not verifiable.**

3. **Baseline studies are costly but informative. We recommend that all projects should conduct a baseline study before start-up. Such a study should also make assessments of the critical factors that may affect positively or negatively the project's activities.**

Despite the limitations that the lack of a quantitative start-up study has given to the evaluation team, the qualitative responses and quantitative statistics the evaluation has received give enough evidence to conclude that the project has been successful even if it is impossible to verify whether the original goal has been reached.

Localisation and start-up

Maidema was established in an area with virtually no infrastructure, but with a high prevalence of blindness. The decision to locate in Maidema was a joint NABP and MOH decision.

In retrospect it is easy to argue that a place with better infrastructure ought to have been chosen. We acknowledge, however, that both NABP and MOH had – at the time the decision was made – stronger arguments for Maidema as the right place to build the clinic than for (for instance) Mendefera. Based on today's knowledge – and on the experiences of Maidema being twice in the war zone - Mendefera might have been a better choice.

The decision that NABP now has been taken to recruit - and fund - an ophthalmologist for Mendefera Hospital is a valuable follow-up of the original localisation debate, and is strongly supported by the evaluation team.

4. **NABP must be commended for the way it rebuilt and re-equipped Maidema after the war offensives in 1998 and 2000.**

5. **Alternative places of localising a clinic in**

   a) **an area that already has most of the needed infrastructure, or**
   b) **in areas that has the highest prevalence of blindness**

   should have been thoroughly assessed – also with security and financial costs in mind – before a final decision is taken. A choice between Maidema and Mendefera would today have given a different result than in 1993.

Maintaining appropriate technology

The consequence of locating the clinic in Maidema was that all needed technology had to be provided by the project and should be on a level that would be sustainable in a remote location. Gradually, Maidema has introduced new technology, and very few incidences of technical problems seem to have happened during NABP's management.

> **6. When the decision was made to establish the clinic in Maidema, NABP followed a policy of being as self-sufficient as possible. New technology has only been introduced as and when the organisation in Maidema was ready to use it.**

Clinical activities

More than 65000 people have made a total of more than 96.000 visits to Maidema, and more than 21.000 people have been operated for eye diseases at the clinic during the 12-year period 1996-2007. During this period Maidema has been closed over long periods due to war, reconstruction activities and doctors-on-leave.

Maidema has a strong reputation with eye-health authorities in Eritrea and it has de facto functioned as a national referral hospital. The clinical activities have functioned extremely well.

> **7. The clinical activities at Maidema have been outstanding both in terms of quantity and quality. NABP must be commended by the way it has brought both funding and professionalism into the Maidema clinic.**

Training of ophthalmic officers.

Since the first group of students were recruited in 1998, 23 ophthalmic officers have been trained at Maidema. This is about 2/3 of all ophthalmic officers in Eritrea. Fairly large investments in terms of students' quarters have been made by NABP to facilitate the training, and the doctors have had the responsibility to train students in addition to regular surgery work.

We refer to chapter 5.5 where comments are made to the ongoing discussions of where and how the training shall be continued.

8. Maidema has clearly fulfilled its original goals to contribute to the improvement of human capacity in the field of Eritrean eye health.

Prevention of blindness.

This is probably Maidema's weakest point. Very little has been done in this field although people visiting the clinic have been given a brief orientation of how to avoid blindness.

We acknowledge that the available capacity has been insufficient to add prevention activities to the - at most times - overworked clinical staff. However, as we have commented on in chapter 3.7, blindness prevention activities are necessary components of any blindness reduction programme, and Maidema should have been more visible in this field. Some suggestions as to activities are also given in the same chapter.

9. Spreading the knowledge of how to prevent blindness is a core activity in all efforts to reduce prevalence of blindness. Maidema did not put in strong enough efforts to reduce blindness through preventive measures.

Eye drop production

Already the first project document had a reference to production of eye-drop at Maidema. 12 years after the clinic was opened, there is still no production of eye drops – neither in Maidema, nor in Eritrea. If such production had been essential for eye clinics in Eritrea a common solution ought to have been found. Why MOH and NABP did not manage to find a sensible solution is unclear to the evaluation team.

Even in remote areas it is not necessary to do everything oneself. It may be more valuable to co-operate and participate with competent "specialists" to develop some production facilities. However, the technology involved in producing eye drops is low, and most of NABP's eye clinics do this within their own walls.

10. NABP and MOH ought to have found a practical solution to where eye-drops should be produced, and who should be in charge of it. As production of eye-drops is a very uncomplicated process, it is unsatisfactory that 12 years after Maidema was established, there is still no production of eye-drops in Eritrea.

Advocacy, lobbying and rights of the blind.

We acknowledge that these areas have never been intended for or planned as part of Maidema's activities. However, it is NABP's strongest field of activity with enormous know-how within their organisation. With more than 62000 people having visited the Maidema clinic – and an unknown number of patients' friends, relatives or travel companions in addition to this, Maidema could have been more than being a first-class clinic.

We suggest that programmes for prevention of blindness or surgical activities always include activities related to advocacy of blind persons' rights. It should include support to social mobilization, national campaigns and special events for the rights of blind persons. Activities that include the development of human capacity for realization of the protection rights, support to the development of disability policy, legislation and those action that will promote blind peoples' rights, and protect them from abuse, exploitation and violence are vital elements of any blindness programme. We do not suggest that NABP should do everything themselves, and the co-operation between NABP and ERNAB should have encouraged ERNAB to use Maidema as a place to work on advocacy and human rights for the blind.

11. Maidema could have been more than an excellent clinic. Far more than 62000 people have been inside Maidema's walls, and for NABP/Maidema there have been excellent opportunities to lobby (on the grass root level) for rights, social inclusion and participation for the blind.

Administrative arrangements/representations.

We have already commented on the problems that have lingered to the Asmara office. NABP should assess how offices of this kind could be used to spread NABP's professionalism into the local networks.

12. We recommend that liaison offices should mirror more of NABP's professional approach and activities than what has been the case in Asmara.

We suggest that NABP actively use liaison offices (if they still have some) to act as their professional extension office, representing NABP in networks, meetings, and activities that work to the betterment of the livelihood for the blind.

Chapter 6.2 describes some problems and shortcomings of the Management Committee that was established. The idea and purpose of the committee was clear; it should act as a resource group for the management at Maidema. According to statements from Maidema, it did not function as expected.

> **13. The management committee did not function as expected. NABP should have followed up more frequently in order to ascertain that formal minutes, recommendations and decisions were made by the management committee and implemented by the administration at Maidema.**

The hand-over process.

The hand-over process was quite smooth on the principal level, but has caused some problems on the operational level. Chapter 6.3 describes some of the problems that appeared after MOH had taken over management of Maidema. Some of these could have been avoided if NABP and MOH had quality controlled the process more carefully than what was done.

> **14. NABP's representative in Asmara should have had a stronger hand on the process. Both NABP/Oslo and MOH should have prepared a more detailed checklist for the take-over and followed the process in more detail than what was the case.**

Some questions/potential problems must be settled well in advance of the take-over date. In Maidema some key people were paid more than double the going government rate for the same positions. These people were well qualified and had no problem finding employment outside the government structures.

> **15. It is in general problem for all government entities to compete with salary levels in NGOs. In order to reduce the consequences of differences in salaries, a handover process must start so early that it is possible to adjust existing salaries or replace the highest paid employees (who will most probably not accept government salary levels) with new personnel.**

The hand-over process was followed-up with a new agreement that continues some of the Maidema activities and provides a strongly needed ophthalmologist for the Mendefera Hospital.

16. The way the new agreement has been designed is exemplary. It provides funding for a highly needed ophthalmologist in Mendefera. The agreement is positive also for Maidema, as the agreement requires the doctor to continue to spend some time at Maidema.

The future?

The evaluation team has the impression that NABP has "portrayed" its vast experience and competence in a too modest way. One reason for that is the fact that the representative in Asmara did not have the necessary "weight" to do so. We therefore recommend that:

17. NABP makes an internal study of how its organisational and individual competence combined can be made available to the national planning and advocacy level for the blind in Eritrea.

Annex 1

Terms of Reference

SUMMATIVE EVALUATION

Terms of reference for external evaluation of project 1072 the Eye Health, and Training centre in Maidema, Eritrea.

Introduction/background:

NABP has taken an initiative to a final evaluation of the Eye Health and Training project in Maidema, because we would like an analysis of more than ten years support to an Eye Health and Training programme in a development country, Eritrea. The role of NABP has been to build a resource centre, provide eye care and train/educate Ophthalmic Officers. The intention of NABP has been to contribute to the reduction of blindness in the Southern Zone region through treatment of patients and furthermore by providing a training/education programme of Ophthalmic Officers. The purpose of the training programme has been to contribute to sustainability of the project, by leaving qualified personnel behind in Maidema and Eritrea when NABP pulls out.

The very first initiative to start an Eye Health programme in Eritrea came from the co-ordinator for Eritrea Peoples Health Programme Dr. Nerayo Teklemichael in 1987. Contacts were made, discussions carried out, which finally led up to the signing of the first agreement, between the Ministry of Health in Eritrea (MOH) and the Norwegian Association of the Blind and Partially Sighted (NABP) in March 1993.

The overall goal and purpose of this project has been to reduce the prevalence of blindness to 0,5 % in the Southern Zone of Eritrea. This should be accomplished by providing curative and preventative eye care, accessible and affordable eye health services, and by training local Ophthalmic Officers who should eventually support the MOH in rendering services to the people. According to the agreement between MOH and NABP, the running costs for this programme have been managed and administered by NABP with a gradual take over by the Ministry of Health (MOH). The gradual take over started in 2005 and after a three-year period this hand over process has come to an end. All capital assets should be handed over to the MOH by the end of this year 2007 and should continue being used at Maidema Eye Hospital and Training Centre for its intended purpose.

The support from NABP to this project is completed by the end of December 2007. The main goal of the evaluation task is to analyse whether the project has reduced the prevalence of blindness from at least 1% (figures from WHO) to 0,5 % in the Southern Zone of Eritrea. Another goal is to analyse the hand over process itself. Did the parties in the agreement fulfil their obligations in accordance to the time frame? What challenges did the parties meet and how were these challenges solved? NABP would also like to know what went well in this project and what should have been done differently? Since this is a final evaluation we would also like to know the status of the sustainability of the project? Recommendations from the evaluation team are most welcome and will be of great value for planning of future programmes within Eye Health and Training of Ophthalmic Officers.

Aim and objectives of the evaluation:
The general aim of this summative evaluation is to assess whether the project has reached its overall goal to reduce the prevalence of blindness to 0,5 % in the Southern Zone of Eritrea. Another objective is the training component. An evaluation of content is needed and an evaluation of the impact of this component regarding the sustainability of the project.
The lesson learned in this evaluation will be most useful for NABP's work and for planning a future project in another district in Eritrea. NABP would like to get recommendations and good piece of advice on how projects like this should be administered as smooth as possible for all parties involved.

Scope of work:
The task of the evaluation team should include an assessment, and analysis of;

1) Achievements of goals
-the overall and purpose of this project to reduce the prevalence of blindness from 1% to 0,5 % in the Southern Zones of Eritrea.
-the impact of the training component and content, placement, follow-up, and evaluation
-assessment of the degree to which objectives, targets have been met

2) Co-operation with partner and the process of phasing out
- roles and forms of cooperation should be analyzed in addition to effectiveness of co-operation between NABP and MOH as stated in the agreement signed by both parties

-assessment of implementation of activities compared to planned activities for the period in question with focus on the process of handing over the project to national authorities
-analysis and assessment of the handover process to national authorities

3) Use of resources
-assessment of resource (human and economical) input and activities, relevance and sustainability, related to the project output.
- the organisational structure of Maidema, how does it contribute to achievement of the main goal (positive/negative)?
- assessment of project management, its efficiency, with focus on the overall cooperation with MOH as a local partner
-a consideration of the implementation of the project, has it been successful according to the main goal of this project?

4) Assessment of sustainability
-an assessment of sustainability both the economical and professional part should be analyzed. This assessment should include an analysis of local partners and their chance to carry out the activities after the end of the agreement.
-How does this project relate to national eye health plans?
-to what extent has the support ensured sustainability of the project?

Methodology
A qualitative method, based on field visit, interviews and analysis of documents should be used to be able to give an analysis of what significant change this project has caused, if any, to the people in Eritrea.

Suggestions on persons to be interviewed:
The Minister of Health, H.E. Saleh Meky (MOH)
The Head of International relations, Dr Gerhmai Tesfassilasei (MOH)
The Director General HRD, Dr Andom Ogbamariam
Director of DPC Sister Tirhas Mihreteab
Dr Desbele
Former NABP Ophthalmologist Dr. Sameer Drabal
NABP Ophthalmologist Dr. Sue Khanthamaly

Dr. Albert Kolstad former NABP Ophthalmologist and initiator of the project.

Datacollection.
-The Agreements between NABP and MOH
-The Evaluation report from 2004
-The final report of former NABP Ophthalmologist Dr Sameer Drabal (April 2007)
-Other project documents such as quarterly reports, annual reports and other background documents are available in NABP office in Norway. The leader of development work Terje B Iversen and adviser Hanne Kildahl will assist when necessary.

Conclusion and Recommendations for the project considering:
-Lesson learned from this project? What has been the impact of this project?
In what way has the cooperation between MOH and NABP led to any changes?
Did the project reach the defined goals?

Recommendations:
-Future clinical activities
-Future development of this project
-Future NABP support for the Vision 2020 programme in Eritrea
-Recommendations for future NABP eye health programmes

Work plan
This evaluation will begin week and include one-week field visit to Eritrea for consultation and information gathering at the project site (Maidema). Consultation with the Ministry of Health, Ministry of Health South Zone, NABP and other related actors should be done during this time.

Reporting
A draft report with main findings and conclusions from the evaluation shall be submitted to NABP, MOH and ATLAS/NORAD by….. week.
Their consideration and written comments must be submitted to the team within one week after receiving the draft report. Based on these comments from NABP, MOH and ATLAS/NORAD the team shall submit a final report within one week of receiving written comments to the proposed draft.
This final report shall be submitted to NABP, MOH and ATLAS/ NORAD not later than week….

Annex 2

List of people met:

Dr. Girmay Tesfasellassre, Director International Relations, MOH
Dr. Goitom Asgedom, Director Health Services Department, MOH
Dr. Andom Ogbamariam, Director General HRD, MOH
Dr. Tesfalem Gebrekidan, Director Health Services, Southern Zone
Ms. Tirhas Mihreteab, Director of DPC HRD
Mr. Bernando Kifleyesus, Director General, Dept. of Regulatory Services,
Mr. Fessahazion Tesfemariam, Administrator, Maidema Health Clinic
Mr. Yebio Gebreab, Ophthalmic Assistant, Maidema Health Clinic
Mr. Dawit Fessahaye, President of ERNAB
Mr. Johannes Gebrat. WHO, Asmara
Ms. Brita Næss, The Norwegian Embassy, Asmara.
Mr. Terje Iversen, Head International Department, NABP
Ms. Hanne M. Agerup Kildahl, Advisor International Department, NABP

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5. ERNAB: Stragegic plan 2004-2009
6. Menahem Prywes Dian coury,
   Gebremeskel Fesseha, Gilberte Hounsounou and Anne Kielland

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