



Off The Road: The Mapping of Health Training Facilities in Southern Sudan

Ministry of Health – Government of Southern Sudan

Mark E Beesley, RN

July 2010

Technical Resource Centre
Liverpool Associates in Tropical Health
Anson House,
25 Anson Street,
Liverpool
L3 5NY
U.K.

Tel: +44 (0) 151 705 3773
Fax: +44 (0) 151 705 3774

trc@lath.com

TABLE OF CONTENTS

Acronyms	5
Executive Summary	6
1. Introduction	8
2. Methodology	8
3. Findings	
A: Nationwide	9
B: GOSS Health Training Facilities	13
Box: Good Luck or Bad?	19
Box: It's only a Few Hours	23
C: State MOH Health Training Facilities	25
Box: A Creative Business Model	30
D: Partner-run Health Training Facilities (not for CHWs)	34
Box: A Virtuous Cycle	39
Box: Practicing Doctors	43
E: Partner-run CHW Training Facilities	46
4. Notes on Nomenclature	53
5. Notes on Architecture	54
Box: In a box.	55
6. Recommendations	
Suggested Training Facility Priorities for State MOHs	56
Suggested Course of Action for MOH-GOSS	57
7. Acknowledgements	58
8. Author's Details	58
Annex 1: False Positives	59
Annex 2: GPS Coordinates	60
Annex 3: In-Country Expenditure	62
Annex 4: List of Assessors	62
Annex 5: Informants	63
Annex 6: List of All Health Training Facilities	65

List of Tables

Table 1:	Distribution of Existing Training Facilities, by State	10
Table 2:	Distribution of Open Training Facilities, by State	11
Table 3:	Selected Findings, by ownership	12
Table 4:	GOSS Training Facilities	17
Table 5:	GOSS Training Facilities, Infrastructure	18
Table 6:	Distribution of Equipment and Utilities, GOSS Training Facilities	19
Table 7:	HR Allocations, GOSS Training Facilities	20
Table 8:	Selected Costs, GOSS Training Facilities	22
Table 9:	State MOH Training Facilities	28
Table 10:	State MOH Training Facilities, Infrastructure	29
Table 11:	Distribution of Equipment and Utilities,	

	State MOH Training Facilities	30
Table 12:	HR Allocations, State MOH Training Facilities	31
Table 13:	Selected Costs, State MOH Training Facilities	32
Table 14:	Partner Training Facilities	38
Table 15:	Partner Training Facilities, Infrastructure	39
Table 16:	Distribution of Equipment and Utilities, Partner Training Facilities	40
Table 17:	HR Allocations, Partner Training Facilities	41
Table 18:	Selected Costs, Partner Training Facilities	43
Table 19:	Partner CHW Training Facilities	49
Table 20:	Partner CHW Training Facilities, Infrastructure	49
Table 21:	Distribution of Equipment and Utilities, Partner CHW Training Facilities	50
Table 22:	HR Allocations, Partner CHW Training Facilities	50
Table 23:	Selected Costs, Partner CHW Training Facilities	51

ACRONYMS

AAH-I	Action Afrika Hilfe - International
ACROSS	Association of Christian Resource Organisations Serving Southern Sudan
ADRA	Adventist Development & Relief Agency International
AMREF	African Medical & Relief Foundation
CHAS	Church Health Association
CHW	Community Health Worker
CISP	Comitato Internazionale Sviluppo di Pololi
FBO	Faith-Based Organisation
GOSS	Government of Southern Sudan
GPS	Global Positioning System
HR	Human Resource
HRD	Human Resources Development
HRRP&HSD	Human Resource, Research, Planning & Health Systems Development
HTI	Health Training Institute
ICRC	International Committee of the Red Cross
IMC	International Medical Corp
IRC	International Rescue Committee
LATH	Liverpool Associates in Tropical Health
MCHW	Maternal/ Mother & Child Health Worker
MOH	Ministry of Health
MOHE	Ministry of Higher Education
NGO	Non-Governmental Organisation
NPA	Norwegian People's Aid
OVCI	Organizzazione Volontario per Cooperazione Internazionale
PHC	Primary Health Care
PRDA	Presbyterian Relief & Development Agency
SCBC	Sudan Catholic Bishops Conference
SDG	Sudanese Pound
SIM	Serving Interior Mission
SMOH	State Ministry of Health
SUHA	Sudan Health Association
TBA	Traditional Birth Attendant
UNFPA	United Nations Population Fund

EXECUTIVE SUMMARY

Objective

To deliver an accurate, comprehensive, up-to-date register of health training facilities in Southern Sudan, recording their location, ownership, infrastructure, output and other specified details.

Methods

All known, reported and suspected health training facilities were investigated. Twenty-seven sites were visited. Open training facilities were photographed and directly assessed using a 100 item questionnaire in the form of a checklist, with a further twenty questions concerning each course on offer.

Findings

Mapping: There are twenty-three open health training facilities: six MOH-GOSS controlled; three State MOH-owned; and fourteen run by partners, of which five train CHWs only. A further three State facilities and three partners ones are shut. Another six facilities have closed since 2006. Distribution of open training facilities is skewed: two states have none; a third of open training facilities (and half of GOSS-owned ones) are in Central Equatoria.

Output: Ten courses offer Diplomas; ten offer Certificates. Four new degree- or diploma-level facilities have opened in the last two years. Two-thirds of facilities are tuition-only. 948 graduates and 1422 current students have attended thirteen courses since 2006. There are at least eighty-four full-time tutors. A full third of output has been delivered by two GOSS facilities. Four facilities – still technically open - are moribund with no graduates since 2006. Only one facility is routinely upgrading existing HR (8% of total graduates). The graduates from the remainder are, and might remain, outside the workforce.

Quality: About a tenth of graduates are probably unsafe practitioners. Five facilities continue to use Khartoum-curricula (and have waited more than two years for Khartoum final exams). In quality control, no training facility systematically follows up graduates (to collate feedback on performance).

Costs: Training costs an average of approximately \$5,000 per student per year. 90% of HRD costs do not go towards HRD of pay-rolled HR. Fifteen million dollars would be needed to give full-board training to the equivalent of 10% of existing staff over eight years.

Conclusion from Findings

There is no decipherable pattern to the distribution of training facilities between or within states, nor the pattern of courses on offer within or across facilities. The individuality of each teaching facility's location, class-size, start and close of academic year, number of hours' tuition per week, working hours, methodology, access to equipment, tutor-student ratio, dependence on part-time tutors, entitlements (in and out of study time), unit costs, clinical supervision, examinations, graduation procedure, reporting lines, governance and even each facility's official name shows a formidable absence of harmonization. This year's developments are moving in a direction *away* from standardization.

Interpretation

At the level of the training facility, the observed individuality - resulting from the repeated and constant introduction of local solutions to resolve local challenges over the lifetime of each facility – has parallels with the adaptation of a species to different circumstances in an uncontrolled environment. Indeed two sub-species have evolved: the passive single-roomed Khartoum-facing institutes using the Arabic curriculum and (undelivered) examinations with over-large class-sizes of questionably-trained future graduates (about a third of the population), and the rest.

The uncontrolled environment, which has sustained the diversity, is reflected at Central-level by the absence of an HR strategy (as distinct from HR Policy) within which there has been a lack of planning (either the lack of a plan or the failure to impose one) and the consequent issuing of standards. Nationally-designed examinations within a structured recruitment and deployment policy which would have disfavoured poorly-performing training facilities and bolstered good ones (by their respective pass rates) have allowed all graduates to escape natural selection pressures.

Meanwhile, the State MOH - mediating between the two - appears immobile in a communication and supervision vacuum.

1. INTRODUCTION

This survey investigated one component of Human Resource Development (HRD). All accessible pre-service health training facilities in South Sudan were visited, assessed and photographed during June and July 2010. Over twenty assessments were conducted and each investigated more than a score of variables.

The survey looked at physical details: the location, size and state of repair of the teaching infrastructure and tutor and student accommodation were recorded, as were the availability of vehicles, utilities, certain items of equipment and teaching materials.

It investigated the facility's links with external bodies: ownership of land and buildings, accreditation, governance, composition of examination boards, academic links, funding sources and visitors received. It also researched the internal structure: information on personnel and their duties, running costs and the professional details of each tutor.

For each course offered, data was sought on the type, admission criteria, catchment area, attrition rate, curriculum in use, venue for clinical practice, and examination procedures. Figures on the course duration and the final class size allowed the calculation of quantity and output.

As a counterbalance, some measure of training quality was also necessary and this was estimated using ten proxy indicators - half of which were objective, half tending to the subjective - with results awarded following the observation of a sample lesson when present and interviews with a selection of students and tutors. The accuracy, validity and sensitivity of the indicators were not formally tested.

Printed materials (eg. copies of curricula, payroll, budgets, old examination papers, sample certificates and publicity literature of any kind) were collected if available.

Finally, upcoming changes, points of particular interest and unusual features were also recorded.

2. METHODOLOGY

The survey remit, originating from the office of the Director-General of the Human Resource, Research, Planning & Health Systems Development Directorate of the Ministry of Health, Government of South Sudan (MOH-GOSS) described the need for a comprehensive and detailed assessment of South Sudan's Health Training Institutes (HTIs)¹. The Liverpool Associates in Tropical Health (LATH) under its Technical Assistance in Health Priorities program agreed to conduct the mapping.

The term *training facility* was adopted to replace *health training institute*. (The label 'Health Training Institute' is not a general description, but rather an embryonic move towards classification by the MOH-GOSS and is intended to apply to a specific kind of facility.)

¹ *Draft Terms of Reference for a Consultancy to Support the Directorate of Human Resources within the Ministry of Health to Conduct an Assessment and Mapping Exercise of All Health Training Institutes in Southern Sudan*, LATH & MOH-GOSS, undated.

The subject of the study was interpreted to mean all health training facilities that offered either (a minimum three months' duration) pre-service training to unqualified individuals yet to enter the HRH pool or further 'upgrading' training to existing HRH staff.

Excluded from the investigation were those facilities that offered only in-service training, ie. those facilities that provided refresher training, through short-term workshops, seminars or on-the-job training events, while maintaining staff at the same professional level.

The allocated timeframe for the preparation, execution, collation and analysis of the survey was eight weeks.

A pre-existing mapping tool was reviewed, amended, simplified, reformatted, field-tested and reproduced. (The self-assessment questionnaires for students and tutors of earlier drafts were omitted.) Studies of the curriculum itself, the adherence to that curriculum, the validity of the students' clinical practice and a review of each clinical site were purposefully excluded from this survey.

Published documents, electronic spreadsheets and internal MOH records were reviewed. The Department of Training holds no central records on training facilities, content to allow registration to occur at state level and with no obligatory registration with the MOH-GOSS². Likely informants were interviewed and unconfirmed sites investigated. As they became known the names of certain and possible training facilities, whether functioning, closed or abandoned, were listed by state, alongside the reported type and duration of their courses. Supporting organizations were noted and contacted. This number rose incrementally from nineteen to forty-eight.

A schedule of nine trips, six of which required flights was designed and budgeted, at US\$25,000, or approximately \$1,500 per training facility. Assessments within Juba were conducted on unassigned days. The Global Positioning System (GPS) coordinates of all facilities appear in Annex 2.

Eight MOH-GOSS managers from the HR and Training Departments conducted the assessments between 22 June and 16 July 2010. Managers from seven State MOHs (three of whom participated in the assessments themselves) were briefed and debriefed by the assessment teams. The consultant either directly participated in or, through cross-checking and deeper questioning, indirectly followed up each assessment.

3. FINDINGS

A: Nationwide

Existing Health Facilities

For the sake of completeness, all *existing* training facilities are included; those that closed before 2006 are counted as not existing. The survey found thirty-eight existing health training sites. Reports of training facilities at eleven other sites, on investigation, were found to be untrue (see Annex 1).

Perhaps the clearest criterion for categorizing and banding the facilities is ownership or, more specifically, line-management. There are three rough categories: frankly national-level facilities

² With the findings of this mapping assessment, such a provisional registration could be established in the space of one afternoon.

owned, directly funded and line-managed by the Training Department (of HR,R,P & HSD Directorate) of MOH-GOSS (but sometimes part-funded by states);

- State-owned facilities (that nevertheless have a national character in that they are formally open to candidates from all states) owned, directly funded and line-managed by the HR and/or Training Department of the relevant State MOH
- Partner-run facilities managed by, in this case, NGOs, FBOs, the Catholic Church and the Ministry of Higher Education (though the legal ownership of the infrastructure or land title may lie elsewhere).

According to this hierarchy, of the thirty-six health training facilities, six (17%) are GOSS-run, nine (25%) are State-run and twenty-one (58%) are run by partners.

The distribution of training facilities across states is uneven. The average number of existing training facilities per state is 3.6, with Western Bahr El Ghazal and Lakes State having just above that average; Upper Nile and Central Equatoria have over double the average number; and the remaining six states host a below-average number of facilities, as shown in the table below. For ease of analysis, partner-run facilities are split into those for which the primary course is the certificate for community health workers (CHWs), and those for which the primary course is something else.

Table 1: Distribution of Existing Training Facilities, by State.

State ³	GOSS-run	S.MOH-run	Partner-run (not CHW course)	Partner-run (CHW course)	Total
Lakes			3	1	4
Jonglei					0
Eastern Eq		1			1
Central Eq	3	1	3	2	9
Western Eq	1		2		3
Western BeG		2	2		4
Northern BeG		1			1
Warrap		1		2	3
Unity			2	1	3
Upper Nile	2	3	1	2	8
Total	6	9	13	8	36

Open Facilities.

³ Throughout the report, the order of the States follows a clockwise spiral with Lakes at the centre.

The raw figures on existing facilities are misleading (and so largely unhelpful): only half the existing facilities are, loosely, functioning. At the start of the mapping exercise, it was presumed that *functioning*, like *existing*, would automatically be a binary criterion too: the list would divide simply into (a) functioning training facilities and (b) non-functioning ones. When data collection had finished however, the facilities fell onto at least six points along an activity-inactivity spectrum. The descriptions *open*, *shut* and *closed* were adopted instead. Yet even this is unsatisfactory: one facility which the principal declared is open has to be classed as shut, while another which has not admitted students for at least three years and is shut in any meaningful sense is technically still open.

A review of only those training facilities which were *open* in July 2010 cuts the figure by a third, to twenty-three, and heightens the uneven distribution, with Central Equatoria now hosting over three times the average number of open training facilities, 2.3 per state.

Table 2: Distribution of Open Training Facilities, by State.

State	GOSS-run	S.MOH-run	Partner-run (non-CHW)	Partner-run (CHW)	Total
Lakes			2 (Rumbek x 2)		2
Jonglei					0
Eastern Eq		1 (Torit)			1
Central Eq	3 (Juba x 2, Yei)	1 (Juba)	3 (Juba x 2, KKeji)	1 (Jalimo)	8
Western Eq	1 (Maridi)		1 (Maridi)		2
Western BeG			2 (Wau x 2)		2
Northern BeG					0
Warrap				2 (M Lou, Wunrok)	2
Unity			1 (Leer)	1 (Ganyiel)	2
Upper Nile	2 (Malakal x 2)	1 (Renk)		1 (Maban)	4
Total	6	3	9	5	23

The names, contact details, qualifications and specialties for approximately half the eighty-four full-time tutors working in non-CHW training facilities were collected and filed.

The quantity of work each training facility delivers is often calculated by summing the numbers of graduates, accepting that those students part-trained but lost to attrition before qualification are excluded. However, output (in graduate-years) is a fairer and more accurate measure. Two facilities may both deliver thirty graduates. However the facility offering the three-year (diploma) course has delivered twice as much output as that providing an 18-month (certificate) course.

Table 3: Selected Findings, by ownership

Ownership-level	Courses					Nº of Teaching Facilities	Nº of Students July 2010	Grad since 2006	Graduate Output, in Graduate-years (%)
	Total	Degree	Diploma	Cert.	Award				
MOH-GOSS	11	0	5	6	0	6	520	274	635 (48%)
State MOH	5	0	3	2	0	3	268	73	153 (12%)
Partner (non-CHW)	12	2	2	6	2	9	497	175	220 (16%)
Partner (CHW)	5	-	-	-	5	5	137	426	319 (24%)
Total	33	2	10	10	7	23	1,422	948	1,327

Each of the four ownership levels is reviewed in succeeding sections. The main findings are as follows:

- There are twenty-three open health training facilities: six MOH-GOSS controlled; three State MOH-owned; and fourteen run by partners, of which five train CHWs only.
- A further three State facilities and three partners ones are shut.
- Another six facilities have closed since 2006.
- Four degree- or diploma-level facilities have opened in the last two years.
- Two-thirds of facilities are tuition-only.
- Distribution of open training facilities is skewed: two states have none, one state has eight.
- 948 graduates and 1422 current students have attended thirteen courses since 2006.
- About a tenth of graduates are probably unsafe practitioners.
- A full third of output has been delivered by a two GOSS facilities.
- Four technically open facilities are moribund with no graduates since 2006.
- Five facilities continue to use Khartoum-curricula.
- Only 8% of total graduates are from the existing workforce and they come exclusively from one facility.
- The average unit cost for training is approximately \$5,000 per student per year.

- Fifteen million dollars would be needed to give full-board training to the equivalent of 10% of staff over eight years.

B: Training facilities owned and run by (central-level) MOH-GOSS

(a) The Sites

There are six GOSS training facilities. All but one are sited in large towns, all of the facilities are open and all were visited in person by assessors. They are:

- Maridi National Health Training Institute (in Western Equatoria)
- Yei National Health Training Institute (in Central Equatoria)
- Juba Technical Nursing Secondary School (in Central Equatoria)
- Malakal Health Sciences Training Institute (in Upper Nile)
- Malakal Teaching Hospital Nursing School (in Upper Nile)
- Juba College of Nursing & Midwifery (in Central Equatoria)

Maridi National Health Training Institute

This vast educational complex a full day's drive west of Juba and hosted by a small town in the verdant bush would quite properly sit at the top of most lists on health training in Southern Sudan: the biggest (with seven blocks and 280 beds), the oldest (of the non-garrison town facilities), the most productive (269 graduated clinical officers since 1998, though using another measure Yei has greater output) and the most expensive (with an estimated annual turnover of at least a million dollars). It is the pre-eminent health training facility and most of its graduates are probably safe and competent practitioners. A big minus is the 2-mile distance to Maridi Hospital.

Yei National Health Training Institute

This well-designed, large and airy, two-storey facility, built by Norwegian People's Aid, sits in the corner of Yei Hospital, itself in pleasant surroundings in a large and growing town 4-6 hours drive south-west of Juba. Yei is in trouble on two fronts: the quality of the practical experience must be in question and, financially, it is running on empty. Its apparent near-collapse since NPA withdrew all running costs last year is dramatic.

Juba Technical Nursing Secondary School

Located within Juba Teaching Hospital, half the students are five or six years into a three-year Khartoum certificate course. Part-student nurse, part-qualified nurse the 'students' are on the hospital payroll and work there. It still follows the Arabic system (a new intake only once the previous course is over) and has eleven tutors...but only one support staff.

Malakal Health Sciences Training Institute

Occupying the old Malakal Midwifery School premises, there has been no intake at this facility since 2008. A plot for a new school lies next to the airport. Coming from over-large class sizes (where satisfactory one-to-one skills training is difficult) and with no full-time tutors to guarantee consistency and quality, the graduates of this facility would probably require an extended period of closely-supervised internship.

Malakal Teaching Hospital Nursing School

The students belonging to the sole massive class of 130 are apparently still waiting, after five years, for their Khartoum final exam.

Juba College of Nursing & Midwifery

Newly-constructed premises within Juba Teaching Hospital are due to open in August 2010. This well-funded facility is new, and with a now-generous tutor-to-student ratio of 1:6, unit costs are running at an extraordinary \$10,000 per person per year.

(b) Output

Certificate-level health workers (with under three years of health training) have long been, and still are, over-represented in the national skills profile, while mid- and advanced-level staff are too few⁴. The stated policy of the MOH-GOSS is to work to redress that imbalance⁵. It is remarkable then that, rather than contributing to its alleviation (by prioritizing the delivery of specially-designed upgrading courses for existing certificate-level staff and the direct delivery of diploma courses for new entrants), the MOH - though its sponsorship and delivery of six certificate-level courses – is contributing in the opposite direction.

As shown by the table below, when output is calculated – the number of graduates multiplied by the length of the course in years - any movement towards internal consistency (by increasing diploma level courses) is more than countered by the MOH's much greater support (also in terms of number of courses and number of students) of the certificate-level courses. Three-quarters of MOH-GOSS output is at certificate level (excluding the lost years of those yet to graduate).

⁴ The *Southern Sudan HR Situation Analysis, 2006* conducted by WHO & AMREF for MOH-GOSS reported an extremely distorted skills profile with vast number of staff with less than 2 years health training.

⁵ Health Policy 2007-2011, MOH-GOSS.

Output (in Graduate-years) of all GOSS Training Facilities since 2006, by level.

Degree Level (3 or 6 years)	0
Diploma Level (3 years)	168 Grad-yrs 5 courses (27%)
Certificate Level (18m -2½ year)	467 Graduate-yrs from 6 courses (73%)
'Award' Level (9-12 months)	0

Extraordinarily, only half the MOH-GOSS training facilities follow the MOH-GOSS designed (or at least GOSS-approved) curricula. The details of the courses run by each MOH-GOSS training facility are tabled below. The number of female clinical officer students is remarkably low, and the number of male community midwife students (at both venues) is surprisingly high. While Juba College of Nursing & Midwifery only opened its doors in May 2010 (and cannot be blamed for having no graduates), the evidence that the facilities in the bottom three lines have graduated no-one since 2006 is frankly astonishing.

A *graduate* here means 'an individual who has successfully passed their final course examination' whether or not they have completed a period of internship or received, or been sent, their graduation document via a formal ceremony. In accepted standard usage in South Sudan *graduate* refers to the passing through of the ceremony itself, even if it occurs many years after the individual's successful completion of the course and subsequent employment. Medical Assistants who completed training from the Juba Health Sciences Training Institute in 2006, for example, only 'graduated' in a mass ceremony in June 2010.

The class sizes for six of the eight courses of the first three facilities are too small: it is an inefficient use of tutor's time and other resources to lecture to a small audience, particularly so when the need is so acute. The tempo needs to be quicker. The class sizes for all of the courses of the last three facilities are too big, one scandalously so.

The MOH-GOSS policies and procedures for examinations were never satisfactorily determined. The clinical officer tutors, probably with AMREF, devise their exams in Maridi, the sole location for this course. This will be the case for the Public & Environmental Health Officer course. The local Certified Community Midwifery tutors (Maridi, Yei plus KajoKeji) collaborate to design their exams. However the Yei Laboratory Technician tutors have not collaborated with colleagues in Rumbek and there must be questions over consistency across training venues. It is not at all clear (or apparently decided) how the Department of Training and the Directorate of Nursing & Midwifery confer over the final exams for the Certified Community Nurses.

For the respective managements delivering the Arabic-language courses, where there is only one intake every three years, to be caught without a back-up examination plan is difficult to understand. Students in Juba who could not sit their Khartoum-originated third-year and final exam (because it did not arrive) were advised to wait until the next third year lessons came around. This is a wholly inappropriate decision, or rather non-decision. That something similar should happen in three nominally GOSS sites over three years (and presumably will continue to happen every year with less and less chance that Khartoum will reincorporate the facilities into their exam rosters) is ample evidence of profound managerial drift at MOH-GOSS.

Perhaps the one clear remit of a central training authority is to guarantee harmonization of examinations, and so consistency in qualification (even if it does not itself design, delivery and mark the exams)⁶. This is a function that cannot be done at a lower, sub-national level.

On governance, the received information was confused. There appears to be no Board of Governors as such at any institute, certainly none that meets regularly and circulates minutes⁷. For administrative and managerial concerns (for example, the release of funds and the recruitment of tutors) a number of principals rightly looked to the Director HR. For training issues, properly the remit of the Director of Training (for example, the selection of candidates for courses) the same principals also looked to the Director of HR⁸.

Juba College of Nursing & Midwifery had extensive academic links with institutions overseas. Maridi has deep-rooted connections with Kenyan organizations. The remainder had no reported outside links.

⁶ Echoed in the recommendations of the 'Harmonisation/ Standardisation in HTIs' MOH-GOSS workshop, Juba November 2009

⁷ The recorded example of the Executive Board of the MOH-GOSS itself (which though timetabled to meet every Tuesday, 'has not met regularly for some months' with no minutes nor communicated decisions) may indicate the most likely state of affairs. *Strengthening Communications in Health* (p13). Report by Daniel Harris, MOH-GOSS & LATH. April 2010.

⁸ This role confusion is understandable and likely to continue. Until the post titles are amended to correctly indicate the relevant duties, assuming 'HR' is responsible for everything to do with Human Resources is both sensible and logical. HR Management is made up of HR Administration (broadly, the quantity) and HR Development (concerned with quality). The posts of Director of HR and Director of Training could be renamed accordingly.

Table 4: GOSS Training Facilities

GOSS Facility	Training Courses	No of Students currently	No of Female students (%)	No of Grads since 2006 intake	Average Class size	Total Output (in Graduate-years) ⁹
Maridi National HTI	3-year Clinical Officer Diploma (+1 yr internship)	127	5 (4%)	56	36	168
	3-year Public & Envir. Health Diploma (+1 yr internship)	15	3 (20%)	0	15	0
	18-month Certified Community Midwife	21	12 (57%)	45	17	67
Yei National HTI	2½ year Certified Community Nurse	39	6? (15%)	115	35	300
	18-month Certified Community Midwife	15	10 (67%)	31	12	46
	2-year Cert Lab Technician	32	4? (13%)	27 (not 2006)	15	54
Juba College of Nursing & Midwifery	3-year Registered Nurse Diploma	20	10 (50%)	0	20	0
	3-year Registered Midwife Diploma	12	11(92%)	0	12	0
Juba Tech Nursing Secondary School	3-5 years <i>consecutive</i> Khartoum Certified Nurse	68	43 (63%)	0	68	0
Malakal Teaching Hosp Nurs School	3-5 years <i>consecutive</i> Khartoum Certified Nurse	130	No info	0	130	0
Malakal Health Science Tr Inst	3-year <i>consecutive</i> General Med Asst	41	27 (66%)	0	47	0
6 Facilities	11 Courses	520 Students now	141/390 (36%) Female	274 Grads since 2006	Class size Range: 12-130	Output 635

(c) Infrastructure and Equipment

Two of the facilities are full-board, four are tuition-only, and this is reflected in the infrastructure of the accommodation and kitchens. In rural Maridi, tutors live on-site. In urban Yei, tutors can more easily arrange their own accommodation. The details of the Juba College refer to their temporary site

⁹ Output since 2006 (in Graduate-Years) = (Total Number of Graduates since 2006) x (Number of Set Years in Course)

and will improve shortly. Currently, the two courses are combined for a foundation course and share a classroom.

Table 5: GOSS training facility Infrastructure

GOSS Training Facility	Nº of Classrooms	Practical Room	Library	Refectory/ Kitchen	Nº of Offices (incl. Tutors Room)	Student Accommodation	Tutor Accommodation
Maridi National HTI	8	1	1	1	3	280 beds	Y
Yei National HTI	4	0	1	1	3	160 beds	N
College of N & M (current) (New premises from Aug 2010)	1	0	0	0	2	0	N
Juba Tech Nursing Sec School	No info	No info	1	0	2	0	N
Malakal Teaching Hosp Nursing School	1	0	No info	0	0	0	N
Malakal Health Sciences Tr Inst	No info	0	No info	0	0	0	N

The number of available computers in Maridi must be the result of a policy decision to embrace distance learning. Those facilities persistently battered by under-funding over an extended period, which seems to have been the fate of the last three facilities, are unlikely to have functioning high-tech equipment of any quantity. Malakal Health Sciences Training Institute has nevertheless managed to secure funds for its vehicle. Maridi is the only rural MOH-GOSS facility and it has six vehicles...but for 163 full-board students and 68 staff.

Table 6: Distribution of Equipment, and Utilities, of GOSS training facilities

GOSS Training Facility	No of working Computers	Internet access	Functioning Photocopier	Projector/ OHP	Vehicle	Electricity Source	Water Source
Maridi National HTI	50	Y	4	3	6	Own generator	Town
Yei National HTI	5+	N	2	2	2?	Hosp generator	No info
Juba College of N & Midwifery (New premises from Aug 2010)	0	N	No info	0	1	Town	Town
Tech Nursing Secondary School	No info	N	0	No info	0	Hosp generator	Hosp
Malakal Teaching Hosp Nursing School	0	N	0	No info	0	Hosp generator	Hosp
Malakal Health Sciences Tr Inst	0	N	0	No info	1	Town	No info

Good luck or Bad?

Like many of his colleagues at other GOSS and State MOH training facilities, the principal considered himself very fortunate that at least his electricity bill was not going to be a problem. There were so many other drains on his scant resources that having free electricity from the nearby hospital generator was undoubtedly a blessing.

Until, that is, he received the letter from the town electricity company giving intent to disconnect in 72 hours following non-payment of 300,000 SDG (\$110,000) for use of electricity over three years.

If only, in order to be perfectly transparent about costs and expose hidden subsidies, the school had insisted on its own meter from the hospital ...

(d) Staffing Levels

As with the other tables so far, details for staffing allocations split the six GOSS facilities into two camps, revealed below.

The upper set have sensible tutor-student and tutor-admin staff ratios, though Yei's tutor-student ratio looks uncomfortable (and may partly explain the earlier concerns over clinical supervision). The use of fewer full-time tutors is preferred over multiple part-timers. Full-board explains the relative numbers of ancillary and administration staff.

The lower set have a different orientation. Ratios appear almost random and certainly outside accepted practice, most notably in Malakal Health Sciences Training Institute where there are no full-time tutors. Juba Technical Nursing Secondary School is notable for its decision, presumably under pressure to cut staff numbers, to retain eleven tutors and let go of everyone else except a cleaner.

Table 7: HR Allocations to GOSS training facilities

GOSS Training Facility	Total No of Personnel	No of Tutors (and part-time)	No of Admin. Staff	No of Ancillary Staff	No of Security Staff	Full-time Tutor: student ratio	Full-time Tutor: other staff ratio
Maridi National HTI	68	13 (+3 part)	14	23	8	1:13	1:3
Yei National HTI	28	4	4	12	8	1:21	1:6
Juba College of N & Midwifery	16	6	2	3	5	1:3	1:2
Sub-total	108	23	20	38	21	1:9	1:3
Juba Tech Nursing Sec School	12	11	0	1	0	1:6	11:1
Malakal Teaching Hosp Nursing School	7	5	0	2	0	1:26	2:1
Malakal Health Sciences Tr Inst	8	0 (28 part)	6	2	0	0:41	0:8
Sub-total	27	16	6	5	0	1:15	2:1

(e) Quality

The survey's attempt to objectively measure quality – through the rating of ten indicators before, during and after an observed lesson – was a sorry failure. A statistically invalid sample size was the

major flaw: one section of one lesson out of more than a hundred lessons each year per course was never going to be a fair – or justifiable - assessment, even if some underlying features held true.

Nevertheless, some impressionistic evaluation is in order, with inferences drawn from class-size, demonstrated methodology, quality control from the tutors, time discipline within the facility and, most key, reports from employers of graduates. There is often more variation within a group than between groups. That said, *most* of the diploma students would *probably* be safe and competent practitioners (174), while *most* of the certificate-level students would *probably* not be (198). It would be wise to treat the certificate of about a quarter of the latter (86) with some caution.

Estimated Quality of Graduates from all GOSS Training Facilities, by level.

Diploma Level (3 years)	41 poor	174 good	
Certificate Level (18m -2½ year)	198 poor		86 mediocre 21

As highlighted in a 2010 review¹⁰, if poor quality graduate performance is the product of a certain course, it is not necessarily the consequence of poor quality teaching: it could equally be due to high-quality teaching of a poor curriculum (or poor quality teaching of a poor curriculum).

Certainly there are worrying anomalies in the Certified Community Nurse curriculum which merit review¹¹.

The best way for training facilities to get reassurance on the quality of their graduates – and hence worth of their training – is for the tutors to get out and see their graduates in action (and further their training in the workplace). Short of this the next best way, is to assess their competence through supervision of their skills in the classroom (through the involvement of the tutors in in-service training events, now absent). However the easiest and certainly the cheapest way is to encourage honest feedback from employers. No institute was systematically doing any of these things.

(f) Costs

Both Maridi and Yei, which both offer full-board tuition, provided a detailed breakdown of their expenditures. Bearing in mind that Maridi is looking after approximately two hundred people (staff and students) and Yei one hundred, then comparisons and contrasts emerge. Food costs are in line (between \$600 and \$700 per person per year) as are teaching material costs (between \$125 and \$135 per person). Some figures diverge: Yei spends roughly \$3000 per year on each of its photocopiers, Maridi half that, and electricity costs are inconsistent. 15% of Yei's expenditure is spent

¹⁰ Evans G, Rehnström U. *Assessment of the Community Midwifery Programme in Southern Sudan*, MOH-GOSS & LATH, Feb 2010

¹¹ The task of routinely seeking out and collecting feedback from tutors implementing the various curricula, in anticipation of any regularly-spaced formal revision by stakeholders, is the duty of the Deputy Director for Curriculum Development.

on the purchase of reagents for its Lab Technician course, while 3% of Maridi's costs are for building repair. Comparisons weaken beyond that; costs do not reflect need. Probably Maridi receives the funds for what it requires and can adjust its fees to sponsoring NGOs accordingly. Certainly, Yei receives its fixed funds and adjusts its spending accordingly. No first year students at Yei have uniforms, for example, and a pocket money allowance (at \$10 per month) has been withdrawn.

GOSS pays for the salaries of all staff in Yei, save one expatriate tutor (and salaries were not paid on time in five of the previous twelve months). African Medical & Research Foundation (AMREF) pay all salaries in Maridi (and all were on time).

As an independently-financed organization, required to be solvent, it is likely that AMREF-supported administrators at Maridi have properly looked at their annual outgoings over time and calculated their charges, now at roughly \$6000 per student per year. Yei's charges to its smaller number of sponsoring NGOs (most students are sponsored by MOH-GOSS) are a fifth of that and are half what they should be according to the facility's own figures. Probably a unit cost of \$6000 per student per year for full-board tuition (outside the main cities) is a good working estimate.

Juba College of Nursing & Midwifery, with only three months' operation, is too young to allow a proper breakdown of costs, but it looks fearsomely expensive and unsustainable. Students are again sponsored by central government at no cost to their respective state authorities.

Table 8: Selected Costs of GOSS Training Facilities

GOSS Training Facility	Fees per student	Salaries in \$/ year (% total costs)	Food \$/ year	Other \$/ year	Costs \$/ year	Self-Estimated Unit Costs \$/ student/ yr (Probable unit costs)
Maridi National HTI	6000/yr	100,000? (10%)	135,000	770,000	1,000,000?	6000
Yei National HTI	1200	60,000? (23%)	60,000	140,000	260,000?	1,660 (2,550)
Juba College of N & Midw.	0	No info	0	No info	300,000	8,000+ (10,000)
Juba Tech Nursing Sec Sch	0	65,000 (100%)	0	0	65,000	0 (1,000)
Malakal Teaching Hosp Nurs School	0	15,000 (100%)	0	0	15,000	0 (120)
Malakal Health Sc Tr Inst	0	14,500 (72%)	0	5,500 (vehicle repair)	20,000	0 (500)

The remaining three facilities are not cost-efficient in any sense: in two of them, 100% of costs go on salaries from MOH-GOSS – largely for tutors - for an output of zero graduates since 2006. Costs for all these facilities were calculated later from a study of pay grades rather than from local information. If it is true that a senior faculty member at one facility told the assessor “But we have no costs” (salaries being invisible) then there would seem to be no cost awareness and no understanding of added value.

It’s only a Few Hours.

At the first visit the assessor learnt that unit costs at the well-regarded training facility were known to be high - estimated at over \$8,000 per student per year.

Almost a quarter of successful candidates had not enrolled that year however and numbers were below expectations. The true unit costs were likely to be over \$10,000 per student per year. Funders were spending \$1000 a day to keep this training facility up and running: extremely high costs for a tuition-only facility.

At 13.00h, at the end of a quick follow-up visit, the assessor saw the students going home for the day and asked what was happening.

“Oh, well. We don’t have a generator and it gets too hot in the afternoon,” came the reply, “So we send them home at one.”

The assessor was silent: productivity had just halved.

(g) Prospects for 2011

The scenarios described below, and in subsequent sections, are the author’s best guesses on what the next year will hold for the training facilities. They are not based on privileged information, merely observations and intuitions about the likely state-of-affairs next year, if all other factors remain the same. The biggest factor, of course, is managerial direction from senior level. Some suggested interventions, to avert the future described, are given in italics.

The three Khartoum-curriculum facilities will be disappointed for another year and their perpetual third year students, soon totally deskilled, will continue in the hospitals as paid staff (a satisfactory outcome for them). In any case, any final exam they do sit and pass will result in a Khartoum-recognised certificate which is already irrelevant.

The best outcome for all is for the students to be required to sit for a GoSS Certified Community Nurse exam (the nearest English-language equivalent) translated into Arabic for these exceptional circumstances, by the Juba Technical Nursing Secondary School bilingual tutors. Basic-level nursing is after all a skilled-based vocation in whatever language. If they pass they should be awarded a one-off Arabic-language Community Nurse Certificate and accepted at that grade.

All three of these facilities will soldier on, unsupported technically and financially, while the tutors remain dramatically under-utilized (in the middle of a nationwide shortage of tutors) and increasingly deskilled. The fiction that GOSS maintains two higher-level training facilities in Malakal and one in Juba will continue. The presence of the facilities – in reality, shells of their former selves - will distort planning decisions. Plans for their renovation, promoted by many, will reinforce pre-existing inequalities of access - hung over from an earlier curative, hospital-based, urban-centred health service delivery model - and now inappropriate to a ten-state Southern Sudan.

For the concerned onlooker, the frightening absence of any in-service training provision nationally is a deep worry. Short (5-day) episodes of in-service training are cheaper and less disruptive ways of developing HR, with a more efficient use of resources, which are more productive (if delivered properly), more manageable and are more likely to have appropriate and relevant content. Correctly-designed events can integrate the service-side and teaching-side which have largely lost touch will each other. The Juba Technical Nursing Secondary School (in itself an obsolete name) and the Malakal Teaching Hospital Nursing School, both within the grounds of their respective hospitals, could very easily be converted to in-service training centres, delivering multiple workshops to the large numbers of staff (including auxiliary staff) unsupported academically since their recruitment. There should be no further General Medical Assistant training, with resources instead directed to the well-established, well-regarded and successful Clinical Officer training in Maridi.

With no further emergency grant extended from NPA (if not in 2011, then certainly in 2012) Yei National HTI will have been obliged to suspend further intake and possibly even suspend lessons. (The 2010 emergency grant was tied and covered only an estimated 10% of needed costs.) If however MOH-GOSS was able to secure and commit half a million dollars over two years, then the same courses for similar students will have been reinitiated.

The suspension should be accepted not challenged: certificate-level courses are not the business of the higher-level training institutes. Students in their third year should be given a final exam. Second year nursing and midwifery students should be transferred under an arrangement with AAH-I and combined with the same courses in Maridi. (First year students should be returned to their states with an academic credit and a promise of serious consideration for training elsewhere.) State-salaried tutors should be further trained or reallocated. With time, when adequate and steady funding returns, the facility (renamed Yei Health Training School) should be reopened, with line-management smartly returned to the proper salaried official responsible for training in Yei, the Director of Training in the State MOH of Central Equatoria.

In 2011, the most valuable resources of all – the time and energy of the Director and staff of the HR Department – will continue to be tragically misallocated to urgent, rather than important, tasks. The ceaseless struggle to extract, rather than budget for, funds will continue.

Returning the responsibility for management of state training institutes to others will allow HR to concentrate on, make decisions and resolve important HR issues. Chief among them are predicting trends and anticipating needs of HR for the medium-term; supporting and building the actual performance of State HR counterparts through repeated, regular and integrated supervision; and the definition of a precise and short list of accepted categories.

C: Training facilities owned and run by State MOHs

(a) The Sites

There are nine facilities, all but one, Renk, are sited in State capitals. All were visited in person by assessors. There are three open facilities, namely:

- Torit Technical Nursing Secondary School (in Eastern Equatoria)
- Health Sciences Training Institute (in Juba, Central Equatoria)
- Renk Nursing School (in Upper Nile)

There are three shut facilities, either recently renovated or still under renovation in July 2010:

- Tonj Nursing School (in Warrap)
- Aweil Nursing School (in Northern Bahr El Ghazal)
- Renk Midwifery School (in Upper Nile)

Three further facilities are closed:

- Midwifery School (in Malakal, Upper Nile)
- Midwifery School (in Wau, Western Bahr El Ghazal)
- Nursing School (in Wau, Western Bahr El Ghazal)

In a County Health Department in northern Jonglei, the staff (acting either as part-time tutors or students) have independently arranged a structured program of training, using GOSS curricula as a template, which is worth recording for its novelty and as an example of a local solution to low HR capacity. Apparently completely unsupported and never previously visited by either a state- or central-level official, it is technically owned, but not run, by the Jonglei State MOH and so could be included in this section. However, this initiative is not a facility in any accepted sense and offers no certificate. It is not otherwise considered in the survey findings.

- New Fangak PHC Centre Training School (County Health Department in Jonglei)

Four States (Unity, Lakes, Western Bahr El Ghazal and Western Equatoria) do not host a single State-run training facility, either open, shut or closed. Western Bahr El Ghazal has two closed facilities in Wau. Jonglei hosts no training facilities at all. Northern Bahr El Ghazal and Warrap have escaped joining this list only because of their attempts to rehabilitate one nursing school each, as described below.

Torit Technical Nursing Secondary School

Eastern Equatoria's only training facility, and a day's drive East from Juba, it suffers from the continued use of the Khartoum curriculum for which there have been no recent exams, the subsequent repeated extension or repetition of training, and inadequate infrastructure and equipment.

Juba Health Sciences Training Institute

Wrestled from GOSS control two years ago, in a drama that involved student demonstrations, the institute is located opposite Juba Teaching Hospital for which it depends on many part-time tutors and practical training.

Renk Nursing School

In the majority Arabic-speaking northernmost county, and accessible only by the road from Khartoum, this lonely equipment-free one-room building sits in the grounds of Renk Civil Hospital and, again, uses the Khartoum curriculum without final exams.

Tonj Nursing School

The only State MOH training facility in Warrap, the building within Tonj Hospital is still under local renovation. Tonj is accessible by road from Wau.

Aweil Nursing School

The school's principal claimed it re-opened in May 2010 but there were no students (who were said to be "on holiday") and the classrooms were inaccessible. The State's Director of HR & Training was equally unaware. This facility must be described as shut whatever the claims to the contrary. Aweil is accessible by plane (the hospital butts the airstrip) or by road from Wau 2 hours away.

Renk Midwifery School

Outside but not far from Renk Civil Hospital is this newly-renovated facility with 30-beds, the only State MOH facility with student accommodation. Possibly due to mistranslation, the Midwifery School is misnamed. Its graduates (though there have been only twenty of them since 2004) are Trained Village Midwives, an obsolete category. Surely at the bottom of any

national list of priorities for reconstruction and refurbishment, the building works can only have been done outside of any infrastructure renovation plan.

(b) Output

State facilities have 268 current students: GOSS facilities 520. But collectively, the State MOH facilities are delivering only a quarter of the output of the MOH-GOSS facilities (153 graduate-years against 635 graduate-years).

About half the current students are female.

Of the three open State MOH training facilities, the single productive one – but a mile - is in Juba. This facility is also the only one in all of Southern Sudan deliberately working at HR development for *existing* HR and redressing the skills imbalance mentioned earlier. Ninety percent of students are already qualified and working within the health service. Their collective aim is to progress from certificate- to diploma-level.

Energetically pursuing three three-year courses each with two or three intakes per course (making either eight or nine different classes) while having only six full-time tutors using four classrooms and one non-laboratory practical room is a considerable feat of administration for the facility. This is achieved by a somewhat complicated system of different shifts for different years at different times. The acting principal is also the lead tutor for the Laboratory Medical Assistant course. A very serious consequence is the reduced number of lesson hours for some classes. Laboratory Medical Assistants, seen waiting patiently at 11.30h for their class to start, seem to be receiving only 10-12 hours of tuition a week, a full third of what is expected. If this is so, the course cannot properly be called a three-year one.

The current first-year Theatre Medical Assistant students study in a class size of three, which is an utterly unviable number, especially given the pressure on classroom space.

The training facilities in Torit and Renk are entirely moribund, using the consecutive-intake, Khartoum Arabic-language Certified Nurse curriculum and requiring third years to repeat the year when no final exam papers arrive. Neither has graduated any alumni since at least 2006 and so have not contributed in any way to HR development. Possibly an earlier reallocation of the tutors to other facilities (as a kind of refresher course and in preparation of a later adoption of the GOSS curriculum) or a reassignment of duties to in-service training would have constituted a wiser use of precious resources.

Both facilities are single room buildings - trebling up as classroom, practical room and office – with no equipment. It is a testament to the students' aspirations that they continue to attend classes at all, though what that means exactly in such circumstances is far from clear. Classes - particularly for these facilities with no practical room and where methodology that makes full use of active

participation is indicated – are over-large. An upper limit of thirty-five students is for a skills-based subject is standard practice. Another interesting detail of the Renk Nursing School is its anachronistic admission charge of 10 Sudanese Pounds (the price of one lunch) with a 50 SDP annual fee, waived for State employees. As with a number of aspects about the school, time seems to be passing it by.

Table 9: State MoH Training Facilities

State MOH Training Facility	Course	N° of Students currently	No of Female students (%)	N° of Grads since 2006 intake	Average Recent Class size	Total Output (in Graduate -years)
Health Sciences Training Institute	3-year General Medical Asst	109	No info	31	37	93
	3-year Theatre Medical Asst	18	2	9	5	27
	'3-year' Lab Medical Asst	59	29	33	27	33
Torit Technical Sec School	3-4 year <i>consecutive</i> Khartoum Certified Nurse	40	4 (10%)	0	40	0
Renk Nursing School	3-year <i>consecutive</i> Khartoum Cert Nurse	42	32 (76%)	0	42	0
3 Facilities	5 Courses	268 Students now	67/159 (42%) Female	73 Grads since 2006	Class size Range: 4-42	Output 153
Renk Midwifery School	9-month Khartoum Trained Village Mid (closed since 2006)	0	20 (100%)	20	20	15
Tonj Nursing School (shut)	Yet to open	0	0	0	-	0
Aweil Nursing School (shut)	Yet to open	0	0	0	-	0

The Renk Midwifery School for Trained Village Midwives – not a recognized MOH category - is so unusual that it is worth recounting in some detail. Apparently, delivering mothers actually deliver in the classroom surrounded by twenty learners. Or rather they used to during the sole course that ran since 2003. The students for the *village midwives* course are seconded, variously, from the Prison Service Hospital, the Police Service Hospital and the Wildlife Service and, right from the outset, could not be returning to practice in any village.

Excluding Juba Health Sciences Training Institute, the eleven remaining full-time State MOH training facility tutors have delivered no output at all since 2006. The supervision procedures, frequency, regularity, composition and findings were not investigated in this mapping.

Output (in Graduate-years) of All Open State MOH Training Facilities since 2006, by level.

Degree Level (3 or 6 years)	0
Diploma Level (3 years)	133 Grad-yrs From 3 courses
Certificate Level (18m -2½ year)	0
'Award' Level (9-12 months)	0

(c) Infrastructure and Equipment

Except for Juba, and now Renk Midwifery, all State MOH training facilities are small and under-equipped.

Table 10: State MOH training facility Infrastructure

State MOH Training Facility	Nº of Classrooms	Practical Room	Library	Refectory/ Kitchen	Nº of Offices (incl. Tutors Room)	Student Accommodation	Tutor Accommodation
Health Sciences Training Inst	4	1	Y	N	4	N	N
Torit Tech Nursing Sec School	1	0	N	N	1	N	N
Renk Nursing School	1	0	N	N	0	N	N
Renk Midwifery School (shut)	1	1	N	Y	1	30 beds	N
Tonj Nursing School (shut)	-	-	-	N	-	N	N
Aweil Nursing School (shut)	-	-	-	N	-	N	N

In Juba Health Sciences Training Institute itself meanwhile, the number of classrooms are insufficient for the classes (for the reasons listed earlier), the five full-time tutors and twenty-six part-time ones –

the acting principal has his own office – must share a small room with nine seats, the library space is irrationally organized, while the recently-refurbished IT room sits empty awaiting reconnection of the server, disconnected during renovation in 2008. Simple open shelters of local construction materials would provide shaded seating space for students waiting for lessons or for the classes themselves during the hot season.

Table 11: Distribution of Equipment, and Utilities, of State MOH training facilities

State MOH Training Facility	N° of Working Computers	Internet access	Functioning Photocopier	Projector/ OHP	Vehicle	Electricity Source	Water Source
Health Sciences Training Inst	3	N	0	N	0	Hosp generator	Town
Torit Tech Nursing Sec School	0	N	0	N	0	Hosp generator	Pump
Renk Nursing School	0	N	0	N	0	Hosp generator	Town
Renk Midwifery School (shut)	0	N	0	No info	1 (broken)	Hosp generator	Town
Tonj Nursing School (shut)	0	N	0	N	0	Hosp generator	No info
Aweil Nursing School (shut)	0	N	0	No info	0	Hosp generator	No info

A Creative Business Model

Photocopying is outsourced in one training facility. In front of the library and near the main gate, a privately-owned photocopier occupies a corner of the wide veranda. Photocopies cost one Sudanese Pound per sheet – the price of a cup of coffee (but almost the hourly wage for a Grade 14 cleaner). Business seems brisk.

Outwardly, this looks to be a risk-free business model worthy of being copied itself: the students are happy with a service where toner and paper never run out; the tutors are relieved of a tiresome task; the photocopy man has a sitting-down job in the shade; the machine owner (who may or may not be a member of the training facility staff) turns a profit; and the administrator has a slightly shorter wish list.

Perhaps this entrepreneur's only worry is that one day someone will ask him (or her) to pay towards the electricity, now 'free' from the hospital generator...

(d) Staffing Levels

The tutor-staff ratio in Juba is too high (but would be lower if some of the part-timer tutors were recruited as full-time staff) and the reversed tutor-other staff ratio perhaps reflects the lack of any need for the other staff.

Table 12: HR Allocations to State MOH training facilities

State MOH Training Facility	Total No of Personnel	No of Tutors (and Part-time tutors)	No of Admin. Staff	No of Ancillary Staff	No of Security Staff	Tutor: student ratio	Tutor: other staff ratio
Health Sciences Training Inst	12	6 (23 part)	3	2	1	1:31	1:1
Torit Tech Nursing Sec School	7	6	0	1	0	1:7	7:1
Renk Nursing School	5	3 (2 part)	0	1	0	1:14	3:1
Renk Midwifery School (shut)	6	2	0	2	2	2:0	1:2
Tonj Nursing School (shut)	-	-	-	-	-	-	-
Aweil Nursing School (shut)	-	-	-	-	-	-	-

(e) Quality

As with the MOH-GOSS facilities, the evaluation of the training quality merits a more structured study. Poor quality training could arise from an issue concerning - or issues concerning a combination of - curriculum, compliance with curriculum, class size, classroom methodology, relevance and appropriateness of content, clinical supervision in the practical area, examination design, examination marking and others reasons. An estimated half of graduates (in green) are probably safe.

Estimated Quality of Graduates from all State MOH Training Facilities, by level.

Diploma Level (3 years)	33 grads	40 grads
Certificate Level (18m -2½ year)	0 graduates to date	

(f) Costs

All State MOH training facilities are tuition-only. There are no food costs nor other costs associated with full-board (for example, salaries for hostel or compound managers, cooks and cleaners). Juba is unusual in that it charges a course fee – a possible explanation for its ambitious student numbers. Out-of-state students are supposed to be provided by their state with an accommodation allowance in addition to their salary, which may be \$150 per month, but no student reported receiving this.

No useful information can be extracted from this table: too little information, which is too vague, was offered by the informants. Naturally, in contexts where one guard was expected to do the work of three, there were no finance officers. (Past) expenditure was routinely interchanged with (future) budget and there were too many hidden subsidies (for example, 'free' electricity and the use of hospital watchmen). Such information is probably not even present in the facility. It should be requested from, or calculated by, the State Director of Finance & Administration.

Table 13: Selected Costs of State MOH Training Facilities

State MOH Training Facility	Fees/ student/ yr	Salaries in \$/ year (% total costs)	Food \$/ year	Other \$/ year	Costs \$/ year	Self-Estimated Unit Costs \$/ student/ yr (Probable unit costs)
Torit Tech Nursing Sec School	0	No info	0	0	No info	0
Health Sciences Training Inst	550	No info	0	No info	8450 (excl sal)	0 (4,800 excl sal)
Renk Nursing School	50	No info	0	0	No info	0
Renk Midwifery School (shut)	0	16,600 (67%)	0	0	16,600	-
Tonj Nursing School (shut)	0	-	0	0	-	-
Aweil Nursing School (shut)	0	-	0	0	-	-

(g) Prospects for 2011

The predictions for the State MOHs are as follows. The Renk Midwifery School will reopen and admit a new intake of Village Midwife students. Tutor salaries will continue to be paid and local candidates, not needing transport, board or lodging, will easily be found after the school's three year closure.

This eventuality should be fully resisted. These Khartoum TBA-equivalents do have an important role to perform... but not in the current health service. The subsidization of their

training by the State MOH using rare experienced tutors in newly-refurbished MOH premises is a multiple misuse of extremely limited resources. The school should remain closed and the tutors seconded, as Obstetrics & Gynaecology specialists, to the teaching staff of Renk Nursing School.

Like their moribund GOSS cousins (Malakal Teaching Hospital Nursing School and Juba Technical Nursing Secondary School) the Renk and Torit State MOH training facilities have proved their staying power in the face of financial and academic withdrawal. With no costs other than salaries and no chance of salary support being withdrawn, they will both stubbornly continue to remain open in 2011.

As with their colleagues in GOSS facilities, the perennial students should be asked to sit a one-off translated GOSS Community Nurses final exam and their untenable situation resolved.

Serious investment should be put into the Torit Nursing School as the only facility in Eastern Equatoria. The recommended course is for Dental Assistants, for whom there is currently no planned, nor planned plan, of training despite MOH-GOSS's long time declaration in its health policy, and in accordance with the Basic Package of Health Services HR requirements. The State Director of Training will have only one facility to supervise and manage and the expected very high demand for places will offer an excellent bargaining position for the State in its negotiations with other States to accept Eastern Equatoria applicants for other courses. For example, Lakes - which may develop a specialty in Lab Technicians - may barter two places in its course for two places in Torit's Dental Assistant course.

Equal investment should be awarded to both Tonj and Aweil, as they too are their State's only training facilities. Tonj should teach Certified Community Nurses: Aweil Certified Community Midwives, a course perhaps transferred from Yei or Maridi Nursing School.

The Renk Nursing School should be transferred to the site of the (to-be-closed) Midwifery School and its current premises converted into an in-service training centre. The GOSS curriculum Certified Community Nurse could commence and serve all of Upper Nile and beyond.

The Juba Health Sciences Training Institute will remain popular with the States because of the General Medical Assistant course. Lack of demand from candidates will finally force the closure of the Theatre Medical Assistant course. The annual fee will have risen.

The current students of the Laboratory Medical Assistant course should be graduated, with no new intake. The course should be closed. It is not clear what extra skills differentiate a graduate of the 3-year Diploma-level course from his or her colleague from the revised (and quite high-level) GOSS 2-year Laboratory Technician level. This should be investigated and a single compromise category agreed. The acting principal may be the only Laboratory Technician tutor. If not, the other tutor should be lured to take up the position of principal of

the newly-built Rumbek Laboratory Technician School which has a spacious practical room and large classroom (in a converted ward). The post of principal will become vacant in August 2010.

The Theatre Medical Assistant, the only one of its kind in the country, should be kept open but converted to a 3-year consecutive Diploma, when the class size may rise to a more sustainable ten. Its proximity to the country's major surgical hospital means no similarly favoured site is possible.

The mutual overlap between the Clinical Officer and the Medical Assistant categories should be resolved by MOH-GOSS once and for all. A post-basic surgical qualification for Clinical Officers might be a possible compromise. The Maridi graduates of ten years ago, or more, may see such a course as a career progression, now lacking.

D: Partner-managed Training Facilities (not primarily for CHWs)

(a) The Sites

There are twenty-two partner health training facilities, fourteen of which are open.

Nine open training facilities offer courses for health worker categories other than CHW. Six are in State capitals, two are sited in smaller towns and one is in a large village. Assessors visited in person all sites but one, KajoKeji:

- The College of Medicine, University of Juba (of Ministry of Higher Education-GOSS, in Central Equatoria)
- KajoKeji Nursing School (International Medical Corps, IMC, in Central Equatoria)
- College of Rehabilitation Sciences, St Mary's University (Organizzazione Volontario per Cooperazione Internazionale, OVCI, in Juba, Central Equatoria)
- Maridi Nurse Training School (Action Afrika Hilfe-International, AAH-I, in Western Equatoria)
- Malteser International Medical Laboratory Training School (in Rumbek, Lakes State)
- Rumbek Nursing School (Comitato Internazionale di Sviluppo di Popoli, CISP, in Lakes State)
- Leer Community Midwife Training School (Presbyterian Relief & Development Agency, PRDA, in Unity State)
- Catholic Health Training Institute (Sudan Catholic Bishops Conference, SCBC, in Wau, Western Bahr El Ghazal)
- Mary Help Training Centre for Nurses & Health Workers, Wau (Diocese of Wau, Western Bahr El Ghazal)

One facility is shut:

- Bentiu Midwifery School (Church Health Association, CHAS, in Unity State)

A further two facilities are closed:

- Lui Community Midwife School (ex-Diocese of Lui, in Western Equatoria)
- Billing Training School (ex-ICRC, in Lakes State)
- Bentiu Hospital Midwifery School (Federal MOH, Khartoum, in Unity State)

Malteser International Medical Laboratory Training School

Currently within attractive grounds owned by the Diocese of Rumbek, Malteser is negotiating transfer of the school to a corner site within Rumbek Hospital. The recently-completed \$200,000 conversion of a ward into practical room and classroom was funded by the German Federal Ministry for Economic Cooperation & Development and Malteser itself provided \$100,000 for the construction of dormitories.

Rumbek Nursing School (CISP)

This newly-constructed ground-floor building, funded by WHO, also lies within a fenced-off section of Rumbek Hospital grounds, within sight of the State MOH.

The College of Medicine, University of Juba (Ministry of Higher Education)

Within Juba's Atlabara neighbourhood, the College shares the campus and buildings of the University, administratively transferred back from Khartoum three years ago.

KajoKeji Nursing School (IMC)

Four hour's drive South from Juba in the dry season, close to the Ugandan border, the town was inaccessible to assessors two months into the rainy season. UN flights had been cancelled twice in consecutive weeks. The IMC Deputy Country Director was interviewed in Juba and the principal interviewed by telephone.

College of Rehabilitation Sciences, St Mary's University (OVCI)

Tucked behind Al Sabah Children's Hospital in Juba, and within the Community-based Rehabilitation Hospital for Disabled Children, this pleasant, almost cloistered, facility registered with the Ministry of Higher Education and opened in 2009. It was unknown to MOH-GOSS staff.

Mary Help Training Centre for Nurses & Health Workers (Diocese of Wau)

In the Sikka Hadid neighbourhood of Wau, this facility is tuition-only

Maridi Nurse Training School (AAH-I)

Two miles distant from Maridi Hospital, this facility predates the Maridi National Health Training Institute nearby. It first opened in 1960, reopening in 1995.

Leer Community Midwife Training School (PRDA)

On Presbyterian Church land, and close to an MSF-H Hospital, this training facility of simple local construction is 2 hours south of Bentiu.

Catholic Health Training Institute (SCBC)

Now only running one course this facility has big plans. This beautiful two-storey complex is well-staffed, superbly-equipped and holds seven classrooms and 130 beds.

Bentiu Midwifery School (CHAS)

Completed in Feb 2010 on Bentiu State Hospital land, with a \$130,000 grant from UNFPA for infrastructure and \$240,000 from the Dutch Embassy, this as-yet-unfurnished school with some external building work remaining, has not been transferred to State ownership.

Lui Community Midwife School (Diocese of Lui)

Closed in 2008 because of small enrolment numbers the old buildings lie 4 hours' drive west of Juba on the road to Maridi.

Billing Training School (ICRC)

Until 2006, Southern Sudan's rural health workforce was mostly made up of graduates from the Billing Training School. Funded by ICRC and run by Dr Elijah Makender Makel, now working - and still teaching - in Rumbek, it closed in 2007 following local insecurity.

Bentiu Hospital Midwifery School (Federal MOH, Khartoum)

This unusual training initiative, operated by Federal MOH in Khartoum until 2007, 'trained midwives'. The last batch had a class of twelve. Reportedly, participants worked in the maternity ward of Bentiu State Hospital for three years, guided by a named but now untraceable supervisor, received no classroom theory whatsoever, and then received a certificate. Between two individuals, one of whom has had three years practical experience and no theory and the other who has had three years theory and no practice, the former is the safer – but neither can properly be called a 'midwife'.

(b) Output

The output from Partner training facilities is on par with that of the State MOHs: 220 graduate-years (though this will improve dramatically in the next two years as first intakes graduate). Collectively they are now teaching 497 students, half of whom are female.

Two facilities which offer Bachelor Degree courses (the College of Medicine, University of Juba for Medical Doctors and the College of Rehabilitation Sciences, St Mary's University for Physiotherapists) are registered with the Ministry of Higher Education. Neither had previously been considered in MOH-GOSS HR training statistics. The first intakes are yet to graduate. The College of Medicine is perhaps most notable for its full-time tutor-student ratio of 1:200. Collaborating faculty teach certain first- and second-year subjects (such as basic sciences) but for the other subjects the Head of the College is the sole tutor for all classes (already at a massive average class size of seventy each) for all three years. This is completely unsustainable: the situation will worsen as additional intakes enter.

Two sites, curiously both in Wau, offer Diploma-level Registered Nurse courses with no graduates so far. Five facilities offer six Certificate-level courses, two of which also provide 9-month CHW training.

In contrast to the consecutively-run courses of the State MOH training facilities which are following an accepted Arabic system, four partner facilities (and five courses) take consecutive intakes only either because of the practical nature of the course (for example, Laboratory Technician) or because of funding constraints limiting expansion. The HRD output is effectively half what it could be. (This is also an under-efficient use of resources - particularly of tutor and classroom time, but also of materials and equipment – so doubling unit costs).

Output (in Graduate-years) of all Partner Training Facilities since 2006, by level.

Degree Level (3 or 6 years)	0 from 2 courses
Diploma Level (3 years)	0 from 2 courses
Certificate Level (18m -2½ year)	150 from 6 courses
'Award' Level (9-12 months)	18 from 2 courses

Table 14: Partner Training Facilities

Partner Training Facility	Courses	No of Students currently	No of Female students (%)	No of Grads since 2006 intake	Average Recent Class size	Total Output (in Graduate -years)
Malteser Med Laboratory Training School	2-year <i>consecutive</i> Cert Laboratory Sciences	10	1 (10%)	10	10	20
Rumbek Nursing School	2-year Cert Community Nurses	26	No info	0	13	0
Kajo-Keji National HTI	2½-year <i>consecutive</i> Cert Community Nurse	22	6 (28%)	0	22	0
	18-month <i>consecutive</i> Cert Community Midwife	30	19 (63%)	18	27	27
Maridi Nurse Training School	18-month Certified Community Midwife	29	19 (66%)	0	15	0
	2½-year <i>consecutive</i> Cert Comm. Nurse	54	5 (9%)	28	27	70
	9-month CHW	8	2 (25%)	70	9	52
Catholic HTI, Wau	Registered Nurse (6m + 3½ years)	17	5 (29%)	0	12	0
Leer Community Midwife Training School	2-year <i>consecutive</i> Certified Community Midwife	16	16	22	19	33
Subtotal for Full-Board Facilities:		204 Excl. CHW				
Mary Help Training Centre for Nurses & HW, Wau	(6m+) 3½-year Registered Nurse	41	21 (51%)	0	20	0
	9-month CHW	32	1 (31%)	27	30	18
College of Medicine, University of Juba	6-year Medical Doctor Degree	198	No info	0	71	0
College of Rehab Science, St Mary's University	(1+) 3-year Physiotherapist	12	3 (25%)	0	12	0

A Virtuous Cycle

The Norwegian doctor in charge of Maternity at the MSF-H hospital told the assessors she was more than satisfied with the standard of care of the graduates – they were safe and competent practitioners snapped up by employers.

The Kenyan tutor from the nearby Community Midwives Training School personally oversaw the practical training. Asked to give an example of how the employer's feedback on practice informed her lessons in theory, she explained that on hearing from the doctor that some students' history-taking skills were weak she adjusted the following week's lesson plans accordingly.

(c) Infrastructure and Equipment

The nine facilities fall easily into two: those providing full board and those offering tuition-only courses. All infrastructure was in good repair, with four new sites opening within the last two years and at least a further two renovated within the last five.

Table 15: Partner training facility Infrastructure

Partner Training Facility	Nº of Classrooms	Practical Room	Library	Refectory/ Kitchen	Nº of Offices (incl. Tutors Room)	Student Accommodation	Tutor Accommodation
<u>Full-Board Facilities:</u>							
Malteser Med Lab Training Sch	1	1	N	Y	1	15 beds	Y
Rumbek Nursing School	3	1	Y	Y	1	15 beds	Y
Leer Community Midw Tr Sch	1	0	N	Y	0	16 beds	Y
Kajo-Keji National HTI	2	2	Y	Y	6	50 beds	Y
Maridi Nurse Training School	3	1	Y	Y	2	91 beds	N
Catholic HTI Wau	7	1	Y	Y	4	130 beds	Y

<u>Tuition-Only Facilities:</u>							
College of Medicine, Univ Juba	0	0	Y	N	1	0	N
College of Rehab Sci, St Mary's Univ	1	0	Y	Y	1	0	Y
Mary Help Training Centre for Nurses & HW, Wau	5	1	Y	Y	1	0	Y

The recently-opened Catholic HTI - with its seven classrooms, thirty-four computers, 130-beds, full faculty of dedicated, long-serving (often volunteer) qualified staff, and plans to increase the number of diploma-level courses on offer - is likely to become a very major player in HRD in Southern Sudan, if not the region

The two capital city HRH training facilities are colleges within Universities. As such their equipment and facilities (for example, use of IT rooms and libraries), utilities and some staff (for example, cleaners and watchmen) are not wholly accountable to them.

At the other end of the urban-rural spectrum lies the Leer Community Midwife Training School. A fenced collection of wattle-and-daub, one room buildings and *tukuls* with one classroom, set among a patchwork of maize plots around a hand-pump well, it is most striking for having no electricity whatsoever, even at night. The two expatriate tutors – one stationed here for four years already - prepare their lesson plans on their shared kitchen table, referring to textbooks settled on top of a rice sack, by the light of a kerosene lamp. The students work a 46-hour week, from 07.30 -18.00h, with half-day study on Saturdays. The quality of the performance of the Certified Community Midwife graduates, all female from many states, appears to be of the highest order. Given its unpromising aspect, the training successes of this facility must rank amongst the health service's great recent achievements – all the more remarkable because its low profile.

Table 16: Distribution of Equipment, and Utilities, of Partner training facilities

Partner Training Facility	N° of Working Computers	Internet access	Functioning Photocopier	Projector/ OHP	Vehicle	Electricity Source	Water Source
Malteser Med Lab Training School	2	Y	1	0	0	Generator	No Info
Rumbek Nursing School	1	Y	1	1	1 (Nissan)	Hosp generator	Bought
Leer Community Midwifery Training School	0	N	0	0	0	None	Hand pump

Kajo-Keji National HTI	11	Y	2	No Info	1	Generator	Pump
Maridi Nurse Training School	2	N	1	0	1 (broken)	Generator	Town
Mary Help Training Centre for Nurses & HW, Wau	20	Y	1	1	1	Town + generator	Town
Catholic HTI Wau	34	Y	1	1	1	Town + generator	Town
College of Medicine, Univ Juba	No Info	Y	No Info	No Info	0	Town	Town
College of Rehab Sci, St Mary's Univ	2	Y	1	No Info	0	Town	Town

(d) Staffing Levels

Tutor-student ratios are much more consistent (and acceptable) in this group compared with the apparent randomness – or anarchy – of the State MOH training facilities. The one statistical outlier is the outrageous 1:200 ratio described above.

Ancillary staff numbers are higher than those of the State MOHs due to the full board nature of the facilities, while watchmen numbers are up since compounds do not fall within hospital grounds as with the previous groups. Greater administration staff numbers probably a greater recognition of cost-effectiveness: where clerical and routine administration duties need doing it is less cost-effective to have them performed by specialized (and more expensive) teaching staff.

Table 17: HR Allocations to Partner training facilities

Partner Training Facility	Total No of Personnel	No of Tutors (full-time equivalents)	No of Admin. Staff	No of Ancillary Staff	No of Security Staff	Tutor: student ratio	Tutor: other staff ratio
<u>Full Board Facilities:</u>							
Malteser Med Lab Training Sch	3	2	0	1	0	1:5	2:1
Rumbek Nursing School	13	3	0	7	3	1:9	1:3
Leer Community Midw Tr Sch	9	3	0	4	2	1:5	1:2
Kajo-Keji National HTI	22	5	3	10	4	1:10	1:3
Catholic HTI Wau	23	4	6	7	6	1:4	1:5

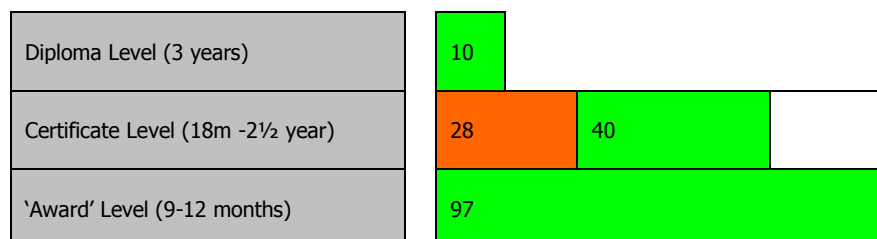
Maridi Nurse Training School	21	7 (6 part)	1	5	2	1:13	1:1
<u>Tuition-only Day Facilities:</u>							
College of Medicine, University Juba	2	1	1	0	0	1:200	1:1
College of Rehab Sciences, St Mary's University	3	2 (3 part)	1	0	0	1:6	2:1
Mary Help Training Centre for Nurses & HW, Wau	13	5	3	3	2	1:15	2:3

The above observation also holds true, incidentally, in the clinical area: where clerical and routine patient care duties need doing it is less efficient to have them performed by specialized, scarce (and more expensive) clinical staff. The global average for the most efficient service delivery is reportedly eight nurses to every one doctor. This ratio is not being reflected in the HR training numbers where the training of clinicians (soon to be seventy doctors a year from the University of Juba plus thirty-five clinical officers a year from Maridi) outpaces the training of registered nurses and midwives (later, sixty a year).

(e) Quality

Since 2006, most certificate and diploma graduates from Partner-run training facilities have probably been safe and competent practitioners. The quality of the training in one facility needs further investigation. Its graduates may or may not have been properly or fully trained

Estimated Quality of Graduates from all Partner Training Facilities since 2006, by level.



Practicing Doctors

The second-year Certified Community Nurse students took their role-play seriously.

Asked to imagine they were already qualified and to demonstrate to the assessors what signs of dehydration they might look for in the baby with severe diarrhoea in front of them – another student – the first volunteer took hold of the baby’s elbow and forearm and vigorously tested the range of movement of the joint.

The second grasped both hands, wobbled the arms and examined both palms for anaemia.

The third clicked his fingers in a wide arc at eye-level then moved his upright ball-point pen horizontally in a kind of neurological examination.

(f) Costs

In every MOH-GOSS and State MOH training facility, except for the top four performers, the calculation of the annual running cost would seem to be straightforward: the only overt costs are the salaries, and 99% of the salaries are for tutors. Once the vast array of hidden subsidies paid for from the hospital running costs budget are investigated, however, the calculations would probably get phenomenally complicated very quickly. For the Partner training facilities, the calculations are complicated to start off with.

Table 18: Selected Costs of Partner Training Facilities

Partner Training Facility	Fees/ student/ yr	Salaries in \$/ year (% total costs)	Food \$/ year	Other \$/ year	Costs \$/ year	Self- Estimated Unit Costs \$/ student/ yr (Probable)
<u>Full Board Facilities:</u>						
Malteser Med Lab Training Sch	3,500	75,000 (50%)	30,000	25,000	130,000	(13,000)
Rumbek Nursing School	0	No Info	25,000	No Info	No Info	No Info

Leer Community Midw Tr Sch	0	No Info	18,000	No Info	90,000	5,500
Kajo-Keji National HTI	Nurses: 0	No Info	No Info	No Info	60,000	2,700
	Midwives: 0				135,000	4,500
Maridi Nurse Training School	2,000	No Info	80,000	13,000	180,000?	(2,000)
Catholic HTI Wau	2,000 (waived)	No Info	No Info	No Info	No Info	No Info
<u>Tuition-only day facilities:</u>						
College of Medicine, University of Juba	250	No Info	0	No Info	No Info	350
College of Rehab Sciences, St Mary's University	570 (waived)	Near 0 (volunteers)	0	No Info	No Info	No Info
Mary Help Training Centre for Nurses & HW, Wau	600	No Info	0	No Info	200,000	(2,750)

No Info = Information not available, not accessible, not given or not asked.

Surprisingly, few principals were able to declare the average cost of running their facility for one year. Perhaps happy to oversee the teaching side, they are aware only that the finances are being overseen back at head office. Nevertheless, in Juba, only three organizations seemed at all certain of their unit costs. Most responses seem to be under-estimates. One organization – without in-country representation – genuinely seemed not to know their budget. (All this bodes ill for the eventual handover of the facilities to the State MOHs)

Salary costs have no pattern beyond the observation that it depends on the organization. The facilities run by, or associated with, the Catholic Church, for example, have access to highly-motivated, highly-qualified volunteer, or nominally-salaried, tutors committed to the facility for years, with little or no home. IMC, on the other hand, needs to recruit its expatriate and other staff at the market rate who will expect satisfactory terms and conditions on short-term contracts. (Frequently, NGOs are dependent on a yearly funding cycle, or less, and cannot underwrite longer-term contracts.)

The remaining partners adopt their own strategies lying somewhere between the two extremes: one organization seems rather too keen on volunteerism and making-do; another seems fully exposed to market forces (and their current downturn).

As mentioned above, courses with consecutive intakes are cheaper to cater for than concurrent courses (because there are less mouths to feed) but are more expensive to run (because fixed costs are relatively higher).

A steady, regular, more formal and deeper review of exact costs, by MOH-GOSS officials, at senior rather than local level would resolve the issue of costs. Whether that is appropriate (given that the partner organizations are financially independent) or desirable (given that the control of quality of the teaching, candidate selection, preparations for handovers, design of new courses and curricula are all much more pressing priorities) would be an interesting debate. All that can be said is that, at diploma and certificate levels, it probably costs the organizations approximately one million dollars a year to train two hundred students, or \$5000 per student per year.

If the training offered by partners (at \$5,000 per student per year) is taken as an acceptable benchmark and reflects the actual costs – MOH-GOSS and State MOH facilities spend what they receive rather than what they need – then a two-year course will cost \$10,000 per student. Since some courses are shorter (Certified Community Midwives is 18 months) but most longer (Certified Community Nurses and Laboratory Technicians are 2½ years long) and some half as long again (Registered Nurses and Registered Midwives courses are three years long) then a two-year course could be taken as a useful minimum training length. If this is so, to provide upgrading courses to, for example, 10% (1,500 staff) of the existing workforce (estimated at 15,000) would cost fifteen million dollars (\$10,000 x 1,500). At the existing capacity of the partner facilities (200 students are studying at any one time), upgrading only 10% of the current HR would cost two million dollars a year for 7½ years. (For the so-called mature intake candidates, an adapted curriculum for an interim period, would allow more study hours for English-language and mathematics but less for practical skills training, already acquired and in need of quality control only).

(g) Prospects for 2011.

Unity State MOH will have received the Bentiu Midwifery School from CHAS and Malteser International will have completed its handover of the Medical Laboratory Training School to Lakes State MOH. CISP will still be negotiating to do the same for the Rumbek Nursing School.

The closure of one funding source in Dec 2010 may have led to the suspension of the Certified Community Nurse course in KajoKeji, while both Church facilities in Wau will have expanded.

The potential of the latter schools for HRD is phenomenal and as yet under-recognized or appreciated. With the Catholic HTI, MOH-GOSS could (a) negotiate for a 6 month or one-year secondment of trainee tutors (b) facilitate travel documents for expatriate tutors to speed up expansion (as requested by the sister-principal) (c) propose the early addition of a Registered Midwife course. (d) propose a 6-month post-basic Trauma & Emergency course to take advantage of the sister-tutors' extensive trauma and surgical expertise.

The super-saturation of courses in Maridi that require Obstetrics & Gynaecology clinical practice will continue. Sufficient and properly supervised practical experience, for which there is very limited opportunity locally and which is a clear requirement for the completion of the courses, will be missing.

MOH-GOSS, in its capacity as national coordinator of all training could convene a meeting of stakeholders to address and resolve the issue of training school over-capacity (and hospital under-capacity) in Maridi. Negotiations should lead to a decision to close, or merge, one or other of the Certified Community Nurses courses, with teaching support reallocated to Bentiu.

E: Partner-managed CHW Training Facilities

(a) The Sites

There are five open CHW training facilities, none of which could be visited by assessors:

- Regional Health Training Institute (International Rescue Committee, IRC, in Ganyiel, Unity State)
- Marial Lou 'CHW Training Centre' (CCM, in Warrap State)
- Wunrok CHW Training School (GOAL, in Warrap State)
- SIM CHW Training School' (Serving Interior Mission, SIM, in Maban, Upper Nile)
- Jalimo Health Worker Training School (Sudan Health Association, SUHA, in Central Equatoria)

A further three CHW training facilities are shut:

- Adol Community-Based Health Training Centre (Association of Christian Relief Organisations in Southern Sudan, ACROSS, in Lakes State)
- Kodok CHW Training School (Tearfund, in Upper Nile)
- Nasir CHW Training School (Adventist Development & Relief Association, ADRA-SS, in Upper Nile)

One facility, visited by assessors, is closed:

- Wondaruba CHW Training Centre (ex-ZOA, in Central Equatoria)

Possibly a further two CHW training facilities exist, but they are unknown to the State authorities and managers did not respond to email enquiries. They are not counted in the survey.

- CHW Training School (Christian Reaching Ministry, Achana, Northern Bahr El Ghazal)
- CHW Training School (Christian Reaching Ministry, Jorbich, Northern Bahr El Ghazal)

The very circumstances which were the making of the CHW Training Schools in the past have also been their undoing in the present. To fill a chronic gap in health service delivery, NGOs and FBOs had purposefully chosen sites for their PHC Units and Training Schools which were remote, isolated from other health facilities and exclusively rural, all of which combined to make inaccessibility – especially in the rainy season - a common feature of all but three. Only Wondaruba and Adol schools are near a major road and Nasir was the remote site of refugee Way Station.

Insecurity has directly led to the suspension of operations in one school. Continuing insecurity on the road has further isolated the operations of another. Three schools could not be directly assessed because of impassable roads. As the emergency nature of the operations recedes, so too may humanitarian support. WFP food has already, or will be shortly, withdrawn supplies in some cases, dramatically increasing school food costs, perhaps to unsustainable levels. For now, UN Humanitarian Air Services provide (unreliable in the rainy season) once-weekly flights to, or near, most NGO school locations. When that is trimmed, even cut – which is perhaps both likely and imminent given UNHAS' advertised funding shortfalls – the logistical viability of most schools' operations, which rely on the transport in and out of tutors, support staff, out-of-state students and supplies, will collapse.

The two schools run by faith-based organizations (in Doro and Adol) and there for the long-term and have different imperatives, not least less financial dependence on large donors. So, too, for the two CHW schools on the edges of Northern Bahr El Ghazal (if they exist).

Adol Community-Based Health Training Centre (ACROSS)

One hour's drive south east of Rumbek, Adol was temporarily inaccessible on the day of the assessors' visit. Established in 1998, CHW training was suspended for one intake only, while in-service training courses were conducted. ACROSS plan to restart CHW training in 2011.

Two tutors were interviewed in person at a nearby site.

Jalimo Health Worker Training School (SUHA)

28 KM south west of Kajo Keji, near the Ugandan border, this long-established school was also inaccessible to assessors during the rainy season. A senior official within the MOH-GOSS, a founding member of SUHA, was interviewed in person. Another founding member was interviewed by telephone. The Jalimo school did not feature on any available lists.

Wondaruba CHW Training Centre (ZOA)

The last batch of 30 CHWs ended in 2007. The situation is terribly poignant. From 2008, the supporting NGO has failed in its negotiations to handover the school to the State MOH and the still well-tended premises sit in eerie limbo, with a full stock of bedding materials in a dusty store, ample books and teaching materials in the library, and faded photos of graduation ceremonies on the office board, it is empty of staff except for an almost-blind now-unpaid compound manager. This facility was unknown to MOH-GOSS.

Marial Lou 'CHW Training Centre' (CCM)

With infrequent flights to Marial Lou and no road access from Tonj, this school is effectively inaccessible in the rainy season. Program Managers did not respond to email enquiries. No information is on record.

Wunrok CHW Training School (GOAL)

In the deep rural north of Warrap State, this is another training school inaccessible to the assessors. It featured on no MOH-GOSS lists of known training facilities. The principal was contacted by email.

Regional Health Training Institute (IRC)

Accessible by air only, Ganyiel is a large village in the south of Unity State. The road to the state capital to the north is unsafe. IRC program managers were interviewed in person in Juba.

SIM CHW Training School (SIM)

With no land route and accessible only by chartered plane, this well-regarded school in north-eastern Upper Nile is staffed by highly-qualified US volunteers. A program manager was contacted by email.

Kodok CHW Training School (Tearfund)

Intakes have been suspended for one year due to insecurity. On the West bank of the Nile three hours' drive north of Malakal, Kodok - as an old British Colonial seat of administration - was once an important town. It too featured on no MOH-GOSS lists of known training facilities. A senior tutor was interviewed by telephone.

Nasir CHW Training School (ADRA-SS)

The 9-month course for laboratory assistants closed in 2007 and the CHW course formally ended in March 2010. It is not expected to reopen as a training school. Program officers were interviewed in person in Juba.

(b) Output

With CHW courses lasting under a year - most are 9 months, some schools add a month for English-language lessons – every CHW training school has been able to deliver a steady stream of graduates. Since 2006, about half of all HRH completing a training course have been CHWs. All graduates return to work, at least for a while, in the PHC Units or PHC Centres of their sponsoring NGO or FBOs. A quarter of all students now are CHW students.

Table 19: Partner CHW Training Facilities.

Partner CHW Training Facility	No of Students currently	No of Female students (%)	No of Grads since 2006 intake	Average Recent Class size	Total Output (in Graduate -years)
SIM CHW Tr School, Doro, Maban	13	No Info	21	10	15
Regional HTI, Ganyiel	44	4 (10%)	125	42	94
Jalimo Health Worker Tr School	30	No Info	130	32	98
Wunrok CHW Training School	20	No Info	30	18	22
CHW School, Marial Lou (Estimates)	(30)	-	(120)	(30)	(90)
5 Facilities	(137)	-	(426)	-	(319)

(c) Infrastructure and Equipment

Away from urban centres, the CHW training schools are studies in self-reliance. Tutor accommodation is more often nearby, rather than within, the school. The distinction between what infrastructure and equipment (for example, a laptop, a photocopier or a vehicle) strictly belongs to 'the school' and what actually belongs in 'the NGO compound' is likely to be vague, fluid and meaningless. This holds true for the staff. Not much can be read into the figures below, except for a general indication of size.

Table 20: Partner CHW training facility Infrastructure

Partner CHW Training Facility	No of Classrooms	Practical Room	Library	Refectory/ Kitchen	No of Offices (incl. Tutors Room)	Student Accommodation	Tutor Accommodation
SIM CHW Tr School, Doro	1	N	N	Y	1	14 beds	Y
Regional HTI, Ganyiel	3	N	Y	Y	2	45 beds	Y
Jalimo Health Worker Tr School	3	N	No Info	Y	No Info	35 beds	Y
Wunrok CHW Tr School	1	N	No Info	Y	1	25 beds	Y
CHW School, Marial Lou	No Info						

Table 21: Distribution of Equipment, and Utilities, of Partner CHW training facilities

Partner CHW Training Facility	N° of Working Computers	Internet access	Functioning Photocopier	Projector/ OHP	Vehicle	Electricity Source	Water Source
SIM CHW Tr School, Doro	0	N	No Info	No Info	0	Generator	Pump
Regional HTI, Ganyiel	1?	Y	1	No Info	2	Generator	Pump
Wunrok CHW Tr School	1	Y	1	1	1	Generator	Pump

NB. Jalimo Health Worker Training School and CHW School, Marial Lou: No information.

(d) Staffing Levels

Table 22: HR Allocations to Partner CHW training facilities

Partner CHW Training Facility	Total N° of Personnel	N° of Tutors (full-time equivalents)	N° of Admin. Staff	N° of Ancillary Staff	N° of Security Staff	Tutor: student ratio	Tutor: other staff ratio
SIM CHW Tr School, Doro	2	2	0	(2 Part)	0	1:6	2:0
Regional HTI, Ganyiel	11	5	0	5	1	1:8	1:1
Wunrok CHW Tr School	4+	3	1	No Info	No Info	-	-

NB. Jalimo Health Worker Training School and CHW School, Marial Lou: No information.

(e) Quality

Sadly, not a single CHW training school could be visited during the assessment, for the reasons outlined above, and so no direct estimation of quality – even a very general and approximate one - was possible. Even then, a one-off brief observation would be inadequate and a disservice to the

efforts of the tutors. Nevertheless, as with PRDA's Community Midwife training, the ready take up of graduates is a vote of confidence by employers and a good indirect indication of quality.

The recurrent failure of principals, or nominated tutors, to keep track of their graduates was striking and unexpected. As explained elsewhere, the follow-up of graduates is an easy, good and cheap way of identifying shortcomings in graduate behaviour. Whether the feedback from employers concerns technical, administrative or interpersonal matters – it offers pointers to possible weaknesses in the training that, at the very least, should be investigated, reviewed and if necessary, amended. When the employers are known individuals with names and email addresses this managerial lapse seems inexcusable. That experienced program managers and other senior managers have also overlooked the potential of employer feedback as a quality control tool is as intriguing as it is lamentable.

(f) Costs

Schools with non-volunteer expatriate tutors are more expensive. Probably the true cost of CHW training using local trainers is a little over the market rate: perhaps \$1,750 - \$2,000 per student per course. Expenditures appear to be routinely under-estimated, ignoring hidden administrative, managerial and logistical support costs.

Table 23: Selected Costs of Partner CHW Training Facilities

Partner CHW Training Facility	Fees/ student/ yr	Salaries in \$/ year (% total costs)	Food \$/ year	Other \$/ year	Costs \$/ year	Self-Estimated Unit Costs \$/ student/ yr (Probable unit costs)
SIM CHW Training School, Doro	0	0 (volunteer)	24,000	No Info	25,000?	(2,000)
Regional HTI, Ganyiel	2,500 (Next: 3,000)	60,000	90,000		150,000	(3,400)
Jalimo Health Worker Training School	1,500	No Info			35,000?	
Wunrok CHW Training School	0 (GOAL only)	No Info			40,000	(5,000)
CHW School, Marial Lou	No Info					

(g) Prospects for 2011

The author predicts a dramatic year for all partners supporting CHW training.

The SIM school in Upper Nile will continue to deliver high-quality CHWs while the vast wealth of clinical expertise of its volunteer expatriate tutors, who are both hugely experienced, profoundly-committed, US-registered nurses, will remain untapped.

MOH-GOSS could develop a creative and novel way to harness this valuable teaching resource. The circumstances would be ideal to develop a post-basic training for community health specialists, a much-needed category to counterbalance the prevailing curative, hospital- and urban-biased focus of almost all current training. SIM could be approached to consider accepting a very limited number of willing already-trained nurses (to be approved by SIM) for a 3 or 6 month training in rural-based nursing. Suitable applicants could be sure of expert, almost one-on-one, wholly relevant tuition and development of their tutoring skills.

Kodok will remain shut. The Nasir school will move from shut to closed. The Adol school will reopen offering a Certified Community Nurse course. Wunrok will shut to prepare for its reopening in 2012 also offering the same course.

ADRA-SS, GOAL or Tearfund could be approached, individually or collectively, by the Directorate for External Cooperation and sounded out on the possibilities of technical support for, and sponsorship of candidates for, a new Registered Nurses course in either Aweil, Tonj or Malakal Hospitals. This is already late. For the NGOs to successfully disengage from their health service delivery programs at some later date, they will be needing more than local Certified Community Nurses at that time.

Jalimo will continue to train CHWs. Against all trends, a one-year only CHW training school in Duk Fadiat, Jonglei, will be opened by IRD.

Despite its apparent allure in bringing a first training school to Jonglei, this latter initiative should be strongly resisted. A one-off CHW training school could indeed be sanctioned (given Bor's exceptionally under-privileged status in HR) but it should be sited in Bor instead. The structures, staff and expertise should be converted to Certified Community Nurse training when the CHW course closes. A one-off MOH-GOSS grant could be extended to Jonglei State MoH to build a modest training school on State-owned land, to be expanded as appropriate at some later date.

Ganyiel will be graduating, or have already graduated, its last CHW students. Its isolation means it will shut as a school and not reopen.

MOH-GOSS could facilitate negotiations among Unity State MoH, IRC and PRDA. IRC (which needs Community Midwives for its own programs but which has yet to establish contact with

its neighbour) might agree to temporarily reallocate the training component of its support to Leer, constructing new classrooms and accommodation, perhaps on another State-owned site and allowing the Community Midwifery school to run concurrent courses, doubling output.

4. NOTES ON NOMENCLATURE

At the start of this survey, merely reading the kaleidoscope of names in the list of schools might have given the alert onlooker a revealing clue about future findings. There is a remarkable absence of consistency – even logic – to the nomenclature.

Perhaps direction from MOH-GOSS was sought and was not forthcoming. Or perhaps, it was never sought and no feedback was forthcoming. Either way, it is as if, in the absence of any central direction, the states and partners have self-organized. In the title of this mapping survey, 'Off the Road' is an allusion the undirected, almost lost, circumstances the training facilities are working within.

There is a Regional Health Training Institute and three National ones, though the former is a CHW school and one of the latter is NGO-run. The MOH-GOSS has failed to spell out what makes a facility an institute. There are also two Health *Sciences* Training Institutes. Incidentally, many current national-level documents describe their plans for the *institutions*, which are not quite the same thing, having more to do with psychiatric asylums and venerated museums.

Nursing Schools abound and new ones are hoping to open their doors. But nominating something as *nursing* closes the very same doors to other health disciplines (like midwifery, dentistry, pharmacy, laboratory and other technical specialties). Some inadequately sensitized medical students might also find excuses not to attend a workshop to be held in a nursing school.

Two organizations, perhaps never expecting a handover day yet alert to the promotional needs of fundraisers, put their own name in the school title.

The title *College* is preferred by Degree-level facilities, yet a new Diploma-level facility calls itself that. The latter puts in its location too - Juba College of Nursing & Midwifery - though this works in opposition to its vaunted national character.

There is an explanation for why three facilities are called Technical Nursing Secondary Schools, but it is too complicated to repeat in writing. It is difficult enough to repeat in words.

If there was a prize for *chutzpah*, it must be awarded to the Renk Midwifery School which trains TBAs¹².

¹² Chutzpah is a Yiddish word with no easy translation. Through brazen self-confidence a person with *chutzpah* can get away with the most outrageous deception simply by being so believable.

To minimize disruption or confusion, perhaps the newly-introduced *Health Training Institute* and the widely-used *Training School* could become the standard terms. *College* could be reserved for Degree-level facilities.

Without any *regional* or *national* prefix, the term Health Training Institute could be awarded only to health training facilities that offer at least one Diploma-level course. Those for Certificate courses become Health Training Schools, keeping their place-name or category in place, or as an alternative, if they wish.

Thus, Aweil could have its Aweil Health Training School, Torit its Torit Health Training School, and Bentiu its Bentiu Midwifery Training School. Yei NHTI becomes Yei Health Training School, while Maridi NHTI simplifies to Maridi HTI and Catholic HTI stays the same. Leer Community Midwives Training School and many of the CHW Training Schools would also stay unchanged. The over-long Mary Help Training School for Registered Nurses & CHWs becomes simply Mary Help HTI.

There is a rite of passage in central Mozambique that perfectly symbolizes transition. After a long period of initiation, the boy leaves his old and worn-out clothes in the bush. Now, re-entering the world as an adult, he puts on a complete set of new clothes. Perhaps a fresh and comprehensive re-registration of all health training facilities would provide an opportunity to do something similar.

5. NOTES ON ARCHITECTURE

Not an architect by training or inclination, the author has nevertheless had the pleasure -and pain – of teaching in many different classrooms. As the mapping survey advanced, so did the realization that a number of the infrastructure in the newly-constructed training facilities were likely to be painful classrooms to teach or live in. With just a little thinking through, students and tutors could now have pleasant buildings. Now they don't. Everyday lessons on the design of buildings in hot countries with a torrential rainy season seem not to have been absorbed. Two good buildings and two bad ones are described.

The Yei National Health Training Institute building is both beautiful and beautifully designed. Solidly-built on two floors, with large windows filling opposite walls and wide verandas to stop the strong afternoon sun, which students use to do private study, the rooms catch every bit of breeze, staying cool and pleasant even in a power cut. The large hall upstairs is especially impressive.

Another wonderful building, now perhaps 50 years old, is the maternity ward in Rumbek Hospital. Standing alone, the building is effectively one large open room with low internal walls and an extremely high double roof. Heated air is allowed to escape through vented windows at the top, promoting ventilation. The whole building is surrounded by verandas now converted to airy dormitories. A similar building was seen in Bor Hospital. Two hundred metres away, the new laboratory technician school's practical room and classroom is equally high-ceilinged, spacious and airy though without the double roof.

In contrast, a disappointing pair of buildings makes up the Bentiu Midwifery School, in Unity State, completed in February 2010. The buildings are solidly built on a metre-high platform, as is common in bigger buildings in Bentiu. But again, the eaves are too close to the walls, letting in strong sun and perhaps slanting rain. Heated air (like the air inside an enclosed classroom with twenty people in it after two hours) has no escape. There is one central open space - open on two opposite sides - which offer a suggestion as to how an airier classroom space could have been built. The minor disappointments include absent handrails for the steps, no covered walkways between the buildings and no places for the students to sit outside class.

Sadly, the new Rumbek Nursing School premises, in sight of the excellent maternity ward – which might have given inspiration - and finished only in May 2010, manages to reverse all of the clever design features of its earlier cousin. Of the supporting NGO's own design, the multiple, small, low-ceilinged, airless rooms (just big enough for the low class-size of fifteen) with regular European-sized windows, were too hot to sit in comfortably even in the rainy season. The verandas are too narrow for both tables and chairs. An elevation of an extra metre, with a veranda either side the width of an additional zinc sheet would have made all the difference. The school's larger refectory hall shows more vision.

In a Box

To say the lab students' dormitory had been *designed* by the NGO sub-contractor already gives the wrong impression. There was no 'design' about it.

Eight small cube-shaped rooms in two rows off a narrow, ill-lit, unventilated, claustrophobic corridor, it had the look and feel of a Death Row prison wing. No thinking person could have failed to anticipate the noise, airlessness, smell, lack of privacy and heat that any future residents would have to put up with. These features only added to the ghastly impression.

If there had been more time, the assessor had wanted to test if the narrow corridor would allow furniture to be squeezed in. It looked doubtful.

Plainly, the contractor had confidently expected the future students to accept their lot. And plainly the NGO staff, who had not raised concerns and paid \$100,000 for the construction, agreed. Perhaps as confident that anything would be seen to be better than nothing, the contractor also went ahead without the involvement and agreement of the Ministry of Infrastructure.

Question: Should the State MOH accept or refuse the handover of the keys?

6. RECOMMENDATIONS

Suggested Training Facility Priorities for State MOHs

State	Construction	Renovation	Re-assignments
Lakes			<u>Rumbek Med Lab Training Sch</u> (old Malteser Med Lab Tr Sch): Develop State specialty in Lab Technician training
Jonglei	<u>Bor Health Training School:</u> (for now) 2-roomed, tuition-only facility for Cert Com Nurses		
Eastern Equatoria			<u>Torit Dental Training School</u> (old Torit Tech Nurs Sec Sch): Develop State specialty in Dental Asst training
Central Equatoria			<u>Yei Health Training School</u> (old Yei NHTI) Assume oversight from MOH-GOSS. Close Comm Midwifery
Western Equatoria			<u>Maridi HTI</u> (old Maridi NHTI) Assume oversight from MOH-GOSS. Maintain specialties in CO & Public Health training
Western Bahr el Ghazal	<i>(Support Catholic HTI and Mary Help. Develop State specialty in Diploma-level and post-basic courses)</i>		
Northern Bahr el Ghazal		<u>Aweil Health Training School:</u> (old Aweil Nursing School) Offer Community Midwives Cert Nearest alternative now is Leer	
Warrap		<u>Tonj Health Training School:</u> (old Tonj Nursing School) Offer Comm Nurses Cert. Registered Nurses in Wau	
Unity			<u>Bentiu HTI</u> (old Bentiu Midwifery School) Offer Registered Midwives. Develop specialty in Midwifery
Upper Nile			<u>Renk Health Training School</u> (old Renk Midwifery School) Offer Comm Nurses Cert.

Suggested Course of Action for MOH-GOSS Training Facilities

Training Facility	Actions	Rationale
Maridi National HTI	1. <u>Cert Community Midwives</u> : suspend entry then close	Clinical Officers need Obs & Gynae experience too. Insufficient deliveries for both. Keep HTI for Diploma-level only
	2. Name: change to Maridi HTI	Rationalisation of names to HTIs (Diploma) and Training Schools (Certs) only
	3. Ownership: Re-assign to Western Equatoria S.MoH	S.MOH has no facility. AMREF can support in the same way
Yei National HTI	1. <u>Cert Community Midwives</u> : suspend entry then close	No funding for Expat tutor. Divisive pay differential. Cut costs.
	2. Name: change to Yei Health Training School	Rationalisation of names to HTIs (Diploma) and Training Schools (Certs) only
College of Nursing & Midwifery	1. Name: change to Juba HTI	Rationalisation of names to HTIs (Diploma) and Training Schools (Certs) only
	2. Ownership: Re-assign oversight to S.MOH	Directorate of N&M can support in the same way
Technical Nursing Secondary School	1. <u>Khartoum Cert Nurses</u> : give GOSS Cert Comm Nurse exam. Translate into Arabic for Arabic-language students. Close course	Resolve current bottleneck. Establish equivalence of qualification.
	2. Convert use to JTH In-Service Training Centre	JTH staff need 'HR Induction week' & refresher training
Malakal Health Sciences Training Institute	1. <u>Gen Med Asst</u> : Give Clinical Officer exam. Translate into Arabic. Close course.	Resolve current bottleneck. Establish equivalence of qualification.
	2. Name: change to Malakal HTI	Rationalisation of names to HTIs (Diploma) and Training Schools (Certs) only
	3. Ownership: Re-assign oversight to S.MOH	Local S.MOH is more capable and more appropriate
	4. <u>Registered Midwives</u> : Adapt/ translate GOSS curriculum into Arabic. Open course	No diploma midwifery outside Juba. Clinical Officers students go to Maridi.
Malakal Teaching Hospital Nursing School	1. <u>Khartoum Cert Nurses</u> : give GOSS Cert Comm Nurse exam. Translate into Arabic. Close course	Resolve current bottleneck. Establish equivalence of qualification.
	2. Convert use to MTH In-Service Training Centre	MTH staff need 'HR Induction week' & refresher training

7. ACKNOWLEDGEMENTS

The author is deeply grateful to the scores of tutors, students, project officers, State Ministry of Health officials and others who kindly provided assessors with data, information and background, perhaps not for the first time. The PHC Dept for their secondment of Peter Kon Thil, the 2010 Household Survey team for their loan of equipment, and innumerable MOH-GOSS officers for their assistance, are all thanked. Appreciation is also due to management, staff and neighbours of the Afro-Asian Business Centre for their kindness and hospitality.

From the MOH-GOSS, the author warmly thanks Kuol Arop Alor, Samuel Maketh Lwal, Lazaro Atem Biar, Buom Kubuong Gatduop and Peter Kon Thil for their flexibility, forbearance and friendship; Chuol Nyuot and Dr Samuel Koang for their help, understanding and insight; and Dr Olivia Lomoro for her determination in initiating the mapping survey, her guidance and support throughout its execution, and her forgiveness for any failings or omissions in its conclusion.

From LATH, the author records his appreciation (and admiration) of the steadfast administrative and logistical services of Jackie Gumbo and her team; of the patient stewardship and quiet facilitation of Dr Simon Gould; and the professional support – and inspired recruitment decision – of Dr Carmen Maroto Camino.

8. AUTHOR'S DETAILS

A semi-retired, London-based, General and Mental Health Registered Nurse Mark Beesley was team leader for a multi-agency survey of HR in Southern Sudan in late 2005 and early 2006 and author of the subsequent *HR Situation Analysis and HR Recommendations for 2006-08*. For WHO in 2007 he conducted and wrote *A Survey of Somali Pre-Service Training Institutions*. As technical advisor at different levels within the national structures of three African states in, or emerging from, conflict he has trained supervisors and supervised trainers. He has extensive first-hand experience in the delivery of high-quality in-service training.

ANNEX 1: FALSE POSITIVES

Suspected, but unfounded, facilities.	Comment
Rumbek State Hospital Nursing School	Recorded in HR budget proposal, 04 June 2010. Not found.
CHW Training School, Malual Achot, Bor	Recorded in HR budget proposal, 04 June 2010. Not found, though Malual Achot is the site of a PHC facility.
SUHA's MCHW Training School in Torit	Reported by a knowledgeable informant. Not known on the ground.
Torit Midwifery School	Recorded in HR budget proposal, 04 June 2010. Not found.
Juba Sanitary Overseer Training School	Not known. The old name for the Public Health Officer course. Possible confusion with the now-transferred National Public & Environmental Health Institute.
Juba Midwifery School	Not found
Juba CHW Training School	Mentioned in LATH's Mission 1, Phase 2 Report Not known by locally-based NGOs or S.MOH
Catholic University Pharmacists course in Wau	Agriculture and Environmental Sciences only Registered nurse training in Catholic HTI.
Bentiu CHW School	Mentioned in LATH's Mission 1, Phase 2 Report Not known by locally-based NGOs or S.MOH
COSV's Laboratory Assistant Training School in Nyal	Reported as above (but misallocated to Upper Nile State) 2-3 day short courses and on-the-job training only. Some week-long refresher courses for CHWs and 'Asst CHWs'
University of Upper Nile Malakal	Misallocated. This facility remains in Khartoum.
CMA's Keew Lab Asst Training School, in northern Jonglei	Some on-the-job training did reportedly once take place at this PHC facility but it was never a training facility. CMA staff are sent to IRC in Ganyiel for training.
College of Medicine, University of Malakal	Smaller than the University of Juba, some fifty-odd medical doctors graduate from this College each year... but it remains in Khartoum!
College of Medicine, University of Wau	Though founded in Wau in 1992, this college, which produces a reported thirty medical doctors a year, is still also based in Khartoum.

ANNEX 2: GPS COORDINATES

(States are ordered in a clockwise spiral, with Lakes State at the centre.)

Name of Health facility	GPS Coordinates
Lakes	
Rumbek Med Laboratory Training School (new site)	06.81142 N, 029.68197 E
Rumbek Nursing School	06.80339 N, 029.67567 E
Adol Community-based Health Training Centre	06.373218 N 029.551118 E
Training School, Billing	Inaccessible
Jonglei	
New Fangak 'Training School'	09.40896 N, 031.16107 E
Eastern Equatoria	
Technical Nursing Secondary School, Torit	04.40607 N, 032.57714 E
Central Equatoria	
Juba College of Nursing & Midwifery (old site)	-
Technical Nursing Secondary School, Juba	04.84922 N, 031.60822 E
Juba Health Sciences Training Institute	04.85108 N, 031.61016 E
College of Medicine, University of Juba	
College of Rehabilitation Sciences, St Mary's Univ Juba	04.84531 N, 031.60707 E
Yei National Health Training Institute	-
Kajo-Keji National Health Training Institute	Inaccessible
Jalimo Health Worker Training School	Inaccessible
CHW Training Centre, Wondaruba	
Western Equatoria	
Maridi National Health Training Institute	04.90465 N not clear
Maridi Nurse Training School	04. 90558 N, 029.45720 E
Community Midwifery Training School, Lui	05.34233 N, 030.44853 E
Western Bahr el Ghazal	
Mary Help Training Centre for Nurses & HW, Wau	07.71456 N, 027.98799 E
Catholic Health Training Institute, Wau	07.68627 N, 028.00953 E
Midwifery School, Wau	
Nursing School, Wau	

Northern Bahr el Ghazal	
Nursing School, Aweil	Same as Hosp
Warrap	
CHW School, Marial Lou	Inaccessible
Tonj Nursing School	07.27640 N, 028.67901 E
Wunrok CHW Training School	Inaccessible
Unity	
Leer Community Midwife Training School	08.30961 N, 030.13513 E
Regional HTI, Ganyiel	Inaccessible
Midwifery School, Bentiu	09.25469 N, 029.80328 E
Upper Nile.	
Health Sciences Training Institute, Malakal (new site)	09.56420N, 031.66262 E
SIM CHW Training School, Doro, Maban	Inaccessible
MTH Nursing School, Malakal	09.52864 N, 031.65105 E
Nursing School, Renk	11.74862 N, 032.79946 E.
Midwifery School, Renk	11.74937 N, 032.80209 E
CHW Training School, Nasir	Shut. Will probably not reopen as a school
Midwifery School, Malakal	

ANNEX 3: IN-COUNTRY EXPENDITURE

For every site visited outside Juba, the mapping exercise cost roughly \$1,000.

Item	Unit Cost	Cost (\$)
Per Diems	\$150 per person per night x 69 nights	10,350
Flights	\$200 per UNHAS journey. \$180 per commercial journey.	3,500
Vehicle Hire/ Fuel Supply/ Fares	Various	4,400
Stationery, Printing.	Various	250
Total		18,500

(\$1,000 is also the cost of a 5-day supervision, or HR Development, visit to a State MOH by an MOH-GOSS manager, travelling by plane. If the Department of Training had been able to steadily maintain a register of health training facilities, kept up-to-date by locally-gathered information regularly collected and supplied from State Directors of Training, the cost of the mapping would be zero. The in-country expenditure of the mapping survey might then have provided for a week-long collaboration between MOH-GOSS and S.MOH training officials, for every state outside Central Equatoria, every month, for eighteen months, twice.)

ANNEX 4: LIST OF ASSESSORS

Alier Garang Ajak	Senior Inspector
Buom Kubuong Gatduop	Senior Inspector, HTIs
Chuol G Nyuot	Director HR
Kuol Arop Alor	DD Curriculum Development
Lazaro Atem Biar	DD HRIS
Mark Beesley	LATH
Peter Kon Thil	PHC
Samuel Maketh Lwal	DD, Training
Tingo Julius Nixon	Intern

ANNEX 5: INFORMANTS

Tutors

Charles Abbey Bulli	Principal, Health Science Training Institute
Stephen Friday Barayona	Deputy Principal, GMA tutor
Florence Kiko Felix	General Medical Assistants tutor
Justin	Theatre Medical Assistants tutor
Dr Gino Lado	Head of College of Medicine, University of Juba
Petronella Wawa	Principal, Juba College of Nursing & Midwifery
Patronilla Munasi	Principal, Leer Community Midwife Training School
Daniel Thon Dot	Principal, Yei National HTI
Flora Gaba Bennett	Nursing Tutor, Yei
Manuela Vittor	Dean, College of Rehabilitation Sciences
Andrew Marial Mayen	Principal, Adol Community-based Health Training Centre
Lucia Sorrentino	Principal, CISP
Grace Kuria	Rumbek Nursing School
Sua Joel Katoro	Principal, Malteser Med Lab Training School
Pitia Joseph Alesio	Tutor, Regional HTI, Ganyiel
Gladys Arika	Tearfund
Abdi Aden	Principal, IMC

MOH-GOSS Officials

Dr Olivia Lomoro	Acting Undersecretary & DG HR,R,P&HSD
Dr Sarah Petrie	Sector Co-lead Health (NGO)
Samuel Koang	Director of Training
Dr Samson Baba	DG External Assistance & Coordination

State MOH Officials

Dr Al Haj	Acting DG, MOH Central Equatoria
Dr Manong	Acting DG, MOH Unity
James Garjuet	Dir Planning & Research, acting Dir Training, MOH Unity
Martin Telar Canuong	Dir HR & D, MOH Lakes
Dr Acut Acut Madhiot	DG, MOH Lakes

Programme Officers from organisations

Dr Abdulqadir Omar	Medical Director, IMC
Dr Micah Busieka	PRDA
Reverend Stephen	PRDA
Bilha Achieng	Intern, UNFPA
Marco	COSV
Dr Justice Bazirake	IRC
Dr Wahid	WHO
Nancy McGaughey	ACROSS
Taban Geoffrey	TA Networking, JICA
Wim Groenendijk	BSF

Joy Mukaire	CHAS
Chaplain Lokojo	GOAL
Dr Rob Congdon	Medical Director, SIM
Maarten Romijn	Deputy Country Director, IMC
Daniel Muhungua	GOAL
Dr Kahi Vincent	Health Coordinator, IMC
Alan Paul	Deputy Director, Programs

Students/ Graduates

2 nd year Student	Lab Med Asst course, H Sc Training Institute
2007 Graduate	Lab Med Asst
Oyella Nancy Mike	1 st year Nursing student, Yei NHTI
10 students	2 nd year Lab Technician class, Malteser Med Lab Training School
11 students	2 nd year Cert Community Nurse class, Rumbek Nursing School

Employers of Graduates

Dr Mali	Head of Obstetrics & Gynaecology, MSF-H Hospital, Leer
---------	--

ANNEX 6: LIST OF ALL HEALTH TRAINING FACILITIES

	Chosen Name of Health Training Facility	Course 1	Course 2	Course 3	Governing Body
Lakes (States are ordered in a clockwise spiral, with Lakes State at the centre.)					
1	Malteser Int'l Medical Laboratory Training School	2-year <i>consecutive</i> Cert Laboratory Sciences (10 grads every other year)			Malteser
2	Rumbek Nursing School	2-year Cert Community Nurses (11-15 grads each year)			CISP
3	Adol Community-based Health Training Centre	10-month CHW Cert (average 23 grads each year)			ACROSS
4	Training School, Billing	(Closed 2007)			ICRC
Jonglei					
-	No Facilities				-
Eastern Equatoria					
6	Technical Nursing Secondary School, Torit	3-4 year <i>consecutive</i> Khartoum Certified Nurse (x every years)			S.MOH

Central Equatoria					
6	Juba College of Nursing & Midwifery	3-year Registered Nurse Dipl (20 grads each yr from 2013)	3-year Registered Midwife (10 grads each yr from 2013)		GOSS
7	Technical Nursing Secondary School, Juba	3-5 years <i>consecutive</i> Khartoum Certified Nurse			GOSS
8	Juba Health Sciences Training Institute	3-year General Medical Asst	3-year Theatre Medical Asst (3-5 grads a year)	'3-year' Lab Medical Asst	S.MOH
9	College of Medicine, University of Juba	6-year Medical Doctor Degree (60-75 grads each year)			Khartoum
10	College of Rehabilitation Sciences, St Mary's University, Juba	(1+) 3-year Physiotherapist (10 grads each yr from 2013)			
11	Yei National Health Training Institute	2½ year Certified Community Nurse	18-month Certified Community Midwife	2-year Cert Lab Technician	GOSS
12	Kajo-Keji National Health Training Institute	Certified Community Nurse (2½ years)	Community Midwife (18 m)		IMC
13	Jalimo Health Worker Training School	9 month CHW (30-35 grads each year)			SUHA
14	CHW Training Centre, Wondaruba	(Closed 2008)			ZOA

Western Equatoria					
15	Maridi National Health Training Institute	3-year Clinical Officer (+1 yr internship)	18-month Certified Community Midwife	3-year Public & Environmental Health Diploma	GOSS
16	Maridi Nurse Training School	2½-year Certified Community Nurse	18-month Certified Community Midwife	9-month CHW	AAH-I
17	Community Midwifery Training School, Lui	(Closed)			Diocese of Lui
Western Bahr el Ghazal					
18	Mary Help Care Institute, Wau	(6m+) 3½-year Registered Nurse	9-month CHW		Diocese of Wau
19	Catholic Health Training Institute, Wau	Registered Nurse (6m + 3½ years)			SCBC
20	Midwifery School, Wau	(Closed)			S.MOH
21	Nursing School, Wau	(Closed)			S.MOH
Northern Bahr el Ghazal					
22	Nursing School, Aweil	(Yet to open)			S.MOH

-	CHW School, Achana	No info			CRM
-	CHW School, Jorbich	No info			CRM
Warrap					
23	CHW School, Marial Lou	9-month CHW			CCM
24	Tonj Nursing School	(Yet to open)			S.MOH
25	Wunrok CHW Training School	9-month CHW			GOAL
Unity					
26	Leer Community Midwife Training School	2-year <i>consecutive</i> Certified Community Midwife (16 grads every other year)			PRDA
27	Regional HTI, Ganyiel	9-month CHW Cert (45 grads each year)			IRC
28	Midwifery School, Bentiu	(Completed 2010. Unfurnished. Unopened)			CHAS

Upper Nile					
29	Health Sciences Training Institute, Malakal	3-year General Medical Assistant			GOSS
30	SIM CHW Training School, Doro, Maban	9-month CHW			SIM
31	MTH Nursing School, Malakal	Certified Nurse (3 years ?)			GOSS
32	Nursing School, Renk	3-year Khartoum Certified Nurse			S.MOH
33	Midwifery School, Renk	9-month Khartoum Trained Village Midwife (Shut)			S.MOH
34	Kodok CHW Training School	(Shut)			GOAL
35	Nursing School, Nasir	(Shut since 2009)			ADRA -SS
36	Midwifery School, Malakal	(Closed)			S.MOH