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Haydom Lutheran Hospital – Final Project Review

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Acronyms

AMO	Assistant Medical Officer
ANC	Ante-Natal Care
CAT	Core Administration Team
CMT	Core Management Team
CO	Clinical Officer
DMO	District Medical Officer
DMT	Division Management Team
ELCT	Evangelical Lutheran Church of Tanzania
HLH	Haydom Lutheran Hospital
IEC	Information, Education and Communication
ISM	International School Moshi
MD	Medical Doctor
MDG	Millennium Development Goals
MP	Member of Parliament
MoHSW	Ministry of Health and Social Welfare
NGO	Non-Government Organisation
NIMR	National Institute of Medical Research
NLM	Norwegian Lutheran Mission
NSSF	National Social Security Fund
OPD	Out-Patient Department
PMO-RALG	Prime Minister's Office Regional Administration and Local Government
PMTCT	Preventive Mother to Child Treatment
PSPF	Public Service Pension Fund
RCH	Reproductive and Child Health
RNE	Royal Norwegian Embassy
SOU	Standard Unit of Output
STD	Sexually Transmitted Disease
VAT	Value Added Tax
VETA	Vocational Education Training Authority
VCT	Voluntary Counselling and Testing

Executive summary

Haydom Lutheran Hospital (HLH) is a first level referral hospital located in Mbulu district, Manyara region. HLH was established by the Norwegian Lutheran Mission in 1955 and is owned by the Evangelical Lutheran Church of Tanzania (ELCT).

HLH has over many years received substantial financial support from the Norwegian government through the Ministry of Foreign Affairs and NORAD. The support is presently channelled through the Royal Norwegian Embassy (RNE) in Dar es Salaam. In 2008, the RNE funded 70% of the hospital's budget. Most of the RNE funds are administered through a Block Grant.

This report is the final project review of the Block Grant for the period 2006-2009. Emphasis is placed on developments since the mid-term review, which was conducted in late 2007.

Among the main conclusions of the review are:

- HLH has maintained or increased its service output over time. There is a large increase in the volume of maternal health services.
- HLH provides services of high technical quality. There is scope for improvements in health worker performance.
- HLH has been very responsive to recommendations from the mid-term review. A new financial management system and a new organisational structure have been put it place.
- HLH serves as an effective development agent in a remote area of the country.
- HLH is a development project with a large value added relative to the resources spent.
- There is no short or medium term alternative to continued support from the RNE if the service provision of HLH is to the maintained.

HLH as a hospital

The service package

HLH offers a wide range of services. There are four notable changes in the service package since the mid-term review

1) A new Addiction Treatment Unit (Amani ward)
2) A new Child Care Unit
3) The closing of Harbanghet dispensary
4) The closing of two RCH clinic and the opening of one new clinic

These changes reflect that the hospital is responsive to the needs of the local population as well as to changes in the government supply of health services. The opening of the Amani ward represents a new service in the Tanzanian health system and has attracted patients from all over the country. The provision of such services raises profound questions about which role the hospital should aim at in the Tanzanian health system.

Recommendations:

- Given the weak financial situation of the hospital, the hospital should not further expand its service package in ways that will increase the demand on existing resources.
- Develop a policy regarding the provision of services beyond what is provided elsewhere in the Tanzanian health system. The policy should be developed through a transparent priority setting process.

Service outputs
We computed an output index covering the following output indicators: number of inpatients, outpatients, deliveries, reproductive and child health examinations, immunisation doses and family planning contacts. The output index remained fairly stable from 2004 to 2007. There was a substantial increase in outputs from 2007 to 2008 (+26%). Much of the increase is due to a strong increase in the number of inpatients (+31%) and in the number of deliveries (+36%). The output index of the health centres behaved in a similar manner.

The increase in the number of deliveries is of particular interest as this increase probably is a direct result of the MDG 4/5 support granted to the hospital by the RNE, which has enabled the hospital to provide free ambulance services and remove user fees on caesarean sections. Our data suggest that HLH has been able to attract more women to deliver in health facilities, not only attract women who would otherwise deliver at other health facilities.

Many services at HLH that are not covered by the calculated output index, for instance theatre operations. The number of operations has fluctuated considerably over the last years, the number of major operations reaching a record low of only 677 in 2007. The figure recovered to 1707 in 2008 but is still lower than planned for. The number of minor operations has also been on a decline.

Recommendation:
- Take further measures to increase productivity of the theatre.

Quality
We have not performed a systematic assessment of the quality of the hospital services, but our general impression is that HLH provides services of high quality compared to the average in Tanzania. The technical quality is high in many departments, but there is scope for improvements in health worker performance.

Some of the quality problems are due to lack of human resources. Others are related to weaknesses in administrative procedures, but there are also problems that stem from inadequate health worker motivation.

The management has initiated processes to address quality problems. Each division has developed a strategic document which includes quality and efficiency indicators, and the Core Management Team has developed a four point motivation strategy as part of their efforts to improve the quality of staff performance.

Recommendations:
- Strengthen the focus on the quality of the services.
- Routinely assess the adequacy of internal quality assurance procedures.
- Evaluate the implementation and effectiveness of the four point motivation strategy. If needed, refine and extend the strategy to include other aspects of health worker motivation.

Expenditures and incomes
The costs of running HLH have increased dramatically from 2004 to 2008 – up by 157%. The aggregate inflation in the same period has been 34%. The most important driver behind the cost increase is a huge increase in staff costs (+205%), but there is also a large increase in operating expenses (+124%) and medical expenses (+73%).

The mid-term review recommended keeping a close eye on the development in medical supply costs and other operating expenses. From 2007 to 2008, these expenditures increased by only 2.9%.

This is a remarkable achievement in light of the big increase in the service outputs in the same period and the general inflation rate of 7.0%.

There was a strong increase in the expenditures on hospital cars from 2007 to 2008, at the same time as the income from hospital cars declined significantly.

Recommendation:

- Investigate reasons for increasing trend in expenditures and declining trend in revenues of hospital cars.

Due to the sharp increase in costs, HLH has become increasingly dependent on donor funds. The RNE share of the total income increased from 48% in 2004 to 59% in 2006, and reached 70% in 2008.

The hospital has managed to increase the funding from the Government of Tanzania from around 300 mill Tsh in 2006 to more than 500 mill in 2008, up from 10% to 11% of the budget. There are no signals of any substantial increase in the funding from Government of Tanzania in the foreseeable future.

Aggregate user fees increased by 22% from 2004 to 2006, and further increased by 16% from 2006 to 2008, despite the fact that there has been no change in the fee structure since 2003. This increase notwithstanding, the share of user fees in total income decreased from 18% in 2004 to 9% in 2007 and 2008. The mid-term review recommended a revision of user fees, and a new fee scale was implemented in the first quarter of 2009. The percentage increase in fees varied substantially across services.

Recommendations:

- Evaluate the impact of the increase in user fees on the accessibility and utilisation of hospital services.
- Regularly revise user fees in line with general inflation unless particular local circumstances dictate otherwise.
- Ensure that reasons for differentiation in price setting policies across services are documented.
- Consider implementing a consultation fee for outpatients, similar to government facilities in the area.
- Ensure that the prices of drugs and tests are not lower than in government facilities.

Human resources

It was not easy to obtain data on the number of staff in a format that is suitable for presentation and analysis.

Recommendation:

- Develop a database for improved human resource management.

The number of staff has increased significantly since 2007. A precise estimate is difficult to provide, but an increase of at least 30% does is not an unreasonable estimate. The increase has come mainly within the categories of medical attendants, temporary staff, and staff for the workshop.

Among the key medical cadres, we notice a positive development in the number of doctors since 2007, mainly due to a larger number of expats. It is worrying that the number of clinical officers and the number of nurses seem to have declined significantly since 2007. (There is some

uncertainty around the figures for the nurses, though.) Some departments have been more heavily influenced by out-migration of nurses than others.

Recommendation:

- Revisit the data on the development in the number of staff over time, with a particular focus on the number of nurses.
- Ensure that disproportionate changes in the number of staff in some departments are followed by reallocation of staff according to need.

HLH has pursued a strategy of sending own staff for training in order to improve the human resource situation. The total number of staff on training is 48 at the moment. The hospital has however experienced problems with retaining students after they finish their studies.

Recommendation:

- Evaluate the policies related to sending staff on further training in light of the experiences with retention of staff after studies are completed.

There has been a dramatic increase in the costs of personnel at HLH since 2004. Total staff costs are projected to increase by more than 2,200 mill Tsh from 2004 to 2009, an increase of 261%. The main cost drivers are salaries, allowances and insurance contributions. These costs are projected to increase by 318% from 2004 to 2009, corresponding to an average annual increase of 33%.

We have roughly estimated that the government salary increase has caused around 55% of the increase in salaries at HLH in the period 2004-2009. The rest of the increase (45%) is hypothesised to be caused by increased allowances and an increase in the number of staff. The government salary increase was the most important driver in the beginning of the period, while the other factors have been more influential during the last two years.

Competition for qualified staff is still fierce, even though HLH pays its staff at least as much as does the government. At present, the main economic reason for health workers to move from HLH to a government health facility is that HLH does not match the pension benefits offered by the government. We have estimated the difference in pension benefits to 2% with 15 years of service, 18% with 20 years of service, 38% with 30 years in service, and 45% with 35 years of service. For a person with 30 years of service and a salary of 400,000 upon retirement, the difference amounts to 12 mill Tsh.

Recommendations:

- Continue the efforts to include all HLH staff in the government pension scheme.
- Continue to monitor reasons for staff leaving HLH, with a particular focus on the pension issue.
- Inform staff about the real differences in pension benefits across schemes.
- Consider implementing a private pension scheme on top of the existing one, if necessary in order to motivate and retain staff.

Efficiency

Our estimates of outputs relative to the number of staff indicate that efficiency remained stable or dipped somewhat between 2004 and 2007 and then increased substantially from 2007 to 2008. Thus, the increase in outputs has more than outweighed the increase in the number of staff in this period.

Capacity utilisation seems to have declined in the wards. This may be related to a more precise estimation (and scale up) of the number of beds from 2006 to 2007. But it is also related to a significant reduction in the average length of stay for inpatients.

Organisational reform
HLH implemented a new organisational structure in December 2007. The day-to-day administration of the hospital is managed by the Core Administration Team (CAT). The Core Management Team (CMT), which includes the CAT plus all nine head of divisions, takes all major decisions. Each division has a Division Management Team (DMT), consisting of the division head, all department leaders and a Division Medical Chief with a veto power.

The organisational structure seems suitable for a hospital of the size of HLH. The challenge is to put the structures to work, in particular to ensure good flow of information and effective collaboration between the Head of Divisions and the Division Medical Chiefs.

The Board of the hospital has decided to make the hospital into a foundation. This organisational change will imply that the ELCT in the future will have less direct influence on the running of the hospital. It will also open up for a stronger professional leadership through a new composition of the Board.

Recommendation:
- Continue the efforts to ensure that information flows effectively and that decisions are implemented as intended.
- Until confidence is reached in the reliability of information flows, the top management should keep eyes open to be abreast of issues arising at the department and division level.
- Evaluate the functioning of the relationship between the Heads of Divisions and the Division Medical Chiefs in due time.

Financial management
HLH has made enormous progress on financial management during a very short period of time. A new financial management system was developed during the end of 2008 and was implemented as of 1st January 2009. A new purchasing system has also been implemented and integrated with the financial management system. The hospital now has a fully professional financial management system which is up to international standards.

There is still a potential for improvement in the way the system deals with income generating activities. However, to implement a financial system that allows the management to fully trace the profits and losses of each income generating asset is probably neither practical nor useful enough to defend the associated costs.

Recommendation:
- Develop a system for periodically assessment of the income and expenditure profiles of the income generating assets of the hospital, focusing both on the potential for increasing the incomes (e.g., through price changes) as well as on the possibilities for outsourcing of services.

Health information system
The analysis of the levels of outputs and inputs at the hospital clearly revealed some of the weaknesses of the current health information system. The development of a new health information system started in May/June 2008, and the new system is now practically ready for implementation. However, there is a need for investment in physical infrastructure

HLH as a development agent

In addition to serving as a hospital, HLH has played an important role in the general development of Mbulu and surrounding districts. Part of this development comes from HLH being a large employer and from the incomes this brings to the area. In addition, HLH has facilitated a large number of development projects in the area, which has improved the livelihoods of many people. In practice, HLH is functioning as a strong, local developmental NGO in a remote and relatively poor area of the country.

Most of the development projects that have been administered through HLH fall within the following categories:

- Food security and clean water (famine relief, agricultural projects, boreholes and dams)
- Transport infrastructure (roads, bridges, air strips)
- Capacity building/education (construction of primary and secondary schools, nursing school)

During recent years, HLH has in addition been strongly involved in projects on:

- Culture, indigenous people's rights, and the co-existence of diverse ethnic groups

The three main projects in 2007 and 2008 have been culture and co-existence, a water project, and a project at the secondary school. In addition, there has been planning of a new trade school project.

Most of the development projects have directly addressed basic human needs (access to food, water, education and health services) and are thus clearly relevant to human development. A few projects – such as the pipeline water supply in Haydom – have originated in the needs of the hospital. But these needs were at the same time the needs of the community, and HLH has addressed these as well as their own. The projects have reduced the vulnerability of the populations to food and health problems, enhanced their economic opportunities, and empowered people to manage their own lives.

All development projects administered by HLH are funded from external sources and operate in financial independence of the hospital. Although the projects are organised outside the hospital, they usually involve hospital staff in one form or the other, for instance in the initiation of new projects and in their management structures. Nevertheless, it is our impression that the current development projects do not represent an unreasonable load on hospital resources. The main danger seems to be that development projects at times may require a lot of attention from the top management of HLH, especially in the initiation phase and in those cases when projects do not run as smoothly as projected and therefore need extra managerial support. The number and scope of development projects need to be adapted to this reality in order not to come into conflict with the management of the hospital itself.

Taking HLH into the future

Teaching hospital

HLH is recognised by the government as a first level referral hospital. In 2005/06, HLH unsuccessfully applied to become a second level referral hospital. The Board has now decided to try to make HLH a teaching hospital. The Ministry of Health and Social Welfare has responded favourably to this objective.

HLH wants to establish a set of accredited training services that will attract increased funding both from international and national sources. The training will consist in education to specialist level for

both foreign and local doctors. The trainers will be specialists from abroad. HLH will join other similar hospitals in the South in order to broaden the platform for this North-South training programme.

Funding for trainers will come from foreign sources. A key underlying assumption is that foreign Ministries of Health will give accreditation to HLH as part of their own training programs and therefore pay the salaries of the trainers and, in addition, provide funding to HLH for the education services provided to students sent from abroad.

The teaching hospital concept, if successfully implemented, promises considerable benefits in terms of increased availability of doctors and specialists at HLH. The economic benefits are more uncertain and probably not very large. There are also associated costs that need to be covered.

Potential benefits of becoming a teaching hospital include:

- Increased availability of human resources through four channels: 1) Specialists from abroad (trainers), 2) Foreign doctors on specialist training, 3) Tanzanian doctors on specialist training, 4) Tanzanian interns staying at HLH.
- Specialist training for HLH staff.
- Funding from abroad through payment for education facilities provided to the foreign students.
- Increased leverage vis-à-vis the Government of Tanzania in negotiations about increased government funding.

Costs include the need to provide housing for foreign specialists and the need to establish an internationally accredited primary school.

Risk factors include:

- Uncertainty about the possibilities of attracting foreign (Norwegian) funding from Ministries of Health for training of foreign (Norwegian) specialists at HLH.
- Feasibility of ensuring a constant and reliable flow of specialists to Haydom.
- Uncertainty related to the establishment of an international primary school, in particular the possibilities of attracting qualified teachers.

Recommendations:

- Continue to explore the possibility of becoming a teaching hospital, in particular the realism in attracting funds from the Norwegian Ministry of Health.
- Create a meaningful dialogue with Tanzanian authorities throughout the process.
- Document the benefits to foreign (Norwegian) ministries of health of training some of their specialists in the South.
- Develop a budget for the project.

Future funding from the Government of Tanzania

The hospital has not succeeded in significantly increasing the contributions from the Government of Tanzania during the past two years, despite several attempts.

Potential funding sources from the government include:

- District basket funds, including service agreements and funds for pay-for-performance.
- Payment for staff through staff grants or through secondment of staff.

Recommendations:

- Take a proactive role vis-à-vis local governments in the years to come in order to maximise contributions from the service agreement, the funds set aside for pay-for-performance and ordinary district basket funds.
- Use the service agreement as a platform to negotiate a staff grant for a higher number of health workers.

Future funding from the RNE

The support from the RNE seems to have been guided by the dual objective of 1) maintaining the operations of the hospital and 2) gradual exit of the RNE support. These objectives have turned out to be internally inconsistent, and they are likely to remain so in the foreseeable future. The RNE therefore needs to state more clearly what their primary objective is.

If the RNE decides to continue its support of HLH with the aim of maintaining the hospital's activities, the level of support should reflect that costs will increase over time due to general inflation and a likely increase in real wages.

There is also a need for a broader discussion of the mandate that comes with future support from the RNE, especially in light of its high and increasing share of the hospital's budget.

Given that continued operations of the hospital is a more important objective than to exit the RNE support, the possibilities for exit are not very large in the short to medium run. The bargaining power vis-à-vis the main alternative funder – the Government of Tanzania – is simply very weak. It is therefore unlikely that the government will substantially increase funding to HLH through some kind of bilateral bargaining process. However, the process of making the hospital a training institution – if well managed – might change the structure of this "bargaining game".

Significant increases in government funding of voluntary hospitals are more likely to come about through sector wide reforms. The RNE can play a more proactive role in these processes now as they have become members of the health basket donor group.

The support from the RNE is currently divided into a block grant and an MDG 4&5 grant. In practice, it is impossible to establish the added value of the MDG 4&5 grant, because it is impossible to know what would have happened to the level of mother and child health services at HLH if the hospital did not receive the grant. Separate reporting of activities and expenditures for this grant has thus limited value. We are inclined to believe that the special attention that has been devoted to the MDG 4&5 targets could also have been achieved if all support was administered through one grant, provided the contract included specific MDG 4&5 performance indicators.

Recommendations:

- Clarify the RNE objectives regarding its future support of the hospital (continued operations vs exit of support).
- Secure the continued operations of HLH over the coming 5-10 years through a grant which accounts for the expected increase in costs over time.
- Clarify the mandate that comes with the RNE support, emphasising expectations on the role of HLH in the Tanzanian health system.
- Be proactive in advancing the public-private partnerships agenda through the health basket donor group and other channels.
- Involve the Government of Tanzania in the plans of developing HLH into a training hospital and try to build a mutual understanding about increased local responsibility for the future funding of the hospital.

- Integrate the MDG 4&5 financial support with the general support of the hospital, provided that the hospital's focus on MDG 4&5 services can be effectively maintained through other measures.

Other funding sources
HLH is making constant efforts to mobilise resources through private channels, especially through the Friends of Haydom in Norway, but also locally through biannual hospital days and gifts from the local churches. The re-organisation of the hospital to a foundation is envisaged to generate increased interest from new private donors.

The HLH does not seem to have been very active in exploring the possibilities to attract funding from international public/private partnerships, such as the Global Fund.

Recommendation:
- Take a more proactive role vis-à-vis the Global Fund and other international funding sources.

Research collaboration offers another potential pool of resources, and HLH has a long history of research collaboration both nationally and internationally. The benefits to the hospital of research activities have mainly come through two channels, 1) new knowledge that enables improvements in the quality of hospital services, and 2) added financial, technical and human resources.

To date, the main resource inputs from research activities have been in terms of equipment and human resources. Significant financial contributions have so far been the exception rather than the rule. In order to increase the financial contributions, the hospital plans to charge an overhead on all new research projects.

The research activities at HLH may become an important asset in discussions about making HLH into a training hospital.

Recommendations:
- Promote research projects that ask questions with relevance to the operations of the hospital.
- Ensure that all new projects add to the total resource base of the hospital.

1. Introduction

1.1 Scope

Haydom Lutheran Hospital (HLH) is a first level referral hospital located in Mbulu district, Manyara region. HLH was established by the Norwegian Lutheran Mission in 1955 and is now owned by the Evangelical Lutheran Church of Tanzania (ELCT). The hospital has been part of the national health plan in Tanzania since 1967.

Over the years, HLH has received substantial financial support from the Norwegian government through the Ministry of Foreign Affairs and NORAD. The support is presently channelled through the Royal Norwegian Embassy (RNE) in Dar es Salaam. In 2008, the RNE funded 70% of the hospital's budget.

The support from RNE is partly administered through a Block Grant. The Block Grant agreement was originally a 44.6 mill NOK contract running from 2006 until end of 2010. The time profile of the support implied in practice a massive down-scaling of the hospital activities, especially since no realistic alternative of increased government support was in sight. The dramatic salary increases that were experienced during the contract period further worsened this picture, and it was decided to shorten the contract period and add the last year's funds on top of the allocations for 2008 and 2009. Since 2007, HLH has in addition received a grant from the RNE related to the achievement of Millennium Development Goals 4&5 (maternal and child health).

The Block Grant agreement states that the support will be evaluated in a mid-term review and a final project review. The mid-term review was carried out in September 2007. [1] This report contains the final project review. The purpose of the review is to assess HLH as a running hospital as well as a participant in the general development of Mbulu district. The review will also assess the present financing sources, financial implications of the Government of Tanzania's wage and pension policies, as well as potentials for and capacity to access alternative or additional resources that will contribute to sustain activities in the long run. Emphasis is placed on new developments since the mid-term review (see Appendix 1 for the full Terms of Reference).

The team members would like to take this opportunity to express our gratitude for the warm hospitality, friendliness and good cooperation afforded by the staff at Haydom, the Embassy, the Ministry of Health and Social Welfare, local government representatives, representatives from ELCT and the local community.

1.2 Methodology

The team used the following methodologies: 1) document reviews, 2) field visits, 3) interviews, meetings and group discussions, 4) own observation and compilation of statistics.

Documents reviewed:

- Appropriation Document and Contract for the Block Grant from the RNE.
- Project reports and audited accounts related to the Block Grant support from the RNE.
- HLH annual reports 2004-2007.
- Correspondence between HLH and the Ministry of Health and Social Welfare.
- Haydom Lutheran Hospital Five Year Strategic Plan 2002-2006
- Audited Financial Reports – 2004-2008
- Revised budget – 2009

[1] Mæstad and Brehoney (2007) Review of Haydom Lutheran Hospital. CMI report 2007: 18.

- Assessment of the financial management system (Baker Tilly, 2007)
- Internal progress report on developments since the Mid-term Review
- Annual report on MDG 4/5 support (2008)
- Report from CORAT on the establishment of Haydom Diaconical Foundation
- Concept note on International Baccalaureate program at Haydom
- Training hospital concept note
- Memorandum of understanding between Ministry of Health and Social Welfare and Madaktari Africa.
- Memorandum of understanding between HLH, Sørlandet Hospital (Norway), and Christian Medical College (Vellore, India)
- Internal documents and reports

Field visits:

- Haydom Lutheran Hospital
- Reproductive and Child Health (RCH) outreach clinic
- Development projects (secondary school, cultural centre)
- Mulbadaw farm and CMSC workshop

Interviews, meetings and group discussions:

- Core Administration Team HLH
- Core Management Team HLH
- Division leaders and staff at HLH
- Ministry of Health representative
- Local government officials in Mbulu districts
- ELCT Bishop
- Local villagers
- Royal Norwegian Embassy, Dar es Salaam

Compiling of statistics:

- Financial statistics
- Human resources statistics
- Hospital activities statistics

The field visits, meetings and interviews were conducted in the period 21-29 May 2009 (see Appendix 2 for the itinerary of the team members and Appendix 3 for a full list of people interviewed).

Further details about the methodologies used are given in each sub-chapter.

2. HLH – hospital and development agent

While HLH started as a hospital, it has grown to take on responsibilities and activities far beyond what is normal for a hospital. The broad activity profile stems from a vision and a set of objectives which emphasise a holistic perspective on human well-being and development. The vision of HLH is ***to cater for the needs of the whole human being, i.e. physically, mentally, spiritually and socially***.

This vision has been translated into the following set of objectives:

- Reducing the burden of disease;
- Poverty alleviation;
- Building and maintaining the institutional capacity of both HLH and its partners; and
- Improved collaboration with likeminded institutions.

By extending its focus beyond a mere reduction in the burden of disease – to food security, water supply, development of transport infrastructure, capacity building and education, and the support of marginalised and indigenous people – HLH has become a broad-spectrum development agent in a poor and remote area of the country.

While this review acknowledges the multifaceted objectives of HLH and will consider HLH both as a hospital and as a development agent, emphasis will be placed on the hospital activities.

3. HLH as a hospital

HLH is located in the south-western corner of Mbulu district, Manayara region. The immediate catchment area of the hospital comprises 316,000 people from four divisions in three districts (Mbulu, Hanang and Iramba). The greater reference area is estimated at 2,155,000 people[2] and includes all divisions in the above-mentioned districts, as well as Meatu district (Shinyanga region), parts of Karatu district (Arusha region), and Singida Urban and Singida Rural districts (Singida region).

This chapter assesses the operations of the hospital by analysing the developments over time in activity levels (outputs) and the use of financial and human resources. We then use the trends in activity levels and resource usage to assess developments in efficiency levels. In addition, this chapter discusses recent changes in the organisational structure as well as the financial management system of the hospital.

The mid-term review came with a number of recommendations for actions that should be taken to improve the running of the hospital. The hospital has worked very seriously with these recommendations. They appointed a working group to address the recommendations, and to date, practically speaking all recommendations have been addressed in a systematic way. The progress is documented in an internal evaluation report made in preparation of the final project review. We found the internal evaluation to give a correct picture of these developments.

3.1 Service provision

3.1.1 The service package

In order to reduce the burden of disease in the area, HLH offers a wide range of services, both curative and preventive (see Appendix 4 for a list of the various service units/departments at HLH).

There are four notable changes in the service package since the mid-term review;

1) A new Addiction Treatment Unit,
2) A new Child Care Unit,
3) The closing of Harbanghet dispensary,
4) The closing of two RCH clinic and the opening of one new clinic.

An Addiction Treatment Unit (the Amani ward) was opened in December 2007. The unit can host up to 12 clients at a time. A six weeks program at the hospital is followed by an 11 month follow-up period. The unit has been established in response to the severe problems with alcohol abuse in the Haydom area. The unit has attracted clients from all over Tanzania. The District Medical Officer in Mbulu district praised this new service for its high relevance and usefulness, claiming also that this service was very favourably looked upon by the District Commissioner. The district government has used the service for some of its employees as well as clients from other regions, desperate in search of this kind of service.

A new Child Care Unit was opened in March 2009. The unit previously occupied part of the maternity ward but has now moved into a separate building. This has greatly improved the quality of the physical amenities of this service.

[2] Estimated figures for 2009. Source: HLH.

Harbangeth dispensary, which used to be operated by HLH, has been closed. The facility rented a location from the local school but was not allowed to continue this arrangement and did not have money to make a new building. The government is now building a new dispensary in this village.

One RCH clinic (Dirm) has been closed due to the building of a new government health facility in the area (despite protests from the local villagers). Yet another clinic (Endamialy) is scheduled to close in the near future for the same reason. A new clinic (Donja) has been opened in a previously unserved area, and yet another clinic (Gorimba) is scheduled to open in August this year, thus leaving the total number of outreach clinics at its previous level of 27.

There are no plans of expanding the service package offered at HLH at present. Note, however, that the plan of establishing HLH as a training hospital may bring this issue up again, as the hospital will have to provide the students with a broad enough clinical platform.

The changes that have taken place in the service package over the last year and a half demonstrate that the hospital is responsive to the needs of the local population as well as to changes in the government supply of health services. At the same time, the opening of the Amani ward demonstrates some dilemmas involved in expanding the service package beyond what is provided elsewhere in Tanzania. The ward is quite unique in the country and has attracted clients from far outside the normal catchment area of HLH. Hence, despite being set up to address a local need, the service may eventually end up reducing the total services available to the local community (insofar as the costs of serving the non-locals exceed the additional revenues they bring to the hospital). Since the ward is not yet operating at full capacity, this is at present more of a theoretical problem, but the issue may arise in the future, and it is also relevant for other services offered at HLH, such as the CT scan, some particular types of surgery etc.

This issue relates to the deeper question of what the mandate of the hospital is or should be. Is it to serve the people of the Haydom area, the local region(s), or does it somehow also extend to the people of the whole country? The needs are "endless", and with enough finances a lot more can be done. We see it as a responsibility of the RNE, as the hospital's biggest donor, to specify more clearly which mandate that comes with their funds.

The Essential Health Care Package describes a minimal set of services that any hospital needs to provide. Services beyond this package should be decided through a process which is transparent for important stakeholders, including the major donors. The internationally accepted "Accountability for Reasonableness" framework[3], which is well-known to the management of the hospital, may provide a useful guide to how such priority setting processes can be conducted.

Recommendations:

- Given the present financial situation of the hospital (see below), the hospital should not further expand its service package (assuming that this will increase the demand on existing resources).
- The hospital needs to develop a policy regarding the provision of services beyond what is provided elsewhere in the Tanzanian health system. The policy should be developed through a transparent priority setting process. How far should the hospital go in providing additional services? Is it feasible and desirable to implement differential access to such services? If not, which implications would this have for the type of services offered?
- The RNE should, in cooperation with the hospital's management, reflect on the deeper mandate of the hospital in terms of its role in the Tanzanian health system, the scope of services provided, and the catchment population served. The aim should be to provide clearer guidance on the future development of the service package.

[3] Daniels N. Accountability for reasonableness. *BMJ* 2000;321:1300-1.

3.1.2 Service outputs of the hospital

The output of a hospital can be evaluated both in quantitative and qualitative terms. This section reviews the quantitative indicators, while quality aspects are further discussed below.

The mid-term review pointed at several shortcomings in the output indicators of the hospital and recommended to design and implement a new and more reliable health information system. The hospital has worked intensively on a new information system which is to be implemented during the coming months (see below). The activity reports utilised in this report is however based on the old system with all its inherent shortcomings. We have used the data from the mid-term review for the period 2004-06 and have added new statistics for the years 2007 and 2008. We discovered several inconsistencies in the aggregation of data also in these last years; reports from different sources sometimes showed quite different results. We asked hospital staff to reassess figures for the last two years by consulting the primary data sources. We here report the results after this reassessment, though we have not been able to assess the quality of this process. This calls for some caution in the interpretation of the findings.

Table 1 displays key quantitative output and input indicators for the hospital from 2004 to 2008

Table 1. Key output and input indicators

	2004	2005	2006	2007	2008
Outputs					
Inpatients	11 029	11 321	11 082	12 389	16 233
Outpatients	79 077	76 226	*64 000*[4]	51 149	65 380
Deliveries	3 022	3 475	3 222	3 343	4 558
RCH examinations	104 493	108 097	111 120	105 697	111 228
Immunisation doses	52 341	50 751	61 189	57 043	54 592
Family planning	2 618	2 290	3 365	1 350	4 522
SUO (based on above outputs)	**323 646**	**328 760**	***315 820***	**318 631**	**400 458**
Theatre					
Major operations	1 677	1 289	1 392	677	1 707
Minor operations	2 889	2 430	2 053	2 180	1 786
HIV/AIDS services					
Voluntary counselling / testing (VCT)	n.a.	n.a.	n.a.	5 023	2 818
Receivers of HIV care	n.a.	n.a.	n.a.	530	598
PMTCT, testing	n.a.	n.a.	n.a.	8 594	7 438
Information, education, communication (IEC)	n.a.	n.a.	n.a.	7 344	8 136
Eye services					
Patients	n.a.	n.a.	n.a.	n.a.	7 106
Glasses dispensed	n.a.	n.a.	n.a.	n.a.	880
Cataract operations	n.a.	n.a.	n.a.	n.a.	598

Sources: Annual reports 2004-2008. Reassessment of key output indicators in 2007 and 2008. Direct inputs from Eye Department and the HIV Care and Treatment Clinic. Pepfar reports 2007/08.

A rough indicator of aggregate output can be obtained by weighing outputs together into a *Standardised Unit of Output* (SUO) index. We applied a SOU framework developed in an Ugandan context (for details on how the SOU index has been calculated, see Appendix 6). One SUO is here assumed to represent the equivalent of one OPD consultation. Note, however, that there are many

[4] This figure deviates from the reported figure of 50,129 outpatients in the annual report. We discovered that at least part of the reason for the sharp drop in the number of outpatients from 2005 to 2006 is probably mistakes or inconsistencies in how reattendances are counted. We re-estimated the number of outpatients in 2006 assuming that the share of reattendances in the total patient flow was the same as in previous years.

services provided by HLH that are not included in the index. These services could have been included in the SOU if we had detailed data on costs or human resources requirements of each of these services, but these data are lacking. Hence, the SOU index needs to be interpreted with great care.

The SOU index suggests that aggregate outputs covered by the index remained fairly stable from 2004 to 2007 but that there was a substantial increase in outputs from 2007 to 2008 (+26%). Much of the increase is due to a strong increase in the number of inpatients (+31%) and in the number of deliveries (+36%). In addition, the number of OPD patients recovered from a very low level in 2007. The number of Reproductive and Child Health consultations and the number of family planning contacts also reach record levels in 2008.

The number of outpatients should be expected to stabilise on a somewhat lower level than in previous years due to the opening of several new government health facilities in the area. According to the management, it is also reasonable to assume that the number of malaria patients is lower than in previous years, following a general pattern in Tanzania.

The increase in the number of deliveries is of particular interest as this increase probably is a direct result of the MDG 4&5 support, which has enabled the hospital to provide free ambulance services and remove user fees on caesarean sections. Based on the figures from the first five months of 2009, it seems that the number of deliveries has stabilised at the record level of 2008. An interesting question in this context is whether free ambulance service has attracted more women into hospital care or whether Haydom now increasingly is attracting women that otherwise would have gone to other hospitals. Data from Mbulu district office suggest that the former is the case; the increase in the total number of deliveries in Mbulu district from 2007 to 2008 is larger than the increase at HLH (HLH accounts for 70% of the total increase). The DMO said that the district in this period also has made efforts to increase the number of deliveries in health facilities by ensuring that each facility has a midwife.

As indicated in Table 1, there are many activities at HLH that are not captured by the SOU index. HLH performs for instance a big number of operations each year. The number of operations has fluctuated considerably over the last years. In particular, the number of major operations reached a record low of only 677 in 2007. This low level was partly due to lack of surgeons, but it was also heavily influenced by a “go slow” attitude at the theatre in this period. The theatre at HLH used to enjoy a rather privileged position. However, with the changes in organisational structure and policies that has taken place under the under management, the theatre has lost several of its privileges, now being treated as any other department at the hospital. This change was not uncontroversial. Nevertheless, the number of major operations recovered in 2008, but is still significantly lower than the ambition of the hospital management. Moreover, the number of minor operations is still on a decline. The hospital management acknowledges that there is a potential to increase productivity in the theatre, and one of the issues that has been brought up repeatedly at the division meetings is how to reduce delays in the execution of operations.

Recommendation:

- Take further measures to increase productivity at the theatre.

Table 1 also reports some output data on HIV/AIDS prevention and treatment for the last two years and for the Eye Department in 2008. Both HIV/AIDS prevention (HAPO) and the Eye Department provide extensive outreach services. HAPO covers a total of 75 villages. The Eye Department saw almost 60% of its patients in 2008 through outreach at 36 different locations. In a gender perspective it is also interesting to note that male clients constituted 60% of the clients for Voluntary Counselling and Testing (VCT) and 53% of the clients for Information, Education and Communication (IEC) in 2007/8. The high share of male clients is related to the fact that HLH has established a male mobile clinic that has become very popular. This clinic also provides syndrome management of sexually transmitted diseases (STDs). Table 1 shows a marked decline in the number of VCTs from 2007 to 2008. The only explanation given for this decline is that HLH has had problems with obtaining a

sufficient number of test kits, but we do not know how much of the decline that is attributable to this factor.

The Reproductive and Child Health (RCH) services are a key component of the work of HLH to reduce the burden of disease in the community. HLH is running one static and 26 mobile RCH clinics. Six of the clinics are accessed by plane. In addition, the three health centres run 8 mobile clinics. The RCH clinics provide a comprehensive package of services: antenatal services, immunisation, family planning, distribution of mosquito nets, HIV testing, and other mother and child health services.

A visit to one of the RCH outreach visits was a rewarding experience. In the site, at a church surrounding, more than 50 women, some pregnant and other with children, listened carefully to the ongoing health education on HIV/AIDS. Individual interviews were held with six women who were either pregnant or had brought children. Interviews were also held with some of the 10 health workers who had come from HLH to offer the services. Services included weighing of children, vaccination, antenatal care, and VCT.

Generally, the women were very satisfied with the services. They also indicated that some had travelled and bypassed nearer health facilities to come to this outreach. When enquiries were made on reasons for their preference of these services, the interviewed women and the evangelist declared that the quality was perceived to be better than the one offered in the government health facility. All the pregnant women who were interviewed had plans to go and deliver at HLH. Their plans were influenced by their confidence that they would not be neglected, that if an emergency caesarean section would be required, they would quickly obtain it, and that nurses would be kind to them compared to the government alternative. One of them lamented on how health services at the government health facility were uncertain and often it was a waste of time as you would be referred to HLH even without any attendance. Some of the women were aware of the ambulance services and declared it was limited to serious cases, but all of them knew that maternal services were free at HLH. It thus seems that the free maternal services are also a major factor for attendance at HLH compared to other places.

Generally, the women expressed that men were less keen to attend the services, some being busy during the day and others simply thinking that the services were for women and children. Some of the health workers on the site expressed that there was still a lot of misperception on certain services such as family planning. Due to the misconceptions, clients for family planning often came at late hours after the others had left. These findings indicate the demand of the services rendered by HLH. However, there is a need to further strategise on how to overcome barriers of male attendance and the misconceptions towards family planning in general.

3.1.3 Service outputs of decentralised health units

Three health centres and one dispensary are run by HLH. Aggregate activity data for the three health centres (Balangdalalu, Gendabi and Kansay) is reported in Table 2.

Table 2. Key output indicators health centres

Outputs	2004	2005	2006	2007	2008
Total no. of inpatients	1 416	1 256	1 547	1 776	1 823
Total no. of outpatients	8 401	9 545	8 870	11 775	17 976
Total no. of deliveries	415	466	520	784	798
Total no. of RCHS examinations	16 379	18 815	20 356	19 727	25 209
Total no. of immunisation doses	22 044	19 421	13 776	11 233	15 815
Total no. of family planning contacts	485	500	417	1 141	644
SUO	**44 557**	**44 257**	**47 817**	**55 016**	**65 401**

Source: Data reports from the HLH administration.

Aggregate outputs have increased significantly over the last two years after a period of quite stable output figures in 2004-06. In particular, there seems to be a sharp increase in the number of outpatients. This increase is solely due to a more than 120% increase in the number of outpatients at Balangdalulu health centre, while the number of outpatients has declined at the other health centres. The number of immunisation doses seems to be recovering after a sharp downward trend in the beginning of the period.

We do not have a good explanation for the sharp increase in the number of outpatients at Balangdalulu, and we encourage the management to look further into the reliability of these figures. We made an attempt to consult underlying annual report statistics but found to many holes in that source to be able to utilise it as a control.

The management reported that Kansay health centre lately has not been able to maintain its supply of electricity. Lack of electricity is not creating a conducive environment especially for inpatients, and the management of HLH is concerned that this will create lack of trust in the quality of the service.

Recommendation:

- Review the output data of the health centres, trying to trace reasons for reported changes.

3.1.4 Quality

Health impacts of the hospital services depend not only on the quantitative outputs but also on the quality of the services. We have not performed a systematic assessment of the quality of the hospital services. Here we discuss only some of the issues that came up in various interviews. Note that anecdotal evidence of this kind is likely to be biased and represent only part of the reality.

Our general impression is that HLH provides services of high quality compared to the average in the Tanzanian health system. Especially the technical quality, such as the availability of equipment and supplies, appears to be relatively high. The fact that HLH attracts referral patients from large parts of northern Tanzania is a strong signal of the high perceived quality of the hospital. Nevertheless, there seems to be a clear potential for improvement in the clinical quality of services. Among the reported quality problems were:

- Poor tracking of inpatient prescriptions
- Ordered procedures not being done
- Ordered tests not being done or severely delayed
- Inadequate documentation of monitoring of labour (parthograms inadequately or not filled)
- Elective surgeries often delayed
- Several cases of severe negligence / misconduct

We presented these reports to the Core Management Team. Their impression was that severe episodes of misconduct are rare, but they also acknowledged that there are a number of quality issues that need to be addressed. One additional issue brought up by the CMT is the problem up maintaining high quality of the services of the male mobile clinic in STD services, due to lack of clinical officers and test kits. Another issue that currently is being addressed by the CMT is an increasing problem of late-coming health workers.

Some of the quality problems are due to lack of human resources. In several of the wards, the low number of nurses has lead nurse students and medical attendants to do their work. Further, the large increase in the number of deliveries without a corresponding increase in the number of personnel has stretched the capacity of the maternity ward to its limits, making it difficult to maintain the desired level of quality. Other quality issues, such as a weak system for documenting which medications that have been given, seem more related to weaknesses in administrative procedures. Finally, there are quality issues such as negligence and late-coming that seem to stem from low health worker motivation.

The CMT has initiated processes to address quality issues along several of these dimensions. In addition to the ongoing efforts to increase the number of staff in key clinical and nursing cadres, there are also plans to increase training for medical attendants (e.g., in the paediatric ward). Furthermore, each division has developed a strategic document which includes quality and efficiency indicators. Each division will define and set the target level of their own indicators. The division leaders will then enter into a formal agreement (a Core Management Team Agreement), through which division leaders commit to attaining a certain level of quality. This system of quality assurance replaces an older and not very functional system of a quality control committee that was supposed to perform quality inspections around the hospital.

The Core Management Team has also developed a four point motivation strategy as part of their efforts to improve the quality of staff performance:

- Encourage staff to give true compliments
- Develop an "asking culture"
- Identify negligence
- Develop team spirit

This strategy has been sent for discussion and further refinements at the division level.

These initiatives to address the quality issues are still in their infancy, and it remains to be seen how effective they will be in raising the quality of the services.

Recommendations:

- Strengthen the focus on the quality of the services.
- Routinely assess the adequacy of internal quality assurance procedures.
- Evaluate the implementation and effectiveness of the four point motivation strategy. If needed, refine and extend the strategy to include other aspects of health worker motivation.

3.2 Financial and human resources

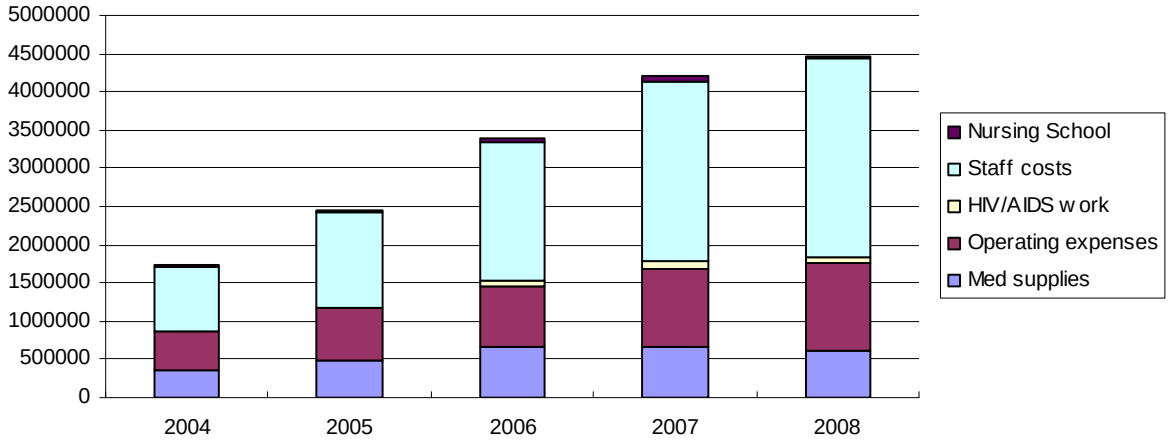
In order to sustain its present activities, HLH needs to secure adequate access to financial as well as human resources. This section reviews the present financial and human resource situation at the hospital.

3.2.1 Financial resources

3.2.1.1 Expenditure

We assessed the trends in HLH's incomes and expenditures from 2004 to 2008. The income and expenditure template has changed somewhat over the years. We will follow the template used in the audited financial reports from 2004-2007 with the following exceptions: 1) depreciation and investments have been excluded from the expenditure summary, and 2) incomes and expenditures related to Haydom Nursing School have been entered as a net subsidy under expenditures. (See Appendix 5 for the detailed expenditure and income figures.)

Figure 1: HLH expenditures, 2004-2008 (Tsh)



The costs of running HLH have increased dramatically from 2004 to 2008 – up by 157%. As a point of reference, the aggregate inflation in the same period has been 34% (see Table 3). The most important driver behind the cost increase is a huge increase in staff costs (+205%), but there is also a large increase in operating expenses (+124%) and medical expenses (+73%). The integration of HIV/AIDS services into the ordinary operations of the hospital has also contributed to the increase in costs.[5]

Table 3. Inflation rate Tanzania, %

Year	2004	2005	2006	2007	2008
Inflation rate	4.1	4.4	7.3	7.0	7.1

Source: International Monetary Fund – World Economic Outlook 2008.

The increase in staff costs is caused mainly by the government increase in salary to health workers (see below). The reasons behind the increase in other expenditures are less obvious, and the mid-term review therefore recommended keeping a close eye on the development in other medical supply costs and other operating expenses. From 2007 to 2008 these expenditures (including the costs of HIV/AIDS services) increased by only 2.9%. This is indeed a remarkable achievement in light of the big increase in the service outputs in the same period as well as the general inflation rate of 7.0%.

The main achievements in terms of costs reduction have been to reduce the costs of HIV/AIDS services by 30% and the expenditures on medical supplies by 7%.

Other operating expenditures increased by 13% from 2007 to 2008. One can, however, not directly attribute changes in other operating expenses to the running of the hospital. HLH has a number of auxiliary service functions which partly provide services to the hospital and partly provide external services. Since external service provision is included in the income and expenditure statements of the hospital, an increase in external service provision will show up in higher costs, but it should at the same time show up in higher incomes. From 2007 to 2008 there was a substantial *decline* in the incomes of HLH facilities and equipment. In fact, other operating expenditures less of incomes from HLH facilities and equipment increased from 389 mill Tsh to 816 mill Tsh from 2007 to 2008. Most of this increase can be attributed to a strong increase in the expenditures on hospital cars, at the same time as the income from hospital cars has declined significantly. A general assessment by the management suggests that increased expenditures on hospital cars are due to higher mileage (primarily

[5] According to management, the integration of the HIV/AIDS work into the hospital has reduced the costs of this programme by two thirds.

due to free ambulance services for pregnant women) and increased prices of spare parts and labour in Arusha garages. These and other reasons should however be investigated in further detail.[6]

Recommendation:

- Investigate reasons for increasing trend in expenditures and declining trend in revenues of hospital cars.

3.2.1.2 Income

Due to the sharp increase in costs, HLH has become increasingly dependent on donor funds. From 2004 to 2008, increasing support from the RNE covered 93% of cost increase (measured as the increase in total costs net of income from HLH facilities and equipment). The RNE share of the hospital's total income increased from 48% in 2004 to 59% in 2006, and reached 70% in 2008.

Table 4. Income by source (%)

	2004	2005	2006	2007	2008
Incomes					
Patient fees	18	15	11	9	9
RNE Grant	48	60	59	55	70
Gov't Grants	13	11	9	10	11
Gifts	4	2	3	9	2
HLH facilities and equipment	17	12	15	14	7
Other income	0	0	3	3	1
Total	**100**	**100**	**100**	**100**	**100**

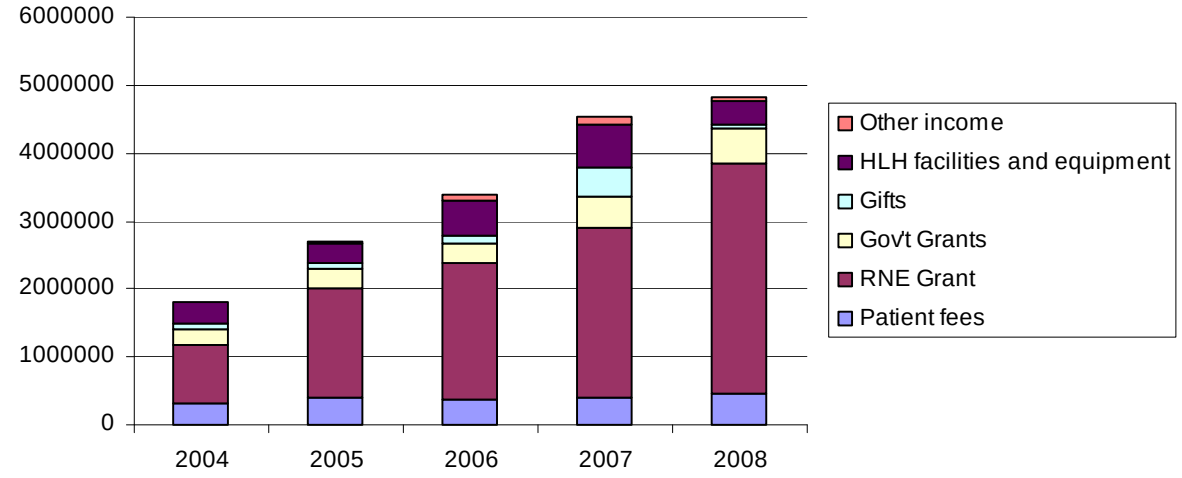
Source: See Appendix 5.

The hospital has managed to increase the funding from the Government of Tanzania from around 300 mill Tsh in 2006 to more than 500 mill in 2008. This increase is primarily related to higher staff grants for those 82 staff that are paid by the government. There has also been a slight movement towards HLH receiving a higher share of the district basket funds in Mbulu; up from around 10% to 12-13%. However, these funds still account for less than 1% of the hospital's total income.

There are no signals of any substantial increase in the funding from Government of Tanzania in the foreseeable future. Hence, HLH is totally dependent on a renewal of the contract with the RNE for its continued existence.

[6] This decline in incomes is not related to the provision of free ambulance services to pregnant mothers.

Figure 2: HLH income sources, 2004-2008 (Tsh)



Aggregate patient or user fees increased by 22% from 2004 to 2006 and further increased by 16% from 2006 to 2008, despite the fact that there has been no change in the rates since 2003. The absolute increase in user fees shows that utilisation of paid HLH services has increased over the period, either through a higher number of patients or through a larger number of services (tests, drugs) per patient. This increase notwithstanding, the share of user fees in total income decreased from 18% in 2004 to 9% in 2007 and 2008 (Table 4).

The mid-term review recommended a revision of the level of patient fees in light of the general inflation since 2003 and the level of government fees. New user fees were implemented in the first quarter of 2009. The following are examples from the past and current price list:

Table 5. Examples of price changes

	Old price	New price	Price increase (%)
Adults			
Outpatient consultations	0	0	0
Inpatient, per day	2 500	4 000	60
Major operation	35 000	50 000	43
Minor operation	7 000	15 000	114

Several of the reported increases in user fees are larger than the aggregate inflation of 34% in 2003-2008. On the other hand, the prices of outpatient consultations and a number of tests in the hospital have remained unchanged. We have not been able to get hold of documentation of the reasons behind the differentiation in price setting policies across services.

The impacts of the price reform are still not visible but will be evaluated bi-annually. In the budget for 2009, user fees are projected to increase by 83 mill from their 2008 level, reaching 530 mill Tsh. However, if activity levels remain constant, we have estimated an increase in incomes of more than 150 mill Tsh, counting only inpatient fees and fees for major and minor operations[7]. Does this imply that HLH expects the price increases to reduce the number of patients, or has income from user fees been under-budgeted in 2009? Admittedly, there are some patients that are unable to pay, but can this explain such a big difference?

[7] The numbers of major and minor operations are from Table 1. The number of inpatient days used is 75 808, which is the total number of inpatient days minus Mother and Child inpatient days, assuming that the latter largely are offered free of charge.

Recommendations:

- Evaluate the impact of the increase in user fees on the accessibility and utilisation of hospital services.
- Regularly revise user fees in line with general inflation unless particular local circumstances dictate otherwise.
- Ensure that reasons for differentiation in price setting policies across services are documented.
- Consider implementing a consultation fee for outpatients, similar to government facilities in the area.
- Ensure that the prices of drugs and tests are not lower than in government facilities.

3.2.2 Human resources

Access to qualified health workers is a key factor for the future of HLH. The team reviewed the staffing profile of the hospital, attempting to identify trends in staffing levels.

We used two data sources to describe the staffing profile. First, the payroll provides an updated list of all workers paid by the hospital. This list does not give an exact picture of the workforce of the hospital, though, since it includes people with a salary who are on training (28 persons in 2009) and also staff at the health centres and the dispensary paid for by the hospital (14 persons in 2009). The second source of information is the master roll which is supposed to map most, if not all, workers at the hospital at any given point in time. We use this second source to validate the figures obtained from the payroll.

It was not easy to obtain data on the number of staff in a format that is suitable for presentation and analysis. Several man-days were used to produce the figures presented in Table 6. Given the vital importance of human managing human resources in a cost-effective manner in this hospital setting, we would encourage the management to develop a database of its human resources which produces timely reports both on present and past staffing levels.

Recommendation:

- Develop a database for improved human resource management.

Table 6. Staffing levels

	Master roll						Payroll	
	2004	*2005*	*2006*	*2007*	*2008*	*2009*	*2008*	*2009*
Doctors	8	8	8	5	11	13	17	17
Clinical officers	19	18	17	22	20	15	25	23
Nurses	109	120	121	110	95	98	118	118
Medical attendants	110	138	127	126	126	176	167	169
Pharmacy/Radiology/Physio	9	8	8	9	10	6	11	7
Workshop	22	11	19	23	47	61	35	39
Laundry	8	19	12	10	8	19	20	20
Guards	17	19	19	22	22	21	24	24
Treasury	7	7	7	7	6	4	4	4
Temporary staff (daily workers)	69	63	51	44	83	99	107	106
Libr/Tailor/Booksh/Records	8	10	10	11	10	9	6	6
Drivers	-	-	-	-	21	28	25	26
Laboratory	-	-	-	-	12	11	11	15
Administration	-	-	-	-	7	9	7	7
Other	-	-	-	-	0	0	8	23
Total (sum)	**386**	**421**	**399**	**389**	**478**	**569**	**585**	**604**
Total (from annual reports)	**379**	**370**	**370**	**-**	**-**	**-**	**-**	**-**

Note: Payroll includes all paid workers, including staff at the health centres and the dispensary (14 persons in 2009) and staff on training with a salary (28 persons in 2009, 21 persons in 2008). Master roll data up to 2007 is from the mid-term review, and some differences in the way data has been compiled compared to the period 2008/09 are likely.

When we deduct people on training (28) and staff at health centres (14), 562 workers remain at the hospital's payroll in 2009 (April). This figure corresponds well with the figure in the master roll (569 staff).

Both the master roll and the payroll suggest that there has been an increase in the number of staff from 2008 to 2009, but the magnitude differs considerably across the data sources. While the increase is only 19 persons according to the payroll, the increase is 91 persons according to the master roll. We judge the payroll to hold the most correct figures here.

Changes in staffing levels in previous years can only be assessed from the master roll data. One problem here is that the compilation of data in the period 2004-07 was done by a different team (in connection with the mid-term review), which may imply some inconsistence in the way data have been aggregated. At least, some categories of workers were simply left out in the pre-2008 data. It is nevertheless quite clear that the number of staff has increased significantly since 2007. The increase has come mainly within the categories of medical attendants, temporary staff, and staff for the workshop. Part of the increase in the number of medical attendants is due to the hiring of 25 staff for the running of the hospital's new information system. There has also been a process of moving long-term temporary workers onto permanent contracts. Nevertheless, the number of temporary workers has increased. This calls for further explanation.

Among the key medical cadres, we notice a positive development in the number of doctors since the mid-term review, mainly due to a larger number of expats. It is however worrying that the number of clinical officers and the number of nurses seem to have declined significantly since 2007. The opening for new recruitment at Mbulu district hospital this year has drawn some health workers away from Haydom, but this does not explain the large drop in the number of nurses from 2007 to 2008. The mid-term review pointed out, however, that around 20 nurses at that time were employed as temporary workers. There is a possibility that these nurses were counted among the nurses up to 2007 but are counted among the temporary staff in 2008 and 2009. If this is the case, the number of nurses has not

declined much, and the increase in temporary staff is smaller than previously indicated. Again, the lack of a proper human resource management system prevents us from drawing robust conclusions.

Recommendation:
Revisit the data on the development in the number of staff over time, with a particular focus on the number of nurses.
Ensure that disproportionate changes in the number of staff in some departments are followed by reallocation of staff according to need.

There is a clear perception among staff that the number of nurses has declined lately. To some extent, the outflow of nurses is a natural consequence of the fact that newly trained nurses from Haydom School of Nursing enter into a contract with HLH while they search for other jobs more suitable to them. Some if the perceived outflow of nurses can be explained by this steady, natural outflow, which is offset every August by a new cohort of graduating students. The administration has established a system where staffs that leave are interviewed and where they explain their reasons for leaving. In most cases, the reported reasons have been judged to be normal career development reasons of the type described above.

The high dependency on expats for filling the posts of doctors and specialists remains an important challenge for the hospital. To attract these cadres from other parts of Tanzania does not make much sense, as these workers are everywhere in scarce supply. HLH has therefore pursued a strategy of sending own staff for training. 13 students are currently being trained as MDs and AMOs. The total number of staff on training is 48. The hospital has however experienced severe problems with retaining students after they finish their studies. Six students have broken their contracts and disregarded their debts to the hospital. The management has taken measures to reduce this problem by strengthening the legal content of the contracts and by following up the cases in court. It remains to be seen how effective these remedies are.

Recommendation:
Evaluate the policies related to sending staff on further training in light of the experiences with retention of staff after studies are completed.

The mid-term review pointed at the need for the development of more written policies and guidelines, including policies for human resource management. The hospital is in the process of developing a Human Resource Manual, in cooperation with Baker-Tilly. The manual will contain policies and regulations about human resource management, e.g., policies on promotions and continued education. Decisions on most of these matters have already been made, but it remains to gather them in a manual.

3.2.3 Personnel costs

There has been a dramatic increase in the costs of personnel at HLH since 2004. Total staff costs are projected to increase by more than 2,200 mill Tsh from 2004 to 2009, an increase of 261%. A breakdown of the trend in staff costs over the period is shown in Table 7.

Table 7. Staff costs (1,000 Tsh)

	2004	2005	2006	2007	2008	2009 budget
Salaries, allowances and NSSF	626 862	1 088 012	1 392 603	1 869 163	2 227 296	2 619 374
Staff & relatives treatment	6 637	5 750	14 893	12 337	7 620	15 220
Education grant expenses	99 768	157 743	246 810	249 781	182 538	276 584
NLM / expat personnel expenses	115 405	-	147 428	212 884	168 000*	150 840
Total staff costs	**848 672**	**1 251 505**	**1 801 734**	**2 344 165**	**2 585 454**	**3 062 018**

Note: Costs of expats paid according to local salary scales were counted as salary up to 2008. From 2009 onwards costs of these staff are counted on the NLM / expat row.
* This figure was included in the general salary account in the audited financial report for 2008.

The main cost drivers are salaries, allowances and insurance contributions (the NSSF contribution is 10% of the basic salary). These costs are projected to increase by 318% from 2004 to 2009, corresponding to an average annual increase of 33%. Education grant expenses have also grown, but much less than the salaries (+177%). Expenses to NLM (Norwegian Lutheran Mission) personnel have remained relatively constant. Note that this expenditure covers the salary of a small number of Norwegian missionaries (2-4) at rates far above the Tanzanian salary scale. The benefits for HLH of these personnel are claimed to be 1) highly qualified medical personnel on long term contracts, 2) improved contact with fund-raisers on the grass roots level in Norway, and 3) assistance in maintaining the values of the hospital. Since these benefits come at a relatively high cost, it is natural that the management considers alternative solutions from time to time.

Annual percentage increases in salaries are displayed in Table 8. The table also shows the increase in staff grants received in the same period.

Table 8. Increase in salaries, allowances and NSSF contributions. Increase in staff grant from the government. Per cent.

	2004-05	2005-06	2006-07	2007-08	2008-09	Total 2004-09
Salaries, allowances and NSSF	74	28	34	19	18	318
Government staff grant	28	6	54	9	21	175

The basic salary at HLH is supposed to follow the pay scale of government health workers, but HLH has its own allowance system. In principle, there can then be three explanations for the increase in staff costs:

- Government increase in salaries
- Higher allowances at HLH
- Increase in the number of staff at HLH, or a change towards more highly qualified staff

One indicator of the increase in the government salaries is the increase in the staff grant during the period. Since the staff grant is given for a fixed number of workers, its increase should be a good indication of the increase in salary levels. We notice that staff grants have increased much less than the salaries at HLH (175% vs 318%). There are also significant variations over the years. There are several possible explanations:

- The workers on staff grant are not representative for the total workforce at HLH; people on staff grant are the most highly paid workers. But it is unlikely that salary increases have been larger for the lower cadres. A case study made by the hospital itself indicates that salary increases for a representative worker on a minimum wage has been 65%, for a nurse

attendants 111%, for a clinical officer 325% and for a nurse diploma more than 500% in the period 2004-2009.

- We were informed that as mistake was made at HLH in 2004 in the interpretation of the new government salary scale of 2004, leading to too high salary increases in that year. This mistake was however corrected for in the following years.
- Before 2007, the promotion of staff at HLH was the responsibility of the government. The new labour law in 2007 allowed institutions to decide on their own promotions. HLH decided to take responsibility for giving their staff the promotions that they rightfully deserved. This caused an increase in salaries of 5-7% in 2007. We do not know if this increase is yet reflected in the staff grants from the government.
- The level of staff grants levels paid by the Ministry of Health are usually not updated. Sometimes there is a backlog of more than two years in the staff grant levels.
- HLH is not always able to increase its salary at the same point in time as the government. For instance, the government increase in salary effective from January 2008 was not implemented at HLH before January 2009. In this particular case, however, the Ministry refused to increase the staff grant as long as HLH did not increase its salaries. In theory, therefore, the increase in salary should be the same as the increase in staff grant in 2008.

With these caveats in mind, we think it is useful to compare the development of staff grants and salaries over periods of more than 2-3 years. Our best estimate of the impact of government salary increases on the salary levels at HLH in the period 2004-2009 is therefore that it caused some 55% of the salary increase. We have however not checked whether HLH and the government started out at the same level of salary in 2004. If HLH started out at a lower level, there might have been a catching up effect as well.

The rest of the increase (45%) is therefore hypothesised to be caused by increased allowances and an increase in the number of staff. Use 2008 as an example: HLH did not increase its salaries in 2008. The government salary increase, announced in July 2008, was not implemented at HLH until January 2009. Nevertheless, the salary bill was up by 28% from 2007 to 2008. This increase is partly due to the increase in the number of staff in this period (see above) and partly to an increase in allowances. Many allowances were renegotiated during 2007, and the full impact of these changes was not experienced until 2008. A rough calculation indicates that the increase in allowances amounted to some 170 mill Tsh per year. Hence, even though much of this increase materialised in 2008, it still leaves a substantial share of the salary increase unexplained. This result supports our previous conclusion that there was a substantial increase in the number of staff in this period.

In summary, the most important reason for the increase in salary costs at HLH has been the increase in government salaries, especially in the pre-2007 period. The number of staff was quite stable in this period (see Table 6). Since 2007, the increase in salaries has in addition been influenced by a series of promotions and a significant increase in allowances, but primarily by an increase in the number of staffing.

Note that the relatively new practice of paying the salaries of staff at the health centres has not affected the salary budget as these costs are counted under subsidies paid to health centres.

It is not unlikely that real wages in the government sector will continue increasing. The inflation target in Tanzania is 7%. Hence, annual nominal salary increases of at least 10% should be expected. In addition, a salary increase of up to 10% may be expected due to the introduction of a pay-for-performance bonus scheme in the financial year 2009-2010. The latest signals from the Ministry of Health and Social Welfare indicate that this scheme will also encompass the voluntary agencies, but it remains to be seen how the scheme actually will be implemented at the district level. However, staff at large hospitals like HLH will not have much to gain from the scheme, since the total payment to a hospital is limited to 9 mill Tsh per year. Thus, if HLH earned the full bonus and shared it equally among all staff, each employee would not earn more than 15 000 Tsh extra per year. Since payments per worker in smaller facilities are much larger (a dispensary may earn 1 mill Tsh per year and a health

centre 3 mill Tsh per year), the scheme is likely to twist the relative wages in favour of the smaller facilities. Even if HLH is included in the scheme, it is therefore likely that the scheme will reduce the attractiveness of the hospital relative to smaller health facilities in the area.

At present, the main economic reason for health workers to move from HLH to a government institution is that HLH does not match the pension benefits offered by the government. HLH employees are covered through the NSSF (National Social Security Fund) while government employees receive their pensions from the PSPF (Public Service Pension Fund). Even though the total employee and employer contributions to these funds are the same (20% of the salary), the PSPF provides higher benefits than the NSSF. The benefits consist in both cases of a lump-sum benefit upon retirement and a monthly benefit after that. Our information suggests that the PSPF provides a significantly higher lump-sum benefit (+223% with 30 years of service) but a somewhat smaller monthly benefit (-21% with 30 years of service), compared to the NSSF.[8] We have calculated the difference in pension benefits to 2% with 15 years of service, 18% with 20 years of service, 38% with 30 years in service, and 45% with 35 years of service. For a person with 30 years of service and a salary of 400,000 upon retirement, the difference amounts to 12 mill Tsh.[9]

Staff at HLH seemed to be somewhat confused about how much pension they would receive elsewhere compared to HLH. All of them focused on the large lump-sum payment in the government, and there was no talk about the relative monthly benefits. The lump-sum benefit in the government was thought to range between 20 mill and 60 mill Tsh, whereas at HLH they thought they would earn only a couple of millions. They mentioned this difference as an important factor in considering moving to the government sector. Our information suggests that the perceived differences are larger than the real ones.

HLH has been working with the central government on the pension issue, arguing that government pension benefits should be extended to all who provide health services to the Tanzanian people. They have received signals that the government will try to resolve this issue within a couple of years. The government has recently established a Social Security Regulatory Authority (SSRA) with a mandate to address the uneven benefit packages provided by the different pension funds. This task is not likely to be an easy one, though. Independent reports have shown that the PSPF pension benefits are not sustainable. Hence, there will be a need to reduce the PSPF benefits, which most likely will take time.

Due to the uncertainty around the government response on this issue, we have made some calculations on what it would take for HLH to come closer to offering a one time payment upon retirement similar to the government sector. Assume that HLH pays an average of 30 000 Tsh per month per staff into a private pension scheme with an annual nominal rate of return of 7%. The accumulated amount after 30 years will then be 34 mill Tsh per employee.[10] If the scheme were to include 500 workers, the total annual costs would be 180 mill Tsh, which is a 6.9% increase over the present salary bill (2009 budget). As a point of reference, 30 000 Ths per month is the same amount as HLH in 2007 granted as an allowance to all staff with at least three years of pre-service training. These calculations illustrate that to provide increased pension benefits at HLH are not totally beyond reach, and that discussions about these matters should be part of any discussion about revision of existing benefit schemes, including the allowance scheme.

The management of the hospital has expressed worries that the competition for human resources among health facilities seems to grow fiercer, especially in Northern Tanzania. Large voluntary agency hospitals in this part of the country have started offering special benefit packages for attracting skilled labour to their facilities, supported by large donations from outside. While the purpose of these

[8] We have used information about the benefit packages from the websites www.nssf.or.tz and www.pspf-tz.org.

[9] Assumptions: Salary in NSSF has been set to 80% of end salary used to calculate PSPF benefits. Average number of years with pension benefits after retirement has been set to 12. No discounting.

[10] The calculation is as follows: $(30{,}000 \cdot 12)\dfrac{1.07^{30}-1}{0.07} = 34{,}005{,}883$.

benefit packages probably is to reverse the present movement of health workers into the government sector, they are also likely to attract health workers from HLH. The magnitudes are difficult to predict, but the implications for the wage policy at HLH are quite clear: in the long run they need to be competitive with the government sector.

Recommendations:

- Continue the efforts to include all HLH staff in the government pension scheme.
- Continue to monitor reasons for staff leaving HLH, with a particular focus on the pension issue.
- Inform staff about the real differences in pension benefits across schemes.
- Consider implementing a private pension scheme on top of the existing one, if necessary in order to motivate and retain staff.
- With previous mistakes in mind, ensure that HLH does not pay higher salary than government facilities. Since the government does not always implement its policies, it might be interesting also to make some spot checks among government employees in the district to compare salary levels.

3.3 Efficiency

An organisation is operating efficiently when its objectives are achieved at the lowest possible cost. Among the four objectives of the hospital, the objective of reducing the burden of disease is the natural starting point for an assessment of its efficiency. Efficiency can be evaluated at two levels:

1) Efficiency in the composition of the service package
2) Efficiency in the provision of the current service package

The management has made explicit that HLH is not only concerned with the aggregate reduction of the burden of disease in the area; the burden of disease should be reduced in a way that is equitable and responsive to human rights and the rule of rescue. Moreover, the need to build trust in order to maintain demand for health services also has implications for which service package to offer. In practice, therefore, the hospital has adopted an activity profile that does not maximise the reduction of the burden of disease per unit of resource inputs, but deliberately operates with a somewhat more costly service package. Hence, standard cost-effectiveness criteria can hardly be used to assess the efficiency of the service package offered.

These issues were further discussed in the mid-term review, and we do not repeat that discussion here. The mid-term review pointed at the potential danger for the efficiency of the hospital in that the vague nature of objectives such as "equity" and "trust building" may become a barrier to reflection on the trade-offs involved in decisions about which service package to offer.[11] It was recommended to critically review the service package in light of the different – and sometimes conflicting – objectives of the hospital. This has not been done so far, but the management, board, union and other staff have been through an extensive process of clarifying the values of the hospital. The resulting value document will provide a platform for future priority setting at the hospital. (See also the discussion under point *3.1.1.*)

Taking the current service package as given, the efficiency of the hospital could best have been evaluated by comparing the outputs per unit of input at HLH with output/input ratios at other hospitals with a similar service package. But since we do not have access to data from similar hospitals, we have to confine ourselves to a review of the time trend in output/input ratios at HLH. The question we are asking is thus whether HLH has maintained its efficiency over time.

[11] A first step towards deeper reflection around these issues could be to estimate the costs per DALY (Disability Adjusted Life Years) averted through the various services provided by the hospital. This would highlight the costs of achieving the objectives of "equity" and "trust building".

Selected output data were presented in Table 1. Table 9 summarises some key input indicators.

Table 9. Input data

	2004	2005	2006	2007	2008
Total costs (1,000 Tsh)	1 400 507	2 102 311	2 834 315	3 505 722	4 094 435
No. of staff	426*	461*	439*	429*	478
No. of beds	350	350	350	396**	408**

Sources: Cost figures from audited financial reports 2004-2008. Cost figures have been calculated as total expenditure minus transfers to Haydom Nursing School and minus incomes from HLH equipment and facilities. See Appendix 5. Staff figures from master roll data, Table 6.

*Due to missing data on the number of drivers, laboratory staff, administration staff and other staff in the master roll in the period 2004-2007, the total number of these categories of staff in 2008 (40 persons) has been added to the master roll total in previous years.

**The number of beds was systematically reassessed in 2008 in connection with the development of the new health information system. In addition to the 408 regular beds, there are 41 corridor beds permanently available. The Amani ward added 12 beds from 2007 to 2008. The number of beds prior to 2007 is probably underestimated.

Among the input data, the only useful indicator that is reasonably consistent over time is the number of staff. The number of beds has been properly measured lately, but the accuracy of the pre-2007 data is questionable. Cost data are heavily influenced by factors beyond the control of the hospital, such as the increase in government salaries, and are therefore not suitable for an analysis of the hospital's efficiency over time.

Table 10 utilises data from Table 1 and Table 9 two calculate the Standard Unit of Output (SOU) per staff member over time.

Table 10. Efficiency

	2004	2005	2006	2007	2008
SUO per staff	760	713	719	742	838

These figures indicate that efficiency remained stable or dipped somewhat between 2004 and 2007 and that efficiency increased substantially from 2007 to 2008. Thus, the increase in outputs has more than outweighed the increase in the number of staff in this period.

There are many problems with these figures, though. Most importantly, a number of hospital services are not included in the SOU index, for instance the number of operations. If we add operations to the picture, we would probably see a stronger tendency towards reduced productivity in the period 2004-2007, while the conclusion about a significant increase in productivity from 2007 to 2008 would be reinforced.

Moreover, there are methodological problems with the SOU index itself, because the weights used in the construction of the SUOs are relative *costs*. If the relative *time* inputs differ from relative *cost* inputs, for instance due to more intensive use of medical supplies for certain services, the SOU figures per staff member may give a misleading picture of efficiency levels.

We also calculated a set of complementary performance indicators for the hospital (see Appendix 6 for an explanation of the indicators):

Table 11. Other performance indicators

	2004	2005	2006	2007	2008
Bed occupancy rate	96.7 %	94.8 %	98.9 %	89.1%	83.9%
Average length of stay	11.2 days	10.7 days	11.4 days	9.6 days	7.2 days
Average user fee per SUO (Tsh)	974 Tsh	1 236 Tsh	1 219 Tsh	1 274 Tsh	1 116 Tsh
Staff per bed	1.2	1.3	1.3	1.1	1.2

Sources: Length of stay and total bed days obtained from annual statistics from management (Amani ward not included). Number of staff and beds from Table 9. User fees from Appendix 5. SUOs from Table 1.

Capacity utilisation seems to have declined. Part of the decline is related to the upward adjustment in the estimated number of beds from 2006 to 2007. But there is also a decline in the average length of stay.[12] For instance, even though the number of inpatients increased substantially from 2007 to 2008, the total number of bed days declined from 128 776 to 121 226 in the same period.

The average user fee per SUO is a measure of the accessibility of the hospital. The figures can be interpreted as the patient costs of an average OPD consultation. The rate does not seem high in a Tanzanian context, although extensive provision of free services makes interpretation difficult.

The staff per bed statistic also suffers from the mentioned upward adjustment in the number of beds in 2007.

3.4 Organisational reform

The new management that was appointed in 2005 arrived to find a very small administration and few written policies and guidelines. Reform was needed in the way the hospital was organised and managed. The mid-term review underscored the need to implement a new organisational structure, increase transparency through formalisation of guidelines and policies, ensure that voices from the staff are effectively communicated to the management, and improve the system of communication about decisions taken at the management level.

HLH implemented a new organisational structure from December 2007 (see Appendix 4). The day-to-day administration of the hospital is managed by the Core Administration Team (CAT). The Core Management Team (CMT), which includes the CAT plus all nine head of divisions, takes all major decisions. Each division has a Division Management Team (DMT), consisting of the division head, all department leaders and a Division Medical Chief with a veto power.

The CMT and DMTs represent new structures at the hospital and are intended to improve the flow of information in the organisation as well as the implementation of policies and decisions. The leaders of these entities have been through leadership training with a professional organizational psychologist, covering topics such as quality improvement, communication, and conflict management. Heads of divisions were recruited based on applications and interviews, but clinical staff were not allowed to apply in order to reduce the administrative burden on these cadres. Many of the division leaders are therefore nurses. Female representation is 56% among the heads of divisions, 47% in the CMT and 50% among the Division Medical Chiefs. (The share of females in the hospital staff is 48%.)

A minute and agenda template has been designed in order to improve two-way communication between management and staff. The agenda template ensures that issues related to communication of information both from management to staff and from staff to management are brought up in every meeting.

[12] The average length of stay should be interpreted with care because of the hospital's policy of not letting people leave until debts are fully paid.

The organisational structure seems suitable for a hospital of the size of HLH. The challenge is to put the structures to work. It is too early at this stage to assess the functioning of the new organisation. One of the challenges is to develop a functioning relationship between the Head of Divisions and the Division Medical Chiefs. Nurses in their roles as Heads of Division need to step up from their traditional subordinate role vis-à-vis the doctors and approach them without being too humble. It is natural that this process of demarcation of responsibilities and acceptance of new roles will take some time, but at some point during the next few years it will be recommendable to evaluate how these relationships function in practice.

It is also difficult to assess the degree to which the new organisational structure has improved the flows of information. Division meetings have taken place somewhat irregularly. While some DMTs meet every week, others meet less than once a month. The frequency of meetings at department levels also varies a lot. The management has requested meeting schedules both at division and department levels, as well as minutes from the meetings.

According to the management, positive results of the new organizational structure include improvement in leadership skills, greater ability to understand the objectives and values of the hospital, and progress towards developing an organization where important managerial and administrative functions are institutionalized.

An organisational change at a higher level will take place when HLH will be transformed into a foundation in the near future. It is expected that the formation of the foundation will be approved at the General Assembly of the Mbulu Diocese in September this year. This organisational change will imply that the ELCT will have less direct influence on the running of the hospital. It will also open up for a stronger professional leadership through a new composition of the Board. The change may also have funding implications (see Section 5.2.3)

Recommendation:

- Continue the efforts to ensure that information flows effectively and that decisions are implemented as intended.
- Until confidence is reached in the reliability of information flows, the top management should keep eyes open to be abreast of issues arising at the department and division level.
- Evaluate the functioning of the relationship between the Heads of Divisions and the Division Medical Chiefs in due time.

3.5 Financial management

The financial management system of the hospital was scrutinized during the mid-term review, and a report from Baker-Tilly documented a number of weaknesses:

- Old and outdated accounting system not well suited to support effective financial management
- Accounting done on cash basis rather than accrual basis
- Lack of internal control mechanisms in procurement, in transfer of cash from the departments to the treasury, and in management of stocks (e.g., in the pharmacy and the garage)
- Internal control system on payment of salaries not consistently followed
- Pricing of internal deliveries within hospital inflates figures of expenditures and incomes
- System does not allow for effective financial management of separate projects as their incomes and expenditures cannot be traced separately
- A fixed asset register is not maintained

In response, the hospital has developed a new financial management system. The requirements of the new financial system were identified through the development of an accounting manual – including a new chart of accounts – and a procurement manual, as well as a strategic document on financial management. In the process, projects that needed separate financial reports were identified, and new

internal control forms were developed. The Baker Tilly Accounting Group was instrumental in the development of the requirements of the system and the manuals.

Commercial software solutions were considered, but they were all found too expensive, and the hospital therefore decided to use the open source software WebERP, which is among the top ten open source applications in this area. An international consultant was hired to adapt existing software to the needs of HLH. Arusha Lutheran Medical Centre was also invited into this process in order to minimise costs.

According to the international consultant, HLH has made enormous progress on financial management during a very short period of time. The financial department at HLH has demonstrates a strong desire to get things right, and the normal resistance to change has been remarkably absent in this context, he commented.

The adaptation of WebERP started in June 2008, and the hospital started practicing the new system in September 2008. In November 2008, Baker Tilly went through the new system in order to identify that requirements from their 2007 report were met. The system was implemented on January 1st 2009. All basic requirements that had been identified were then incorporated into the system, expect for a few that were judged to be unnecessary and too complex by the external developer. The system is now fully operational, only a few minor changes related to work flow issues are now being adjusted.

The international developer stated that he is comfortable with the way the financial department has been able to implement the system.

Among the benefits of the new system are:

- International standards of accounting, including accrual accounting.
- Real-time updating of information through a network based system.
- Reporting has become tremendously much easier.
- Unlike the old system, several persons can now operate the system at the same time, thus reducing delays and increasing efficiency.
- Postings can be tagged to the projects where they belong. Financial reports for each separate project can thus be produced.
- The system traces the individual who entered each posting, thus increasing transparency.
- There is considerable flexibility in adjusting the level of security within the system as the manager controls which parts of the system that can be accessed by each individual user.
- The financial management system will be integrated with the new health information system to be implemented in the near future. The new information system provides individual data about each patient and will form the basis for billing of patients. This will increase control with the collection of funds from patients.
- A new system with requisition forms and issue notes has been implemented to ensure that all changes in inventories are properly documented.
- There is also a new system for the control of inventories. One person from the financial department is constantly reviewing the various stocks around the hospital, covering each individual item every three months. In case something is missing, it is possible to check against requisition forms whether the discrepancy is due to punching errors or theft.

A new purchasing system has also been implemented and integrated within WebERP. All purchasing orders, signed by the Managing Medical Director, are entered into the system. When ordered goods are received, a goods-received note is issued, signed by three persons, and entered into the system. The system then checks consistency between the purchasing order, the goods-received note, and the invoice.

Our assessment is that the hospital now has a fully professional financial management system which is up to international standards. Stock taking procedures are as good as one can expect.

There is still a potential for improvement in the way the system deals with income generating activities. All transactions related to income generating assets are now tagged in the system. This is an improvement, because it is now possible to report incomes and expenditures related to each of the income generating assets. However, it is not straightforward to separate income generating activities from services provided to the hospital, as services provided to the hospital are not priced. Thus, if one of these assets for instance generates less income than the associated expenditures, it is difficult to know whether the loss is due to large (non-priced) deliveries to the hospital or a real loss in the services provided outside the hospital. This issue becomes particularly relevant in cases where the asset provides services that are available in the local market and therefore can be outsourced. Some of the transportation assets at HLH may fall in this category.

To implement a financial system that allows the management to fully trace the profits and losses of each individual asset is probably neither practical nor useful enough to defend the associated costs. We recommend that the management instead periodically makes a more qualitative assessment of the cost and income profiles of the assets that fall into this category. For transport assets and machines it is also possible to divide costs between hospital and non-hospital activities by using the existing log books to enter information about how much of the services that are provided to the hospital and how much is provided outside.

Recommendation:

- Develop a system for periodically assessment of the income and expenditure profiles of the income generating assets of the hospital, focusing both on the potential for increasing the incomes (e.g., through price changes) as well as on the possibilities for outsourcing of services.

In the mid-term review, the Mulbadaw farm was mentioned as the potentially most important external income generating activity of the hospital. The farm is now operating as a separate entity. It has its own accounts, administered by the accounting office of HLH. Any transfers of surplus from the farm to the hospital are registered in the hospital's account under "other income".

The following table summaries how the hospital has dealt with other issues raised in Baker Tilly's assessment of the financial management system:

Problem identified	Response
ID numbers are not always checked when staff collect their salaries	Badges with ID numbers have been implemented for all staff. New forms have been developed where ID numbers and signatures are written when salary is paid.
Money from patients may disappear in the transfer to the treasury.	No change has been made in this system, but according to the financial manager this issue has not been a big problem. Each department fills a cash register book whenever payments are made. At the end of the day the books together with the cash are brought to the treasury. Two people at the treasury sign that the amount received is the correct one. In case of any problems, they will be reported to the financial manager.
No system for acknowledging receipt of medicine from the pharmacy.	This system has changed. All withdrawals from the stock are accompanied by a stock transfer with two signatures (issuer and receiver).
Charging of internal supplies within the hospital leads to overestimation of total incomes and expenditures.	Internal supplies within hospital are no longer charged. In order to keep track of incomes and expenditures of various projects, there is a tagging system that enables the management to review the financial status of projects.

No fixed asset register.	The hospital has made a list of their fixed assets. Strictly speaking, it is not a requirement to make such a list for accounting purposes, as all assets are valued at zero (100% depreciation in the year of acquisition). The list is nevertheless useful for management purposes.
VAT exemptions not consistently obtained	The hospital attempts to obtain VAT exemptions whenever possible. However, the exemption procedure may take several months, and it is not always possible for the hospital to wait for the decision.
Large variation across cars in fuel consumption per km may indicate misuse of resources.	This issue is partially addressed by recording fuel consumption per car in WebERP. However, there is no direct control of the fuel use per km as the distances are recorded in log books only. Management has requested the developers to follow up on this issue.

3.6 New health information system

The analysis of the levels of outputs and inputs at the hospital clearly revealed some of the weaknesses of the current health information system. These weaknesses have long been acknowledged by the management. The development of a new system started in May/June 2008. Various commercial systems were briefly considered, but the hospital decided to rather use the open source, web-based system Care2x.

Care2x was originally developed for an outpatient department. HLH has pioneered the development and integration of an inpatient module into the system. The process started with 20-30 division and department heads sitting together in order to develop the list of requirements for the new system. Developers from various countries were then invited into the process, at rates far below commercial ones. During the last six months, the new system has been tested in a virtual hospital, where 20-25 people have been continuously trained to handle the system. These are the ones who will operate the system in the wards. An interactive process has taken place between the training group and the developers in order to further improve the system.

The information system is now practically ready for implementation. However, there is a need for investment in physical infrastructure (UPSs and computers) in order to increase the robustness of the hospital's local network. The total investment cost is stipulated to some 20 mill Tsh.

Arusha Lutheran Medical Centre has been involved along with HLH in the development of Care2x. Their effort has resulted in an asset with large potential value to other similar hospitals in the region. The value to other hospitals will increase if HLH carefully documents challenges encountered during development and, in particular, during the implementation of the system. We encourage producing this documentation.

4. HLH as a development agent

In addition to serving as a hospital, HLH has played an important role in the general development of Mbulu district as well as the surrounding districts of Hanang and Iramba. Part of this development comes from HLH itself being a large employer, and from the incomes this brings to the area. In addition, HLH has facilitated a large number of development projects in the area, which has improved the livelihoods of many people. In practice, HLH is currently functioning as a strong, local developmental NGO in a remote area of Tanzania.

The districts served by HLH are among the poorest districts in Tanzania. Almost 50% of the population is estimated to live below the poverty line.

Table 12. Poverty levels

	Share of population below poverty line (2002)
Mbulu	49
Hanang	49
Iramba	43
Tanzania	**36**

Source: Tanzania Poverty and Human Development Report 2005. REPOA

Historically, most of the development projects administered through HLH seem to have originated from the hospital's vision of reducing the population's vulnerability to ill health, broadly speaking. The projects fall mainly within the following categories:

- Food security and clean water (famine relief, agricultural projects, boreholes and dams)
- Transport infrastructure (roads, bridges, air strips)
- Capacity building/education (construction of primary and secondary schools, nursing school)

During recent years, HLH has in addition been strongly involved in projects on:

- Culture, indigenous people's rights, and the co-existence of diverse ethnic groups

In addition to mobilising and channelling resources to development projects, HLH operates as a voice from civil society vis-à-vis government bodies. In its dialogue with government bodies, HLH has increasingly emphasised the government's responsibility for the development of the area, including the continuation of the projects initiated by HLH. There are several examples where the government has taken over responsibility for the operation of projects after HLH has made its contribution. For instance, the government has taken responsibility for the running of schools, including Dr. Olsen Secondary School, as well as the police station.

The close relationship between HLH and the local communities has enabled the hospital to respond in a timely and efficient manner to local needs and emergencies. Village committees have been established in 45 villages with the purpose of identifying needs, targeting assistance and identifying priorities for development projects. HLH's high degree of responsiveness is combined with a fine understanding in the management about the danger that community assistance from HLH can develop into excessive and unnecessary dependency. These considerations led HLH not to provide any food support since 2007.

All development projects administered by HLH are funded from external sources and operate in financial independence of the hospital.

4.1 Recent and planned development projects

The HLH strategic plan 2002–2006 carries a comprehensive list of all development projects carried out from the start of HLH until 2001. The mid-term review assessed development projects up to mid 2007. Here, we discuss only the three main projects in 2007 and 2008 (culture and co-existence, water, and secondary school), as well as the planned trade school project and the town development project.

Table 13. Expenditure on development projects (1,000 Tsh)

	2004	2005	2006	2007	2008	Total	*Share (%)*
Famine relief	664 568	-	47 690	-	-	712 258	*34.2*
Culture and co-existence	30 000	23 000	100 944	423 059	100 863	677 866	*32.5*
Secondary school	-	65 994	23 382	65 373	44 918	199 667	*9.6*
Girls' hostel	-	134 321	101 534	-	-	235 855	*11.3*
Nursery school	10 929	2 435	-	-	-	13 364	*0.6*
Indigenous people water	-	-	55 480	69 849	119 868	245 197	*11.8*
Total	**705 497**	**225 750**	**329 030**	**558 281**	**265 649**	**2 084 207**	*100.0*

4.1.1.1 Culture and co-existence

The Four Corners cultural programme started as a celebration of the fact that the Haydom area is the only place in Africa where all the four major linguistic groups – Nilotic, Cushite, Bantu and Khoisan – meet and co-exist. The project has developed into a forum for presenting and taking care of tradition and culture, as well as a regular meeting place for representatives from the respective groups. It is designed to create more understanding and contribute to knowledge sharing within the six key thematic areas – health, environment, livelihoods, education, values and governance. The government and the HLH have also been invited as partners in the forum in capacity of their large influence on the development of the area.

The cultural centre is located at the outskirts of Haydom village, where houses showing the traditional way of living for each of the linguistic groups have been built. An amphitheatre that will host workshops and celebrations is under construction. In the meanwhile, the biannual workshops, which bring together around 40 participants from the various groups, have been held at the hospital grounds. Topics of the last workshops have been land rights, alcohol abuse, and corruption.

The cultural centre is visited by local schools and other groups throughout the year. Some of these groups might be able to contribute financially to the centre, but we did not see any system for this in place at the moment.

4.1.1.2 Water projects

Water projects have been a more or less continuous activity since the start of the hospital. HLH has facilitated the construction of more than 20 boreholes in various communities, a 17 km long pipeline to serve the hospital and Haydom village, as well as the building of 45 dams used to store water during the dry seasons. The local water projects have now been taken over by local village water committees.

2009 is the last year of the current water project. The aim of the project is to improve the water supply for indigenous people, especially the Hadzabe, through the digging of new wells in the Yeada Chini valley and through rain water harvesting. The project also improves the water supply of the hospital through a new well. This is important for the indigenous people both directly, as the hospital's increasing use of water from the existing water source have reduced the amount of water flowing through the river into the Yeada Chini valley, and indirectly because these groups are also users of the hospital. Rain water harvesting at the hospital has also been part of the project.

4.1.1.3 Dr Olsen Secondary School

HLH has been a pivotal part of the development of Dr Olsen Secondary School in Haydom. Many of the newer buildings have been constructed with Norwegian support, both from Friends of Haydom and from others. The school is now fully owned and operated by the government and has more than 800 pupils. In 2006, the school ranked as number one (out of 15 schools) in Mbulu district and 309 (out of 944) in the country.

Every now and then there are infrastructure needs at the school. HLH may then facilitate the contact between the school and various donors, such as the Culture and School group of Friends of Haydom. The last projects have involved the construction of a new kitchen and a roof in the dining hall.

During our informal visit, school representatives expressed a need for further collaboration with the HLH on an HIV/AIDS education programme.

4.1.1.4 Trade school

The population at Haydom has grown rapidly, and the place is now developing into a town. A major problem is that there is not enough work for the youth. The problem is particularly severe for boys, as the girls have more easily taken up jobs as medical attendants at the hospital or have been enrolled at the Haydom School of Nursing. As a result, young boys easily get into problems with alcohol abuse. Many have also travelled to the gold mines in the area where living conditions are extremely miserable.

The idea of building a trade school has been on the table for some years, and the concept is now taking shape. The aim is to build a school for the education of employers. The curriculum will therefore involve business training (e.g., leadership, management, ethics and good governance) along with traditional vocational training courses such as mechanics, carpentry, and masonry. There will also be a training course focusing on hospital equipment.

The plan is for the school to become a Designated District Trade School under VETA (Vocational Education Training Authority). This will also be a source of funds. Funding for investments are also expected from the Rotary and Lions Club in Southern Norway. Within-school business projects will be a source of funds for running costs. Teachers will be both local teachers and volunteers recruited from Norway.

The plans for the school are now ready, and VETA has given their go-ahead signal. The next step is to develop the curricula.

4.1.1.5 Town development

The development of Haydom into a town has also raised the need for more comprehensive town planning and development related to issues such as water, sewage, and garbage handling.

In this field, HLH has facilitated collaboration between Haydom town and the Mandal city council in Norway. As a result, local leaders from Haydom have visited Mandal, and city planners from Mandal are now actively involved in the development of sewage and garbage handling systems at Haydom. District planners from Mbulu district are also involved. The hospital itself plays only a minor role in this collaboration.

4.2 Relevance and impact of development projects

Most of the development projects have directly addressed basic human needs (access to food, water, education and health services) and are thus clearly relevant to human development. A few projects – such as the pipeline water supply in Haydom – have originated in the needs of the hospital. But these needs were at the same time the needs of the community, and HLH has addressed these as well as their

own. Even the cultural centre is partly addressing basic human needs, for instance through discussions about land rights. Loss of land is a big threat to the future existence of one of the indigenous groups. The relevance of the cultural centre also extends to areas such as enhancing mutual understanding and respect across groups and strengthening the voice of local worldviews and priorities in the development of the area.

A rigorous assessment of the impacts of the HLH development projects is beyond the scope of this review. The mid-term review discussed the impacts as perceived by the local people and the review team itself, and there is no need to repeat that discussion here. We confine ourselves to a brief summary of some main impacts:

1) Reduced vulnerability

Vulnerability to ill health has been reduced through expansion of infrastructure networks in the area (road, bridges, airstrips), which has eased people's access to the hospital and facilitated ambulance services as well as outreach preventive health services.

Security against crop failures and other natural disasters has been greatly enhanced through famine relief projects as well as the water projects.

Security has also been improved by the construction of a police station in Haydom.

2) Enhanced opportunities

Education opportunities have been enhanced through the construction of schools, both at the primary and secondary levels.

Trade opportunities have been stimulated though the building of roads.

The opportunities for work and income have been greatly enhanced not only for hospital staff but also for others through the hospital's purchases of local products and through the opportunities created through the 200 mill Tsh that each month is paid in salary to hospital staff.

3) Empowerment

HLH is acting as part of civil society in raising awareness and channelling information about local needs to the government. There are several examples that development activities initiated by HLH have served as a catalyst for larger government involvement in the area. Thus, HLH seems to have been effective in empowering the local community vis-à-vis government bodies.

HLH has also empowered local communities to take control of the direction of their own development. Development projects are to a large extent driven by the community, although some of the ideas appear to have emerged from the hospital side. For instance, the idea about the trade school appears to be originating from the hospital side. In this and similar cases, it is important to involve local representatives from the start in order to build ownership to the project.

The apparent success of HLH as a development agent in the area has come about despite the lack of an explicit development strategy. Development activities have, however, emerged from a thorough understanding of people's needs, and from a genuine interest in addressing those needs. Projects have been implemented by drawing on competence and resources that have been developed within the hospital itself.

Some of the factors that have increased the effectiveness of HLH as a development agent are:

- Long-term presence in the area, which has facilitated a deeper understanding of local needs and priorities
- Ability to build trust in the community through the provision of quality health services; the fact that the hospital is bringing observable improvements in health also strengthens trust in HLH as an development agent
- The development of a large, high standard workshop: although the main function of the workshop has been to build and maintain the hospital and its supporting infrastructure, the competences and equipments that have been developed and acquired over the years have become a huge asset, especially for infrastructural development projects.[13] It has placed HLH in a unique position to facilitate infrastructural development in the area.

Although all development projects are organised outside the hospital, with separate management structures and separate accounts, the projects also often involve hospital staff in one form or the other. Hospital staff are often heavily involved in the initiation and conceptualisation of new projects, and often participate in their management structures (e.g., in their Boards). Project accounts are managed by the hospital's finance department.

The HLH Board has decided long ago that they want to see the hospital acting a development agent in the area. This decision cannot be executed without some resource implications for the hospital. Nevertheless, it is our impression that the current development projects do not represent an unreasonable load on hospital resources. The hospital charges an 8% overhead to cover its costs related to projects that it facilitates. Meetings that involve hospital staff are normally held outside the hospital working hours. The main danger seems to be that development projects at times may require a lot of attention from the top management of HLH, especially in the initiation phase and in those cases when projects do not run as smoothly as projected and therefore need some extra managerial support. The number and scope of development projects need to be adapted to this reality in order not to come into conflict with the management of the hospital itself.

[13] The list of equipment includes four trucks, four lorries, four tractors, one excavator, one compressor and one cesspit emptying facility, among many other things.

5. Taking HLH into the future

5.1 HLH - a teaching hospital?

5.1.1 Background

The Tanzanian health system is comprised of three major groups of health service providers: 1) government facilities, 2) voluntary agencies, and 3) private-for-profit providers. HLH is registered as a private hospital under "The Private Hospitals (Regulation) Act No.6 of 1977 as amended by Act 26 of 1991", and is part of the voluntary agency sector, which mainly consists of various Christian and a few Muslim health facilities. The voluntary agency sector runs around 40% of the hospitals in Tanzania, in addition to a number of health centres and dispensaries.

HLH is recognised by the government as a first level referral hospital. In 2005/06, HLH unsuccessfully applied to become a second level referral hospital. The application was declined because HLH did not have a sufficient number of key staff according to the government staffing norms for second level referral hospitals. Lack of specialists was the most serious problem.

Early in 2008, the Ministry of Health and Social Welfare explicitly stated that HLH should give up its ambition to become a second level referral hospital. We do not know the reasons behind this statement, but we suppose that the location of HLH at the outskirt of a region in combination with the Ministry's own plans of building a regional hospital in Babati were important factors.

The Board of HLH has acknowledged this recommendation and has decided to try to become a teaching hospital instead. The Ministry of Health and Social Welfare has responded favourably to this objective. There are six teaching hospitals in Tanzania at present, four public and two private. They are all located in the bigger cities, but their location is not linked directly with regional or other administrative units.

5.1.2 The concept

HLH wants to establish a set of accredited training services that will attract increased funding both from international and national sources. The training will consist in education to specialist level for both foreign and local doctors (and possibly nurses). The trainers will be specialists from abroad. Moreover, the status as a training hospital will hopefully give HLH access to Tanzanian interns. According to the Ministry of Health and Social Welfare, the need for more places for interns is urgent, as the recent increased output of doctors now implies that students stay unproductive while they are waiting for their internships.

Funding for trainers will come from foreign sources. A key underlying assumption is that foreign Ministries of Health will give accreditation to HLH as part of their own training programs and therefore pay the salaries of the trainers while staying at HLH, and, in addition, provide funding to HLH for the education services provided to students sent from abroad. The management of HLH thinks this will be feasible because there is lack of patients for specialist training in many developed countries, and these patients can be found at HLH.

A role model for how this system could work is illustrated by HLH's cooperation with Madaktari Africa – a US based NGO with a programme for training of neurosurgeons in Tanzania. Neurosurgeons from the US come to HLH on a regular basis. They bring with them their own students, and at the same time they train local doctors while at HLH. An important difference, though,

is that this model is based on volunteer specialists from abroad and that foreign students do not come with any funding to HLH.

HLH wants to start a similar programme in 3-4 other specialities, but this time coupled with foreign funding. The Norwegian Ministry of Health will be approached on this issue. As a first step, HLH will initiate collaboration with relevant specialist associations in Norway, such as

- Norwegian Gynecology Association
- Norwegian Pediatrics Association
- Norwegian Psychiatry Association – particularly related to substance abuse treatment
- Norwegian Surgical / Orthopedic Surgery Association

These associations are responsible for curricula and accreditations in Norwegian specialist training. The Norwegian Ministry of Health will then be asked to secure funding for the programme.

A Norwegian program for specialist training through accredited hospitals in the South must encompass more hospitals than just HLH. HLH will therefore join with other similar institutions in countries such as India, Ethiopia and Malawi in order to establish a broader platform in the South. A Memorandum of Understanding between HLH, Sørlandet Hospital (Norway) and Christian Medical College (Vellore, India) on joint development of programmes for training and research was signed in 2008 and will form part of the foundation for a strengthening of these South-South collaborations.

A Norwegian programme for specialist training in institutions in the South fits well with the recommendations in the report from the Norwegian Directorate on Health on "Solidarity in the recruitment of health personnel"[14].

5.1.3 Benefits, costs, and challenges

The assumed benefits for HLH of becoming a teaching hospital are mainly the following:

- Increased availability of human resources through four channels: 1) Specialists from abroad (trainers), 2) Foreign doctors on specialist training, 3) Tanzanian doctors on specialist training, 4) Tanzanian interns staying at HLH.
- Specialist training for HLH staff.
- Funding from abroad through payment for education facilities provided to the foreign students.
- Increased leverage vis-à-vis the Government of Tanzania in negotiations about increased government funding.

There are also costs associated with becoming a teaching hospital. No budget has been developed yet, but some of the issues that have been raised are the need to provide housing for foreign specialists and the need to establish an internationally accredited primary school concept. The latter issue has been taken forward to the International School Moshi (ISM) with the aim of establishing a new International Baccalaureate program at Haydom. The initial feedback from the leadership at ISM in meetings in May 2009 was very positive, and an initial concept note has been drafted and circulated to key stakeholders. It is foreseen that the school will initially have 1-7 international students, 5-15 national students from other places than Haydom and 10-30 students from Haydom. The latter would primarily be children of HLH staff now studying in other parts of the country such as Arusha, Tanga, Morogoro and Dar es Salaam. The school will be funded through school fees.

At this stage, there is still several uncertainties related to the feasibility of HLH becoming a teaching hospital. First, and most importantly, there is uncertainty about the possibilities of attracting Norwegian funding from the Ministry of Health for training of Norwegian specialists at HLH. The

[14] Solidarisk politikk for rekruttering av helsepersonell. Rapport fra Sosial- og Helsedirektoratet (2007).

main argument for doing so is the larger availability of patients at HLH compared to Norwegian hospitals. HLH should as soon as possible provide figures to support this claim. An argument against such arrangements would be that it is not efficient to remove Norwegian specialist from their hospitals in Norway in order to train one or two Norwegian doctors in Tanzania. It might be more cost-efficient to link up with hospitals in the South which already have in-house specialists (such as KCMC or Muhumbili in Tanzania). On the other hand, to send Norwegian specialists to Haydom will have an added value far beyond the training of Norwegian doctors since local doctors will be trained at the same time. The question is, however, to which extent the Ministry of Health in Norway is willing to fund such arrangements; they may argue that this issue should be dealt with by the Ministry of Foreign Affairs through the foreign aid budget. But the Ministry of Health might also consider initiatives of this kind as part of their strategy to ensure ethical recruitment of health personnel. The provision of training services in a low-income context is a way of compensating for the fact that Norway is part of a global market for health workers which currently swamps health workers from the South into Northern health systems.

Another uncertainty is the feasibility of ensuring a constant and reliable flow of specialists to Haydom. A specification of the required number of specialists needed to get a teaching programme up and running, the required length of stay for the specialists, etc. has yet to be developed.

Finally, there is uncertainty related to the establishment of the international school, in particular the possibilities of attracting qualified teachers. Funds also need to be raised for the development of new infrastructure.

Approval from national authorities is of course key in establishing the teaching hospital. Although signals from the government so far have been positive, efforts should be made to ensure that the further development of the concept is in line with national policies and priorities. Important stakeholders, such as the Ministry of Health and the Ministry of Higher Education, should probably be heavily involved from the beginning in order to increase ownership and ease the approval process later on.

Besides strengthening the human resource situation of HLH, a major motivation for becoming a teaching hospital is to attract more funds from the Government of Tanzania. At present, the main source of government funds is the staff grant, which covers the salaries of 82 staff, amounting to 436 mill Tsh in 2008. HLH is now recognised as a first level referral hospital with 250 beds. Teaching hospitals do not have a similar pre-defined number of beds. If, by becoming a teaching hospital, HLH were able to proportionally scale up its staff grant in line with the actual number of beds (408), government funding would increase by 276 mill Tsh. This amounts to 8% of what was granted by the RNE in 2008.

Another potential source of future funding is the new service agreement between the government and the voluntary agencies. Voluntary agencies are supposed to enter into an agreement with their respective district authorities about the range of services and associated reimbursement rates. As a point of departure, reimbursement rates will follow the rates of the National Health Insurance Fund (NHIF). There is uncertainty about which rates that actually will apply and which services that might be included in the agreement. HLH expects that the negotiation of the service agreement will be a long process (1-2 years) starting in 2011. The reason HLH does not want to start earlier, is that the hospital expects to obtain some leverage in these negotiations from being upgraded to a teaching hospital. The total amount of funding that comes along with the agreement is highly uncertain.

In summary, the teaching hospital concept, if successfully implemented, promises considerable benefits in terms of increased availability of doctors and specialists at HLH (but does not necessarily solve the problem of too few nurses). The economic benefits are more uncertain and probably not very large. There are also associated costs that need to be covered.

Recommendations:

- Continue to explore the possibility of becoming a teaching hospital, in particular the realism in attracting funds from the Norwegian Ministry of Health.
- Create a meaningful dialogue with Tanzanian authorities throughout the process.
- Document the benefits to the Norwegian side of training some of their specialists in the South.
- Develop a budget for the project.

5.2 Future funding

A hospital which provides affordable access to health services to a poor population will always be in need of external funding. The question is where the funds will come from. HLH works along several channels in order to secure the future funding of the hospital. The hospital Board has been divided into three fund-raising groups working with, respectively, a) national funding (district, region and MoHSW), b) international funding (Friends of Haydom, RNE, Global Fund, and others), and c) local community funding (church and businessmen). This section discusses various opportunities for future funding of the hospital.

5.2.1 The Government of Tanzania

The hospital has not succeeded in significantly increasing the contributions from the Government of Tanzania during the past two years despite numerous efforts, such as: Meetings with the President, former Prime Minister Sumaye, Vice President, former Prime Minster Lowassa, local district and regional authorities, MoHSW (Voluntary Agency Coordinator, Permanent Secretary, Chief Medical Officer, Director of Hospital Services, Deputy Minister of Health), Ministry of Finance, Christian Social Service Commission, and Members of Parliament.

Potential funding sources from the government include:

- District basket funds, including service agreements and funds for pay-for-performance.
- Payment for staff through staff grants or through secondment of staff.

HLH does not obtain a reasonable share of the district health basket funds from all the districts and regions served by the hospital. For instance, the extensive network of RCH clinics provides services free of charge in a number of districts in two different regions, but only a small share of the expenses is covered by the respective local governments. HLH has made efforts to increase its share of the district health basket funds, but success has been limited so far. The problem appears partly to be caused by policy regulations from the central government (or lack of such) and partly by lack of political will to coordinate local administrative units, or maybe a game in which local governments are trying to "free ride" on the contributions from others. Most likely, however, it also reflects an attitude that seems to be present all the way up to the ministry level, that the voluntary agencies are able to make their way through support from foreign sources, so why should the government take financial responsibility?

As mentioned above, the share of the Mbulu district basket funds allocated to HLH has increased this year to 12-13% of the basket funds and may further increase up to 15% in the years to come. The DMO in Mbulu was however not willing to extend the support beyond the 15% limit suggested in the policy guidelines, even though he asserted that HLH provides some 40% of all health service in the district. This unreasonableness of the present guidelines was acknowledged in our interview with the Ministry of Health and Social Welfare, and they assured that the policy guidelines would be adjusted in the near future by taking the actual workload more into account. If HLH were able to increase its share of the basket funds in Mbulu district to 40%, the added funding would amount to some 90 mill Tsh in 2009.

The minimal contributions from other districts were discussed with the MoHSW. They recommended involving PMO-RALG to bring on board the other districts. However, patients who seek care across

district boundaries are a common phenomenon all over Tanzania, and to our knowledge there is no system in place to deal with these cases. One possible strategy to further advance HLH's arguments on this matter could be to calculate HLH's share of the services provided in each of these districts. This is feasible since the place of residence is recorded in the patient registers at HLH.

HLH should ensure its share of the new pay-for-performance scheme, although the amount available is small (max 9 mill Tsh per year).

HLH should also put considerable effort into the negotiations of the service agreement. Although it is unclear how much funds that initially will come with this arrangement, these negotiations may be an important arena for demonstrating the mismatch between the services provided at HLH and the resources provided by the government. According to the MoHSW, the resource gaps identified through these negotiations could form the basis for subsequent requests to the MoHSW to fill the gaps.

The MoHSW also argued that the service agreement would form an important foundation for future discussions about the number of staff at HLH that would receive a staff grant. By entering into a contract about the range of services that should be provided, it will be easier for the Ministry to adjust the number of people on a staff grant accordingly. The MoHSW claimed that their long term goal is to provide a staff grant to all health workers in the voluntary agencies. A policy change was not expected in the near future, though.

A final possibility is to ask the government to second staff to HLH. The workers will then become civil servants on government payroll. This arrangement is common in voluntary agencies in Tanzania, especially in the designated district hospitals. The DMO of Mbulu said he would be positive to second staff to HLH, like they have already done at several other voluntary agency health centres in the district. The MP of Mbulu also argued that this is the most realistic future option. The message from the MoHSW was the opposite, though; there have been a lot of negative experiences with seconded staff in Tanzania due to unclear management structures when the health workers are employed by the government and are working in a voluntary agency. The MoHSW therefore argued that the staff grant arrangement is preferable and is the one that should be expanded in the future. This is in line with the views of the management of HLH.

Recommendations:

- Take a proactive role vis-à-vis local governments in the years to come in order to maximise contributions from the service agreement, the funds set aside for pay-for-performance and ordinary district basket funds.
- Use the service agreement as a platform to negotiate a staff grant for a higher number of health workers.

5.2.2 The Royal Norwegian Embassy

The Block Grant agreement between HLH and the RNE was originally a 44.6 mill NOK contract running from 2006 until end of 2010. The time profile of the support implied in practice a massive down-scaling of the hospital activities, especially since no realistic alternative of increased government support was in sight. The dramatic salary increases that were experienced during the contract period further worsened this picture, and it was decided to shorten the contract period and add the last year's funds on top of the allocations for 2008 and 2009. The block grant has recently been further increased by 2 mill NOK in 2009, partly to compensate for the strong depreciation of the Norwegian krone relative to Tanzanian shillings that occurred in the second half of 2008 in the wake of the global financial crisis. From 2007/2008, HLH has in addition received a separate grant to support the achievement of Millennum Development Goals (MDGs) 4&5.

Table 14. Grant from the Royal Norwegian Embassy (mill NOK)

	2006	2007	2008	2009	2010
Orginal block grant	*10.0*	*12.0*	*10.0*	*7.3*	*5.3*
Revised block grant	10.0	12.0	12.0	13.0	
MDG 4&5 grant	-	-	5.0	3.8	
Total grant	**10.0**	**12.0**	**17.0**	**16.8**	

Our interpretation of this development is that the main objective of the RNE has been to maintain the operations of HLH. At the same time, the RNE seems to have had an aim to exit, or at least substantially reduce, its support over time. The latter objective has however been subordinate to the former, implying that the level of support has been renegotiated whenever the operations of the hospital have come under threat. In other words, if there was an exit strategy, the strategy was not a credible one.

We would encourage the RNE to clarify its objectives regarding the support of HLH. Given the long term support from the Norwegian government to the hospital, it can be argued that it has become a duty of the RNE to continue its support at a level which ensures the hospital's future operations. The Norwegian government has arguably entered into an implicit social contract with the people of the Haydom area to secure their health services. This argument does not imply that the RNE should not also try to exit, leaving the funding to others. But it has implications for the acceptability of using reduced quantity and quality of services as a leverage in the process of getting other funding sources on board.

Another factor that the RNE needs to consider is the efficiency of the support in terms of advancing the health and development of people in the area. Based in the findings of this study, there is little doubt that HLH is a development project that offers high value for money. The benefits to the local people are undoubtedly large. The location of HLH in the corner of a district and a region implies that the likelihood that the government would serve this area with similar services is very small. Hence, the HLH project offers a real value added. It is also a factor in this context that funds to the HLH project are spent in a relatively transparent manner.

Should the RNE decide to continue its support to the hospital, we recommend not again planning for an exit that is not credible. It should also be acknowledged that to plan for continued operations at HLH implies that future allocations should have an increasing profile over time, taking into account both the general inflation rate as well as the likely increase in real wages (i.e., wage increases above the rate of inflation).

The RNE has so far largely pursued a hands-off policy regarding the strategy and future development of the hospital. There are many good reasons for this, including the very complexity of the project and the importance of detailed local knowledge for making the right decisions. However, this report has also highlighted the need for a broader discussion of the mandate that comes with the support from the RNE, especially in light of the RNE's high and increasing share of the hospital budget. We recommend the RNE to provide more clarity around these issues. Which role does the RNE want to see HLH be playing in the Tanzanian health system? Should its main role be to extend health services to a population that otherwise probably not would have received decent government services? Or should HLH be something more, a "golden example" of what can be achieved in a rural setting, and an encouragement to the government to increase its ambitions for the public health service? If so, along which dimensions should HLH be special; the type and range of services, the quality of the services, the rural training hospital, etc.? And which role should HLH play as a "window" through which the RNE and other donors may learn how the health system in Tanzania is functioning on the ground? These are but some of the questions that could be part of a discussion on the broader mandate of the RNE support. Decisions along these dimensions have large implications for costs and thus for the

demands for future funding from the RNE. They also have implications for the possibilities of the hospital to increasingly be funded by the Government of Tanzania.

Assuming that continued operations of the hospital is a more important objective than to exit the RNE support, the possibilities for exit are not very large in the short to medium run. The bargaining power vis-à-vis the main alternative funder – the Government of Tanzania – is simply too weak. Even if it were in the genuine interest of the Government of Tanzania to uphold the services at HLH, there is no reason for them to increase their financial support as long as they know that the RNE is a guarantee for the hospital's continued existence. The RNE, on the other hand, has little or no bargaining power as long as they – for good reasons –are unwilling to cut off the service provision in order to demonstrate a real intent to withdraw. As long as the RNE wants to ensure the hospitals continued existence, they are thus trapped in a game where they cannot exit.

Against this background, we find it unlikely that the government will substantially increase funding to HLH through some kind of bilateral bargaining process. Substantial increases in government funding are more likely to come through sector-wide reforms such as service agreements and other public-private partnership arrangements, reformed allocation rules for district basket funds, and changes in the system for allocation of staff grants. Given the slowness of these processes, a national solution to the funding issue should not be expected in the near future. The RNE could however play a more proactive role in these processes now as they become members of the health basket donor group.

Making HLH into a training hospital might increase the possibilities for bilateral negotiations between the RNE and the Government of Tanzania about the future funding of the hospital, because this will make the hospital belong to a very exclusive set of institutions. The likelihood of succeeding with such a strategy will increase if the government is brought on board in the early stages of the process in order to build a mutual understanding of the way forward in terms of the future funding of the hospital.

At present, the support from the RNE is divided into a block grant and a MDG 4&5 grant. The MDG 4&5 grant is supposed to support mother and child health services. The grant has undoubtedly expanded these services, for instance by increased utilisation of delivery services. The grant has also increased the focus on maternal and child health services at the hospital through the MDG 4&5 working group.

Most of the services supported by the MDG 4&5 grant were provided by the hospital also prior to the grant, even though volumes were smaller. In practice, it is impossible to establish the added value of the grant, because it is impossible to know what would have happened to the level of mother and child health services at HLH if the hospital did not receive the grant. It would be misleading to assume that no grant would have lead to a continuation of services at historic levels. The economic situation of the hospital at the time when the grant was provided implied that without extra resources, some services would have to be scaled down. To the extent this would have affected mother and child services, the contribution of the MDG 4&5 grant is larger than suggested by comparing the present level of services to historic levels. But a down-scaling of services would most likely also have affected other parts of the hospital, in which case the MDG 4&5 grant is *de facto* supporting services outside the mother and child area. Hence, it is impossible to measure what the MDG 4&5 support has achieved in the mother and child health area. In our view, this is an important argument for not separating MDG 4&5 money from the block grant in future allocations.

In addition, the separation between the grants creates an extra burden on the hospital in terms of budgeting and reporting. Much of this reporting has little value in light of the point made above.

On other hand, it can be argued that a separate MDG 4&5 grant has sharpened the hospital's focus on mother and child health services. The question is whether this focus needs a separate grant or whether the same could have been achieved by building MDG 4&5 monitoring indicators into the block grant. We are inclined to believe that sensible, separate indicators might have done the job. One practical

suggestion could be to maintain a separate MDG 4&5 working group at HLH with the responsibility for providing thorough analyses and reports of activities in this area, with inputs from ongoing research projects at HLH.

Recommendations:

- Clarify the RNE objectives regarding its future support of the hospital (continued operations vs exit of support).
- Secure the continued operations of HLH over the coming 5-10 years through a grant which accounts for expected increases in costs over time.
- Clarify the mandate that comes with the RNE support, emphasising the role of HLH in the Tanzanian health system.
- Be proactive in advancing the public-private partnerships agenda through the health basket donor group and/or other channels.
- Involve the Government of Tanzania in the plans of developing HLH into a training hospital and try to build a mutual understanding about increased local responsibility for the future funding of the hospital.
- Integrate the MDG 4&5 financial support with the general support of the hospital, provided that the hospital's focus on MDG 4&5 services can be effectively maintained through other measures.

5.2.3 Other funding sources

HLH is making constant efforts to mobilise resources through private channels, especially through the Friends of Haydom in Norway, but also locally through biannual hospital days and gifts from the local churches.

The Bishop of the Mbulu Diocese of the ECLT argued that the ongoing process of forming a new ownership structure through a foundation would weaken the direct influence of the ELCT on the governance of the hospital and thereby enable the hospital to attract more donors.

Other potential funding sources include international public/private partnerships and programmes, such as the Global Fund. The HLH does not seem to have been very active in exploring the possibilities to attract this type of funding. The Mbulu district is receiving 220 mill Tsh from the Global Fund, and the DMO allegedly said that there is a possibility for HLH to access part of these funds.

Attempts should also be made to increase Norwegian government funding through other channels than the aid budget (cf. the discussion in Section 5.1 about funding from the Norwegian Ministry of Health related to the training hospital concept).

Recommendation:

- Take a more proactive role vis-à-vis the Global Fund and other international funding sources.

Another pool of resources emphasised by the hospital is the research collaboration with national and international institutions. HLH and the surrounding community have a long history of welcoming researchers, and this research has so far generated more than 180 publications. The National Institute for Medical Research (NIMR) in Tanzania has established and is running a research station at the hospital. In 2008, the hospital was involved in 17 research project with 18 collaborating institutions.

The benefits to the hospital of research activities have mainly come through two channels, 1) new knowledge that enables improvements in the quality of hospital services, and 2) added financial, technical and human resources. The value of new knowledge depends on the relevance to the hospital setting of the research questions being asked, as well as on the hospitals ability to absorb new knowledge into the organization. The financial contribution from a recent large research project has

made it possible to engage a research coordinator to increase the impact of research programmes on the quality of hospital services.

Significant financial contributions to the hospital from the research projects have so far been the exception rather than the rule. In order to increase the financial contributions, the hospital will charge an overhead on all new research projects. The total amounts collected through this channel cannot be expected to become very large, though. To date, the main resource inputs from research activities have been equipments and human resources. Researchers sometimes contribute in the clinic beyond their research activities. This brings a direct resource input in addition to capacity building of hospital staff. Moreover, the projects sometimes bring new equipments that can be utilised for regular hospital services.

The research activities at HLH may become an important asset in discussions about making HLH into a training hospital.

Recommendations:

- Promote research projects that ask questions with relevance to the operations of the hospital.
- Ensure that all new projects add to the total resource base of the hospital.

Appendix 1. Terms of Reference

Final Project Review

Project : TAN-2315 Haydom Lutheran Hospital – General Support

Agreement : TAN-06/029 Haydom Block Grant Support 2006-2010
(with additions in TAN-08/012 Addendum 1)

1 Background

Haydom Lutheran Hospital (HLH) was established by the Norwegian Lutheran Mission in 1955. The administration of the hospital was handed over to the local church, the Evangelical Lutheran Church of Tanzania (ELCT) in 1963.

HLH is situated in Northern Tanzania, in the south-west corner of the Mbulu District. Taking its regional impact into account, it has been estimated that Haydom serves approximately 390,000 people. The official immediate catchments area has a population of about 100,000.

The hospital has received considerable support from Norwegian official development assistance over the years. In 2008, the Ministry of Foreign Affairs, through the Royal Norwegian Embassy (RNE) in Dar es Salaam, supported HLH with a total of approx. NOK 13.5 million, of which NOK 12 million came from the Block Grant Support, NOK 1.4 million through the Millenium Development Goals 4&5 (MDG 4&5) support and approx. NOK 100,000 for strengthening HLH's financial management system.

In addition, HLH is financed from patient fees, support from the Tanzanian Ministry of Health and Social Welfare, revenue from research collaboration, internally generated income (e.g. from farming activities and guest house), as well as contributions from Norwegian organizations and private individuals. HLH defines its main objectives as follows:

- Reducing the Burden of Disease
- Poverty Alleviation
- Building and Maintaining Institutional Capacity of both HLH and its Partners
- Improved Collaboration with Likeminded Institutions

In achieving these objectives, the hospital has decided upon a set of strategies for medical care, capacity building and poverty alleviation. These main strategies give the foundation for the core activities of the hospital.

In accordance with the Contract for the Block Grant support, a mid-term review of the project was done in 2007. Following the recommendations of this review, a number of adjustments were made and a separate project to strengthen the financial management system at HLH was initiated.

The current Contract for the Block Grant support states that there will be a final project review carried out within September 2009. These Terms of Reference are intended to provide guidance for this review.

2 Project goals and objectives

The goal of the project is to secure and improve health services to the people in the catchment area for the purpose of poverty reduction, community capacity building, reduction of the burden of disease and improving collaboration between partners (both Government and civil society partners) sharing the same vision.

The objectives of the project are to:

- Secure material and professional support to meet the health related needs of the people living in the HLH target area.
- Further integrate the HLH operations into the national health structure by working to contribute to the fulfilment of the Tanzanian Ministry of Health and Social Welfare national health policy objectives and advancing from a recognised first referral hospital to a recognised second referral hospital.
- Make the hospital financially sustainable through predictable long term funding.
- Promote the hospital's focus on the health objectives of Norwegian development assistance policy such as poverty alleviation, reaching the marginalized sector of the society, gender, capacity building at community and sector level, focusing on indigenous people, educational development, good governance at institutional, local and national levels, local government reforms and interfaith dialogue.

3 Review objectives and intended use

The objectives of the review are to assess HLH as a running hospital within a health care system as well as a participant in the general development of Mbulu District, but also to consider how HLH can sustain the present activities and adjust to changing environment. The review should assess the present financing sources as well as potentials for and capacity to access alternative or additional resources, including long term strategy to sustain activities.

In this connection, the review should consider pros and cons of a separate MDG 4&5 support as opposed to integrating this targeted support into potential future block grant support.

The review should also assess the potential impact of Government of Tanzania's present wage policy will have for HLH, both with regards to the financial and the staffing situation. In this regard, the review should also consider financial implications of HLH's pension scheme obligations.

Furthermore, the review should include an assessment of the financial management system at HLH.

In addition the review should assess the possibilities of using the achievements and infrastructure of the HLH in order to attract further international funding through concepts such as training, education and consultancy collaboration services. The focus of this objective should be particularly related to the role of research and the role of establishing accredited training services within Tanzania but also internationally and in particular through the Norwegian universities and health ministry.

Due to the short time span since the mid-term review, major focus should be on assessing developments since the mid-term review.

The review will be used for two purposes:

1. As input and guidance to HLH's drafting of a programme document for a period beyond the present Contract period.
2. As input to the dialogue between HLH and RNE on size and modality of any future collaboration. While, RNE has expressed interest to engage in dialogue regarding support beyond the present Contract period, no commitment for funding has been made.

4 Scope of work

This Final Project Review will focus on progress since the mid-term review as well as future plans and sustainability of the project. The review will focus on three themes including, but not restricted to:

I HLH as a hospital (efficiency, cost-efficiency, effectiveness, sustainability):
- HLH's role in the Tanzanian health system. Cooperation with/links to the Ministry of Health and Social Welfare (administrative, technical, financial, etc.).
- HLH as a hospital: Relevance, performance in relation to goals and objectives, overall effect and impact on the health situation of the target population (efficiency, effectiveness, general cost-effectiveness , etc.)
- Outreach program: Relevance, performance, effects and effectiveness
- Adequacy, effectiveness and general performance in relation to program for maternal and child health (MDG 4&5), including aspects of integration in overall activities
- Financial sustainability, future plans and potentials for new/additional funding
- Organisational sustainability, incl. overall capacity, ability to adapt to changing environment, innovativeness, managerial strength
- Achievements re. HIV/AIDS, gender and environment.

II HLH as a development agent in the Mbulu District:
- Role, relevance and impact in the district related to social/economic development (schools, water, roads, etc.).
- Collaboration and coordination of activities with local authorities, role of communities (Mbulu and neighbouring Districts).
- Cross-cutting issues such as HIV/AIDS, gender and environment.

III Assessment of the financial management system
- Progress since the mid-term review
- The quality of the new financial management system (strengths and weaknesses, need for further improvements etc.)
- Whether the present system provides sufficiently clear boundaries between the running of the hospital and other activities, such as the Mulbadaw Farm.
- Anti-corruption and accountability measures in place and used.

5 Implementation of the review

The sources of information and methodology to be employed are as follows:

Desktop study of relevant documents

- Appropriation document and contract for the block grant.
- Budget, financial and progress reports for the block grant.
- Equivalent documents for the MDG 4& 5 support
- Audited accounts for HLH
- Documentation and minutes from annual meetings
- Other relevant documents

Field visits

- To HLH including meetings with relevant officials (church, community, local authorities)
- To Dar es Salaam for meetings with RNE, other Development Partners and Government of Tanzania as deemed necessary by the consultants.

The review shall be undertaken by Dr. Ottar Mæstad (team leader) and Dr. Aziza Mwisongo. The necessary background documentation will be provided by RNE either in advance of or during the field visit in Dar es Salaam.

The review assignment should be done in May and June 2009. The team leader will be allocated 18 working days, the other member 15 working days. This will include preparation, field trip, and finalization of the reports.

6 Reporting

The team shall submit the following reports in English:

- Draft report not later than 15 June 2009
- Final report not later than two weeks after RNE, Norad and HLH have commented on the draft report.

The final report shall be presented in both electronic and paper version, and should not exceed 40 pages plus relevant annexes. There should be an executive summary and a summary of conclusions and recommendations.

Appendix 2. Itinerary

Date	Description
Thurs May 21	Arrival at Haydom, Ottar Mæstad Informal meeting with Dr Olsen and Dr Mallyeck Meeting Core Administration Team Meeting Finance Department Meeting with Dr Olsen and Dr Mallyeck
Fri May 22	Meeting Finance Department Meeting Nursing Officer in charge Meeting Human Resource Officer Meeting Dr Olsen Compiling statistics
Sat May 23	Meeting Mr Schofield Meeting Member of Parliament, Mbulu District
Sun May 24	Arrival at Haydom, Aziza Mwisongo Visiting Mulbadaw farm and CMSC workshop
Mon May 25	Looking around hospital Meeting staff Meeting Core Management Team Meeting Dr Olsen
Tues May 26	Meeting Dr Olsen, Dr Mallyeck and Finance Manager Visiting RCHS outreach Interviewing Heads of Divisions and staff Visiting cultural centre Meeting Dr Olsen
Wed May 27	Travelling to Mbulu Meeting ELCT Bishop Meeting DMO Mbulu Meeting head of VCT services, Mbulu District Hospital Meeting Dr Olsen Meeting Dr Mallyeck Visiting Dr Olsen Secondary School Preparing presentation for CMT meeting Cross-checking statistics
Thurs May 28	Debriefing Core Management Team Travelling to Dar es Salaam
Fri May 29	Meeting MoH Debriefing Royal Norwegian Embassy, Dar es Salaam

Appendix 3: Persons and groups consulted

Øystein Evjen Olsen	Managing Medical Director
Isaack Malleyeck	Deputy Mananging Medical Director and CTC clinic
Core Administration Team (CAT)	HLH
Core Management Team (CMT)	HLH
Justine Masuja	Financial Manager
Emanuel Mighay	Nursing Officer in charge and Head of Outpatient Division
Naftali Nuwas	Human Resource Officer
Ruth Mneney	Head of Medical Division
Angella Baynit	Head of Mother and Child Division
Bertha Sulle	Head of Outreach Division and RCH Department
Local staff	HLH
Expatriate staff	HLH
James Dahaye	Head Master Dr Olsen Secondary school
Alphonce Munyaw	Manager Mulbadaw farm
Philip Sanka Marmo	Member of Parliament, Mbulu District
Tim Schofield	Consultant, HLH
Anna Karin Evjen Olsen	Consultant, HLH
Zebedayo Daudi	ELCT Mbulu Diocese and chair person for HLH Board
A. T. Pallangyo	District Medical Officer, Mbulu district
A. Molamuk	Head of VCT services, Mbulu District
Group of pregnant women at RCH outreach programme	
Marko Dillan	Engelist at Dang'eyda Clinic station
Dr Mongango'o	VA coordinator, MoH, Dar es Salaam
Jon Lomøy	Ambassador, RNE, Dar es Salaam
Morten Heide	Counsellor, RNE, Dar es Salaam
Hanne Tilrem	First Secretary, RNE, Dar es Salaam

Appendix 4. HLH services and organisational structure

Hospital services

- Medical ward
- General ward (Surgical 1 and 2)
- Maternity ward
- Tuberculosis ward
- Paediatric ward
- Physiotherapy
- Eye department
- Outpatient department
- X-ray department including a CT scan
- Operating theatres – three major and three minor
- Intensive care unit
- Intravenous unit
- Dental clinic
- Drug store
- HIV/AIDS care and treatment clinic
- Addiction treatment unit / Amani ward (new December 2007)
- Child care unit (new March 2009)

Other medical support services:

- Mental Health Clinic
- Ambulance and radio service
- Pastoral service

Outreach and preventive health services:

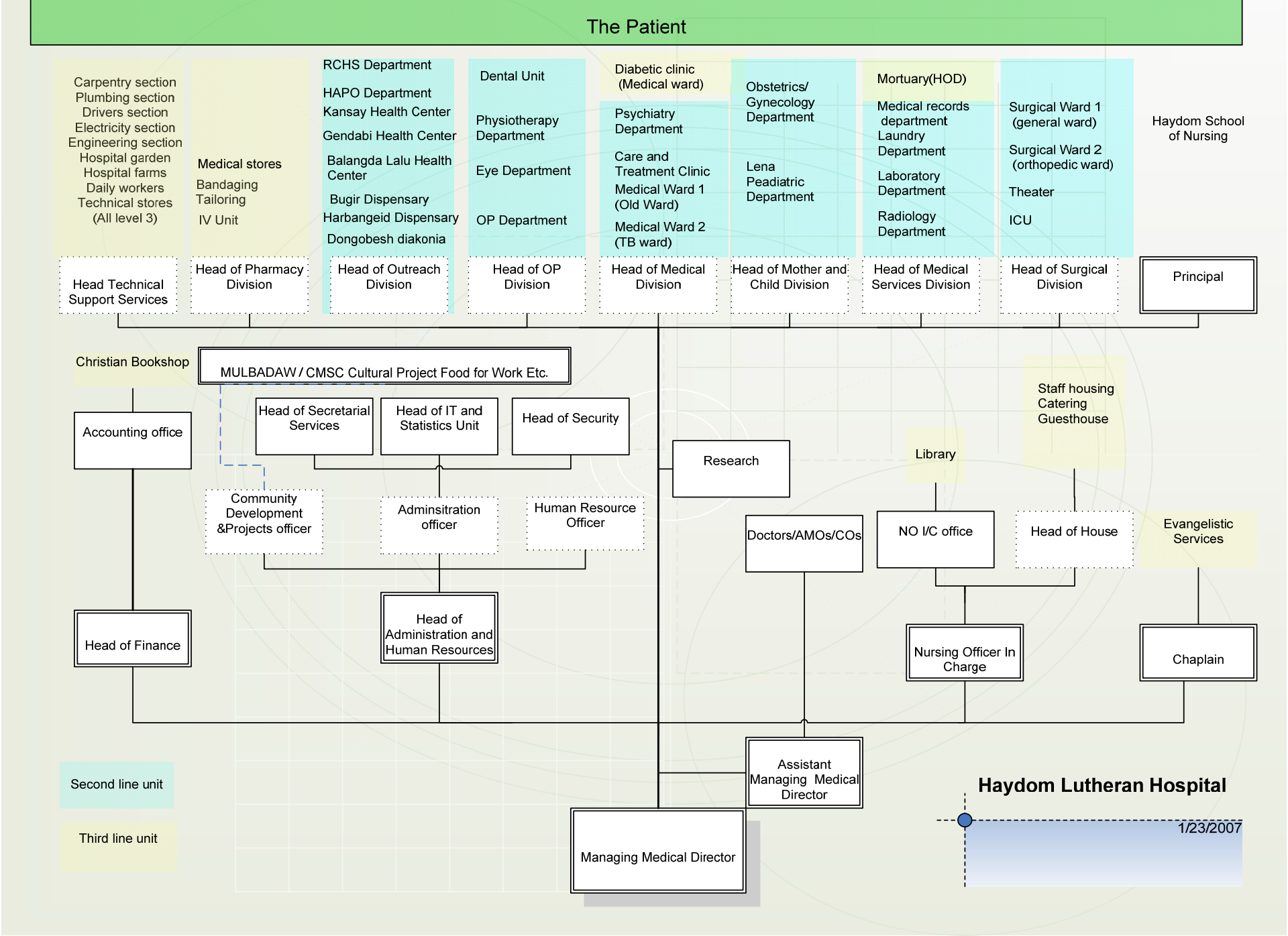
- Reproductive Child Health Service, with 1 static station and 26 outstations, of which 6 are served by plane
- HIV/AIDS prevention and voluntary counselling and testing

Decentralised curative units operated by HLH:

- Kansay Lutheran Health Centre
- Balandalalu Lutheran Health Centre
- Gendabi Lutheran Health Centre
- Buger Dispensary

Other support units at HLH:

- Finance department
- Human resource office (new January 2008)
- Workshop – construction and maintenance, hospital transport services
- Laundry
- Library, with internet access
- Tailoring department
- A vegetable garden and dairy cows


The Patient
Carpentry section
Plumbing section
Drivers section
Electricity section
Engineering section
Hospital garden
Hospital farms
Daily workers
Technical stores
(All level 3)
Medical stores
Bandaging
Tailoring
IV Unit
RCHS Department
HAPO Department
Kansay Health Center
Gendabi Health Center
Balangda Lalu Health Center
Bugir Dispensary
Harbangeid Dispensary
Dongobesh diakonia
Dental Unit
Physiotherapy Department
Eye Department
OP Department
Diabetic clinic (Medical ward)
Psychiatry Department
Care and Treatment Clinic
Medical Ward 1 (Old Ward)
Medical Ward 2 (TB ward)
Obstetrics/ Gynecology Department
Lena Peadiatric Department
Mortuary(HOD)
Medical records department
Laundry Department
Laboratory Department
Radiology Department
Surgical Ward 1 (general ward)
Surgical Ward 2 (orthopedic ward)
Theater
ICU
Haydom School of Nursing
Head Technical Support Services
Head of Pharmacy Division
Head of Outreach Division
Head of OP Division
Head of Medical Division
Head of Mother and Child Division
Head of Medical Services Division
Head of Surgical Division
Principal
Christian Bookshop
MULBADAW / CMSC Cultural Project Food for Work Etc.
Staff housing
Catering
Guesthouse
Accounting office
Head of Secretarial Services
Head of IT and Statistics Unit
Head of Security
Research
Library
Community Development &Projects officer
Adminsitration officer
Human Resource Officer
Doctors/AMOs/COs
NO I/C office
Head of House
Evangelistic Services
Head of Finance
Head of Administration and Human Resources
Nursing Officer In Charge
Chaplain
Assistant Managing Medical Director
Second line unit
Third line unit
Managing Medical Director
Haydom Lutheran Hospital
1/23/2007

Appendix 5. Income and expenditure

Table A5.1. Incomes and expenditures (1,000 Tsh)

	2004	2005	2006	2007	2008
Incomes					
Patient fees	315 442	406 314	385 092	406 148	446 744
RNE Grant	869 438	1 599 790	2 000 000	2 484 800	3 389 230
Gov't Grants	229 195	299 648	290 872	468 227	513 343
Gifts	70 456	66 611	110 656	428 259	74 060
HLH facilities and equipment	314 047	310 912	502 289	629 924	334 700
Other income	3 290	3 199	86 141	128 079	52 409
Total income	**1 801 868**	**2 686 474**	**3 375 050**	**4 545 437**	**4 810 486**
Expenditures					
Med supplies	352 137	494 743	671 970	653 629	610 393
Operating expenses	513 745	666 975	770 164	1 019 113	1 150 321
HIV/AIDS work	-	-	92 736	118 739	82 967
Staff costs	848 672	1 251 505	1 801 734	2 344 165	2 585 454
Nursing School	19 523	28 861	43 762	62 481	28 893
Total expenditure	**1 734 077**	**2 442 084**	**3 380 366**	**4 198 127**	**4 458 028**

Sources: Audited financial reports 2004-2008. 2008 figures have been rearranged according to the pre-2008 template. Note: Depreciation and investments not included.

Table A5.2. Income and expenditure shares (%)

	2004	2005	2006	2007	2008
Incomes					
Patient fees	18	15	11	9	9
RNE Grant	48	60	59	55	70
Gov't Grants	13	11	9	10	11
Gifts	4	2	3	9	2
HLH facilities and equipment	17	12	15	14	7
Other income	0	0	3	3	1
Total income	**100**	**100**	**100**	**100**	**100**
Expenditures					
Med supplies	20	20	20	16	14
Operating expenses	30	27	23	24	26
HIV/AIDS work	-	-	3	3	2
Staff costs	49	51	53	56	58
Nursing School	1	1	1	1	1
Total expenditure	**100**	**100**	**100**	**100**	**100**

Source: Table A5.1

Appendix 6: Concepts and definitions[15]

The Standard Unit of Output
While hospitals produce a wide range of services, it is impossible to capture all these services and attach a cost to each of them. This would require a fairly sophisticated accounting system that is not available at the moment in most institutions. The middle ground can be reached by identifying the most common and comprehensive final outputs of a hospital and attribute to them a relative weight based on cost analysis already carried out. The index that is used by the Ugandan Catholic Medical Bureau is called the standard unit of output (SUO). SUO is a composite index that takes into account various types of output. It provides a general idea of the volumes of the main services produced by a health unit. The choice of the parameters to be used in the calculation of the index is determined by the information routinely generated by the HMIS:

- Inpatient episodes (IP),
- Outpatient contacts (OP),
- Deliveries,
- Immunisation doses administered,
- Antenatal - Mother and Child Health – Family Planning contacts.

A single index is derived starting from the costs of the following activities relative to the costs of one outpatient contact (OP):

Cost for 1 IP	= 15 times the cost of 1 OP
Cost for 1 delivery	= 5 times the cost of 1 OP
Cost for 1 AN contact	= ½ the cost of 1 OP
Cost of 1 immunisation dose	= 1/5 the cost of 1 OP

All the 5 categories can now be expressed in one index of the volume of activities, the Standard Unit of Output (SUO) index:

$$SUO = 15*IP + 1*OP + 5*Del + 0.2*Imm + 0.5*AN/MCH/FP$$

The relative weights of each of these activities were drawn partly from the literature and partly from a cost analysis exercise carried out by one of the authors (Giusti, 1993). A critical analysis of the effects of the biases introduced by the choice of relative weights has so far demonstrated that the formula developed can comfortably be used to compare the majority of hospitals, according to UCMB (Beekes, 2003).

Average cost per SUO
This is a measure of efficiency. It represents the average amount of money spent by the hospital to produce a unit of output (assumed to be an OPD contact). It is calculated as the total costs of the hospital divided by the total number of SUOs produced.

Staff productivity (SUO per staff)
This is a measure of efficiency. It can be calculated both for qualified staff as well as for all hospital staff. It is the total SUOs produced by a given hospital in a year divided by the number of staff (all or qualified) in the hospital that year.

[15] This appendix draws heavily on work done by the Ugandan Catholic Medical Bureau and kindly shared with Eamonn Brehony. We acknowledge their help and kindness in allowing us to use this approach.

Average Fee per SUO
This is a measure of accessibility. It represents the average amount of money spent by a patient to get a unit of output (assumed to be an OPD contact). It is calculated as the total amount of money collected from user fees divided by the total number of SUOs produced by the hospital.

Average Length of Stay (ALOS)
This is the average number of days that each inpatient stays in the hospital. It is total inpatient days divided by total number of admissions. It may vary for different reasons, e.g. case mix and quality of services. There is no evidence that longer stays contribute to higher quality care. Without case mix and disease severity data, it is difficult to use ALOS as a direct efficiency measure. But ALOS that are longer for hospitals of the same level and same case mix may suggest inefficiency.

Bed Occupancy Rate (BOR)
This is the proportion of the potential patient bed days of a hospital utilised in a particular period, usually a year. It is expressed as a percentage. It is total inpatient days divided by total number of beds multiplied by 365 days. The BOR provides information about the degree of capacity utilisation of inpatient services. A BOR between 80-90% is usually considered to be a reasonable norm.

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SUMMARY

Haydom Lutheran Hospital (HLH) is a first level referral hospital located in Mbulu district, Manyara region in Tanzania. HLH was established by the Norwegian Lutheran Mission in 1955 and is owned by the Evangelical Lutheran Church of Tanzania (ELCT).

HLH has over many years received substantial financial support from the Norwegian government through the Ministry of Foreign Affairs and NORAD. The support is presently channelled through the Royal Norwegian Embassy (RNE) in Dar es Salaam. In 2008, the RNE funded 70% of the hospital's budget. Most of the RNE funds are administered through a Block Grant.

This report is the final project review of the Block Grant for the period 2006-2009. Emphasis is placed on developments since the mid-term review, which was conducted in late 2007.

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