

**REPUBLIC OF UGANDA
MINISTRY OF HEALTH**

**PREPARATORY SURVEY REPORT
ON
THE PROJECT FOR IMPROVEMENT
OF MEDICAL EQUIPMENT FOR
REGIONAL REFERRAL HOSPITALS
IN
THE REPUBLIC OF UGANDA**

APRIL 2023

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**TRES CONSULTING CORPORATION
FUJITA PLANNING CO., LTD.**

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PREFACE

Japan International Cooperation Agency (JICA) decided to conduct the preparatory survey and entrust the survey to the consortium of Tres Consulting Corporation and Fujita Planning Co., Ltd.

The survey team held a series of discussions with the officials concerned of the Government of Uganda, and conducted field investigations. As a result of further studies in Japan, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Uganda for their close cooperation extended to the survey team.

April, 2023

Haruko Kamei
Director General
Human Development Department
Japan International Cooperation Agency

SUMMARY

1. Overview of the Country

The Republic of Uganda (Uganda) is a landlocked country in East Africa, bordered by five countries: Kenya, Tanzania, Rwanda, Democratic Republic of Congo, and South Sudan. Uganda comprises approximately 241,000 km² of area - almost the same size as the Honshu Island of Japan. Its average altitude is about 1,100 m above sea level. Uganda has a pleasant climate, classified as a savannah, with temperature in the 21–25°C range on average, and two rain seasons - March to May and October to November. Uganda's population is 47.12 million (UN data 2021), and is home to a large number of ethnic groups. Since 2016, Uganda has famously received approximately 1.43 million refugees (UNHCR 2020) from South Sudan and Congo due to political instability.

Despite repeated coup attacks since the country's independence in 1962, Uganda's economy has stabilized since 1987 with the Structural Adjustment Program implemented by the World Bank and the International Monetary Fund (IMF). The main industry sectors are (1) agriculture, forestry & fisheries; (2) manufacturing & construction; and (3) services sector, with agricultural workers occupying 72.44% (World Bank 2020).

Uganda's Gross National Income (GNI) per capita is reported at US\$800 (World Bank 2020) and its economic growth rate is 6.8% (World Bank 2019). Uganda has been implementing a five-year National Development Plan focused on growth and job creation since 2010, targeting entry into middle-income countries.

2. Background, History and Outline of the Project

In the Sustainable Development Goals (SDGs), Uganda ranks 136th out of 163 countries (Sustainable Development Report 2022) and faces numerous challenges. In the health sector, infant and maternal mortality rates remain high, and infectious diseases, such as malaria and pneumonia are the leading causes of death. Additionally, the increase in non-communicable diseases (NCDs) has created another burden.

To solve these challenges, the Government of Uganda (GoU) has been attempting to strengthen the regional referral hospitals (RRH), district hospitals and health centres that provide health services in suburban areas in order to formulate the Ministry of Health (MoH) Strategic Plan 2020/21-2024/25, which has the goal of '*Strengthening the Health System and its support mechanisms with a focus on Primary Health Care to achieve Universal Health Coverage by 2030*'.

The Project sites Soroti RRH and Jinja RRH, including a Jinja RRH children campus, each cover 10–11 neighbouring districts and provide a wide range of specialized care, such as ophthalmology; ENT (ear, nose and throat); dentistry; neonatal intensive care; psychiatry and physiotherapy, as well as educational hubs for physicians, nurses and other medical cadres. In addition, their locations along main roads lead to a significant demand for emergency medical care for accidental and traumatic injuries.

However, the above roles are not being adequately fulfilled due to aging facilities, and aging and lack of medical equipment. The JICA survey, '*Data Collection Survey on Medical Facilities and*

Equipment in Response to COVID-19 for African Countries,’ conducted in May 2021, also confirmed these challenges.

Under these circumstances, the GoU requested Japanese Grant Aid to improve medical equipment in Soroti RRH and Jinja RRH in order to strengthen both RRHs’ functions.

3. Outline of the Survey Results and Description of the Project

Responding to a request from the GoU, the Government of Japan (GoJ) decided to conduct a preparatory survey, and JICA dispatched a survey team in March 2022. In the field survey, the survey team examined the relevance and necessity of the equipment needs, optimized the GoU’s request, and gathered the data and information necessary for the review and analysis in Japan. After analysis in Japan, JICA dispatched a mission to confirm the draft version of the Preparatory Survey Report in August 2022, and the Preparatory Survey Report was completed in April 2023.

As a result, the number of targeted departments/units for Soroti RRH is 19 and 22 for Jinja RRH, including the Jinja RRH children campus. The planned number of equipment items is 91 for Soroti RRH and 97 for Jinja RRH, as described below.

Table i Number of departments/units covered by each hospital

Name of Hospital	Name of Departments/Units	Number of Depts/Units
Soroti RRH	Operating theatre, orthopaedics, radiology, obstetrics and gynaecology (OB/GYN), neonatal intensive care unit (ICU), dental, emergency, outpatients, private wing, physiotherapy, surgical ward, paediatrics wards, ophthalmology, internal medicine ward, pharmacy, ENT, sterilization, laundry, and mortuary	19
Jinja RRH (main campus)	Operating theatre, orthopaedics, radiology, OB/GYN, neonatal ICU, dental, emergency, outpatients, physiotherapy, ophthalmology, pharmacy, ENT, sterilization, laundry and mortuary	22 (main campus 15 + children campus 7)
Jinja RRH (children campus)	Emergency & triage, paediatrics ward-1, paediatrics ward-2, paediatrics outpatient, neonates room, nutrition unit, and isolation & tetanus	

Table ii Summary of the Planned Equipment

No	Name of Equipment	Quantity		Total Quantity	No	Name of Equipment	Quantity		Total Quantity
		Soroti RRH	Jinja RRH				Soroti RRH	Jinja RRH	
1	Anaesthesia Machine	3	5	8	51	Refrigerator, Pharmaceutic	7	6	13
2	Electro Surgical Unit	2	3	5	52	Resuscitator Set, Manual (A)	4	9	13
3	Instruments Set, General Surgery	6	4	10	53	Resuscitator Set, Manual (B)	4	6	10
4	Instruments Set, Laparotomy	3	2	5	54	Sterilizing Drum Set	16	15	31
5	Mayo Stand	4	10	14	55	Suction Apparatus, Electric	11	13	24

No	Name of Equipment	Quantity		Total Quantity	No	Name of Equipment	Quantity		Total Quantity
		Soroti RRH	Jinja RRH				Soroti RRH	Jinja RRH	
6	Operating Light, Ceiling	-	3	3	56	Weighing Scale, Adult	5	5	10
7	Operating Light, Mobile	3	5	8	57	Weighing Scale, Baby	4	7	11
8	Operating Table, Hydraulic	2	5	7	58	Wheel Chair	16	15	31
9	Dental X-ray Machine	1	1	2	59	X ray Film Viewer	9	15	24
10	Laser Imager System for General X-ray	-	1	1	60	Dental Unit	2	3	5
11	Imaging System for Dental X-ray	1	1	2	61	Instruments Set, Dental Extraction and Treatment	4	4	8
12	Ultrasound Scanner, Portable (A)	3	1	4	62	B Scan Ultrasound	1	1	2
13	Ultrasound Scanner, Portable (B)	2	3	5	63	Auto Refracto-Keratometer	1	1	2
14	Ultrasound Scanner	-	1	1	64	Instruments Set, Ophthalmology	6	4	10
15	General X-ray Machine	-	1	1	65	Operating Microscope, Ophthalmology	1	1	2
16	CPAP Machine	3	4	7	66	Ophthalmoscope, Direct	4	2	6
17	Delivery Bed	5	4	9	67	Retinoscope	3	2	5
18	Doppler Fetal Detector	4	4	8	68	Slit Lamp	3	2	5
19	Infant Incubator	4	2	6	69	Tonometer	2	2	4
20	Infant Warmer	3	11	14	70	Trial Lens Set	3	3	6
21	Instruments Set, Caesarean Section	8	10	18	71	Visual Field Analyzer	1	1	2
22	Instruments Set, Delivery	2	15	17	72	Multifunctional Exercisers Set	1	1	2
23	Instruments Set, Dilation and Curettage	2	4	6	73	Exercise Therapy Tool Set	1	1	2
24	Instruments Set, Gynaecology	4	2	6	74	Electrical Muscle Stimulator	2	2	4
25	Phototherapy Unit	2	5	7	75	Traction Machine, Cervical & Lumber	1	1	2
26	Oscillating Cutter and Bone Drill Set	1	1	2	76	Physiotherapy Apparatus Set	1	1	2
27	Bed with Traction Frame Set	6	6	12	77	Autoclave, Electric, approx. 100L	2	2	4
28	Instrument Set, Orthopaedics	-	3	3	78	Autoclave, Electric, approx. 20L	5	2	7
29	Plaster Cutting Set	1	1	2	79	Autoclave, Electric, approx. 40L	2	3	5
30	Operating Table, Hydraulic, Orthopaedics	-	1	1	80	Dryer for laundry, approx. 50Kg	1	1	2
31	Bed, Adult (Ordinary)	40	45	85	81	Roller Ironing Machine	1	1	2
32	Bed, Adult (High Dependency Unit)	2	8	10	82	Washing Machine, approx. 50Kg	1	2	3
33	Bed, Paediatric (A)	27	30	57	83	Mortuary Refrigerator	1	1	2
34	Bed, Paediatric (B)	10	10	20	84	Generator, approx. 100KVA	1	-	1
35	BP Machine (A)	18	15	33	85	Generator, approx. 30KVA	-	1	1
36	BP Machine (B)	9	15	24	86	Television Set for Education	8	11	19
37	Cabinet, Instruments	5	6	11	87	Gastroendoscope	1	1	2

No	Name of Equipment	Quantity		Total Quantity	No	Name of Equipment	Quantity		Total Quantity
		Soroti RRH	Jinja RRH				Soroti RRH	Jinja RRH	
38	Crash Cart (Emergency Cart)	10	7	17	88	Diagnostic Set	5	6	11
39	ECG	1	2	3	89	Audiometer, Clinical	1	1	2
40	Examination Couch	16	20	36	90	Instruments Set, ENT, Middle Ear	1	1	2
41	Examination Couch, Gynaecology	5	2	7	91	Diagnostic Microscope, ENT	1	1	2
42	Examination Light	10	12	22	92	AVR, 1 KVA	24	24	48
43	Instruments Set, Surgical Toilet and Suturing	10	14	24	93	AVR, 3 KVA	3	4	7
44	Instrument Trolley	15	22	37	94	UPS, 1 KVA	7	8	15
45	Nebulizer	10	9	19	95	UPS, 2 KVA	4	6	10
46	Oxygen Concentrator	10	18	28	96	UPS, 3 KVA	4	6	10
47	Oxygen Therapy Apparatus	25	24	49	97	UPS, 5 KVA	2	4	6
48	Patient Monitor	19	20	39	98	Power Transformer and Distribution Panel (A)	1	-	1
49	Patient Trolley	11	11	22	99	Power Transformer and Distribution Panel (B)	-	1	1
50	Pulse Oximeter	27	25	52					
Number of Items							91	97	
Total Quantities (No. 1~99)							544	644	1,188

For equipment that requires significant maintenance by local distributors or manufacturers to ensure sustainable use, a maintenance contract is covered for up to three years after handover of the equipment. The target equipment may include anaesthesia machine, dental X-ray, ultrasound scanner, general X-ray machine, dental unit, large autoclave and gastroendoscope. The above contract consists of scheduled maintenance services, on-call troubleshooting services and supply of specific spare parts.

In addition, two types of soft components (technical assistance) are planned for the Project. The first component is coaching on goods management using the 5S-Continuous Quality Improvement (CQI)-Total Quality Management (TQM) method in collaboration and synergy with the ongoing JICA technical cooperation 'Project on Patient Safety Establishment through the 5S-CQI-TQM'. The goal is to make effective use of limited resources and to maintain maximum use of the procured equipment.

The second soft component is to conduct training related to clinical knowledge, clinical techniques and maintenance skills for the equipment that is newly introduced, or is experienced but where the users are concerned about technical and operational aspects. The goal here is to expand specialized medical services through the proper and effective use of the targeted equipment.

4. Project Schedule and Cost Estimation

The Project schedule from the start of detailed design to the handover of the equipment is expected to take a total of 17 months: approximately 5 months for the detailed design and bidding stage, and 12 months for the procurement, installation and training stages. After the above 17-month schedule, some equipment items will be covered by the maintenance contract for up to three years, including the manufacturers' warranty periods. Thus, the overall schedule of the Project is expected to be completed 53 months including three years (36 months) maintenance contract period.

The total amount to be borne by Uganda for the Project is estimated as 6.02 million Japanese yen.

5. Project Evaluation

(1) Relevance

The relevance of the Project is confirmed, as shown below.

- The beneficiary population of the Project is approximately 6.5 million, of which 2 million are in the catchment area of Soroti RRH (Soroti City and 10 neighbouring districts), and 4.5 million are in the area of Jinja RRH (Jinja City and 11 neighbouring districts).
- The Project contributes to achieving the goals of Uganda's Health Strategic Plan and is positioned as urgent and a high priority.
- The Project is in line with Japan's Official Development Assistance (ODA) policy. It will also contribute to achieving the Sustainable Development Goal 3 (Good Health) and the promoting Universal Health Coverage, which is a trend of international health cooperation.

(2) Effectiveness

The following quantitative and qualitative effects are expected through the Project implementation.

1) Quantitative Effects

The indicators used to measure the expected effects are summarized in the table below. The actual record in 2021 is defined as the baseline data, and the target data is set at about three years after the Project completion in 2027.

Table iii Quantitative Indicator

Indicator (per year)	Baseline 【Actual record in 2021】		Target 【After 3 years from the Project completion (in 2027)】		
	Soroti RRH	Jinja RRH	Soroti RRH	Jinja RRH	
1	Number of examinations				
	Number of general X-ray exams	N/A	2,067	N/A	4,000
	Number of dental X-ray exams	0	0	300	350
	Number of ultrasound exams	2,133	131	4,500	7,000
	Number of upper gastrointestinal endoscope exams (including biopsy and treatment)	0	0	150	300

Indicator (per year)	Baseline 【Actual record in 2021】		Target 【After 3 years from the Project completion (in 2027)】		
	Soroti RRH	Jinja RRH	Soroti RRH	Jinja RRH	
2	Number of outpatients				
	Number of outpatients of all departments	160,056	213,260	192,000	255,000
	Number of outpatients of ophthalmology department* ¹	1,762	4,020	3,500	8,000
	Number of outpatients of dental department* ¹	5,720	6,512	8,500	9,000
	Number of outpatients of physiotherapy department* ¹	2,786	2,256	3,700	5,000
3	Number of operations				
	Number of major surgeries* ² including Caesarean section	2,427	2,338	3,200	4,000

*¹ Noted that as a precondition, the number of medical doctors will not be decreased.

*² Surgeries which involve general anaesthesia.

2) Qualitative Effects

The qualitative indicators are summarized in the table below.

Table iv Qualitative Indicators

Indicator	
1	<p>Increased patients' satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Improved diagnostic and therapeutic services in each clinical department • Improved patient safety by effective operation of the post-operative recovery room in the central operating room and expanding the space and functions of the wards and the high dependency unit (HDU) • Reduced burden on patients and medical staff through improved and efficient services by operating rapid ultrasonic diagnosis in the obstetrics and gynaecology department, emergency department and wards • Improved medical treatment environment by updating medical furniture such as patient beds
2	<p>Improved quality of hospital services</p> <ul style="list-style-type: none"> • Improved cancer diagnosis function in gynaecology and gastrointestinal medicine • Improved function of patient care in pregnancy and delivery • Improved prognosis for newborns with respiratory failure • Improved surgical environment • Improved physiotherapy services
3	<p>Increased hospital staff satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Increased staff motivation • Increased staff retention

In conclusion, the Project is highly relevant and its effectiveness is expected to be sufficient.

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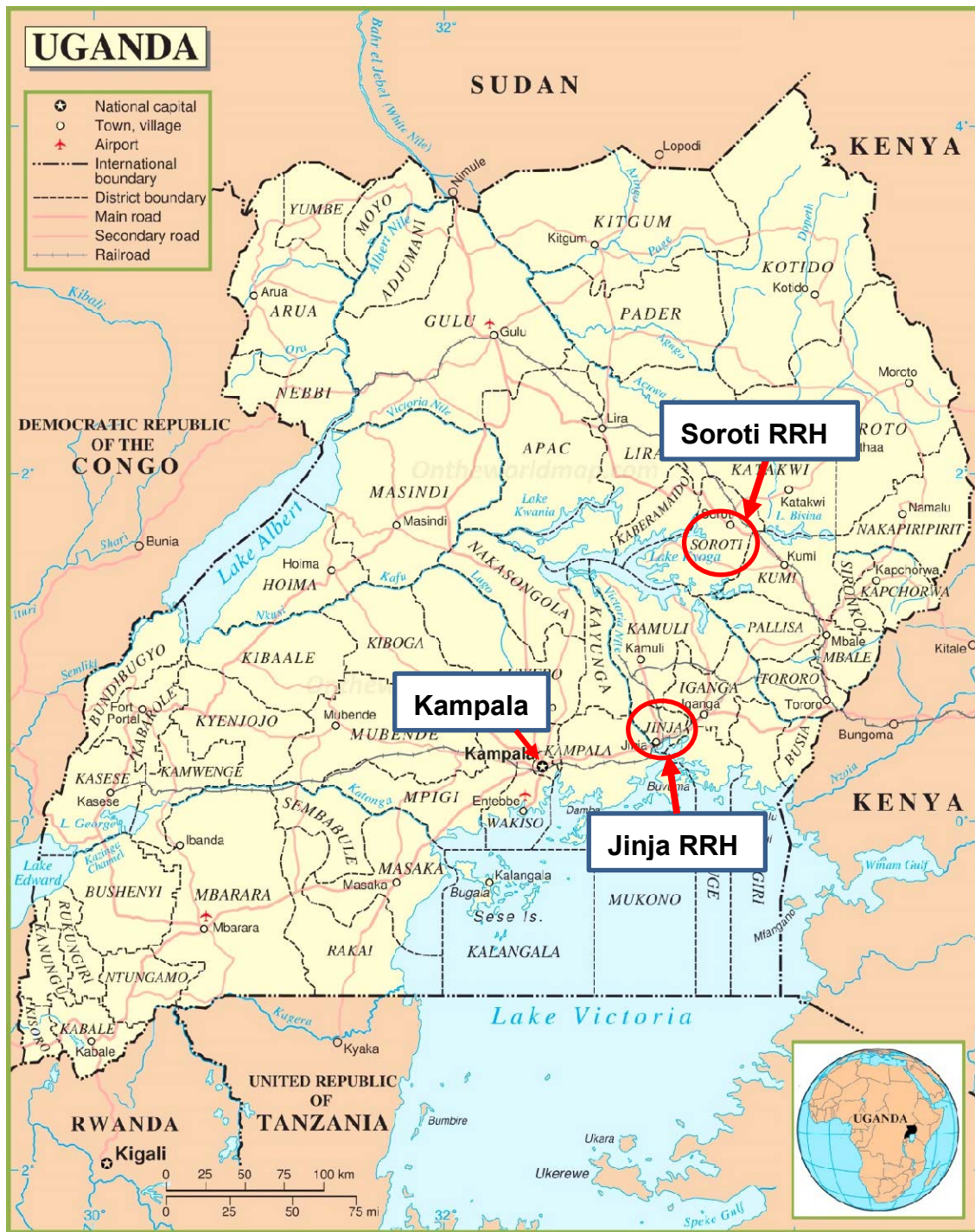
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LOCATION MAP



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ABBREVIATIONS

Abbreviations	English
5S	Seiri, Seiton, Seiso, Seiketsu, Shitsuke (Sort, Set, Shine, Standardize, Sustain)
A/P	Authorization to Pay
AVR	Automatic Voltage Regulator
B/A	Banking Arrangement
BP	Blood Pressure
CE	Conformité Européenne
CFU	Colony Forming Unit
CIP	Carriage and Insurance Paid To
CO ₂	Carbon Dioxide
CoC	Certificate of Conformity
COVID-19	Coronavirus Disease 2019
CQI	Continuous Quality Improvement
CPAP	Continuous Positive Airway Pressure
CQI	Continuous Quality Improvement
CR	Computed Radiography
CT	Computed Tomography
DAC	Development Assistance Committee
E/N	Exchange of Notes
ECG	Electrocardiogram
ENT	Eye Nose Throat
EU	European Union
FDA	Food and Drug Administration
G/A	Grant Agreement
GoJ	Government of Japan
GoU	Government of Uganda
HDU	High Dependency Unit
ICU	Intensive Care Unit
ISO	International Organization for Standardization
JICA	Japan International Cooperation Agency
JIS	Japanese Industrial Standards
JPY	Japanese Yen
LAN	Local Area Network
LEEP	Loop Electrosurgical Excision Procedure
MoFPED	Ministry of Finance, Planning and Economic Development
MoH	Ministry of Health
MRI	Magnetic Resonance Imaging
NDA	National Drug Authority

Abbreviations	English
NMS	National Medical Store
NRH	National Referral Hospital
NWSC	National Water and Sewerage Corporation
OB/GYN	Obstetrics and Gynaecology
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OPD	Outpatient Department
PVoC	Pre-Export Verification of Conformity to Standards Programme
RRH	Regional Referral Hospital
SDGs	Sustainable Development Goals
TQM	Total Quality Management
UCI	Uganda Cancer Institute
Uganda	Republic of Uganda
UHC	Universal Health Coverage
UNBS	Uganda National Bureau of Standards
UNHCR	The Office of the United Nations High Commissioner for Refugees
UNPS	Uganda National Panel Survey
UPS	Uninterruptible Power Supply
URA	Uganda Revenue Authority
USA	The United States of America
USAID	United States Agency for International Development
UShs	Ugandan Shilling
VAT	Value Added Tax
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

Chapter 1. Background of the Project

CHAPTER 1 Background of the Project

1-1 Background, History, and Outline of Grant Aid

In Uganda, infant and maternal mortality rates remain high, and infectious diseases, such as malaria and pneumonia, are the leading causes of death. Additionally, the increase in NCDs has created another burden. To solve these challenges, the GoU has been working to strengthen the RRHs, district hospitals and health centres that provide health services in suburban areas.

The Project sites, Soroti RRH and Jinja RRH (including a Jinja RRH children campus) each cover about 10 neighbouring districts and provide wide a range of specialized care, as well as important educational institutions for medical cadres. In addition, both RRHs are also the centre of emergency medical care in their respective regions and the neighbouring districts.

However, the above roles are not being adequately fulfilled due to aging facilities, and aging and the lack of medical equipment. The JICA survey, '*Data Collection Survey on Medical Facilities and Equipment in Response to COVID-19 for African Countries*,' conducted in May 2021, also confirmed these challenges.

Under these circumstances, the GoU requested Japanese Grant Aid to improve medical equipment in Soroti RRH and Jinja RRH in order to strengthen both RRHs' functions and rectify the imbalance across the RRHs.

1-2 Natural Conditions

1-2-1 Water Quality Survey

The water quality of Soroti RRH and Jinja RRH could be analyzed from regular water quality analysis data collected from both city's branch offices of the National Water and Sewage Corporation (NWSC). For Jinja city, all sampling data complied with the national standards for potable water in Uganda. However, for Soroti city, two sampling sites out of six sites detected abnormal values; 6 mg/L of suspended solids (standard is 0 mg/L) in Nakatunya area, and 28 Colony Forming Unit (CFU)/100 ml of faecal coliforms (standard is 0 CFU/100ml) in Soroti Prisons areas. However, the other four sites out of six did not detect any abnormal data. Both hardness and iron were normal values, and the other test items were also within the range of the national standards. Thus, contamination of the sampling container could not be ruled out. To implement the Project, the survey team concluded that the additional water treatment is not required for the use of tap water in Soroti and Jinja.

1-2-2 Climate Condition Survey

Soroti and Jinja districts are located at altitudes between 1,100 and 1,200 metres and are classified as either savanna or tropical monsoon climates according to Köppen's climate classification. The rainy

season is mainly from March to May and October to November, while the dry season usually begins in December and ends in January. In recent years, rainfall has been unstable, which can affect agriculture and livestock raising. The average temperatures (maximum and minimum), average precipitation, and average relative humidity in Soroti and Jinja are shown in the table below.

Table 1-1: Monthly Climate Data in Soroti (Temperature, Precipitation, Humidity)

	1	2	3	4	5	6	7	8	9	10	11	12
Avg. High Temperature, 2020 (°C)	30.7	31.0	29.8	29.0	29.2	28.3	27.5	29.0	29.1	29.0	29.3	30.8
Avg. Low Temperature, 2020 (°C)	19.3	20.1	19.9	20.3	20.2	19.5	19.1	19.3	19.1	19.2	19.3	19.2
Avg. Precipitation, 2014-2020 (mm)	151	71	167	133	143	66	119	170	199	219	114	27
Avg. relative humidity at 6 am, 2017 (%)	67	76	76	79	83	82	87	81	83	79	79	74
Avg. relative humidity at noon, 2017 (%)	40	47	55	57	63	54	60	55	59	57	57	48

Source: Uganda Bureau of Statistics, Statistical Abstract 2021

Table 1-2: Monthly Climate Data in Jinja (Temperature, Precipitation, Humidity)

	1	2	3	4	5	6	7	8	9	10	11	12
Avg. High Temperature, 2020 (°C)	28.7	29.5	28.1	27.7	27.7	27.0	26.6	28.2	28.1	27.8	27.7	28.0
Avg. Low Temperature, 2020 (°C)	15.0	15.5	15.6	16.2	16.0	14.9	14.9	14.3	14.6	14.7	14.8	14.1
Avg. Precipitation, 2014-2020 (mm)	129	36	330	169	155	50	22	104	74	192	194	150
Avg. relative humidity at 6 am, 2017 (%)	51	66	73	75	83	78	84	79	79	75	70	54
Avg. relative humidity at noon, 2017 (%)	26	45	43	43	60	54	58	56	57	55	48	31

Source: Uganda Bureau of Statistics, Statistical Abstract 2021

1-3 Environmental and Social Considerations

The Project is classified as Category C (a project likely to have minimal or no adverse environmental impacts) according to the JICA Guidelines for Environmental and Social Considerations (January 2022), because it is not large-scale category, does not fall into a sensitive area or characteristic, and is not considered to have significant adverse impacts on the environment and society.

Chapter 2. Contents of the Project

CHAPTER 2 Contents of the Project

2-1 Basic Concept of the Project

2-1-1 Superior Goals and Project Objectives

The Project aims to improve the diagnostic and treatment capabilities of Soroti RRH and Jinja RRH in eastern Uganda by upgrading their medical equipment, thus contributing to the improvement of medical services in their respective regions. One of the priorities in the MoH’s Strategic Plan 2020/21–2024/25 is to improve the functioning and adequacy of health infrastructure and logistics, to which the Project will contribute. In addition, the Comprehensive Health Service Standards Manual (July 2021) defines the functions that RRHs should have as psychiatry, ENT, ophthalmology, dentistry, intensive care, radiology, pathology tests, and more advanced medical care. The Project will also contribute to the enhancement of these specialized medical services.

These two RRHs cover 10–11 neighbouring districts and provide specialized care in ophthalmology, ENT, dentistry, neonatal intensive care, psychiatry and physiotherapy, as well as educational hubs for physicians, nurses and other medical cadres. In addition, their locations along main roads lead to the significant demand for emergency medical care for accidental and traumatic injuries. In particular, Jinja RRH has an almost two times larger capacity than Soroti RRH in terms of population and hospital beds. It also has a cancer screening unit for gynaecology, and a specialized paediatric hospital located in outside of main hospital.

However, the above roles are not being adequately fulfilled due to aging facilities, and to aging and lack of medical equipment. Under these circumstances, the Project aim to improve medical equipment in Soroti RRH and Jinja RRH in order to strengthen both RRHs’ functions and rectify imbalance across the RRHs.

2-1-2 Basic Concept of the Project

The Project provides equipment to improve diagnostics and treatment capabilities. Most of the planned equipment is categorized as replacement and/or refilling quantities and will be installed in existing facilities, except for the radiology department. Ultimately, 99 items of equipment are planned to be procured, with the major equipment listed in the table below.

Table 2-1: Major Planned Equipment

Name of the Equipment
anaesthesia machine, electro surgical unit, operating light, operating table, X-ray imaging system, ultrasound scanner, general X-ray machine, CPAP machine, infant incubator, infant warmer, instrument set for gynecology, oscillating cutter and bone drill, patient monitor, dental unit, B scan ultrasound, refract-keratometer, operating microscope for ophthalmology, visual field analyzer, multifunctional exercisers, cervical & lumber traction machine, laundry dryer, roller ironing machine, washing machine, generator, gastroendoscope, ENT instruments set, ENT diagnostic microscope, etc.

The Project will include the maintenance contract for up to three years after handover of the equipment. Targeted equipment requires maintenance by local distributor or manufacturer's representative in order to ensure sustainable use.

In addition, trainings on initial operation and daily maintenance will be provided at the time of installation of procured equipment. Apart from the above trainings, two types of soft components (minor technical assistance) are planned. The first component is coaching on goods management using the 5S-CQI-TQM method targeted at equipment users, central warehouse staff, and maintenance engineers/technicians.

The second component is training on clinical techniques and maintenance to enhance clinical knowledge, clinical techniques and maintenance skills for the specific equipment.

The overall schedule of the Project is expected to take a total of 53 months: approximately 5 months for the detailed design and bidding stage, 12 months for the procurement, installation and training stages, and 36 months for the maintenance contracts (up to three years) associated with some of the specific equipment after the handover of the procured equipment.

2-2 Outline Design of the Japanese Assistance

2-2-1 Design Policy

2-2-1-1 Basic Principles

The Project will procure medical equipment that will contribute to the improvement of the diagnostic and treatment capabilities of the two target RRHs and to the enhancement of the specialized medical services that are required at RRHs. The Project aims to improve the medical services of the target hospitals and their catchment areas.

2-2-1-2 Policies for Natural Conditions

Soroti and Jinja districts are located at altitudes between 1,100 and 1,200 metres and are classified as either savanna or tropical monsoon climates. The rainy season is mainly from March to May and October to November, while the dry season begins in December and ends in January.

The average annual maximum and minimum temperatures for the 5-year period from 2016 to 2020 are respectively 27.9°C and 16.5°C in Soroti and 28.5°C and 15.7°C in Jinja, indicating a comfortable climate with little fluctuation in temperatures. Relative humidity during the daytime is comfortable, hovering between 40% and 60% in most months. Accordingly, there is no particular weather-related issues for the equipment to be procured.

2-2-1-3 Policies for Socio-economic Customs

In Uganda, healthcare services at public healthcare facilities are generally free of charge. When

diagnosis and treatment are not available due to a lack of medical equipment, patients are advised to visit public healthcare facilities in the capital city, where testing, diagnostics and treatment are available, or private healthcare facilities that charge for medical services. However, most rural patients have difficulty in raising transport costs and medical service fees to visit private facilities for economic reasons. Thus, prompt diagnosis and treatment services are required at RRHs, which are the cornerstones of community healthcare. The Project focuses on strengthening the diagnostic capacity of RRHs through upgrading medical equipment.

2-2-1-4 Policies for Procurement Situations

Japanese and Ugandan products will be procured in accordance with Japan's grant aid procurement guidelines in principle. If the planned equipment is not manufactured in Uganda, third-country products will be shortlisted in consideration of maintenance services by the Ugandan agents and the competitiveness of the bidding process. However, to ensure quality when procuring third-country products, manufacturers will be selected not only in terms of price but also by limiting the country of origin of the products.

The Uganda National Bureau of Standards (UNBS), Ministry of Trade, Industry and Co-operatives Uganda, has introduced the Pre-Export Verification of Conformity to Standards Programme (PVoC). This is a mechanism to ensure product quality when the product designated by UNBS will be imported, by having products undergo assessment by an inspection company designated by the GoU and obtaining a PVoC certificate in advance, or by confirming conformity with International Organization for Standardization (ISO) standards performed in Uganda or having inspection reports reviewed at the manufacturers' factories. The JICA survey team confirmed with the Ugandan side how to exempt PVoC inspections so that the PVoC program will not adversely affect the Project implementation and the procurement of Japanese products.

2-2-1-5 Policy for Employing Local Agencies

The installation, commissioning, and post-installation training (initial operation and daily maintenance) of the equipment will be carried out by local manufacturer-certified engineers/technicians whenever possible.

2-2-1-6 Policy for Concerning the Capability of Proper Management and Maintenance

Biomedical engineers and technicians of the regional maintenance workshops perform equipment repairs upon request and preventive maintenance. While workshop engineers are able to repair basic equipment, more advanced medical equipment is usually outsourced. For this reason, the Project will include the maintenance contracts for some advanced equipment.

Two to three medical equipment user trainers work at each RRH certified under the JICA technical cooperation project, the Project on Improvement of Health Services through Health Infrastructure

Management (2011–2014) and the subsequent Phase 2 (2016–2021). Initial operational training (including daily maintenance and troubleshooting) at the time of installation is expected to be conducted in cooperation with these user trainers.

2-2-1-7 Policies for Setting Equipment Grade

To improve treatment and diagnostic capabilities, the equipment grades will take into consideration the appropriate technology level in Uganda, the local distributors' maintenance services and the target RRHs' maintenance capacities. In addition, the equipment procured under the Project for Improvement of Regional Referral Hospitals in Northern Uganda, which was completed in 2021, will be referred to for the equipment grades and specifications. As some equipment can be seriously affected by voltage fluctuations and power outages, automatic voltage regulators (AVR) and uninterruptible power supplies (UPS) will be included.

2-2-1-8 Policy for Procurement Methods and Period

The procurement of the equipment for the Project is expected to be completed approximately 17 months after the signing of the Exchange of Notes (E/N) and Grant Agreement (G/A). However, significant delays in equipment manufacturing and transportation are possible due to the prolonged COVID-19 pandemic, natural disasters, Russia's invasion of Ukraine and accelerating inflation. Our policy is to set the Project period in consideration of these factors and Ugandan habits. In addition, some of the equipment will come with a maintenance contract for up to three years, including a one-year warranty period, so the Project is expected to be fully completed within 36 months after handover of the equipment.

2-2-2 Basic Plan (Equipment Plan)

2-2-2-1 Project Outline

The Project targets Soroti RRH and Jinja RRH and provides equipment to improve diagnostics and treatment. The equipment covers a wide range of departments, including operating theatres, radiology, emergency, outpatients, specialized clinics, inpatient wards, physiotherapy and sterilization, in order to strengthen the entire hospitals' functions. Most of the equipment are categorized as replacement and/or refilling quantities and will be installed in existing facilities, except for the radiology department.

The CT scanner, which was included in the original request, is excluded from the scope of the Project because the MoH is currently planning to procure this equipment based on the FY 2022/2023 budget, and it is expected to be installed by the end of June 2023. The MoH is also planning to construct a new radiology building including a CT scanner room at the same time, so the imaging equipment to be procured by the Japanese side will be installed in the new radiology building. Regarding the equipment additionally requested by the MoH during the field survey, three items were excluded from the Project after further study. Then, the results and reasons were reported to the MoH, as shown below.

- Fluoroscopy X-ray machine : Alternative diagnostic methods, such as CT scanner, MRI, endoscope and ultrasound have become available in recent years, and as these technologies become more widespread, the demand for fluoroscopy X-ray machine is expected to further decrease in the future.
- Bronchoscope : Due to the lack of medical specialists, such as ENT consultants and thoracic surgeons, the use of the equipment is currently limited.
- Mammography : Regional cancer centres will be expanded to Jinja RRH and Soroti RRH under the National Development Plan IV, but at present, the necessity and relevance of mammography cannot be explained for the reasons stated below.
- Although an average of 20 mammography screenings per day can be performed at the Uganda Cancer Institute, currently, only an average of 6-7 tests per day are carried out. Given this situation, there is a high possibility that the equipment will be underutilized.
 - Even with mammography installed in Jinja RRH and Soroti RRH, there are other bottlenecks for early and accurate cancer detection, such as low awareness of breast cancer among the local people and the small number of skilled healthcare workers for diagnostics and interventions, especially pathologists for definitive diagnosis.
 - Therefore, giving attention to the current situation, we believe that alternative diagnosis via ultrasound, which can be operated by existing personnel, is a more effective solution in the short run.

After completion of the field survey, a plan to procure a general radiography system and related equipment for Soroti RRH from the GoU budget was confirmed. In response to the results, a general X-ray machine and a general X-ray imaging system for Soroti RRH were excluded from the Project.

The construction of the new generator houses and the compressor storage cages for the dental units will be covered by the Japanese side, in order to avoid the risk of delay in the implementation schedule. The outline of the construction work is as described in 2-2-3 Outline Design Drawings and 2-2-4-3 Scope of Works.

2-2-2-2 Equipment Planning

(1) Selection Criteria

The requested equipment, quantity and priority levels were first discussed by both the Ugandan and the Japanese sides, and the results were summarized as a List of Equipment Requested by the Ugandan Side, which was attached to the Minutes of Discussion. During the discussions, equipment that clearly does not meet the user's technical level or that is difficult to maintain was removed from the list. Equipment that was difficult to judge its eligibility was kept on the list to be finally judged through analysis in Japan after the field survey. The quantity of the equipment was determined based on the scale of the existing facility and the frequency of use. The priority was categorized into three levels: A (high: high-impact and high-value equipment for diagnosis and treatment), B (medium: general purpose equipment or highly necessary equipment taking into consideration human resources, maintenance capacity and impact) and C (low: inexpensive equipment, medical furniture or equipment with alternative means).

As a result of the above, the number of targeted departments/units for Soroti RRH is 19 and 22 for Jinja RRH, including the Jinja RRH children campus.

Table 2-2: Number of Departments/Units Covered by Each Hospital

Name of Hospital	Name of Departments/Units	Number of Depts/Units
Soroti RRH	Operating theatre, orthopaedics, radiology, OB/GYN, neonatal ICU, dental, emergency, outpatients, private wing, physiotherapy, surgical ward, paediatrics wards, ophthalmology, internal medicine ward, pharmacy, ENT, sterilization, laundry, and mortuary	19
Jinja RRH (main campus)	Operating theatre, orthopaedics, radiology, OB/GYN, neonatal ICU, dental, emergency, outpatients, physiotherapy, ophthalmology, pharmacy, ENT, sterilization, laundry and mortuary	22 (main campus 15 + children campus 7)
Jinja RRH (children campus)	Emergency & triage, paediatrics ward-1, paediatrics ward-2, paediatrics outpatient, neonates room, nutrition unit, and isolation & tetanus	

After returning to Japan, the equipment list was finalized based on the six criteria shown in Table 2-2, in consideration of factors that were difficult to determine during the field survey, the policy of the Japanese side and issues related to the procurement plan.

The evaluation was made on a three-point scale of ● (adequate), △ (partially inadequate) and × (not adequate) according to the six criteria. Equipment with at least one ‘×’ or three ‘△’ were excluded from the equipment plan because their comprehensive validity was low. Each quantity was determined to avoid excess by considering the frequency of use, the operating conditions of existing equipment and the installation space.

Table 2-3: Criteria for Planned Equipment

Criteria	Explanation of Criteria
① Purpose of use	• The equipment is required for RRH’s medical services, diagnosis and treatment.
② Technical level	• The equipment can be used properly and is appropriate for their technical skills.
③ Needs	• The equipment can benefit many patients and such beneficiary patients are expected to increase in the future. • The equipment is difficult to procure by the Ugandan side or is a high priority.
④ Maintenance	• The equipment can be technically and financially operated and maintained
⑤ Alternative options	• The equipment cannot be substituted by other equipment or cannot be included in the composition of other equipment.
⑥ Others	• The equipment can be procured under the Japanese Grant and fairness in the bidding process is ensured. • Maintenance services are available in Uganda.

After the above analysis, the priorities and quantities of each equipment were reviewed through discussions with the Ugandan counterparts in the Explanation of Draft Report (August 2022). The priority of each equipment was categorized into two levels, Priority A (high: high-impact and high-value equipment for diagnosis and treatment, or commonly used equipment that need replacement, or

critically needed equipment with concern on human resources, maintenance capacity and impact) and B (low: inexpensive equipment and medical furniture or equipment for which alternative options are available), instead of the previous three-levels classification (Priority A to C). The planned number of equipment items is 91 for Soroti RRH and 97 for Jinja RRH. The results based on the above analysis are summarized in Tables 2-4, 2-5 and 2-6.

Table 2-4: Equipment Plan Results (Soroti RRH)

Soroti RRH Name of Depts/ Units	S.N.	Soroti RRH Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
Operating Theatre	1	Anaesthesia Machine	A	A	2	●	●	●	●	●	●	●	2
	2	Electro Surgical Unit	A	A	2	●	●	●	●	●	●	●	2
	3	Instruments Set, General Surgery	A	A	6	●	●	●	●	●	●	●	6
	4	Instruments Set, Laparotomy	A	A	5	●	●	●	●	●	●	●	3
	5	Mayo Stand	B	A	4	●	●	●	●	●	●	●	4
	6	Operating Light, Ceiling (<i>Changed to "Mobile type"</i>)	A	A	1	●	●	●	●	×	●	×	-
	7	Operating Light, Mobile	A	A	1	●	●	●	●	●	●	●	2
	8	Operating Table, Hydraulic	A	A	2	●	●	●	●	●	●	●	2
	9	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	10	Instruments Set, Caesarean Section	A	A	12	●	●	●	●	●	●	●	8
	11	Instruments Set, Gynaecology	B	A	6	●	●	●	●	●	●	●	4
	12	Cabinet, Instruments	C	B	2	●	●	●	●	●	●	●	2
	13	Crash Cart (Emergency Cart)	B	A	1	●	●	●	●	●	●	●	1
	14	Instrument Trolley	C	B	3	●	●	●	●	●	●	●	2
	15	Oxygen Therapy Apparatus	C	B	2	●	●	×	●	●	●	×	-
	16	Patient Monitor	A	A	2	●	●	●	●	●	●	●	2
	17	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	18	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	19	Resuscitator Set, Manual	A	A	2	●	●	●	●	●	●	●	2
	20	Sterilizing Drum Set	B	A	3	●	●	●	●	●	●	●	3
	21	Suction Apparatus, Electric	A	A	3	●	●	●	●	●	●	●	3
	22	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1
	23	Autoclave, Electric, approx. 40L	B	A	1	●	●	●	●	●	●	●	1
	24	Gastroendoscope	A	A	1	●	●	●	●	●	●	●	1
Orthopaedics	25	Oscillating Cutter and Bone Drill Set	B	A	1	●	●	●	●	●	●	●	1
	26	Drill Machine (<i>Merged with Oscillating Cutter Set</i>)	C	-	1	●	●	●	●	×	●	×	-
	27	Plaster Cutting Set	B	A	2	●	●	●	●	●	●	●	1
	28	Examination Couch	B	A	2	●	●	●	●	●	●	●	2
	29	X ray Film Viewer	C	B	1	●	●	●	●	●	●	●	1
Radiology	30	Fluoroscopy X-ray Machine	A	A	1	●	△	×	△	△	●	×	-
	31	Laser Imager System for General X-ray	A	A	1	●	●	×	●	●	●	×	-
	32	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	33	General X-ray Machine	A	A	1	●	●	×	●	●	●	×	-
	34	Cabinet, Instruments	C	B	2	●	●	●	●	●	●	●	1
	35	Examination Couch	B	A	2	●	●	●	●	●	●	●	1

Soroti RRH Name of Depts/ Units	S.N.	Soroti RRH Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	36	X ray Film Viewer	C	B	2	●	●	●	●	●	●	●	2
	37	Mammography	B	-	1	●	△	△	△	△	●	×	-
OB/GYN	38	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	39	Delivery Bed	A	A	3	●	●	●	●	●	●	●	3
	40	Doppler Fetal Detector	A	A	3	●	●	●	●	●	●	●	3
	41	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	42	Instruments Set, Dilation and Curettage	A	A	2	●	●	●	●	●	●	●	2
	43	Bed, Adult (Ordinary)	C	B	20	●	●	●	●	●	●	●	15
	44	BP Machine	C	B	6	●	●	●	●	●	●	●	5
	45	Cabinet, Instruments	C	B	1	●	●	●	●	●	●	●	1
	46	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	2
	47	Examination Couch, Gynaecology	B	A	4	●	●	●	●	●	●	●	4
	48	Examination Light	B	B	3	●	●	●	●	●	●	●	3
	49	Instrument Trolley	C	B	3	●	●	●	●	●	●	●	3
	50	Oxygen Concentrator	A	A	1	●	●	●	●	●	●	●	1
	51	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	4
	52	Patient Monitor	A	A	3	●	●	●	●	●	●	●	3
	53	Patient Trolley	B	A	3	●	●	●	●	●	●	●	3
	54	Pulse Oximeter	A	A	3	●	●	●	●	●	●	●	3
	55	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	56	Resuscitator Set, Manual	A	A	3	●	●	●	●	●	●	●	2
	57	Sterilizing Drum Set	B	A	3	●	●	●	●	●	●	●	3
	58	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	59	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
60	Wheel Chair	B	A	2	●	●	●	●	●	●	●	2	
61	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1	
62	Television Set for Education	B	A	2	●	●	●	●	●	●	●	2	
Neonatal Care Unit	63	CPAP Machine	B	A	3	●	●	●	●	●	●	●	3
	64	Infant Incubator	A	A	4	●	●	●	●	●	●	●	4
	65	Phototherapy Unit	A	A	2	●	●	●	●	●	●	●	2
	66	Baby Cot	C	-	4	●	●	×	●	●	●	×	-
	67	Oxygen Concentrator	A	A	1	●	●	●	●	●	●	●	1
	68	Oxygen Therapy Apparatus	C	B	2	●	●	●	●	●	●	●	2
	69	Patient Monitor	A	A	2	●	●	●	●	●	●	●	2
	70	Pulse Oximeter	A	A	3	●	●	●	●	●	●	●	2
	71	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
Dental	72	Dental X-ray	A	A	1	●	●	●	●	●	●	●	1
	73	Imaging System for Dental X-ray	A	A	1	●	●	●	●	●	●	●	1
	74	Cabinet, Instruments	C	B	2	●	●	●	●	●	●	●	1
	75	Dental Unit	A	A	2	●	●	●	●	●	●	●	2
	76	Instruments Set, Dental Extraction and Treatment	B	A	4	●	●	●	●	●	●	●	4
	77	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1
Emergency	78	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	79	BP Machine	C	B	2	●	●	●	●	●	●	●	2
	80	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	2
	81	Examination Couch	B	A	2	●	●	●	●	●	●	●	2

Soroti RRH Name of Depts/ Units	S.N.	Soroti RRH Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	82	Examination Light	B	B	2	●	●	●	●	●	●	●	2
	83	Instruments Set, Surgical Toilet and Suturing	B	A	6	●	●	●	●	●	●	●	6
	84	Nebulizer	A	A	2	●	●	●	●	●	●	●	2
	85	Oxygen Therapy Apparatus	C	B	3	●	●	●	●	●	●	●	3
	86	Patient Monitor	A	A	3	●	●	●	●	●	●	●	3
	87	Patient Trolley	B	A	1	●	●	●	●	●	●	●	1
	88	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	89	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	90	Resuscitator Set, Manual	A	A	2	●	●	●	●	●	●	●	2
	91	Sterilizing Drum Set	B	A	3	●	●	●	●	●	●	●	3
	92	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	93	Weighing Scale, Adult	C	B	1	●	●	●	●	●	●	●	1
	94	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
	95	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1
	96	X ray Film Viewer	C	B	1	●	●	●	●	●	●	●	1
	97	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1
Outpatient	98	BP Machine	C	B	8	●	●	●	●	●	●	●	8
	99	Cabinet, Instruments	C	B	1	●	●	×	●	●	●	×	-
	100	Examination Couch	B	A	5	●	●	●	●	●	●	●	5
	101	Examination Light	B	B	2	●	●	●	●	●	●	●	2
	102	Instruments Set, Surgical Toilet and Suturing	B	A	4	●	●	●	●	●	●	●	4
	103	Instrument Trolley	C	B	3	●	●	●	●	●	●	●	3
	104	Nebulizer	A	A	2	●	●	●	●	●	●	●	2
	105	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	106	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	4
	107	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1
	108	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	109	Pulse Oximeter	A	A	6	●	●	●	●	●	●	●	4
	110	Sterilizing Drum Set	B	A	2	●	●	●	●	●	●	●	2
	111	Weighing Scale, Adult	C	B	1	●	●	●	●	●	●	●	1
	112	Wheel Chair	B	A	2	●	●	●	●	●	●	●	2
	113	X ray Film Viewer	C	B	3	●	●	●	●	●	●	●	3
	114	Television Set for Education	B	A	2	●	●	●	●	●	●	●	2
	115	Diagnostic Set	A	A	2	●	●	●	●	●	●	●	2
Private Wing	116	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	117	Delivery Bed	A	A	2	●	●	●	●	●	●	●	2
	118	Doppler Fetal Detector	A	A	1	●	●	●	●	●	●	●	1
	119	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	120	Instruments Set, Delivery	A	A	2	●	●	●	●	●	●	●	2
	121	Bed, Adult (Ordinary)	C	B	15	●	●	●	●	●	●	●	15
	122	Bed, Adult (High Dependency Unit)	B	A	2	●	●	●	●	●	●	●	2
	123	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	1
	124	Examination Couch	B	A	2	●	●	●	●	●	●	●	2
	125	Examination Couch, Gynaecology	B	A	1	●	●	●	●	●	●	●	1
	126	Examination Light	B	B	2	●	●	●	●	●	●	●	2

Soroti RRH Name of Depts/ Units	S.N.	Soroti RRH Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	127	Instrument Trolley	C	B	4	●	●	●	●	●	●	●	2
	128	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	129	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	4
	130	Patient Trolley	B	A	3	●	●	●	●	●	●	●	3
	131	Pulse Oximeter	A	A	4	●	●	●	●	●	●	●	3
	132	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	133	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
	134	Wheel Chair	B	A	3	●	●	●	●	●	●	●	2
	135	Autoclave, Electric, approx. 40L	B	A	1	●	●	●	●	●	●	●	1
Physiotherapy	136	Examination Couch	B	A	5	●	●	●	●	●	●	●	4
	137	Weighing Scale, Adult	C	B	1	●	●	●	●	●	●	●	1
	138	Wheel Chair	B	A	2	●	●	●	●	●	●	●	2
	139	X ray Film Viewer	C	B	2	●	●	●	●	●	●	●	2
	140	Multifunctional Exercisers Set	A	A	1	●	●	●	●	●	●	●	1
	141	Exercise Therapy Tool Set	B	A	1	●	●	●	●	●	●	●	1
	142	Electrical Muscle Stimulator	B	A	2	●	●	●	●	●	●	●	2
	143	Traction Machine, Cervical & Lumber	A	A	1	●	●	●	●	●	●	●	1
	144	Physiotherapy Apparatus Set	A	A	2	●	●	●	●	●	●	●	1
	145	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1
Surgical Ward	146	Bed with Traction Frame Set	A	A	4	●	●	●	●	●	●	●	4
	147	Bed, Paediatric	B	A	7	●	●	●	●	●	●	●	7
	148	BP Machine	C	B	5	●	●	●	●	●	●	●	4
	149	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	2
	150	Instrument Trolley	C	B	3	●	●	●	●	●	●	●	3
	151	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	152	Oxygen Therapy Apparatus	C	B	6	●	●	●	●	●	●	●	4
	153	Patient Monitor	A	A	2	●	●	●	●	●	●	●	2
	154	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	155	Sterilizing Drum Set	B	A	3	●	●	●	●	●	●	●	2
	156	Suction Apparatus, Electric	A	A	2	●	●	●	●	●	●	●	2
	157	Weighing Scale, Adult	C	B	2	●	●	●	●	●	●	●	1
	158	Wheel Chair	B	A	2	●	●	●	●	●	●	●	2
Paediatric Ward	159	Bed with Traction Frame Set	A	A	2	●	●	●	●	●	●	●	2
	160	Bed, Adult (Ordinary)	C	B	10	●	●	●	●	●	●	●	10
	161	Bed, Paediatric	B	A	30	●	●	●	●	●	●	●	30
	162	BP Machine	C	B	5	●	●	●	●	●	●	●	4
	163	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	2
	164	Instrument Trolley	C	B	2	●	●	●	●	●	●	●	2
	165	Nebulizer	A	A	3	●	●	●	●	●	●	●	3
	166	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	167	Oxygen Therapy Apparatus	C	B	5	●	●	●	●	●	●	●	4
	168	Patient Monitor	A	A	3	●	●	●	●	●	●	●	3
	169	Pulse Oximeter	A	A	3	●	●	●	●	●	●	●	3
	170	Resuscitator Set, Manual	A	A	2	●	●	●	●	●	●	●	2
	171	Wheel Chair	B	A	4	●	●	●	●	●	●	●	2
	172	Television Set for Education	B	A	3	●	●	●	●	●	●	●	3
	173	Diagnostic Set	A	A	3	●	●	●	●	●	●	●	3

Soroti RRH Name of Depts/ Units	S.N.	Soroti RRH Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
Ophthalmology	174	Anaesthesia Machine	A	A	1	●	●	●	●	●	●	●	1
	175	Operating Light, Mobile	A	A	1	●	●	●	●	●	●	●	1
	176	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1
	177	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	178	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	179	B Scan Ultrasound	A	A	1	●	●	●	●	●	●	●	1
	180	Auto Refracto-Keratometer	A	A	1	●	●	●	●	●	●	●	1
	181	Instruments Set, Ophthalmology	B	A	6	●	●	●	●	●	●	●	6
	182	OCT (Optical coherence tomography)	B	-	1	●	△	△	●	●	×	×	-
	183	Operating Microscope, Ophthalmology	B	A	1	●	●	●	●	●	●	●	1
	184	Ophthalmoscope, Direct	A	A	4	●	●	●	●	●	●	●	4
	185	Retinoscope	A	A	3	●	●	●	●	●	●	●	3
	186	Slit Lamp	A	A	3	●	●	●	●	●	●	●	3
	187	Tonometer	B	A	2	●	●	●	●	●	●	●	2
	188	Trial Lens Set	A	A	3	●	●	●	●	●	●	●	3
	189	Visual Field Analyzer	B	A	1	●	●	●	●	●	●	●	1
190	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1	
Internal Medicine Ward	191	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	192	BP Machine	C	B	4	●	●	●	●	●	●	●	4
	193	Electrocardiogram Machine (ECG)	B	A	1	●	●	●	●	●	●	●	1
	194	Nebulizer	A	A	3	●	●	●	●	●	●	●	3
	195	Patient Monitor	A	A	4	●	●	●	●	●	●	●	2
	196	Pulse Oximeter	A	A	5	●	●	●	●	●	●	●	4
	197	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	198	Suction Apparatus, Electric	A	A	2	●	●	●	●	●	●	●	2
	199	Weighing Scale, Adult	C	B	2	●	●	●	●	●	●	●	1
	200	Wheel Chair	B	B	5	●	●	●	●	●	●	●	2
Pharmacy	201	Cabinet, Instruments	C	B	5	●	●	×	●	●	●	●	-
	202	Refrigerator, Pharmaceutic	A	A	5	●	●	●	●	●	●	●	3
ENT	203	Examination Light	B	B	1	●	●	●	●	●	●	●	1
	204	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	205	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1
	206	Bronchoscope	B	-	1	●	×	×	△	●	●	×	-
	207	Audiometer, Clinical	A	A	1	●	●	●	●	●	●	●	1
	208	Instruments Set, ENT, Middle Ear	A	A	1	●	●	●	●	●	●	●	1
	209	Diagnostic Microscope, ENT	B	A	1	●	●	●	●	●	●	●	1
Others (Sterilization)	210	Generator, approx. 100KVA	A	A	1	●	●	●	●	●	●	●	1
	211	Sterilizing Drum Set	B	A	3	●	●	●	●	●	●	●	3
(Laundry)	212	Autoclave, Electric, approx. 100L	A	A	2	●	●	●	●	●	●	●	2
	213	Dryer for laundry, approx. 50Kg	B	A	1	●	●	●	●	●	●	●	1
(Mortuary) (Electricity)	214	Roller Ironing Machine	B	A	1	●	●	●	●	●	●	●	1
	215	Washing Machine, approx. 50Kg	B	A	1	●	●	●	●	●	●	●	1
	216	Mortuary Refrigerator	A	A	3	●	●	●	●	●	●	●	1
	217	Voltage Stabilizer ⁽⁺⁾	A	A	10	●	●	●	●	●	●	●	-
	218	Power Transformer and Distribution Panel	-	A	1	●	●	●	●	●	●	●	1

Note⁽⁺⁾: Some **voltage stabilizers** will be changed to UPS. The quantities are described in the next section.

Table 2-5: Equipment Plan Results (Jinja RRH-Main Campus-)

Jinja RRH Main Campus Name of Depts/ Units	S.N.	Jinja RRH Main Campus Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
Operating Theatre	1	Anaesthesia Machine	A	A	2	●	●	●	●	●	●	●	2
	2	Electro Surgical Unit	A	A	1	●	●	●	●	●	●	●	1
	3	Instruments Set, General Surgery	A	A	4	●	●	●	●	●	●	●	4
	4	Instruments Set, Laparotomy	A	A	3	●	●	●	●	●	●	●	2
	5	Mayo Stand	B	A	2	●	●	●	●	●	●	●	2
	6	Operating Light, Ceiling	A	A	3	●	●	●	●	●	●	●	3
	7	Operating Light, Mobile	A	A	2	●	●	●	●	●	●	●	2
	8	Operating Table, Hydraulic	A	A	2	●	●	●	●	●	●	●	2
	9	Instruments Set, Gynaecology	B	A	2	●	●	●	●	●	●	●	2
	10	Cabinet, Instruments	C	B	1	●	●	●	●	●	●	●	1
	11	Instrument Trolley	C	B	6	●	●	●	●	●	●	●	4
	12	Patient Monitor	A	A	4	●	●	●	●	●	●	●	4
	13	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	14	Resuscitator Set, Manual	A	A	3	●	●	●	●	●	●	●	3
	15	Suction Apparatus, Electric	A	A	3	●	●	●	●	●	●	●	3
	16	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1
	17	Autoclave, Electric, approx. 40L	B	A	1	●	●	●	●	●	●	●	1
	18	Gastroendoscope	A	A	1	●	●	●	●	●	●	●	1
Orthopaedics	19	Anaesthesia Machine	A	A	2	●	●	●	●	●	●	●	2
	20	Electro Surgical Unit	A	A	1	●	●	●	●	●	●	●	1
	21	Mayo Stand	B	A	2	●	●	●	●	●	●	●	2
	22	Operating Table, Hydraulic	A	A	1	●	●	●	●	●	●	●	1
	23	Oscillating Cutter and Bone Drill Set	B	A	2	●	●	●	●	●	●	●	1
	24	Bed with Traction Frame Set	A	A	6	●	●	●	●	●	●	●	6
	25	Drill Machine (Merged with Oscillating Cutter Set)	C	-	2	●	●	●	●	×	●	×	-
	26	Instrument Set, Orthopaedics	A	A	3	●	●	●	●	●	●	●	3
	27	Plaster Cutting Set	B	A	2	●	●	●	●	●	●	●	1
	28	Operating Table, Hydraulic, Orthopaedics	A	A	1	●	●	●	●	●	●	●	1
	29	Examination Couch	B	A	2	●	●	●	●	●	●	●	2
	30	Instrument Trolley	C	B	4	●	●	●	●	●	●	●	4
	31	Oxygen Concentrator	A	A	4	●	●	●	●	●	●	●	2
	32	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	2
	33	Patient Monitor	A	A	2	●	●	●	●	●	●	●	2
	34	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	35	Resuscitator Set, Manual	A	A	1	●	●	●	●	●	●	●	1
	36	Sterilizing Drum Set	B	A	4	●	●	●	●	●	●	●	3
	37	Suction Apparatus, Electric	A	A	3	●	●	●	●	●	●	●	2
	38	X ray Film Viewer	C	B	4	●	●	●	●	●	●	●	3
	39	Autoclave, Electric, approx. 40L	B	A	1	●	●	●	●	●	●	●	1
Radiology	40	Fluoroscopy X-ray Machine	A	-	1	●	△	×	△	△	●	×	-
	41	Laser Imager System for General X-ray	A	A	1	●	●	●	●	●	●	●	1
	42	Ultrasound Scanner	A	A	1	●	●	●	●	●	●	●	1
	43	General X-ray Machine	A	A	1	●	●	●	●	●	●	●	1
	44	Cabinet, Instruments	C	B	1	●	●	●	●	●	●	●	1
	45	Examination Couch	B	A	1	●	●	●	●	●	●	●	1

Jinja RRH Main Campus Name of Depts/ Units	S.N.	Jinja RRH Main Campus Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	46	X ray Film Viewer	C	B	2	●	●	●	●	●	●	●	2
	47	Mobile X-ray Machine	C	-	1	●	●	●	●	×	●	×	-
	48	Mammography	B	-	1	●	△	△	△	△	●	×	-
OB/GYN	49	Anaesthesia Machine	A	A	1	●	●	●	●	●	●	●	1
	50	Electro Surgical Unit	A	A	1	●	●	●	●	●	●	●	1
	51	Mayo Stand	B	A	4	●	●	●	●	●	●	●	4
	52	Operating Light, Mobile	A	A	3	●	●	●	●	●	●	●	3
	53	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	54	Delivery Bed	A	A	4	●	●	●	●	●	●	●	4
	55	Doppler Fetal Detector	A	A	4	●	●	●	●	●	●	●	4
	56	Infant Warmer	A	A	2	●	●	●	●	●	●	●	2
	57	Instruments Set, Caesarean Section	A	A	15	●	●	●	●	●	●	●	10
	58	Instruments Set, Delivery	A	A	15	●	●	●	●	●	●	●	15
	59	Instruments Set, Dilation and Curettage	A	A	6	●	●	●	●	●	●	●	4
	60	Phototherapy Unit	A	A	1	●	●	●	●	●	●	●	1
	61	Bed, Adult (Ordinary)	C	B	30	●	●	●	●	●	●	●	30
	62	Bed, Adult (High Dependency Unit)	B	A	6	●	●	●	●	●	●	●	6
	63	BP Machine	C	B	8	●	●	●	●	●	●	●	7
	64	Cabinet, Instruments	C	B	2	●	●	●	●	●	●	●	2
	65	Crash Cart (Emergency Cart)	B	A	4	●	●	●	●	●	●	●	3
	66	Examination Couch, Gynaecology	B	A	2	●	●	●	●	●	●	●	2
	67	Examination Light	B	B	3	●	●	●	●	●	●	●	3
	68	Instrument Trolley	C	B	4	●	●	●	●	●	●	●	4
	69	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	70	Oxygen Therapy Apparatus	C	B	6	●	●	●	●	●	●	●	4
	71	Patient Monitor	A	A	6	●	●	●	●	●	●	●	4
	72	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	73	Pulse Oximeter	A	A	3	●	●	●	●	●	●	●	3
	74	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	75	Resuscitator Set, Manual	A	A	3	●	●	●	●	●	●	●	2
	76	Sterilizing Drum Set	B	A	4	●	●	●	●	●	●	●	3
	77	Suction Apparatus, Electric	A	A	2	●	●	●	●	●	●	●	2
78	Weighing Scale, Baby	C	B	2	●	●	●	●	●	●	●	2	
79	Wheel Chair	B	A	4	●	●	●	●	●	●	●	2	
80	Television Set for Education	B	A	2	●	●	●	●	●	●	●	2	
81	LEEP Machine	B	-	1	●	△	●	△	●	×	×	-	
Neonatal ICU	82	CPAP Machine	B	A	4	●	●	●	●	●	●	●	4
	83	Infant Incubator	A	A	2	●	●	●	●	●	●	●	2
	84	Infant Warmer	A	A	2	●	●	●	●	●	●	●	2
	85	Phototherapy Unit	A	A	2	●	●	●	●	●	●	●	2
	86	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	87	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	3
	88	Patient Monitor	A	A	2	●	●	●	●	●	●	●	2
	89	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	90	Resuscitator Set, Manual	A	A	2	●	●	●	●	●	●	●	1
	91	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
	92	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1

Jinja RRH Main Campus Name of Depts/ Units	S.N.	Jinja RRH Main Campus Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
Emergency	93	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	94	BP Machine	C	B	4	●	●	●	●	●	●	●	3
	95	Cabinet, Instruments	C	B	2	●	●	●	●	●	●	●	1
	96	ECG	B	A	1	●	●	●	●	●	●	●	1
	97	Examination Couch	B	A	2	●	●	●	●	●	●	●	2
	98	Examination Light	B	B	4	●	●	●	●	●	●	●	4
	99	Instruments Set, Surgical Toilet and Suturing	B	A	6	●	●	●	●	●	●	●	6
	100	Oxygen Concentrator	A	A	4	●	●	●	●	●	●	●	3
	101	Oxygen Therapy Apparatus	C	B	10	●	●	●	●	●	●	●	5
	102	Patient Monitor	A	A	3	●	●	●	●	●	●	●	3
	103	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	104	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	105	Refrigerator, Pharmaceutic	A	A	1	●	●	●	●	●	●	●	1
	106	Resuscitator Set, Manual	A	A	2	●	●	●	●	●	●	●	2
	107	Sterilizing Drum Set	B	A	5	●	●	●	●	●	●	●	4
	108	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	109	Weighing Scale, Adult	C	B	2	●	●	●	●	●	●	●	1
	110	Wheel Chair	B	A	5	●	●	●	●	●	●	●	3
	111	X ray Film Viewer	C	B	2	●	●	●	●	●	●	●	1
	112	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1
Outpatient	113	Operating Light, Mobile	A	A	1	×	●	●	●	×	●	×	-
	114	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1
	115	BP Machine	C	B	10	●	●	●	●	●	●	●	10
	116	ECG	B	A	1	●	●	●	●	●	●	●	1
	117	Examination Couch	B	A	8	●	●	●	●	●	●	●	8
	118	Examination Light	B	B	4	●	●	●	●	●	●	●	4
	119	Instruments Set, Surgical Toilet and Suturing	B	A	4	●	●	●	●	●	●	●	4
	120	Instrument Trolley	C	B	2	●	●	●	●	●	●	●	2
	121	Nebulizer	A	A	4	●	●	●	●	●	●	●	4
	122	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	123	Oxygen Therapy Apparatus	C	B	2	●	●	●	●	●	●	●	2
	124	Pulse Oximeter	A	A	5	●	●	●	●	●	●	●	4
	125	Sterilizing Drum Set	B	A	2	●	●	●	●	●	●	●	2
	126	Suction Apparatus, Electric	A	A	2	●	●	●	●	●	●	●	1
	127	Weighing Scale, Adult	C	B	4	●	●	●	●	●	●	●	2
	128	Wheel Chair	B	A	4	●	●	●	●	●	●	●	3
	129	X ray Film Viewer	C	B	9	●	●	●	●	●	●	●	9
	130	Autoclave, Electric, approx. 20L	C	A	1	●	●	×	●	×	●	●	-
	131	Television Set for Education	B	A	4	●	●	●	●	●	●	●	2
	132	Diagnostic Set	A	A	2	●	●	●	●	●	●	●	2
Dental	133	Dental X-ray	A	A	1	●	●	●	●	●	●	●	1
	134	Imaging System for Dental X-ray	A	A	1	●	●	●	●	●	●	●	1
	135	Cabinet, Instruments	C	B	1	●	●	●	●	●	●	●	1
	136	Dental Unit	A	A	3	●	●	●	●	●	●	●	3

Jinja RRH Main Campus Name of Depts/ Units	S.N.	Jinja RRH Main Campus Name of Equipment	Priority		Required Qr ^y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	137	Instruments Set, Dental Extraction and Treatment	B	A	4	●	●	●	●	●	●	●	4
	138	Autoclave, Electric, approx. 20L	C	A	1	●	●	●	●	●	●	●	1
ENT	139	Examination Light	B	B	1	●	●	●	●	●	●	●	1
	140	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	141	Bronchoscope	B	-	1	●	×	×	△	●	●	×	-
	142	Audiometer, Clinical	A	A	1	●	●	●	●	●	●	●	1
	143	Instruments Set, ENT, Middle Ear	A	A	1	●	●	●	●	●	●	●	1
	144	Diagnostic Microscope, ENT	B	A	1	●	●	●	●	●	●	●	1
	Ophthalmology	145	Mayo Stand	B	A	2	●	●	●	●	●	●	●
146		Operating Table, Hydraulic	A	A	2	●	●	●	●	●	●	●	2
147		BP Machine	C	B	2	●	●	●	●	●	●	●	2
148		Examination Couch	B	A	2	●	●	●	●	●	●	●	2
149		Instrument Trolley	C	B	2	●	●	●	●	●	●	●	2
150		Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
151		Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
152		B Scan Ultrasound	A	A	1	●	●	●	●	●	●	●	1
153		Auto Refracto-Keratometer	A	A	1	●	●	●	●	●	●	●	1
154		Instruments Set, Ophthalmology	B	A	4	●	●	●	●	●	●	●	4
155		OCT (Optical coherence tomography)	B	A	1	●	△	△	●	●	×	×	-
156		Operating Microscope, Ophthalmology	B	A	1	●	●	●	●	●	●	●	1
157		Ophthalmoscope, Direct	A	A	2	●	●	●	●	●	●	●	2
158		Retinoscope	A	A	2	●	●	●	●	●	●	●	2
159		Slit Lamp	A	A	2	●	●	●	●	●	●	●	2
160		Tonometer	B	A	2	●	●	●	●	●	●	●	2
161		Trial Lens Set	A	A	3	●	●	●	●	●	●	●	3
162		Visual Chart	C	-	2	●	●	×	●	●	●	×	-
163		Visual Field Analyzer	B	A	1	●	●	●	●	●	●	●	1
Physiotherapy	164	Examination Couch	B	A	2	●	●	●	●	●	●	●	2
	165	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1
	166	Multifunctional Exercisers Set	A	A	2	●	●	●	●	●	●	●	1
	167	Exercise Therapy Tool Set	B	A	1	●	●	●	●	●	●	●	1
	168	Electrical Muscle Stimulator	B	A	2	●	●	●	●	●	●	●	2
	169	Traction Machine, Cervical & Lumber	A	A	1	●	●	●	●	●	●	●	1
	170	Physiotherapy Apparatus Set	A	A	1	●	●	●	●	●	●	●	1
Pharmacy	171	Cabinet, Instruments	C	B	5	●	●	×	●	●	●	●	-
	172	Refrigerator, Pharmaceutic	A	A	5	●	●	●	●	●	●	●	4
Others (Sterilization) (Laundry)	173	Autoclave, Electric, approx. 100L	A	A	2	●	●	●	●	●	●	●	2
	174	Dryer for laundry, approx. 50Kg	B	A	1	●	●	●	●	●	●	●	1
	175	Roller Ironing Machine	B	A	1	●	●	●	●	●	●	●	1
	176	Washing Machine, approx. 50Kg	B	A	2	●	●	●	●	●	●	●	2
(Mortuary) (Electricity)	177	Mortuary Refrigerator	A	A	3	●	●	●	●	●	●	●	1
	178	Voltage Stabilizer ⁽⁺⁾	A	A	10	●	●	●	●	●	●	●	-
	179	Power Transformer and Distribution Panel	-	A	1	●	●	●	●	●	●	●	1

Note⁽⁺⁾: Some **voltage stabilizers** will be changed to UPS. The quantities are described in the next section.

Table 2-6: Equipment Plan Results (Jinja RRH-Children Campus-)

Jinja RRH Children Campus Name of Depts/ Units	S.N.	Jinja RRH Children Campus Name of Equipment	Priority		Required Qr- y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity	
			OD (1 st visit)	DOD (2 nd visit)										
Paediatrics Emergency & Triage Paediatrics	180	Ultrasound Scanner, Portable	A	A	1	●	●	●	●	●	●	●	1	
	181	Infant Warmer	A	A	2	●	●	●	●	●	●	●	2	
	182	Phototherapy Unit	A	A	1	●	●	●	●	●	●	●	1	
	183	Baby Cot	C	-	5	●	●	×	●	●	●	×	-	
	184	Bed, Paediatric	B	A	6	●	●	●	●	●	●	●	6	
	185	BP Machine	C	B	2	●	●	●	●	●	●	●	2	
	186	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	1	
	187	Examination Couch	B	A	1	●	●	●	●	●	●	●	1	
	188	Instruments Set, Surgical Toilet and Suturing	B	A	4	●	●	●	●	●	●	●	4	
	189	Instrument Trolley	C	B	1	●	●	●	●	●	●	●	1	
	190	Nebulizer	A	A	2	●	●	●	●	●	●	●	2	
	191	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2	
	192	Oxygen Therapy Apparatus	C	B	4	●	●	●	●	●	●	●	2	
	193	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1	
	194	Pulse Oximeter	A	A	3	●	●	●	●	●	●	●	2	
	195	Resuscitator Set, Manual	A	A	3	●	●	●	●	●	●	●	2	
	196	Sterilizing Drum Set	B	A	1	●	●	●	●	●	●	●	1	
	197	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1	
	198	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1	
	199	Autoclave, Electric, approx. 40L	B	A	1	●	●	●	●	●	●	●	1	
	200	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1	
	201	Diagnostic Set	A	A	1	●	●	●	●	●	●	●	1	
202	Generator, approx. 30KVA	A	A	1	●	●	●	●	●	●	●	1		
Paediatrics Ward-1 (Chronic Diseases)	203	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1	
	204	Bed, Adult (Ordinary)	C	B	15	●	●	●	●	●	●	●	15	
	205	Bed, Adult (High Dependency Unit)	B	A	2	●	●	●	●	●	●	●	2	
	206	Bed, Paediatric	B	A	5	●	●	●	●	●	●	●	5	
	207	BP Machine	C	B	2	●	●	●	●	●	●	●	2	
	208	Crash Cart (Emergency Cart)	B	A	1	●	●	●	●	●	●	●	1	
	209	Examination Couch	B	A	1	●	●	×	●	×	●	×	-	
	210	Instrument Trolley	C	B	1	●	●	●	●	●	●	●	1	
	211	Nebulizer	A	A	1	●	●	●	●	●	●	●	1	
	212	Oxygen Concentrator	A	A	1	●	●	●	●	●	●	●	1	
	213	Oxygen Therapy Apparatus	C	B	1	●	●	●	●	●	●	●	1	
	214	Patient Monitor	A	A	2	●	●	●	●	●	●	●	1	
	215	Patient Trolley	B	A	1	●	●	●	●	●	●	●	1	
	216	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2	
	217	Resuscitator Set, Manual	A	A	1	●	●	●	●	●	●	●	1	
	218	Sterilizing Drum Set	B	A	1	●	●	●	●	●	●	●	1	
	219	Weighing Scale, Adult	C	B	1	●	●	●	●	●	●	●	1	
	220	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1	
	221	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1	
	222	Diagnostic Set	A	A	1	●	●	●	●	●	●	●	1	
	Paediatrics Ward-2	223	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
		224	Bed, Paediatric	B	A	20	●	●	●	●	●	●	●	20

Jinja RRH Children Campus Name of Depts/ Units	S.N.	Jinja RRH Children Campus Name of Equipment	Priority		Required Qr- y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
(Acute Diseases)	225	BP Machine	C	B	1	●	●	●	●	●	●	●	1
	226	Crash Cart (Emergency Cart)	B	A	1	●	●	●	●	●	●	●	1
	227	Examination Couch	B	A	1	●	●	×	●	×	●	×	-
	228	Instrument Trolley	C	B	1	●	●	●	●	●	●	●	1
	229	Nebulizer	A	A	1	●	●	●	●	●	●	●	1
	230	Oxygen Concentrator	A	A	1	●	●	●	●	●	●	●	1
	231	Oxygen Therapy Apparatus	C	B	1	●	●	●	●	●	●	●	1
	232	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1
	233	Patient Trolley	B	A	1	●	●	●	●	●	●	●	1
	234	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	1
	235	Resuscitator Set, Manual	A	A	1	●	●	●	●	●	●	●	1
	236	Sterilizing Drum Set	B	A	1	●	●	●	●	●	●	●	1
	237	Wheel Chair	B	A	1	●	●	●	●	●	●	●	1
238	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1	
Paediatrics Outpatient	239	BP Machine	C	B	2	●	●	●	●	●	●	●	2
	240	Examination Couch	B	A	1	●	●	●	●	●	●	●	1
	241	Patient Trolley	B	A	2	●	●	●	●	●	●	●	2
	242	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	2
	243	Weighing Scale, Adult	C	B	1	●	●	●	●	●	●	●	1
	244	Weighing Scale, Baby	C	B	2	●	●	●	●	●	●	●	1
	245	Wheel Chair	B	A	2	●	●	●	●	●	●	●	2
	246	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1
247	Diagnostic Set	A	A	1	●	●	●	●	●	●	●	1	
Neonates Room	248	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	249	Phototherapy Unit	A	A	1	●	●	●	●	●	●	●	1
	250	Instrument Trolley	C	B	1	●	●	●	●	●	●	●	1
	251	Nebulizer	A	A	1	●	●	●	●	●	●	●	1
	252	Oxygen Concentrator	A	A	1	●	●	●	●	●	●	●	1
	253	Oxygen Therapy Apparatus	C	B	1	●	●	●	●	●	●	●	1
	254	Pulse Oximeter	A	A	1	●	●	●	●	●	●	●	1
	255	Resuscitator Set, Manual	A	A	1	●	●	●	●	●	●	●	1
	256	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1
	257	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1
Nutrition Unit	258	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	259	Baby Cot	C	-	10	●	●	×	●	●	●	×	-
	260	BP Machine	C	B	2	●	●	●	●	●	●	●	1
	261	Crash Cart (Emergency Cart)	B	A	2	●	●	●	●	●	●	●	1
	262	Examination Couch	B	A	1	●	●	●	●	●	●	●	1
	263	Instrument Trolley	C	B	2	●	●	●	●	●	●	●	1
	264	Oxygen Concentrator	A	A	2	●	●	●	●	●	●	●	2
	265	Oxygen Therapy Apparatus	C	B	2	●	●	●	●	●	●	●	2
	266	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1
	267	Patient Trolley	B	A	1	●	●	●	●	●	●	●	1
	268	Pulse Oximeter	A	A	2	●	●	●	●	●	●	●	1
	269	Resuscitator Set, Manual	A	A	1	●	●	●	●	●	●	●	1
	270	Suction Apparatus, Electric	A	A	1	●	●	●	●	●	●	●	1
	271	Weighing Scale, Baby	C	B	1	●	●	●	●	●	●	●	1

Jinja RRH Children Campus Name of Depts/ Units	S.N.	Jinja RRH Children Campus Name of Equipment	Priority		Required Qr- y	① Purpose of use	② Technical level	③ Needs	④ Maintenance	⑤ Alternative options	⑥ Others	Evaluation results	Quantity
			OD (1 st visit)	DOD (2 nd visit)									
	272	Wheel Chair	B	A	2	●	●	●	●	●	●	●	1
	273	Television Set for Education	B	A	1	●	●	●	●	●	●	●	1
	274	Diagnostic Set	A	A	1	●	●	●	●	●	●	●	1
Isolation & Tetanus	275	Infant Warmer	A	A	1	●	●	●	●	●	●	●	1
	276	Bed, Paediatric	B	A	9	●	●	●	●	●	●	●	9
	277	Instrument Trolley	C	B	1	●	●	●	●	●	●	●	1
	278	Oxygen Therapy Apparatus	C	B	1	●	●	●	●	●	●	●	1
	279	Patient Monitor	A	A	1	●	●	●	●	●	●	●	1
	280	Pulse Oximeter	A	A	1	●	●	●	●	●	●	●	1
Staff room	281	Bed, Paediatric	B	A	3	×	●	●	●	●	●	×	-
Others	282	Voltage Stabilizer ⁽⁺⁾	A	A	4	●	●	●	●	●	●	●	-

Note ⁽⁺⁾: Some **voltage stabilizers** will be changed to UPS. The quantities are described in the next section.

As noted for the Portable Ultrasound Scanner, Paediatrics Bed, Blood Pressure (BP) Machine and Manual Resuscitator Set, each item was divided into two categories, (A) and (B), because the size/type of accessories differs slightly depending on the target department. The main differences are as follows.

- Portable Ultrasound Scanner: types and numbers of probes are different due to the different purpose according to the departments.
- Paediatric Bed: bed dimensions are different due to wide range of targets from infants to school-aged children.
- BP Machine: cuff sizes and quantities are different due to wide range of the target patients from adults to neonates.
- Manual Resuscitator Set: different sizes and quantities of resuscitation bags and masks. (As the target group ranges from adults to neonates)

The list of planned equipment is summarized in Table 2-7.

(2) Countermeasures against Voltage Fluctuations and Power Outages

Based on the survey, AVRs and UPSs are included for individual equipment that is highly necessary. According to the voltage fluctuation survey, a brief voltage drops of about 20% to 30% was recorded at Soroti RRH during three days measurements. In addition, power outages of about 12 continuous hours were recorded. Conversely, voltage fluctuations at Jinja RRH were relatively stable, ranging from $\pm 0\%$ to -5% over two days measurements, but one short power outage was identified. Considering the risk of seasonal fluctuations due to the rain and dry seasons and to avoid equipment failure due to power outages, AVRs will be included in the plan for equipment that would be seriously affected by voltage fluctuations. UPSs will be planned for equipment where power outages and voltage fluctuations can seriously affect medical services and life-saving treatment. The followings are assumed to be covered.

Table 2-8: Target Equipment for AVR and UPS to Be Installed

Type	Target Equipment
AVR	dental X-ray machines, infant incubators, ECG machines, patient monitors, and dental units
UPS	anaesthesia machines, electrosurgical units, imaging systems for general X-ray and dental X-ray, floor stand ultrasound scanner, computers for general X-ray, CPAP machines, B scan ultrasounds, refract-keratometers, ophthalmic operating microscopes, visual field analyzers, gastroendoscopes, ENT diagnostic microscopes, and large autoclaves

(3) Spare Parts and Consumables

Spare parts and consumables required for the initial operation are included in the Project for about three months, in consideration of the time lag between the equipment installation and the budget formulation.

(4) Maintenance Contract

For equipment that requires significant maintenance by local distributors or manufacturers to ensure sustainable use, a maintenance contract is covered for up to three years after handover of the equipment. The equipment normally comes with a one-year warranty with on-call troubleshooting services when equipment failure happens. The maintenance contracts will include a two-year extension of the on-call service, three years of periodical maintenance services and major spare parts costs. The Japanese side will cover the contract costs, and the supplier will be responsible for its contract. The Ugandan side will pay for the consumables and other costs, which are not covered by the above contract.

This system generally covers products made by the Japanese manufacturers. The targeted equipment and the contract scope are expected to be as follows.

Table 2-9: Equipment Covered by The Maintenance Contracts

No	Equipment	Quantity		
		Soroti RRH	Jinja RRH	Total
1	Anaesthesia machine	3	5	8
9	Dental X-ray	1	1	2
12	Ultrasound scanner, portable (A)	3	1	4
13	Ultrasound scanner, portable (B)	2	3	5
14	Ultrasound scanner	0	1	1
15	General X-ray machine	0	1	1
60	Dental unit	2	3	5
77	Autoclave, approx. 100L	2	2	4
87	Gastroendoscope	1	1	2

At the time of the field survey, numerous items were requested by the Ugandan side. The target equipment was narrowed down to above equipment, in consideration of the availability of Japanese products and outsourced maintenance needs.

Maintenance details (excluding one-year warranty)

- (a) Scheduled maintenance service: 1–2 times per year × three years
- (b) On-call troubleshooting service: Up to 4 times a year × two years (2nd and 3rd years)
- (c) Supply of specific spare parts (excluding consumables): three years

(5) Inspection Prior to the Expiration of Manufacturer’s Warranties

Since the equipment includes sophisticated and life-sustaining precision equipment, pre-inspection prior to the expiration of the manufacturer’s warranty (within one year from handover of the equipment) will be included. The main purpose of the inspection is to check for operational defects in the equipment. If any defects are found, the local distributors will be required to take action.

(6) Specifications of Main Equipment

Table 2-10: Summary of Specifications on Main Equipment

No.	Equipment	Main Specifications	Q'ty	Purpose
1	Anaesthesia Machine	Ventilator with accessories: Equipped Flow meter: Oxygen, N2O, Air Vaporizer: Isoflurane, Sevoflurane Tidal volume: 100ml – 1,200ml or wider Battery operation: Available	8	A device used to anaesthetize patients during surgery
2	Electro surgical unit	Output mode: monopolar cutting, monopolar coagulation, bipolar coagulation Cutting output: 300W or more Safety alarm function: Available Foot switch and cart: Equipped	5	A device for cutting and haemostasis of body tissues during surgery
6	Operating Light, Ceiling	Type: Ceiling mounted, dual light-head type, Light source: LED Light intensity: • Main light-head: 150,000lux or more • Auxiliary light-head: 120,000lux or more	3	An illuminating lamp used to illuminate the operating field during surgery. It is mounted on the ceiling of the operating theatre.

No.	Equipment	Main Specifications	Q'ty	Purpose
		Sterilizable handle: Equipped		
8	Operating Table, Hydraulic	Type: Multi-purpose, manual hydraulic, Angle adjustment: head, leg, lateral Table-top size: At least 1,900 x 490mm Accessories (arm pad, shoulder support and knee crutches are included)	7	A table for use in surgery. Height and patient position can be adjusted.
10	Laser Imaging System for General X-ray	Type: Imaging for General X-ray Composition: CR reader, dry printer, imaging plate, server, PC Processing Speed: 60 films/hour or more Film size: Up to 14 x 17 inches	1	System that prints X-ray images dry, without the use of a developer, and allows the images to be viewed on a monitor.
11	Imaging System for Dental X-ray	Type: Imaging for Intra-Oral Dental X-ray Composition: CR reader, imaging plate. Monitor, PC Diagnosis: Possible on monitor without printing	2	System for viewing dental X-ray images on a monitor.
12	Ultrasound Scanner, Portable (A)	Dept. in use: X-ray, OB/GYN, Private wing Type: Tabletop, Monitor: 12 inches or more Probe: Convex, linear, transvaginal Battery: Equipped Thermal printer (black and white): Equipped Mobile cart: Equipped	4	A device that uses ultrasound to diagnose organs, fetus, uterus and body surface parts.
13	Ultrasound Scanner, Portable (B)	Dept. in use: Emergency, OPD, Medicine Ward Type: Tabletop, Monitor: 12 inches or more Probe: Convex, linear Battery: Equipped Thermal printer (black and white): Equipped Mobile cart: Equipped	5	A device that uses ultrasound to diagnose organs, fetus and body surface parts.
14	Ultrasound scanner	Dept. in use: X-ray and cardiovascular diagnosis Type: Floor stand type with casters Monitor: 18 inches or more Colour doppler: Available Probe connector: 3 pcs. Probe: Convex, linear, sector, transvaginal Thermal printer (black and white): Equipped	1	An ultrasound scanner is widely used to diagnose organs and fetus. Colour images and Doppler acoustic effects are available.
15	General X-ray Machine	Type: Floor stand type, CR system is supported Composition: High voltage generator, X-ray tube, bucky table, bucky stand X-ray tube voltage: 125kV or more Max. output power: 40 kW or more Protective gears: Included	1	Equipment for radiographic imaging of the chest, limb bones, head, etc.
16	CPAP Machine	Application: Nasal CPAP treatment for neonates/infant Ventilation mode: Pressure mode Setting: CPAP pressure, flow rate Alarm system: Over/under pressure, O2 level	7	Respiratory therapy equipment that delivers oxygen and air intranasally to newborns and infants.

No.	Equipment	Main Specifications	Q'ty	Purpose
		Humidifier: Equipped		
19	Infant Incubator	Type: Closed type Application: Warming, humidification Temperature control: Servo and Manual Setting: air and skin temperature, humidity Skin temperature sensor: Equipped	6	Equipment for accommodating low-birthweight newborns and diseased newborns by maintaining constant temperature and humidity.
20	Infant warmer	Type: Open type Application: Neonatal care, warming, O2 supply Temperature control: Servo and Manual Alarm: Equipped Tilting of treatment bed: Available Lighting: Equipped Skin temperature probe: Included	14	An open nursery treatment table that keeps newborns warm with heater.
24	Instruments Set, Gynaecology Laparotomy	Abdominal Hysterectomy, Instrument set: About 35 instruments (surgical knife blades, towel clamps, dissecting forceps, dissecting scissors, haemostatic forceps, needle holder, uterine haemostatic forceps, retractors, vaginal speculums, sterilizing case, etc.)	6	Forceps set primarily intended for abdominal hysterectomy.
26	Oscillating Cutter and Bone Drill Set	Electric oscillating cutter: Three types of blades, 11,000 cycles/min., battery-operated Electric bone drill: Two types of attachments, 1,000 rpm, battery-operated Spare batteries and battery charger: Included	2	A set for bone drill to be used for fracture fixations and a set for bone cutting saws.
28	Instrument Set, Orthopaedics	Orthopaedics Surgery Set: About 70 instruments (scissors, bone curettes, suction tips, retractors, osteotomes, nerve hooks, knife handles, various kinds of forceps, etc.)	3	Forceps sets intended for orthopaedics surgery. These are used in orthopaedics operating theatres.
30	Operating Table, Hydraulic, Orthopaedics	Operating table for Orthopaedics with lower limb traction unit Hi-Lo adjustment: Electric or manual Head/leg angle change: Available Tabletop size: At least 1,900 x 490mm Accessories (Arm pad, shoulder support, knee crutches are included)	1	An orthopaedic table with traction device. Table height and patient position are adjustable.
48	Patient Monitor	Measurement Parameters: SpO2, pulse rate, NIBP, ECG, Display size: 8.4 inches or wider Waveforms display: ECG and pulse wave Recorder: Built-in Battery: At least 2 hours of operation Mobile cart: Equipped	39	A device that measures electrocardiogram, non-invasive blood pressure, pulse rate and oxygen saturation to monitor patient vital signs.
60	Dental unit	Treatment chair: Adjustable of Hi-Lo, backrest Composition: Air compressor, air dryer, and vacuum pump are included	5	A treatment table for use in dental examinations, tooth extractions, cavity treatment and other treatments.

No.	Equipment	Main Specifications	Q'ty	Purpose
		Accessories: Air turbine, micro motor, 3-way syringe, vacuum, saliva ejector, ultrasonic scaler Stool for dentist: Included		
62	B Scan Ultrasound	Type: Tabletop Measuring mode: At least B mode Display: Colour LCD, 8.4 inches or bigger Post processing: Distance, area, annotation B scan probe: Included	2	Measuring the length from the surface of the eye to the retina and checking for retinal detachment and intraocular foreign bodies.
63	Auto Refracto-Keratometer	Refractometry parameters: At least Sphere -25D ~ +22D or more, cylinder -10.0D ~ +10.0D, axis Keratometry parameters: At least corneal curvature radius 5.00 ~10.00 mm, corneal refraction, corneal astigmatism Printer: Built-in Hi-Lo adjustable table/stand: Equipped	2	Equipment for measuring the degree of farsightedness, astigmatism and myopia, and the corneal curve.
65	Operating Microscope, Ophthalmology	Application: Eye surgery Type: Floor stand type Total magnification: At least 5X to 20X Eyepiece: 12.5X / 10X Field of view: At least 45 to 12mm (dia.) Focus: Electric focusing Light source: LED or halogen lamp	2	Binocular microscope for general ophthalmic treatment and surgery.
71	Visual Field Analyzer	Type: Manual projection perimeter or automatic Testing range: 80 degree or wider Stimulus intensity: 1,000 abs or more Hi-Lo adjustable table/stand: Equipped	2	A device to test range of vision and sensitivity. It is used to diagnose glaucoma and optic nerve disease.
72	Multifunctional Exercisers Set	1) Treadmill (1 unit) approx. 0.5-12.0 km/h Walking surface: 450 x 1,300mm or more Tilt adjustment: available 2) Stationary bike (2 units): Power source: Self-generating Program setting: Available Pulse rate sensor: Included 3) Leg press (1 unit): Load: Weight, hydraulic cylinder or equivalent Max load: 80kg or more by weight	2	Multiple training devices for training the lower limbs and strengthening the lower body muscles.
75	Traction Machine, Cervical & Lumber	Type: Electric traction machine No. of people treated: Available for two people at the same time Traction mode: Continuous, Intermittent Composition: Traction machine, bed for lumbar, chair for cervical, traction accessories	2	A device that provides intermittent and continuous traction on the cervical and lumbar spine to relieve pain and swelling.
80	Dryer for laundry	Type: Electric drive, tumble drying, front loaded Capacity: 45-55 kg Drum diameter: 900 mm or more	2	Large equipment for drying surgical gowns, bed sheets, etc.

No.	Equipment	Main Specifications	Q'ty	Purpose
		Door open: : The door can be opened manually when power is out. Dry Linen Trolley: Included		
81	Roller Ironing Machine	Electric heating, front feed and front return Roller working length: 2,000 – 2,100 mm Roller diameter: 250 mm or more Ironing speed: fixed or controllable	2	Large equipment for ironing flat fabrics, such as surgical linen and bed sheets.
82	Washing Machine	Type: Electric drive, automatic Function: Washing and extraction of linens Capacity: 45 – 55 Kg Washing speed: At least 40 rpm Drum material: Stainless steel Wet Linen Trolley: Included	3	Large equipment for washing and dehydrating surgical gowns, bed sheets, etc.
83	Mortuary Refrigerator	Capacity: 9 dead bodies Type: Front loading type Inner temperature: Controlled in 2 ~ 5 °C Internal material: Stainless steel Transport trolley and hi-lo lift: Included	2	A specialized refrigerator for cold storage of multiple dead bodies including stretchers and Hi-Lo lifts for transporting bodies.
84	Generator, 100KVA	Capacity: 100KVA, Fuel: Diesel Voltage: 415V/240V, Phase: 3 phase 4 wire Continuous operation: At least 8 hours Sound level: 97 dB or less Automatic transfer switch panel: Equipped	2	Large equipment that uses fuel to generate electricity to supply key medical departments in the event of a power failure.
85	Generator, 30KVA	Capacity: 30KVA, Fuel: Diesel Voltage: 415V/240V, Phase: 3 phase 4 wire Continuous operation: At least 8 hours Sound level: 97 dB or less Automatic transfer switch panel: Equipped	1	Medium-sized equipment that uses fuel to generate electricity to supply the main medical department in the event of a power failure.
87	Gastroendoscope	Gastro Video Endoscope (2 units: Standard size and small size) Instruments (Grasping forceps, Biopsy forceps, Injector): Included Compositions: Video system processor, colour monitor, light source with lamp, suction unit with bottle, trolley	2	A device that inserts a flexible speculum into the esophagus, stomach and duodenum for the diagnosis and simple treatment of pathologies in these areas.
90	Instruments Set, ENT, Middle Ear	ENT examination/treatment instrument set: About 50 instruments Middle ear instrument set: About 30 instruments (Head mirror, speculums, turning forks, ear probes, suction cannulas, ear myringotomy knife, ear forceps, instrument tray, etc.)	2	Forceps set for otorhinolaryngological examinations, general treatments and middle ear intervention.
91	Diagnostic Microscope	Type: Floor stand type, for ENT Eye piece: 10X / 12.5X Total magnification: 4 – 10 X or more Focal length: Approx. F=250 mm Light source: LED, Xenon or Halogen	2	Binocular microscope used for diagnosis and treatment of otorhinolaryngology.

2-2-3 Outline Design Drawing

The infrastructure maps for each RRH are shown below.

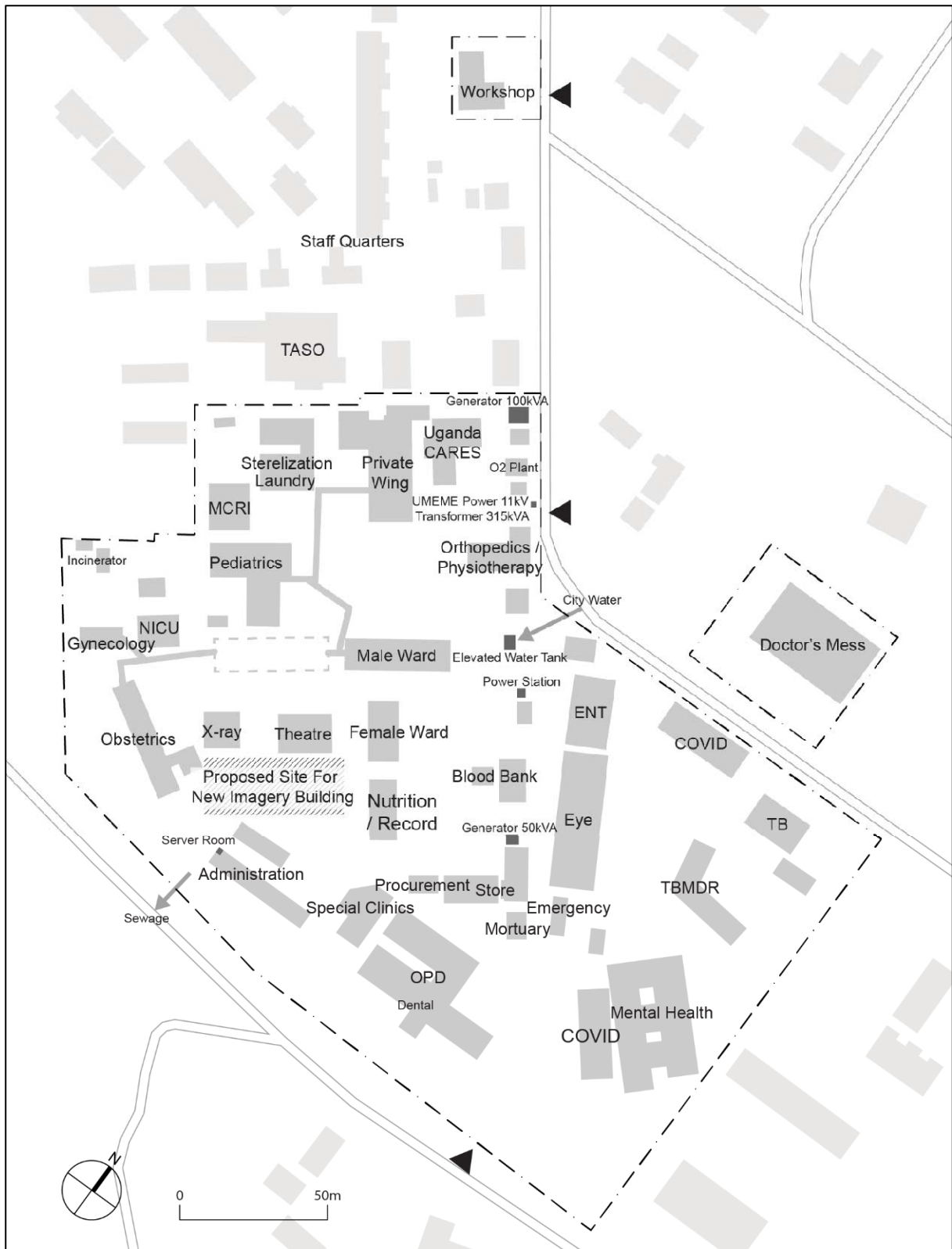


Figure 2-1: Soroti RRH Infrastructure Map

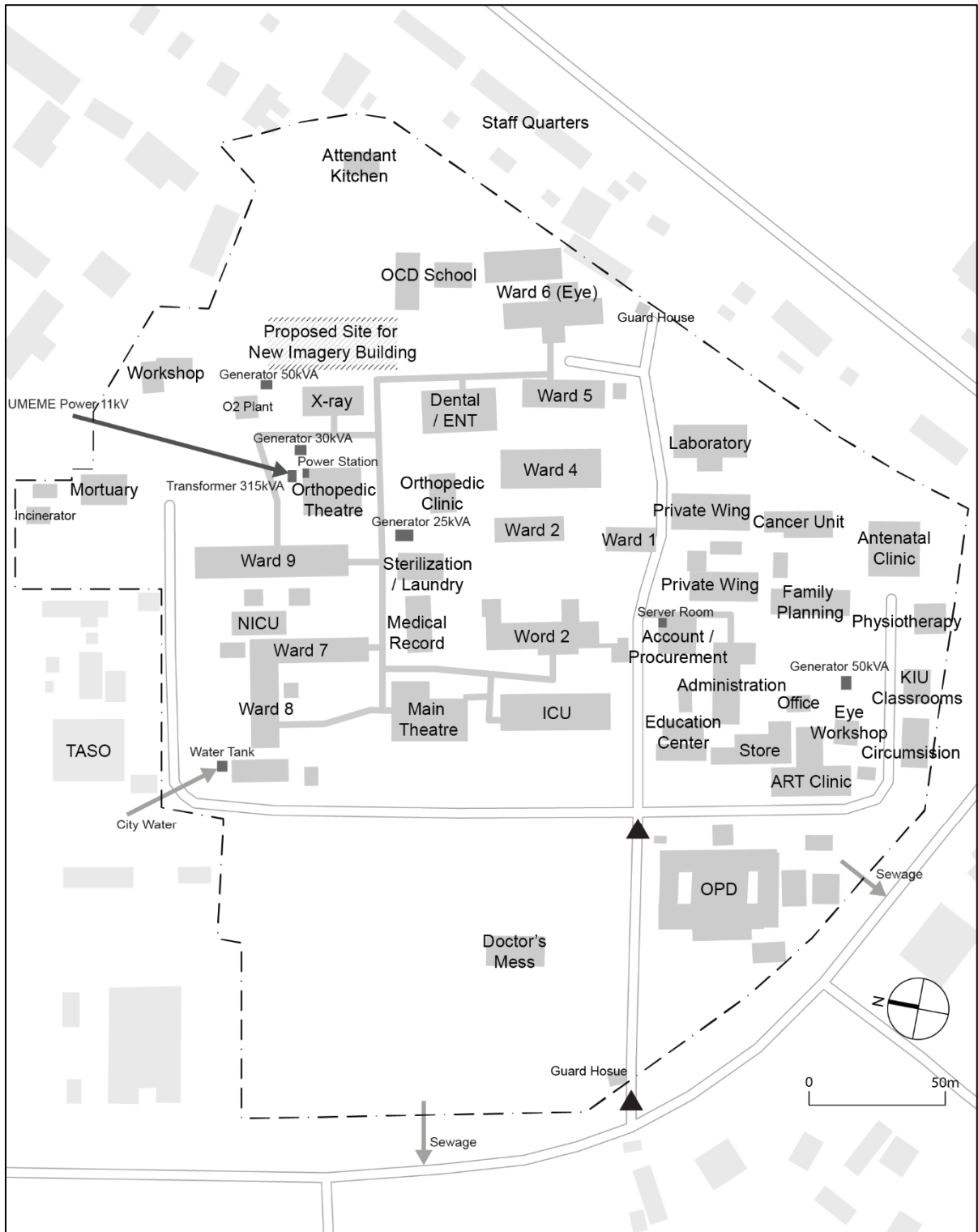


Figure 2-2: Jinja RRH Main Hospital Infrastructure Map

The layout drawings of the major equipment to be procured are shown below.

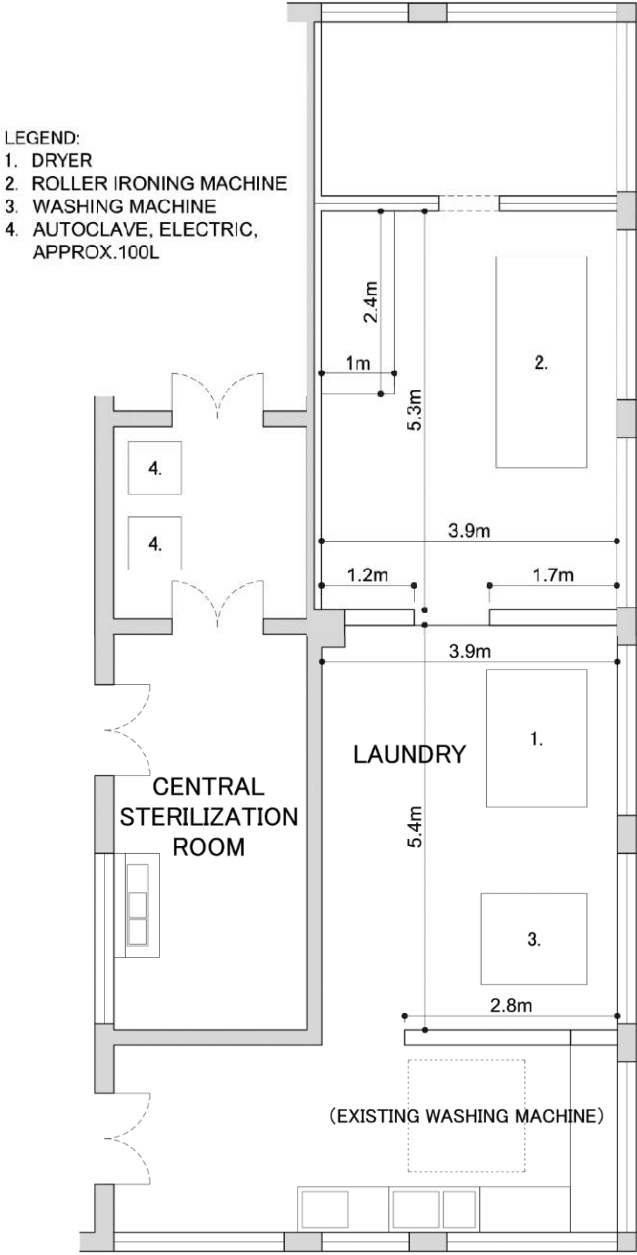


Figure 2-3: Equipment Layout in Central Sterilization Room and Laundry at Soroti RRH

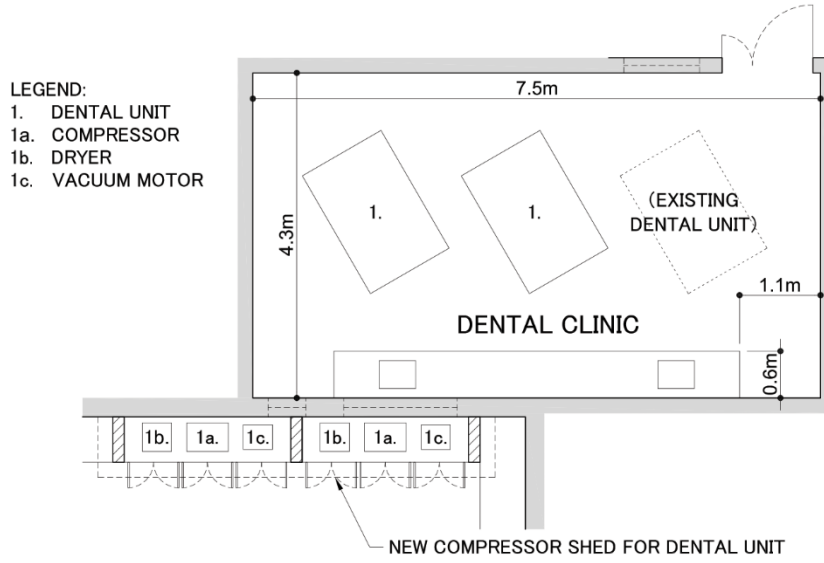


Figure 2-4: Equipment Layout in Dental Clinic at Soroti RRH

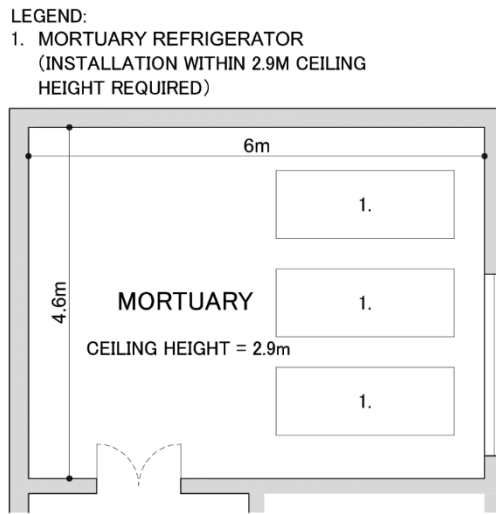


Figure 2-5: Equipment Layout in Mortuary at Soroti RRH

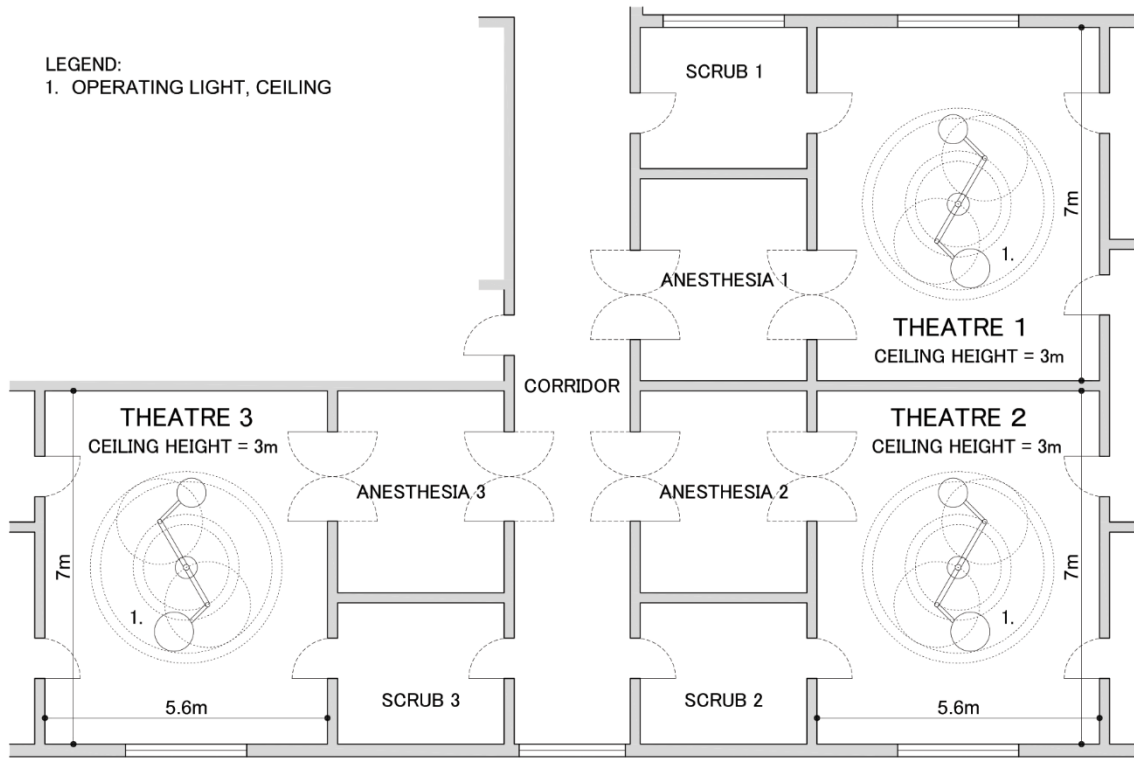


Figure 2-6: Equipment Layout in Main Operating Theatre at Jinja RRH

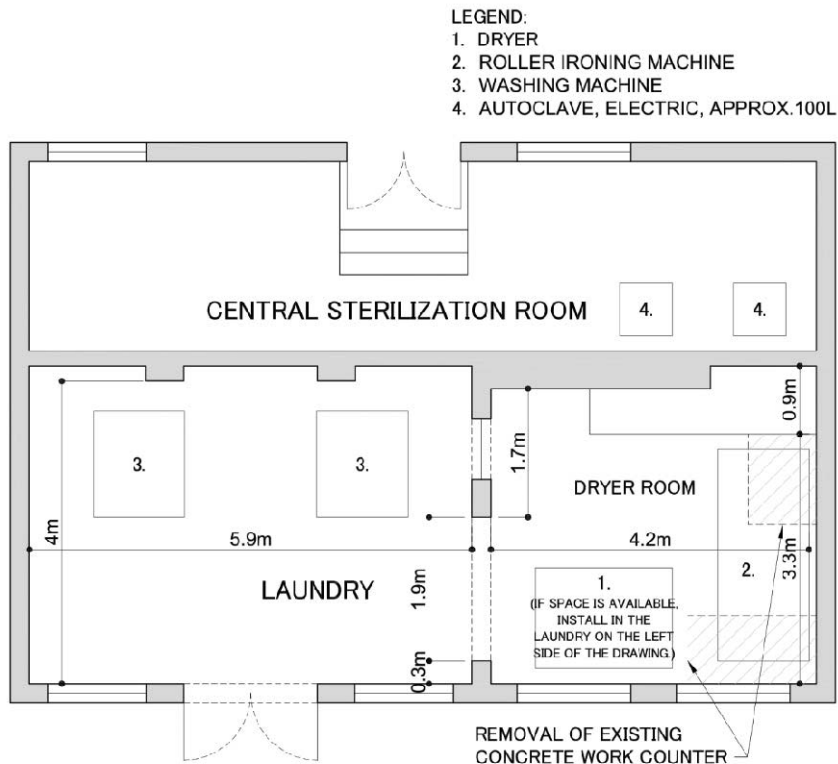


Figure 2-7: Equipment Layout in Central Sterilization Room and Laundry at Jinja RRH

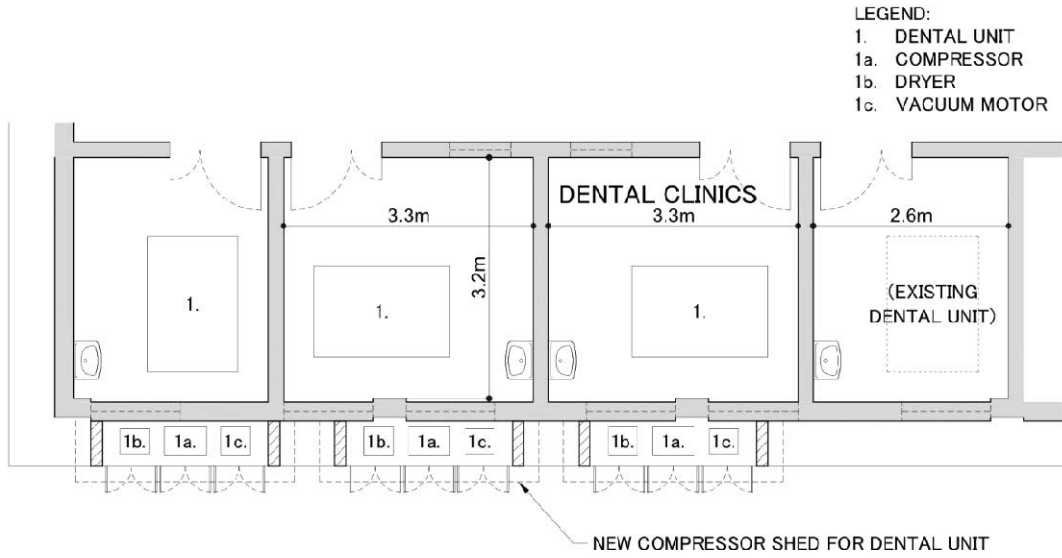


Figure 2-8: Equipment Layout in Dental Clinics at Jinja RRH

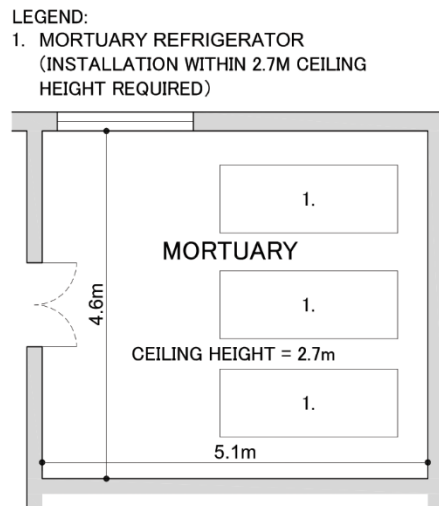
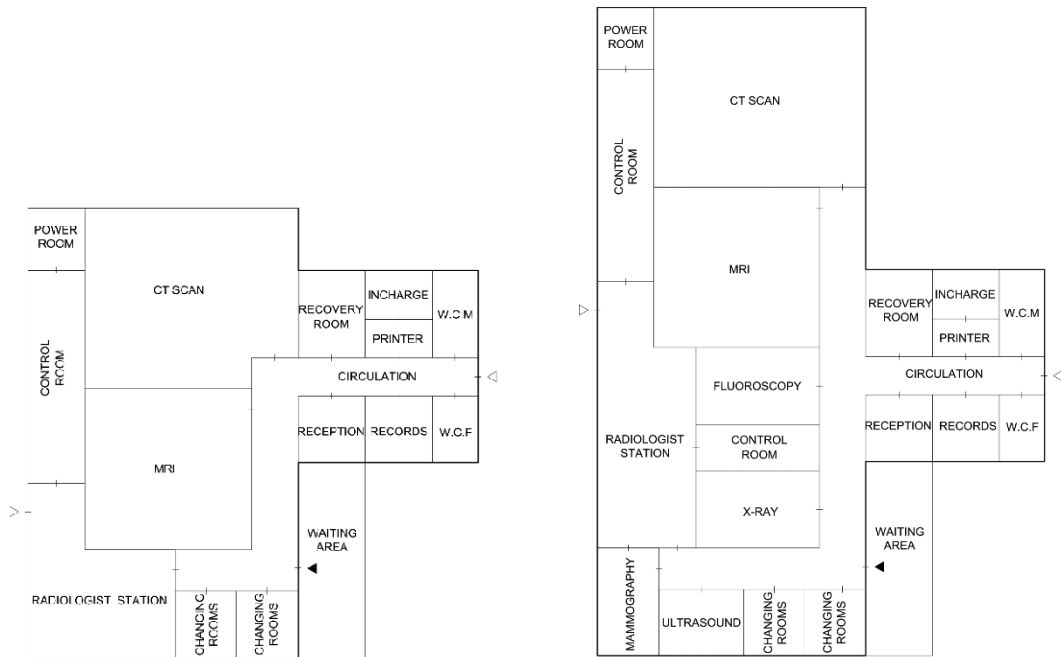


Figure 2-9: Equipment Layout in Mortuary at Jinja RRH

2-2-3-1 General X-ray Machine (Jinja RRH)

The MoH has agreed to change the initial plan for the new radiology building and secure a location for the installation of a general X-ray machine in the building. The following is the initial plan as devised by the MoH and one of the alternatives to the original plan that is under consideration.



Initial floor plan for new radiology building An alternative floor plan for the new radiology building, including a general X-ray room.

Figure 2-10: Draft Floor Plans of New Radiology Building

2-2-3-2 Compressor for Dental Unit

The draft drawings of the compressor cage for the dental unit are shown below.

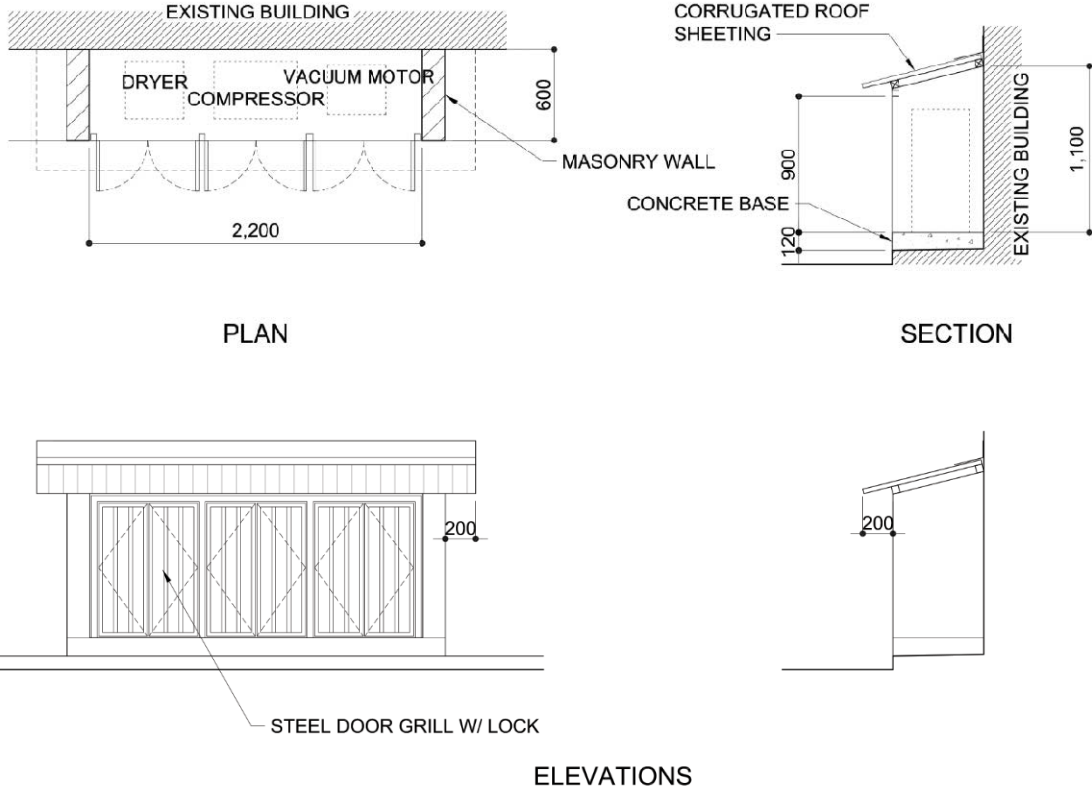


Figure 2-11: Draft Drawings of Compressor Shed for Dental Unit

2-2-3-3 Generator

The draft drawings of the generator houses are shown below.

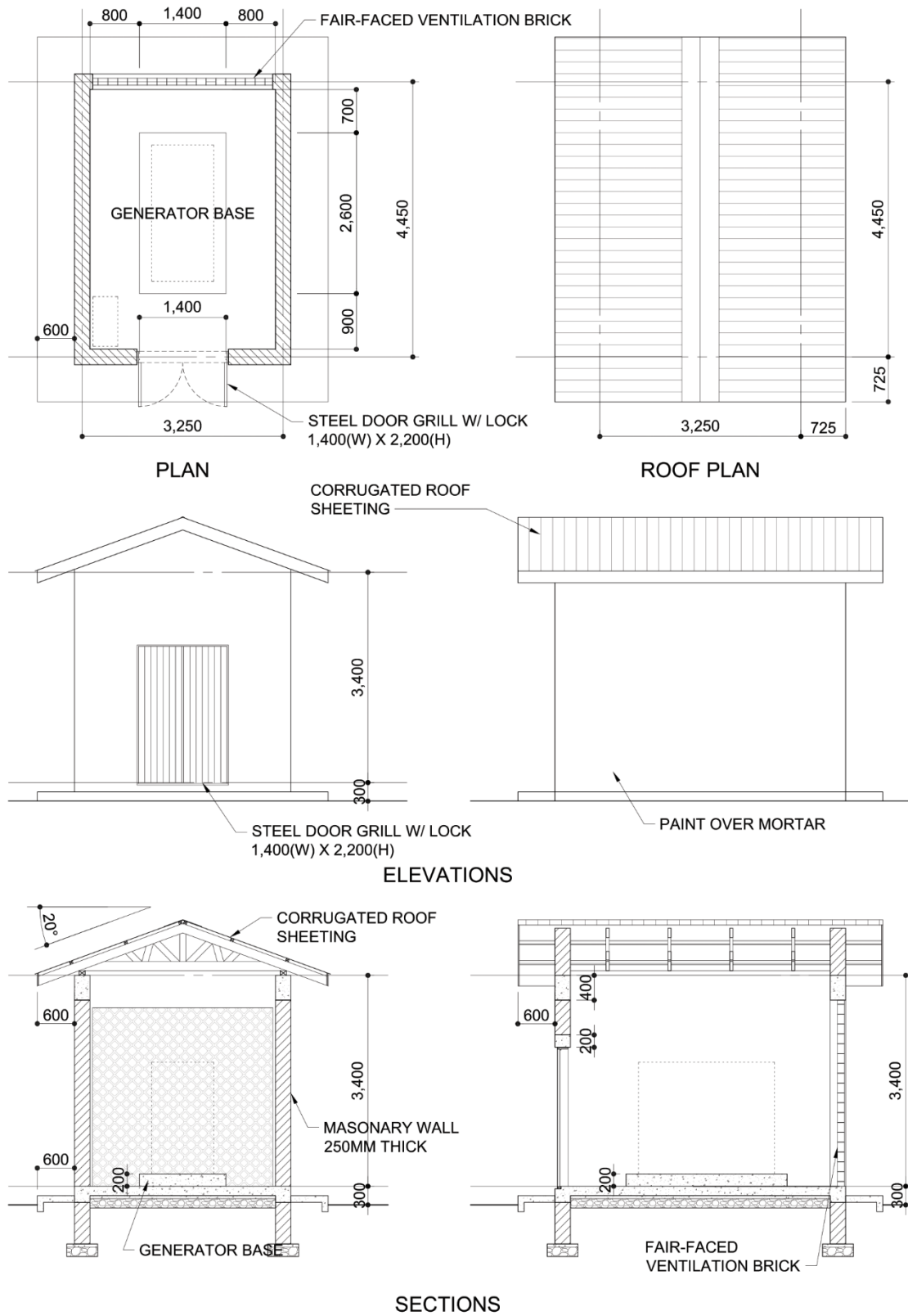


Figure 2-12: Draft Drawings of Generator House for 30kVA Generator at Jinja RRH Children Campus

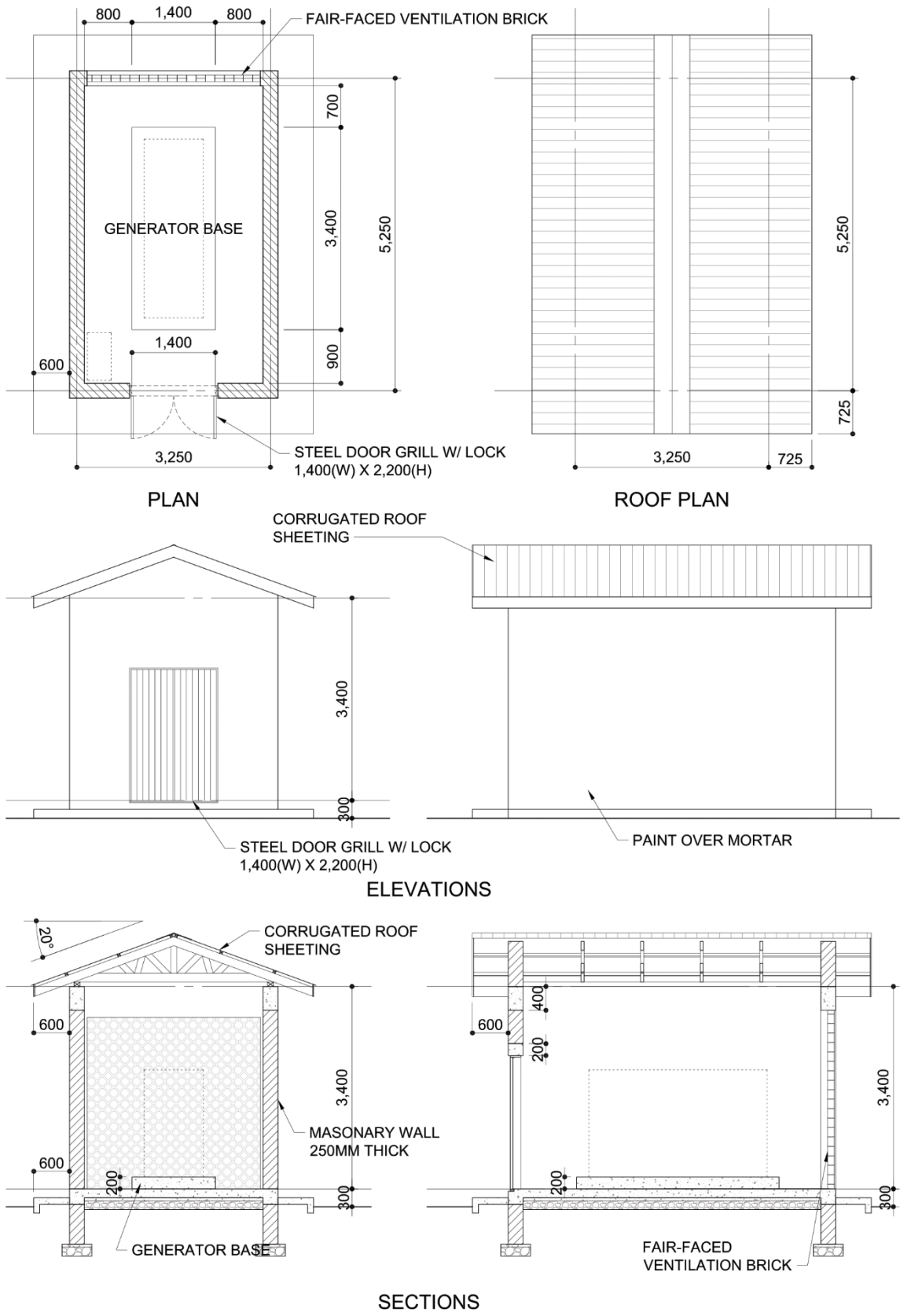


Figure 2-13: Draft Drawings of Generator House for 100kVA Generator at Soroti RRH

2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

(1) Basic Items for Project Implementation

The scope of the Japanese side is medical equipment procurement, which will be implemented in accordance with the framework of Japanese Grant Aid System. Thus, after the GoJ approves the Project at a cabinet meeting, the E/N will be signed between the GoJ and the GoU, and the G/A will be signed between the GoU and JICA. Then, the executing agency on the Ugandan side will conclude a consultancy agreement with a Japanese consultant, and the consultant will commence the detailed design, the duties for the bidding and supervision of the Project implementation. After completion of the detailed design, bidding will be held to decide on a Japanese supplier. The supplier will carry out the procurement for the equipment and installation work.

(2) Implementation Organization

The Project will be implemented by the four parties listed in 1) to 4) below.

1) The Ugandan Executing Agency

The Health Infrastructure Department of the MoH will be the executing agency. Operation and maintenance of the procured equipment will be carried out by the respective RRHs under the MoH's guidance and supervision.

2) The Consultant

As regulated by Japanese grant system, the Japanese consultant will conclude a consultancy agreement with the Ugandan executing agency. Based on the agreement, the consultant will provide guidance, advice and coordination services and perform duties necessary for the smooth implementation of the Project in a fair manner throughout the entire stages of the Project, including bidding and procurement.

3) The Supplier

The supplier (a qualified Japanese trading company) will be selected through a competitive bidding process according to the Japanese grant system. Then, the supplier will sign the contract with the Ugandan executing agency for procurement of the equipment.

4) JICA

Based on the conclusion of the G/A, JICA will supervise the implementation of the Project to ensure that it is properly implemented under Japanese grant system. JICA will consult with the executing agency if necessary and facilitate the Project's implementation.

2-2-4-2 Implementation Conditions

(1) Local Conditions and Regional Characteristics

The equipment can be classified into the following 3 categories from the viewpoint of procurement.

- 1) Equipment that requires installation and maintenance services, for which the maintenance services are available in Uganda and Japanese products are expected to be selected.

- 2) Equipment to be considered for procurement of third-country products when Japanese manufacturers are not able to procure products to Uganda or have no sales experience.
- 3) Equipment that does not require installation and maintenance services.

Category 1) is expected to include equipment related to surgical, radiology, ultrasound, perinatal care and ophthalmology, endoscopes, sterilizers, etc. Category 2) maybe include equipment related to oxygen therapy, laundry, AVR, UPS, power transformer etc. Category 3) would be commonly used basic equipment, such as surgical instruments, medical furniture, BP machines etc.

By the time of the field survey, numerous local companies located in the capital city Kampala have been dealing with medical equipment. However, very few local companies, such as MedEquip (U), Zicopp (U) and Palin Corporation, have authorized distributorship agreements with Japanese manufacturers. For other companies handling Japanese products, authorized distributors located in Kenya, South Africa or Europe provide various services through cooperating companies in Uganda.

The equipment in category 1) is mainly equipment that was procured for the RRHs in the Northern Uganda under past JICA's project, or equivalent equipment. JICA survey team confirmed that more than 10 local companies can install the equipment and provide maintenance services; therefore, these local companies are considered capable of handling the Japanese products in terms of the technical level and securing spare parts. As for 2), several companies in Uganda have electrical and biomedical engineers and have experience in the installation and maintenance of equipment manufactured in third countries. With regard to 3), quality will be ensured by providing products from Japanese manufactures.

(2) Exemption of Duties and Taxes

Customs duties on imported materials and equipment for the Project are exempted at customs clearance by applying for exemption in advance from the executing agency to the Uganda Revenue Authority (URA). Value-added tax (VAT) on equipment procured in Uganda through the local distributors is also exempt. The process for VAT exemption is expected as follows:

- 1) In the detailed design phase, the duties and tax exemption items will be agreed upon by the consultant, the URA and the MoH and reflected in the bidding documents.
- 2) The MoH will announce to the Ministry of Finance, Planning and Economic Development (MoFPED) regarding the information of Japanese supplier and sub-supplier(s) that are qualified for tax exemption.
- 3) The MoFPED will issues a letter to the URA to acknowledge the tax exemption of the above-mentioned supplier(s). The supplier(s) submit this letter when applying for tax exemption.

If the local company/supplier fails to comply with the above tax exemption process, the Japanese supplier and sub-suppliers will pay VAT temporarily and apply for a refund to the URA at a later date.

With regard to income and corporate taxes, Japanese suppliers are exempt from taxes, and the MoH as the executing agency will pay them. Therefore, the MoH plans to secure a budget for this purpose as a counterpart fund. In addition, all vouchers and other documents that may be required to be submitted to the Ugandan side must be prepared in accordance with local Ugandan accounting laws and regulations.

(3) Other Procurement Conditions

- 1) It is confirmed that the PVoC inspection by the designated inspection company can be exempted by the issuance of a Certificate of Conformity (CoC) prior to shipment through the necessary process as described in section 2-2-4-6 (1).

Imported equipment should be verified by the National Drug Authority (NDA) in parallel with the PVoC procedure. The NDA registration process will be conducted online by a representative of the MoH. The NDA verification fee can be waived by submitting the CoC issued by the manufacturer, a copy of the shipping documents and a letter signed by the Undersecretary of the MoH to the NDA after shipment. However, the applicant is required to pay approximately 300,000 Ugandan Shillings (UShs) to the NDA for each shipment as an administrative processing fee. (Cost at the time of field survey)

- 2) The supplier will inspect the targeted RRHs at least one month prior to the delivery of the equipment, confirm the completion status of the work to be borne by the Ugandan side, the delivery route, temporary storage and installation locations, the electrical status, etc. and prepare a schedule for the delivery and installation of the equipment for the practical work.

2-2-4-3 Scope of Works

The Project will be implemented in accordance with the framework of Japanese Grant Aid under the mutual collaboration between Japan and Uganda. The items to be borne by Japan and Uganda are described below.

(1) Items to Be Borne by Japanese Side

- Procurement of the equipment, marine and land transportation to the sites
- Installation, commissioning and coordination of the equipment
- Initial operation and daily maintenance trainings of the equipment
- Implementation of soft components
- Maintenance contracts for selected equipment
- Construction of generator houses
- Construction of compressor cages for dental units
- Supply of transformers, distribution panel, and related cables

(2) Items to Be Borne by Ugandan Side

- Procedures related to PVoC exemptions, customs clearance and tax exemptions

- Construction of a new radiology building to secure installation sites for radiology equipment
- Removal of existing equipment, disposal of obsolete equipment, securing required electrical capacity and preparing installation sites.
- Appropriate use of procured equipment, procurement of spare parts, procurement of consumables and proper maintenance
- Opening of Banking Arrangement (B/A) and issuance of the Authorization to Pay (A/P)

Supplementally, the detail works by the Ugandan side for each equipment are summarized below.

- 1) Transformers and distribution panel (Item No. 98 and 99)
Installation of transformers, distribution panels and related cables, and replacement of existing distribution panels
- 2) Generators (Item No. 84 and 85)
Replacement of existing cables (removal, re-installation or addition, if necessary)
- 3) Dental units (Item No. 60)
 - Power supply, water supply and drainage work for the dental unit
 - Power supply and piping work to the compressors, dryers and vacuums
- 4) Equipment related to the laundry section (Item No. 80, 81 and 82)
 - Modification or new installation of power panels to accommodate relocation of the equipment
 - Addition of isolation switches, and cable installation work between the panels and the isolation switches
- 5) Large autoclave (Item No. 77)
If necessary:
 - Modification or new installation of necessary power panels
 - Addition of the dedicated outlets and cable installation work between the panels and the outlets
- 6) Mortuary refrigerator (Item No. 83)
If the number of refrigerators is to be increased from the current number:
 - Addition of the isolation switches near the new refrigerators
 - Cable installation work between the distribution panels and the isolation switches
- 7) Ceiling operating light (Item No. 6)
Cable installation work, in case of the existing cables are not available
- 8) Television set for education (Item No. 86)
Wall mounting work of Television monitors and security frames
- 9) Other equipment
Supply and installation work of the power outlets or isolation switches, in case of the existing power outlets and isolation switches are not available
- 10) Local Area Network (LAN) system
Supply and installation work of the LAN system, if the cabled internet connection is required

2-2-4-4 Consultant Supervision

(1) Policy for Procurement Supervision

The consultant will supervise a series of works for the Project, including procurement and handover of the equipment and execution of the maintenance contract. The consultant will also set up a communication network with the supplier and related agencies, led by the chief consultant, to ensure that both the Ugandan and the Japanese side work properly without delay.

(2) Procurement Supervision Structures and Work

The consultant will assign a chief consultant, a procurement supervisor, a facility/equipment supervisor and an inspector. The main duties of each consultant are as follows:

Table 2-11: Main Duties of Japanese Consultants

Japanese Consultants	Main Duties
Chief Consultant	Overall project supervision Final inspection before completion Confirmation and signing of handover documents Preparation of completion documents Reporting to relevant agencies Acquisition of the completion certificate from the Ugandan side
Procurement Supervisor	Confirmation of equipment receipt at the target RRHs Confirmation and supervision of work progress to be undertaken by the Ugandan side and the Japanese side Supervision of delivery, installation, commissioning, and operation training
Facility and Equipment Supervisor	Preliminary confirmation and meetings for preparatory works and new construction to be undertaken by the Ugandan side and the Japanese side Check progress and verify construction works covered by the Japanese side Inspection prior to expiration of manufacturers' warranties and first year's maintenance contracts Inspection for second year's maintenance contracts Inspection for third year's maintenance contracts
Inspector	Confirmation and verification of drawings and factory inspection reports, etc. Meetings and observation of pre-shipment inspections Meetings, coordination and reporting related to shipment verification

2-2-4-5 Quality Control Plan

For the equipment that requires maintenance services, Japanese or third-country products with local distributors or partner companies in Uganda will be selected. If maintenance service is not required, Japanese products will be selected whenever possible. The procurement condition shall also be that the equipment complies with quality standards, such as JIS (Japanese Industrial Standards, Japan), CE (Conformité Européenne, EU), FDA (Food and Drug Administration, USA), etc. In addition to these standards, the quality of the equipment will be ensured by limiting the country of origin, the country in

which the equipment manufacturer's headquarters is located (if necessary) and by conducting pre-shipment inspections of major equipment, etc.

2-2-4-6 Procurement Plan

(1) Equipment Procurement Plan

In the field survey, no Ugandan products were found within the scope of the planned equipment list. Therefore, if the quality and bidding competitiveness cannot be secured by limiting Japanese products, third-country products will be considered. However, in the case of third-country products, measures such as limiting procurement to the member countries of Development Assistance Committee (DAC) or Organization for Economic Cooperation and Development (OECD), as well as price, will be taken into consideration. Otherwise, the quality will be ensured by considering past experience at comparable hospitals in Uganda. The after-sales maintenance will be based on support from local companies, but in cases where it is difficult to provide support, products that can be maintained from the distributors in neighbouring countries should be selected.

The PVoC verification described in the section 2-2-4-2 can be waived through the following procedures:

- 1) A letter from the Undersecretary of the MoH stating that the MoH guarantees the quality of the imported goods related to the Project, instead of the UNBS.
- 2) A Certificate of Donation (CoD), contract documents and a list of equipment is attached to the above letter.
- 3) The UNBS examines the letter's contents.

In parallel with this PVoC, the exemption of NDA verification fee will also be proceeded as follows:

- 1) NDA verification registration process to be conducted online by the MoH.
- 2) The Undersecretary of the MoH submits a letter to the NDA requesting the verification fee exemption.
- 3) A copy of the CoC and shipping documents are attached to this letter.
- 4) The NDA examines the letter's contents.

(2) Transportation Route

Japanese equipment will be transported by sea to the Mombasa port, Kenya, and this may take approximately two months. After unloading at the Mombasa port, the equipment will be transported inland for customs clearance at Malaba on the border between Uganda and Kenya. If the containers are divided by site, these containers will arrive at the Jinja and Soroti sites in about two weeks each, without having to go through Kampala.

Table 2-12: Transportation Route and Period

Transportation Route		Transportation Method	Period
Gather items in Yokohama port warehouse			About three months
Yokohama port→Mombasa port, Kenya		Shipping	
Mombasa→Malaba (Custom clearance at border)		Inland transportation by truck	
①	Malaba→Soroti RRH	Inland transportation by truck	
②	Malaba→Jinja RRH	Inland transportation by truck	

For third-country equipment, the quotations were collected from local companies at the CIP site (Jinja/Soroti RRHs) as of the Project cost estimation, so the delivery route is not set. For the products made in USA, the products will be transported to the Mombasa port, Kenya, and then follow the same transportation route in the above table.

2-2-4-7 Operational Guidance Plan

The training on initial operation and daily maintenance will be planned for the equipment used for critical medical services, the equipment for life-saving and the equipment requiring installation work. However, medical furniture, surgical instrument sets and basic simple equipment (BP machine, examination light, refrigerator etc.) will be excluded from the scope of training. The training will be handled by the engineers/technicians who are dispatched at the time of the installation, and the consultant will supervise that these trainings are properly conducted.

2-2-4-8 Soft Component (Technical Assistance)

Two types of soft components are planned for the Project: The first component is coaching on goods management using the 5S-CQI-TQM method in collaboration and synergy with the ongoing JICA technical cooperation (Project on Patient Safety Establishment through the 5S-CQI-TQM). The goal is to make effective use of limited resources and maintain maximum utilization of the procured equipment.

The second is to conduct training related to clinical knowledge, clinical techniques and maintenance skills for equipment that is newly introduced, or is experienced but where the user are concerned about technical and operational aspects. The goal here is to expand specialized medical services through proper use of the targeted equipment. An overview of both soft components is as follows.

Table 2-13: Overview of The Soft Components

Item	Coaching on Goods Management	Training on Clinical Techniques and Maintenance
Target RRHs	Soroti RRH and Jinja RRH	Soroti RRH and Jinja RRH
Teaching Methods	Small group discussions and group work in each department	Training through lectures and hands-on training
Target Equipment	All equipment is targeted, except some equipment that does not require accessories, spare parts, consumables and after-sales	5 items in Jinja RRH (general X-ray imaging system, gastroendoscope, CPAP machine, dental X-ray imaging system, patient monitor)

Item	Coaching on Goods Management	Training on Clinical Techniques and Maintenance
	service.	Note: general X-ray imaging system is only covered for Jinja RRH.
Recipients/ Trainees at each RRH	<ul style="list-style-type: none"> - Main store staff (approx. 5 staff) - Maintenance engineers/technicians (approx. 8 staff) - Target departments (approx. 5–10 staff per dept.) 	<p>Equipment users and maintenance engineer/technicians</p> <ul style="list-style-type: none"> - General X-ray imaging system (approx. 10 staff) - Gastroendoscope (approx. 10 staff) - CPAP machine (approx. 10 staff) - Dental X-ray imaging system (approx. 10 staff) - Patient monitor (approx. 15 staff)
Frequency and Timing of Activities	<p>On-site activities three times:</p> <ul style="list-style-type: none"> - 2 months before equipment arrival - Shortly after equipment handover - 4–6 months after handover 	<p>On-site activities two times:</p> <ul style="list-style-type: none"> - Shortly after equipment handover - 4–6 months after handover <p>However, the number of trainings for the dental X-ray imaging system and the patient monitor is one times each.</p>
Consultants/ Trainers	<p>One (1) Japanese</p> <p>1) Chief/Trainer on goods management</p>	<p>Soroti RRH Five (5) (One Japanese + Four local trainers)</p> <ol style="list-style-type: none"> 1) Programme manager (Japanese) 2) Trainer B (endoscope) 3) Trainer C (CPAP machine) 4) Trainer D (patient monitor) 5) Trainer E (dental X-ray imaging system) <p>Jinja RRH Six (6) (One Japanese + Five local trainers)</p> <ol style="list-style-type: none"> 1) Programme manager (Japanese) 2) Trainer A (general X-ray imaging system) 3) Trainer B (endoscope) 4) Trainer C (CPAP machine) 5) Trainer D (patient monitor) 6) Trainer E (dental X-ray imaging system)
Outputs	<ol style="list-style-type: none"> 1) Clarify the operational system for goods related to the equipment. 2) Improve the status of managing goods 3) Easier planning for procurement of spare parts and consumables 	<ol style="list-style-type: none"> 1) Able to perform imaging diagnosis utilizing general X-ray imaging systems (for Jinja RRH) 2) Able to diagnose upper gastrointestinal disorders by endoscopy 3) Able to perform neonatal respiratory therapy with a CPAP machine 4) Improve vital sign monitoring and management for critically ill patients 5) Able to perform dental imaging diagnosis utilizing dental X-ray imaging systems 6) Develop a daily check and maintenance system for the above equipment

Coaching on Goods Management will cover all departments, with the aim of improving goods management capabilities, including proper placement of procured equipment and removal and disposal of unwanted items. The major activities are as follows:

- Provide suggestions and guidance on the placement of procured equipment and the proper storage of related goods using the 5S-CQI method.
- Identify where and what type of goods will be stored in the hospital central warehouse, maintenance workshop or the departments where the equipment is used, with using an existing goods ledger book. It also clarifies goods ordering procedures, if necessary.
- Facilitate to storage the goods in easy-to-find and easy-to-take ways, using 5S tools.
- Collaborate with the ongoing JICA technical cooperation projects.

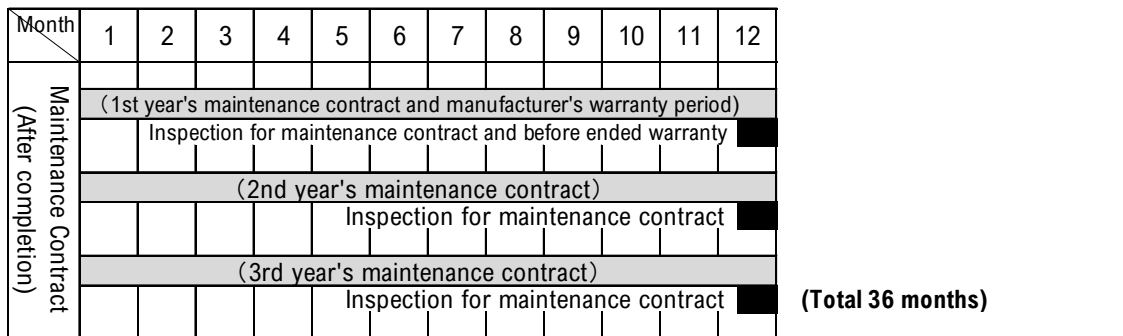
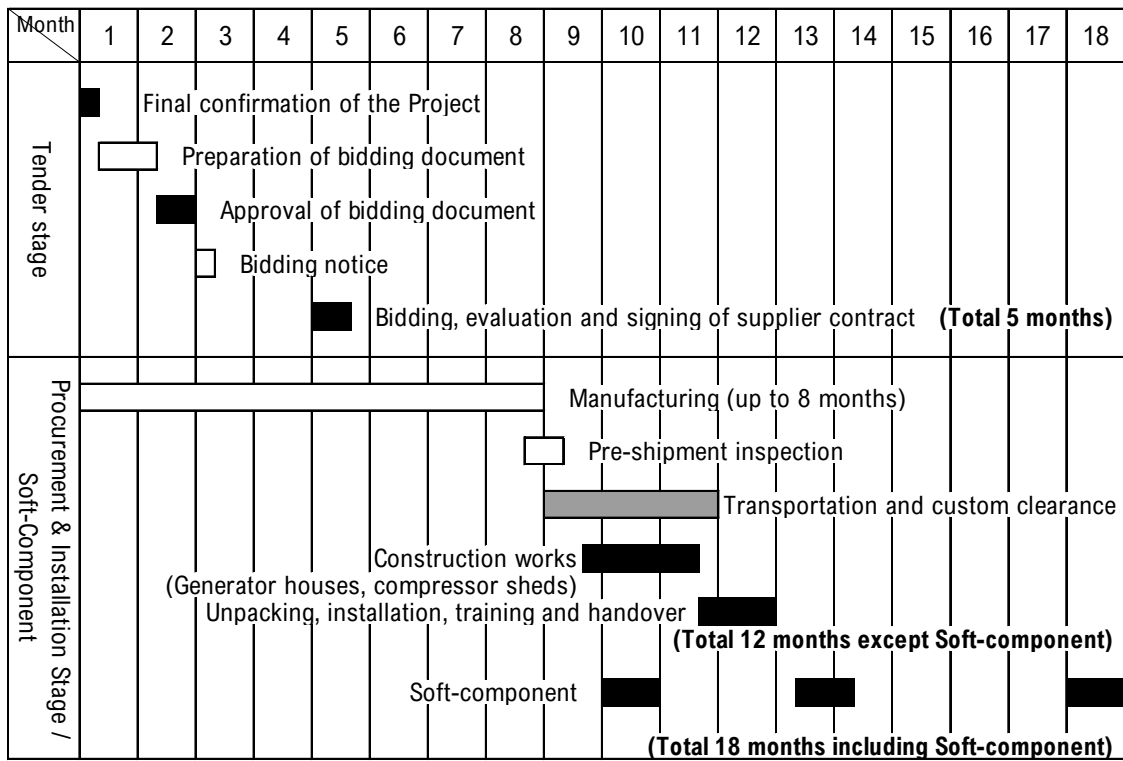
Training on Clinical Techniques and Maintenance targets 5 items to focus on strengthening and expanding specialized diagnostic and treatment capabilities. The major activities are as follows:

- Understand the functions and clinical applications.
- Resolve technical concerns by learning the initial settings and operating processes.
- Learn clinical techniques and precautions through hands-on practice with simulated patient cases.
- Learn the key points of daily checks, cleaning and troubleshooting.
- Clarify the scope of services that can be handled by the user or the maintenance workshop.

2-2-4-9 Implementation Schedule

The Project schedule from the start of detailed design to the handover of the equipment is expected to take 17 months: approximately 5 months for the detailed design and bidding stage, and 12 months for the procurement, installation and training stages. After the above 17-month schedule, some equipment items will be covered by the maintenance contract for up to three years. Thus, the overall schedule of the Project is expected to be completed 53 months. To implement the Project, it is necessary for the Ugandan side to complete the construction of the new radiology building and other preparatory work. The expected implementation schedule is shown below.

Table 2-14: Project Implementation Schedule



2-3 Recipient Country Obligations

To implement the Project, the items to be undertaken by the Ugandan side are as follows.

Table 2-15: Items to Be Undertaken by The Ugandan side

No	Items to be undertaken by the Ugandan side	Responsible organization
01	Opening of B/A and issuance of A/P	MoFPED, MoH
02	Procedures related to tax exemptions	URA, MoFPED, MoH
03	Support for procedures related to registration and exemption of imported medical equipment with NDA	MoH
04	Support for procedures related to PVoC exemption	MoH
05	Construction of radiology buildings at Jinja RRH and Soroti RRH	MoH
06	<ul style="list-style-type: none"> • Cabling work for new generator installation • Installation of transformer and distribution panels 	Target hospitals
07	<ul style="list-style-type: none"> • Removal of existing equipment (equipment requiring installation work, such as washing machines, dryers for laundry, roller ironing machines, autoclaves, dental units, mortuary refrigerators, etc.) • Partial removal of concrete countertop in Jinja RRH laundry room 	Target hospitals
08	<ul style="list-style-type: none"> • Wall mounting of educational television • Installation of security frames against theft 	Target hospitals
09	Water supply, drainage and power supply for dental units	Target hospitals
10	Secure budget and personnel necessary for appropriate and effective equipment use and maintenance	MoH, Target hospitals

2-4 Project Operation Plan

2-4-1 Medical Equipment Users

The equipment will be installed in the existing facilities except for the radiology department, for which a new building is being constructed. Most of the existing equipment is being used appropriately by medical personnel, such as physicians, nurses, midwives and radiology technicians. Most of the procured equipment are categorized as replacement and/or refilling the quantities; thus, it can be operated and maintained by the hospitals' existing personnel.

As for the newly introduced gastroendoscope, both hospitals have surgeons and internal medicine consultants capable of operating endoscope, so no particular technical problems are anticipated. Jinja RRH has four surgeons: one is currently studying in Egypt (scheduled to return in 2023), and two have been learning gastroendoscopy techniques at private hospitals. The anaesthesia technician also has experience in assistance with and post-operative procedures for endoscopy tests at a private hospital. At Soroti RRH, the chief internal medicine consultant has had experience in gastroendoscopy, the junior physicians are able to perform basic examinations and biopsy tissue sampling by gastroendoscopy, and the number of hospitalized patients with gastrointestinal diseases is also high. In addition, medical equipment user trainers who are working at the target hospitals are available for support.

Therefore, there is no need to assign new specialized personnel for the use of the procured equipment

under the Project. On a positive note, the target hospitals plan to recruit new specialized staff in FY2022/23 for ophthalmology and dentistry, which are the Project target departments. Based on the above findings, it is concluded that the medical equipment can be used appropriately.

2-4-2 Engineers for Medical Equipment Maintenance

Each RRH has a regional maintenance workshop with 1–2 biomedical engineers, who supervise management of all the medical equipment and 7–8 technicians. The workshop technicians perform simple equipment repairs and preventive maintenance on request at the district hospitals and health centres, as well as the RRH. While workshop technicians are capable of repairing basic equipment, more advanced medical equipment repairs are usually requested from local distributors through the MoH. In addition, some advanced equipment such as General X-ray Machines will be covered by the maintenance contract, which will be made between the MoH and local distributors. Therefore, maintenance of the majority of procured equipment can be handled by staff of RRH without outsourcing.

2-4-3 Maintenance Budget

In Uganda, public healthcare services are generally free of charge, so the maintenance budget for public hospitals, except for financial support from development partners, comes entirely from the government budget. A budget item ‘Maintenance - Machinery, Equipment & Furniture,’ includes the maintenance costs for the subordinate healthcare facilities in the area covered. There is also a budget for the maintenance of hospital facilities and vehicles, and these budgets are used flexibly, depending on the situation. The maintenance budgets have remained at between 2% and 4% of the hospital’s overall budget each year.

It has been agreed that an adequate maintenance budget will be secured when the Project is implemented.

Table 2-16: Transition of The Soroti RRH Maintenance Budget

Item	2021/22		2020/21		2019/20		2018/19		2017/18	
	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million
Maintenance – Civil	0.04	0.14	0.02	0.07	0.04	0.14	0.04	0.14	0.04	0.14
Maintenance – Vehicles	0.07	0.24	0.07	0.24	0.05	0.17	0.05	0.17	0.05	0.17
Maintenance - Machinery, Equipment & Furniture	0.08	0.27	0.07	0.24	0.09	0.31	0.08	0.27	0.08	0.27
Maintenance – Other	0.01	0.03	0.01	0.03	0.01	0.03	0.02	0.07	0.02	0.07
Total	0.20	0.68	0.17	0.58	0.19	0.65	0.19	0.65	0.19	0.65

(Source) Annual Budget Performance Report 2017/18~2020/21, Semi-Annual Budget Performance Report 2021/2022, Converted at JICA rate as of April 2022

Table 2-17: Transition of The Jinja RRH Maintenance Budget

Item	2021/22		2020/21		2019/20		2018/19		2017/18	
	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million	UShs Billion	JPY 10 million
Maintenance – Civil	0.16	0.55	0.03	0.10	0.01	0.03	0.02	0.07	0.02	0.07
Maintenance – Vehicles	0.09	0.31	0.06	0.21	0.07	0.24	0.05	0.17	0.02	0.07
Maintenance - Machinery, Equipment & Furniture	0.38	1.30	0.10	0.34	0.10	0.34	0.10	0.34	0.05	0.17
Maintenance – Other	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.01	0.03
Total	0.63	2.15	0.19	0.65	0.19	0.65	0.17	0.58	0.10	0.34

(Source) Annual Budget Performance Report 2017/18~2020/21, Semi-Annual Budget Performance Report 2021/2022, Converted at JICA rate as of April 2022

2-5 Project Cost Estimation

2-5-1 Initial Cost Estimation

2-5-1-1 Cost to Be Borne by the Ugandan Side

The cost on Ugandan side required for implementation of the Project is estimated as follows.

Table 2-18: Cost to Be Borne by The Ugandan Side

Items	Cost (UShs)	
	Soroti RRH	Jinja RRH
(1) Cost to be borne by the RRHs		
Partial removal of concrete countertop in laundry	N.A.	1,300,000
Decommissioning and disposal of existing/obsolete equipment	25,000,000	25,000,000
Wiring works for generators and large equipment (including Procurement of additional power outlets and isolation switches)	6,000,000	6,000,000
Installation of transformers and distribution panels	35,000,000	35,000,000
Cable installation from the distribution panels to the new radiology building	20,000,000	8,000,000
(1) Sub-total (The RRHs)	86,000,000	75,300,000
(2) Cost to be borne by MoFPED		
Others (Bank commissions, etc.)		15,000,000
(2) Sub-total (MoFPED)		15,000,000
TOTAL (1) + (2)		176,300,000

2-5-1-2 Calculation Conditions

- (1) Time of cost estimation : April 2022 (as the month of completion the field survey)
- (2) Exchange rate : 1 U.S. dollar = 117.40 JPY
1 Ugandan shilling = 0.032799 JPY
- (3) Procurement period : As indicated in the Implementation Schedule.
- (4) Others : The cost estimation will be made under Japanese Grant Aid System.

2-5-2 Operation and Maintenance Costs

2-5-2-1 Operation and Maintenance Costs of Soroti and Jinja RRHs

(1) Soroti RRH

The estimated annual operation and maintenance costs for spare parts and consumables are as follows.

Table 2-19: Estimated Annual Increase in Operation and Maintenance Costs at Soroti RRH

(Upper: Billion UShs, lower: JPY)

	Total	Breakdown		
	Estimated Annual Cost	Procured by RRH	Maintenance Contract	NMS
A: Spare parts	0.008	0.008	-	-
	282,000	282,000	-	-
B: Consumables	0.016	0.009	-	0.007
	534,700	297,500	-	237,200
Total	0.024	0.017	-	0.007
	816,700	579,500	-	237,200

* Converted at JICA rate as of April 2022

The breakdown of spare parts and consumables costs is assumed as shown in Table 2-20 and Table 2-21.

Table 2-20: Assumed Breakdown of Spare Parts Costs at Soroti RRH

No	Name of Equipment	Spare Parts	Required Quantity per Year	Unit Price (JPY)	Total Qty	Total (JPY)	Maintenance Contract
2	Electro Surgical Unit	Electrode	2 Set	26,000	2	52,000	
16	CPAP Machine	Respiratory Circuit Set	3 Set	18,000	3	54,000	
19	Infant Incubator	Probe for infant	1 piece	18,000	4	72,000	
26	Oscillating Cutter and Bone Drill Set	Drill blade	1 piece	5,000	1	5,000	
29	Plaster Cutting Set	Blade	1 Set	3,500	1	3,500	
39	ECG	Limb and chest electrodes	1 Set	15,000	1	15,000	
48	Patient Monitor	Blood pressure cuff	1 piece	2,000	19	38,000	
66	Ophthalmoscope, Direct	Lamp	1 piece	2,500	4	10,000	
67	Retinoscope	Lamp	1 piece	2,500	3	7,500	
88	Diagnostic Set	Lamp	2 piece	5,000	5	25,000	
						Total (JPY)	282,000
						Total (Billion UShs)	0.008
Purchased by RRH						Total (JPY)	244,000
						Total (Billion UShs)	0.007
Maintenance Contract						Total (JPY)	38,000
						Total (Billion UShs)	0.001

* Converted at JICA rate as of April 2022

Table 2-21: Assumed Breakdown of Consumables Costs at Soroti RRH

No.	Name of Equipment	Consumables	Required Quantity per Year		Unit Price (JPY)	Total Qty	Total (JPY)	NMS
1	Electro Surgical Unit	Anesthesia gas, 250ml	6	bottle	30,000	3	90,000	○
		CO2 absorber, 5L	1	bag	6,000		18,000	○
12	Ultrasound Scanner (Portable)	Gel, 5 kg	1	bag	3,500	5	17,500	○
13		thermal paper, 20m	8	bottle	10,400		52,000	○
16	CPAP Machine	Humidifier Bottle	24	piece	16,800	3	50,400	
19	Infant incubator	Filter	2	sheet	3,600	4	14,400	
39	ECG	Recording paper, Z-Fold	24	piece	19,200	1	19,200	○
45	Nebulizer	Medicine cup	6	piece	3,000	10	30,000	
48	Patient Monitor	Disposable electrode, 50 pieces/ box	2	box	3,600	19	68,400	
55	Suction Apparatus, Electric	Suction tube	1	set	1,500	11	16,500	○
60	Dental Unit	Diamond Bar for Polishing	2	set	6,000	2	12,000	
		Vacuum Tip	12	piece	4,800		9,600	
63	Auto Refractometer	Recording paper, 20m	24	piece	6,000	1	6,000	○
69	Tonometer	Recording paper, 20m	24	piece	6,000	2	12,000	○
71	Visual Field Analyzer	Recording paper, 20m	24	piece	6,000	1	6,000	
76	Physiotherapy Apparatus Set	Disposable electrode, 50 pieces/ box	4	box	9,200	1	9,200	
		Gel, 5 kg	1	bag	3,500	1	3,500	
77	Autoclave, Electric, approx. 100L	Salt for water softener	1	bag	2,000	2	4,000	
84	Generator, 100KVA	diesel fuel	600	litter	90,000	1	90,000	
89	Audiometer, Clinical	Recording paper, 20m	24	piece	6,000	1	6,000	○
Total (JPY)							534,700	
Total (Billion US\$)							0.016	
Purchased by RRH							297,500	
Total (Billion US\$)							0.009	
Procured from NMS							237,200	
Total (Billion US\$)							0.007	

* Converted at JICA rate as of April 2022

The spare parts costs will be paid from the hospital's maintenance budget. However, the Project plans to cover a maintenance contract for some advanced equipment for up to three years, and the MoH plans to continue the said maintenance contract in its own budget. Most of the equipment is categorized as replacement and/or refilling of the quantities, so the additional costs should be small.

For the consumables costs, commodity consumables are supplied by the National Medical Store (NMS) at no charge, and specific consumables are procured from the hospital budget. However, as noted above, the additional costs are expected to be small, since the main focus will be on the replacement of existing equipment. In addition, fuel costs for generators may be further reduced, as the frequency of power

outages is expected to decrease with the start of the operation of the large hydroelectric power station at Karuma in 2022. In addition, the maintenance cost itself is expected to be lower than in the past due to improvement of preventive maintenance through the training of daily maintenance and soft component.

(2) Jinja RRH

The estimated annual operation and maintenance costs for spare parts and consumables are as follows.

Table 2-22: Estimated Annual Increase in Operation and Maintenance Costs at Jinja RRH

(Upper: Billion UShs, lower: JPY)

	Total	Breakdown		
	Estimated Annual Cost	Procured by RRH	Maintenance Contract	NMS
A: Spare parts	0.009	0.009	-	-
	309,500	309,500	-	-
B: Consumables	0.026	0.015	-	0.010
	878,200	522,500	-	355,700
Total	0.035	0.024	-	0.010
	1,187,700	832,000	-	355,700

* Converted at JICA rate as of April 2022

The breakdown of spare parts and consumables costs is assumed as shown in Table 2-23 and Table 2-24.

Table 2-23: Assumed Breakdown of Spare Parts Costs at Jinja RRH

No	Name of Equipment	Spare Parts	Required Quantity per Year	Unit Price (JPY)	Total Qty	Total (JPY)	Maintenance Contract
2	Electro Surgical Unit	Electrode	2 set	26,000	3	78,000	
16	CPAP Machine	Respiratory Circuit Set	3 set	18,000	4	72,000	
19	Infant Incubator	Probe for infant	1 piece	18,000	2	36,000	
26	Oscillating Cutter and Bone Drill Set	Drill blade	1 piece	5,000	2	10,000	
29	Plaster Cutting Set	Blade	1 set	3,500	1	3,500	
39	ECG	Limb and chest electrodes	1 set	15,000	2	30,000	
48	Patient Monitor	Blood pressure cuff	1 piece	2,000	20	40,000	
66	Ophthalmoscope, Direct	Lamp	1 piece	2,500	2	5,000	
67	Retinoscope	Lamp	1 piece	2,500	2	5,000	
88	Diagnostic Set	Lamp	2 piece	5,000	6	30,000	
						Total (JPY)	309,500
						Total (Billion UShs)	0.009
Purchased by RRH						Total (JPY)	269,500
						Total (Billion UShs)	0.008
Maintenance Contract						Total (JPY)	40,000
						Total (Billion UShs)	0.001

* Converted at JICA rate as of April 2022

Table 2-24: Assumed Breakdown of Consumables Costs at Jinja RRH

No	Name of Equipment	Consumables	Required Quantity per Year		Unit Price (JPY)	Total Qty	Total (JPY)	NMS
1	Anesthesia Machine	Anesthesia gas, 250ml	6	bottle	30,000	5	150,000	○
		CO2 absorber, 5L	1	bag	6,000		30,000	○
12	Ultrasound Scanner (Portable)	Gel, 5 kg	1	bag	3,500	4	14,000	○
13		Thermal paper, 20m	8	bottle	10,400		41,600	○
14	Ultrasound Scanner	Gel, 5 kg	2	bag	7,000	1	7,000	○
		Thermal paper, 20m	24	bottle	31,200		31,200	○
15	General X-ray Machine	Dry film, 100 sheets	12	box	240,000	1	240,000	
16	CPAP Machine	Humidifier Bottle	24	piece	16,800	4	67,200	
19	Infant incubator	Filter	2	sheet	3,600	2	7,200	
39	ECG	Recording paper, Z-Fold	24	piece	19,200	2	38,400	○
45	Nebulizer	Medicine cup	6	piece	3,000	9	27,000	
48	Patient Monitor	Disposable electrode, 50 pieces/ box	2	box	3,600	20	72,000	
55	Suction Apparatus, Electric	Suction tube	1	set	1,500	13	19,500	○
60	Dental Unit	Diamond Bar for Polishing	2	set	6,000	3	18,000	
		Vacuum Tip	12	piece	4,800		14,400	
63	Auto Refractometer	Recording paper, 20m	24	piece	6,000	1	6,000	○
69	Tonometer	Recording paper, 20m	24	piece	6,000	2	12,000	
71	Visual Field Analyzer	Recording paper, 20m	24	piece	6,000	1	6,000	
76	Physiotherapy Apparatus Set	Disposable electrode, 50 pieces/ box	4	box	9,200	1	9,200	
		Gel, 5kg	1	bag	3,500		3,500	
77	Autoclave, Electric, approx..100L	Salt for water softener	1	bag	2,000	2	4,000	
85	Generator, 30KVA	diesel fuel	360	litter	54,000	1	54,000	
89	Audiometer, Clinical	Recording paper, 20m	24	piece	6,000	1	6,000	○
Total (JPY)							878,200	
Total (Billion US\$)							0.025	
Purchased by RRH		Total (JPY)					522,500	
		Total (Billion US\$)					0.015	
Procured from NMS		Total (JPY)					355,700	
		Total (Billion US\$)					0.010	

* Converted at JICA rate as of April 2022

For the same reasons as Soroti RRH, the additional costs are expected to be small. In addition, the expenditure on X-ray film, which is the main expense, can be lowered due to the digitalization of X-ray equipment, which enables diagnostic imaging on monitors.

2-5-2-2 Financial Conditions

(1) Health-related Expenditures

Trends in the health sector expenditures are shown in Table 2-25. While government health spending and support from development partners have been steadily increasing, a share of total government spending for health sector has been declining in recent years, falling to 6.1% in FY2020/21. Note that counter funds for joint projects with development partners are not included in the above government expenditures but are distributed separately depending on the size and amount required for each project.

Table 2-25: Health-related Expenditure

	2016/17	2017/18	2018/19	2019/20	2020/21
GoU Health Expenditure (Billion US\$)	993	1,008	1,371	1,472	1,590
External Budget Expenditure (Billion US\$)	877	944	1,003	1,117	1,198
Health Expenditure (Billion US\$)	1,870	1,952	2,374	2,589	2,788
GoU Expenditure (Billion US\$)	20,431	29,000	32,700	36,113	45,494
Health Expenditure as % of GoU Expenditure (%)	9.2%	6.7%	7.3%	7.2%	6.1%

(Source) Annual Health Sector Performance Report FY2020/21

(2) Budget for Target Hospitals

Although the RRH is administratively under the MoH, the budget is allocated directly from the MoFPED to the hospitals. Tables 2-26 and 2-27 show the budget and execution rates for Soroti and Jinja RRHs for the past five years. (Note that only approved budget amounts are available for FY 2021/22.)

[Soroti RRH]

Table 2-26: Soroti RRH Budget and Execution Rate

	Item	RRH Services	RRH Internal Audit	Regional Maintenance	Retrofitting of Soroti RRH	RRH Rehabilitation	Institutional Support to Soroti RRH	Total	
		Unit : Billion UShs (a~c), Percent (d~f)							
2021/22	a	Approved Budget	7.81	0.01	0.14	0.20	0.00	0.00	8.17
2020/21	a	Approved Budget	6.71	0.01	0.14	0.20	0.00	0.00	7.06
	b	Released	7.41	0.01	0.14	0.20	0.00	0.00	7.76
	c	Spent	7.19	0.01	0.14	0.20	0.00	0.00	7.54
	d	% GoU Budget Released	110.4%	100.0%	100.0%	100.0%	0.0%	0.0%	109.9%
	e	% GoU Budget Spent	107.1%	99.9%	99.6%	100.0%	0.0%	0.0%	106.8%
	f	% GoU Releases Spent	97.0%	99.9%	99.6%	100.0%	0.0%	0.0%	97.2%
2019/20	a	Approved Budget	7.15	0.01	0.14	0.00	0.71	0.43	8.44
	b	Released	6.80	0.01	0.14	0.00	0.71	0.43	8.08
	c	Spent	6.53	0.00	0.14	0.00	0.71	0.43	7.82
	d	% GoU Budget Released	95.0%	100.0%	100.0%	0.0%	100.0%	100.0%	95.8%
	e	% GoU Budget Spent	91.4%	99.9%	100.0%	0.0%	100.0%	100.0%	92.7%
	f	% GoU Releases Spent	96.1%	99.9%	100.0%	0.0%	100.0%	100.0%	96.7%
2018/19	a	Approved Budget	6.44	0.01	0.14	0.00	0.74	0.75	8.08
	b	Released	6.76	0.01	0.14	0.00	0.74	0.75	8.39
	c	Spent	6.47	0.01	0.14	0.00	0.74	0.75	8.11
	d	% GoU Budget Released	104.9%	100.0%	100.0%	0.0%	100.0%	100.0%	103.9%
	e	% GoU Budget Spent	100.4%	100.0%	100.0%	0.0%	100.0%	100.0%	100.3%
	f	% GoU Releases Spent	95.7%	100.0%	100.0%	0.0%	100.0%	100.0%	96.6%
2017/18	a	Approved Budget	4.15	0.01	0.14	0.00	1.35	0.14	5.78
	b	Released	4.77	0.01	0.14	0.00	1.35	0.14	6.40
	c	Spent	4.55	0.00	0.14	0.00	0.63	0.00	5.32
	d	% GoU Budget Released	114.9%	100.0%	100.0%	0.0%	100.0%	100.0%	110.7%
	e	% GoU Budget Spent	109.7%	95.0%	100.0%	0.0%	46.5%	0.0%	92.1%
	f	% GoU Releases Spent	95.5%	95.0%	100.0%	0.0%	46.5%	0.0%	83.2%

(Source) Annual Budget Performance Report 2017/18~2020/21, Semi-Annual Budget Performance Report 2021/2022

[Jinja RRH]

Table 2-27: Jinja RRH Budget and Execution Rate

	Item	RRH Services	RRH Internal Audit	Regional Maintenance	Retrofitting of Soroti RRH	RRH Rehabilitation	Institutional Support to Soroti RRH	Total	
		Unit : Billion UShs (a~c), Percent (d~f)							
2021/22	a	Approved Budget	16.11	0.01	0.16	0.20	0.87	0.00	17.35
2020/21	a	Approved Budget	10.65	0.01	0.14	0.24	1.36	0.00	12.40
	b	Released	13.76	0.01	0.13	0.24	1.36	0.00	15.51
	c	Spent	11.02	0.01	0.11	0.24	1.36	0.00	12.75
	d	% GoU Budget Released	129.1%	91.0%	99.4%	100.0%	100.0%	0.0%	125.0%
	e	% GoU Budget Spent	103.5%	80.1%	84.6%	100.0%	100.0%	0.0%	102.8%
	f	% GoU Releases Spent	80.1%	88.1%	85.1%	100.0%	100.0%	0.0%	82.2%
2019/20	a	Approved Budget	10.77	0.02	0.14	0.00	1.10	0.09	12.12
	b	Released	9.50	0.01	0.14	0.00	1.10	0.09	10.84
	c	Spent	9.42	0.01	0.13	0.00	1.10	0.09	10.76
	d	% GoU Budget Released	88.2%	66.7%	100.0%	0.0%	100.0%	100.0%	89.4%
	e	% GoU Budget Spent	87.5%	66.7%	98.0%	0.0%	100.0%	100.0%	88.8%
	f	% GoU Releases Spent	99.2%	100.0%	98.0%	0.0%	100.0%	100.0%	99.3%
2018/19	a	Approved Budget	9.56	0.02	0.09	0.00	1.30	0.19	11.15
	b	Released	9.74	0.01	0.09	0.00	1.30	0.19	11.33
	c	Spent	8.19	0.01	0.09	0.00	1.30	0.19	9.78
	d	% GoU Budget Released	101.9%	69.1%	103.7%	0.0%	100.0%	100.0%	101.6%
	e	% GoU Budget Spent	85.7%	58.8%	103.7%	0.0%	100.0%	99.5%	87.7%
	f	% GoU Releases Spent	84.1%	85.1%	100.0%	0.0%	100.0%	99.5%	86.3%
2017/18	a	Approved Budget	6.51	0.02	0.09	0.00	0.84	0.65	8.11
	b	Released	7.54	0.00	0.00	0.00	0.67	0.82	9.03
	c	Spent	6.09	0.00	0.00	0.00	0.73	0.64	7.46
	d	% GoU Budget Released	115.8%	0.0%	0.0%	0.0%	80.4%	125.1%	111.4%
	e	% GoU Budget Spent	93.5%	0.0%	0.0%	0.0%	87.5%	98.0%	92.0%
	F	% GoU Releases Spent	80.8%	0.0%	0.0%	0.0%	108.9%	78.3%	82.6%

(Source) Annual Budget Performance Report 2017/18~2020/21, Semi-Annual Budget Performance Report 2021/2022

The estimated annual increase in maintenance costs for the Project is about 0.29% of the total budget of 8.17 billion shillings for FY2021/22 at Soroti RRH and about 0.21% of the total budget of 17.35 billion shillings for FY2021/22 at Jinja RRH. As noted above, most consumables will be supplied by the NMS,

whose budget is a separate line in the MoH and is not included in the hospital budget. In addition, the above estimation includes the costs of spare parts and consumables, not only for new equipment but also for the replacement equipment, which is the majority, so the actual increase in maintenance costs for the procured equipment is small.

Although the budgets of both hospitals may increase or decrease depending on the allocation of renovation costs assigned by the MoH, the main part of the budget, 'RRH Services,' has been increasing for the past five years.

In addition, although revenues from private wings revert to the MoFPED on a quarterly basis, a portion of such revenues can be applied as an additional budget by showing appropriate planning and actual performance. When the survey team members visited the Uganda Cancer Institute and Naguru National Referral Hospital, it was observed that some diagnostic imaging tests have adopted a partial charge system to cover operation and maintenance costs.

Chapter 3. Project Evaluation

CHAPTER 3 Project Evaluation

3-1 Preconditions

To implement the Project, the Ugandan side will implement the actions to be taken as described in Chapter 2-3 Recipient Country Obligations at an appropriate time before or during the procurement period. This is a key precondition for the smooth implementation of the entire project schedule.

3-2 Necessary Inputs by Recipient Country

To achieve and maintain the effectiveness, the following actions should be taken by the Ugandan side.

- Construction of a new radiology building prior to installation
- Procurement of consumables and spare parts necessary for the procured medical equipment
- Secured medical personnel and technicians for proper use and maintenance of the equipment
- Continued maintenance of the equipment after the warranty period ends and maintenance contract covered by the Japanese side

3-3 Important Assumptions

To achieve and maintain the Project's effectiveness, the following assumptions need to be satisfied:

- National policies for health services are continued
The Uganda National Development Plan and the Health Sector Development Plan address the development of human resources for health and the strengthening of the health infrastructure. These directions need to be continued. In particular, the shortage of medical personnel has become a serious issue, and it is important to promote the development and securing of human resources in line with the development plan.
- Appropriate budget is allocated to the healthcare sector
For the outputs of the Project to be sustained, it is necessary that efforts for the stability and optimization of national finance are implemented in the future and that the necessary budget for hospital operations is secured in a stable manner.

3-4 Project Evaluation

3-4-1 Relevance

3-4-1-1 Project Beneficiaries

The beneficiary population of the Project is approximately 6.5 million, of which 2 million are in the catchment area of Soroti RRH (Soroti City and 10 neighbouring districts), and 4.5 million are in the area of Jinja RRH (Jinja City and 11 neighbouring districts).

3-4-1-2 Consistency with Uganda’s Development Plan

The goal of the *MoH Strategic Plan 2020/21–2024/25* is to ‘Strengthening the health system and its support mechanisms with a focus on primary healthcare to achieve Universal Health Coverage (UHC) by 2030’. One of its objectives is to improve the functionality and adequacy of health infrastructure and logistics. In addition, the *Comprehensive Health Service Standards Manual* (July 2021) outlines health service standards by level of healthcare facility. The RRH is identified for the provision of psychiatry, ENT, ophthalmology, dentistry, intensive care, radiology, pathology and higher level surgical services, in addition to the services provided by district hospitals and health centres. The Project aims to strengthen the functionality of Jinja RRH and Soroti RRH by providing adequate equipment. Accordingly, the Project contributes to achieving the goals of Uganda's Health Strategic Plan and is positioned as urgent and a high priority.

3-4-1-3 Consistency with Japan’s Official Development Assistance (ODA) Policy

According to the *Country Assistance Policy for the Republic of Uganda* (July 2017) issued by the Japanese Ministry of Foreign Affairs, (3) Improvement of Living Conditions (Health and Water Supply) is one of the priority areas (medium-term objectives). This states that to improve basic livelihoods, Japan aims to enhance and expand the facilities and equipment of referral hospitals, together with its management skills. According to the *Rolling Plan for the Republic of Uganda* (September 2020), Improvement of Health Service is listed as development agenda 3-1 (sub-goal): ‘To improve basic livelihoods, the GoJ will implement the renovation of core medical facilities and equipment in rural areas through grant assistance’ and ‘To contribute to the achievement of the Sustainable Development Goal 3 (Good Health)’ are stated as policy for addressing development challenges. Thus, the Project is in line with Japan’s ODA policy.

3-4-1-4 Consistency with the Trend of International Health Cooperation

Among the SDGs adopted at the United Nations Sustainable Development Summit in 2015, SDG 3 ‘Ensure healthy lives and promote well-being for all at all ages’ is set as a goal in the healthcare field by 2030. One of its targets is ‘3.8 Achieve UHC, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all’. The Project contributes to promoting UHC, which is a trend of international cooperation.

3-4-2 Effectiveness

The Project aims for improving and maintaining the medical service functionality of Jinja RRH and Soroti RRH by replacing obsolete equipment, as well as refilling quantities and introducing new equipment for advanced medical services with high-impact. The indicators of effectiveness were chosen to be easily accessible and measurable as follows.

3-4-2-1 Quantitative Indicator

The indicators used to measure the expected effects are summarized in Table 3-1.

Table 3-1: Quantitative Indicator

Indicator (per Year)		Baseline 【Actual Record in 2021】		Target 【After 3 Years from Project Completion (in 2027)】	
		Soroti RRH	Jinja RRH	Soroti RRH	Jinja RRH
1	Number of examinations				
	Number of general X-ray exams	N/A	2,067	N/A	4,000
	Number of dental X-ray exams	0	0	300	350
	Number of ultrasound exams	2,133	131	4,500	7,000
	Number of upper gastrointestinal endoscope exams (including biopsy and treatment)	0	0	150	300
2	Number of outpatients				
	Number of outpatients of all departments	160,056	213,260	192,000	255,000
	Number of outpatients of ophthalmology department ^{*1}	1,762	4,020	3,500	8,000
	Number of outpatients of dental department ^{*1}	5,720	6,512	8,500	9,000
	Number of outpatients of physiotherapy department ^{*1}	2,786	2,256	3,700	5,000
3	Number of operations				
	Number of major surgeries ^{*2} including Caesarean section	2,427	2,338	3,200	4,000

*1 Noted that as a precondition, the number of medical doctors will not be decreased.

*2 Surgeries which involve general anaesthesia .

The basis for the above-mentioned baseline and target values is shown in Tables 3-2, 3-3 and 3-4.

Table 3-2: Basis for Baseline and Target Values (Number of Examinations)

Indicator	Baseline 【Actual Record in 2021】	Target 【3 Years from Project Completion (in 2027)】	
		Soroti RRH	Jinja RRH
Number of general X-ray exams	Actual record in 2021 ^{*1}	—	Since the actual record in 2018 when the general X-ray was operating without problems was 5,759, it is calculated assuming that it will be at least double.
Number of dental X-ray exams	Reference value is 0 (Novel equipment)	Calculated based on the estimated number of needed exams suggested by the dentist at Soroti RRH, assuming that 6% of the number of patients in 2021 will be examined.	Calculated based on the ratio of the number of outpatients between Soroti RRH and Jinja RRH.

Indicator	Baseline 【Actual Record in 2021】	Target 【3 Years from Project Completion (in 2027)】	
		Soroti RRH	Jinja RRH
Number of ultrasound exams	Actual record in 2021 ^{*1}	(1) Since the actual record in the radiology and emergency departments in 2020 was 2,773, it is calculated assuming that it will be about the same number. (2) It is assumed that at least 50 exams a month will be demanded in the obstetrics and gynaecology department, the paid clinical department and the internal medicine ward (50 times/month × 3 places × 12 months = 1,800 cases). Calculated on the assumption that it will increase to the same extent as the totals of (1) and (2) (4,573 cases).	(1) The actual record in 2018 when ultrasound was operating without problems in radiology and the emergency department was 6,631. It is calculated assuming it will be about the same number. (2) It is assumed that at least 50 exams a month will be demanded in the obstetrics and gynaecology department (50 times/month × 1 place × 12 months = 600 cases). Calculated on the assumption that it will increase to the same extent as the totals of (1) and (2) (7,231 cases).
Number of upper gastrointestinal endoscope exams (Including biopsy and treatment)	Reference value is 0 (Novel equipment)	Calculated based on the ratio of the population of the catchment area of Soroti RRH and Jinja RRH.	Calculated assuming that about 6 examinations will be conducted per week ^{*2} .

^{*1} Based on the interviews by the survey team (The number reflects an environment of insufficient functioning medical equipment)

^{*2} The total number of upper and lower gastrointestinal endoscope exams in Uganda Cancer Institute (UCI) is 4–5 per day.

Table 3-3: Basis for Baseline and Target Values (Number of Outpatients)

Indicator	Baseline 【Actual Record in 2021】	Target 【After 3 Years from Project Completion (in 2027)】	
		Soroti RRH	Jinja RRH
Number of outpatients of all departments	Actual record in 2021	Calculated assuming 20% increase.	Calculated assuming 20% increase.
Number of outpatients of ophthalmology department	Actual record in 2021	Calculated assuming that it will at least double from the number in 2021, referring to Jinja RRH.	The actual number in 2018 was 17,044. In the recruitment plan for 2022, since it is expected that the same human resources will be secured as in 2018, it is calculated assuming that it will at least double the number in 2021.
Number of outpatients of dental department	Actual record in 2021	One dental unit is in operation currently, and two new units are scheduled to be provided. It is	Two old dental units are operating currently, and three units will be operating after updating the equipment.

Indicator	Baseline 【Actual Record in 2021】	Target 【After 3 Years from Project Completion (in 2027)】	
		Soroti RRH	Jinja RRH
		calculated assuming that it will be at least 1.5 times the record in 2021, referring to Jinja RRH.	In the recruitment plan for 2022, it is expected that sufficient human resources will be secured to operate three units at the same time. Calculated assuming that it will be 1.5 times the record in 2021.
Number of outpatients of physiotherapy department	Actual record in 2021	Calculated assuming 10% increase every year.	Calculated assuming 30% increase every year.

Table 3-4: Basis for Baseline and Target Values (Number of Operations)

Indicator	Baseline 【Actual record in 2021】	Target 【After 3 years from the Project completion (in 2027)】	
		Soroti RRH	Jinja RRH
Number of major operations of all departments (including Caesarean section)	Actual record in 2021	Calculated assuming 10% increase every year.	Calculated assuming 20% increase every year.

3-4-2-2 Qualitative Effects

The qualitative indicators are summarized in Table 3-5.

Table 3-5: Qualitative Indicators

Indicator	
1	<p>Increased patients' satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Improved diagnostic and therapeutic services in each clinical department • Improved patient safety by effective operation of the post-operative recovery room in the central operating room and expanding the space and functions of the wards and the high dependency unit (HDU) • Reduced burden on patients and medical staff through improved and efficient services by operating rapid ultrasonic diagnosis in the obstetrics and gynaecology department, emergency department and wards • Improved medical treatment environment by updating medical furniture as patient beds
2	<p>Improved quality of hospital services</p> <ul style="list-style-type: none"> • Improved cancer diagnosis function in gynaecology and gastrointestinal medicine • Improved function of patient care in pregnancy and delivery • Improved prognosis for newborns with respiratory failure • Improved surgical environment • Improved physiotherapy services
3	<p>Increased hospital staff satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Increased staff motivation • Increased staff retention

Appendices

1. Member List of the Study Team
2. Study Schedule
3. List of Parties Concerned in the Recipient Countries
4. Minutes of Discussion
5. Soft Component Plan
6. References
7. Other Relevant Data (Result of the Water Quality Analysis)

[APPENDICES]

1. Member List of the Study Team

(1) The Field Survey (26th March to 22nd April 2022: 28 days)

	Name	Title	Organization
JICA	Mr. Ichiro FUKUHARA	Leader	JICA Uganda Office
	Dr. Rei KANSAKU	Technical Advisor	JICA Headquarters
	Ms. Rina KASHIMA	Project Coordinator	JICA Headquarters
Consultant	Mr. Naoki MIMURO	Chief Consultant/ Equipment Planning	Tres Consulting Corporation
	Mr. Takahiko MINASE	Deputy Chief Consultant/ Maintenance Planning	Fujita Planning Co., Ltd.
	Ms. Yasuko KASAHARA	Healthcare Plan/ Gender Consideration	Fujita Planning Co., Ltd.
	Mr. Hideki MOCHIZUKI	Procurement/ Cost Planning	International Total Engineering Corporation
	Mr. Shuzo ISHIKAWA	Facility Planning	Sakura Global Solutions, Inc.
	Mr. Hiroki MASUMI	Architectural Planning/ Site Condition Survey	Masumi Architecture Studio

(2) Explanation on Draft Preparatory Survey Report (5th August to 14th August 2022: 10 days)

	Name	Title	Organization
JICA	Ms. Sonoko TAKAHASHI	Leader	JICA Headquarters
	Dr. Rei KANSAKU	Technical Advisor	JICA Headquarters
	Ms. Mayu SUZUKI	Project Coordinator	JICA Headquarters
Consultant	Mr. Naoki MIMURO	Chief Consultant/ Equipment Planning	Tres Consulting Corporation
	Mr. Yosuke KONNO	Deputy Chief Consultant/ Maintenance Planning	Fujita Planning Co., Ltd.

2. Study Schedule

(1) The Field Survey (26th March to 22nd April 2022: 28 days)

No	Date		JICA			Consultant Members						
			Leader	Technical Advisor	Project Coordinator	Chief Consultant/ Equipment Planning	Deputy Chief/ Maintenance Planning	Healthcare plan & Gender consideration	Architectural Planning/ Site Condition Survey	Facility Planning	Procurement & Cost Planning	
			Ichiro FUKUHARA	Rei KANSAKU	Rina KASHIMA	Naoki MIMURO	Takahiko MINASE	Yasuko KASAHARA	Koki MASUMI	Shuzo ISHIKAWA	Hidenori MOCHIZUKI	
1	26-Mar	Sat				Tokyo -->						
2	27-Mar	Sun				--> Entebbe						
3	28-Mar	Mon				Meeting: JICA Office, HID/MOH						
4	29-Mar	Tue				Kampala --> Jinja, Jinja RRH (Day 1)						
5	30-Mar	Wed				Survey: Jinja RRH (Day 2), Electricity distribution company and Water supply corporation						
6	31-Mar	Thu				Survey: Jinja RRH (Day 3)						
7	1-Apr	Fri				Survey: Jinja RRH (Day 4), (Online Meeting: JICA Tokyo)						
8	2-Apr	Sat				Internal Meeting & Documentation						
9	3-Apr	Sun				Jinja --> Soroti						
10	4-Apr	Mon	Tokyo-->			Survey: Soroti RRH (Day 1)						
11	5-Apr	Tue	--> Entebbe			Survey: Soroti RRH (Day 2)						
12	6-Apr	Wed	Internal Meeting, Meeting: JICA, Meeting: PS-MOH, Kamapala --> Jinja			Soroti --> Kampala Meeting: JICA Meeting: PS-MOH Kampala --> Jinja	Meeting: JICA, Survey: Soroti RRH (Day 3), Electricity distribution company			Meeting: JICA, Research: PVoC/UNBS, NDA registration & Local Agents		
13	7-Apr	Thu	Jinja --> Soroti Survey: Soroti RRH			Survey: Soroti RRH (Day 4), Water supply corporation			Research: PVoC/UNBS, NDA registration & Local Agents			
14	8-Apr	Fri	Soroti --> Kampala					Soroti --> Lira --> Jinja				
15	9-Apr	Sat	Preparation: Minutes of Meeting (M/M)					Survey: Jinja RRH Jinja --> Kampala		Preparation: Minutes of Meeting (M/M)		
16	10-Apr	Sun	Preparation: Minutes of Meeting									
17	11-Apr	Mon	M/M Discussion: MOH				Documentation		Research: Local Agents		Research: Local Agents, Transportation company	
18	12-Apr	Tue	Preparation, MM Signing: PS-MOH	Kampala--> Jinja RRH --> Kampala	Preparation M/M Signing: PS-MOH		Kampala--> Jinja RRH --> Kampala		Research: IPs, MOH		Survey: China - Uganda Friendship Hospital Naguru (Nauru National Referral Hospital)	
19	13-Apr	Wed	Survey: China - Uganda Friendship Hospital Naguru (Nauru National Referral Hospital)			AM: Survey: China - Uganda Friendship Hospital Naguru (Nauru National Referral Hospital) PM: Research: Tax Exemption		Survey: China - Uganda Friendship Hospital Naguru (Nauru National Referral Hospital)		Research: Utility, facility & Local Agents		
20	14-Apr	Thu	Report to Embassy of Japan	PCR Test Report to Embassy of Japan Survey: Uganda Cancer Institute		Report to Embassy of Japan Survey: Uganda Cancer Institute	Uganda Cancer Institute		Study of proposed new radiation building		Research: Local Agents, Transportation company, Uganda Cancer Institute	
21	15-Apr	Fri	Entebbe -->			Easter Holidays (Internal meeting and Documentation)						
22	16-Apr	Sat	--> Djibouti		--> Tokyo							
23	17-Apr	Sun										
24	18-Apr	Mon										
25	19-Apr	Tue										
26	20-Apr	Wed	Documentation PCR Test					Research: Local Agents, PCR Test				
27	21-Apr	Thu	Documentation			Discussion: MOH		Documentation				
28	22-Apr	Fri	Online Meeting: JICA Tokyo, Report to JICA Uganda Office, Entebbe -->					--> Tokyo				

[Abbreviations] HID: Health Infrastructure Department, IPs: Implementing Partners, M/M: Minutes of Meeting, MOH: Ministry of Health, NDA: National Drug Authority, NRH: National Referral Hospital, PVoC: Pre-Export Verification of Conformity to Standards Programme, PS: Permanent Secretary, RRH: Regional Referral Hospital, UNBS: Uganda National Bureau of Standards

(2) Explanation on Draft Preparatory Survey Report (5th August to 14th August 2022: 10 days)

No	Date		JICA			Consultant Members	
			Leader	Project Coordinator	Technical Advisor	Chief Consultant/ Equipment Planning	Deputy Chief/ Maintenance
			Sonoko TAKAHASHI	Mayu SUZUKI	Rei KANSAKU	Naoki MIMURO	Yosuke KONNO
1	5-Aug	Fri	--> Kampala on March 3			Tokyo -->	
2	6-Aug	Sat	Tokyo -->			--> Entebbe/ Kampala	
3	7-Aug	Sun	--> Entebbe/ Kampala Meeting: JICA Uganda Office (Online)			Internal meeting and Documentation	
4	8-Aug	Mon	Meeting: JICA Uganda Office Courtesy visit: MoFPED Meeting: HID MOH visit				
5	9-Aug	Tue	Explanation/discussion of draft report: MOH (HID, Assistant Commissioner for Clinical Services, and Commissioner & staff for Human Resources), Hospital Director and staff of Jinja RRH and Hospital Director of Soroti RRH. Preparation: Minutes of Discussions (M/D): MOH (HID)				
6	10-Aug	Wed	M/D discussion: MOH (HID) Meeting: MoFPED (feedbacks of the draft M/D) Meeting: JICA Uganda Office				
7	11-Aug	Thu	Survey: Jinja RRH				
8	12-Aug	Fri	Meeting: JICA Uganda Office				
			M/D signing: MoH Report to EOJ			Meeting: HID Documentation	
9	13-Aug	Sat	Entebbe/ Kampala -->				
10	14-Aug	Sun	--> Tokyo				

EOJ: Embassy of Japan, HID: Health Infrastructure Department, MOH: Ministry of Health, M/D: Minutes of Discussion
 MoFPED: Ministry of Finance, Planning, and Economic Development, PS: Permanent Secretary
 RRH: Regional Referral Hospital

3. List of Parties Concerned in the Recipient Country

Ministry of Health	
Diana Atwine Kanzira	Permanent Secretary
Sitra Mulepo	Senior Mechanical Engineer, Health Infrastructure Dept. (HID)
Tusubira Samuel	Civil Engineer, HID
George Otim	Acting Commissioner,
Tadeo Byabagambi	Principal Biomedical Engineer, HID
Muhimbise Owen	Biomedical Engineer, HID
Eric Tabusibwa	Team Lead, Results Based Financing Unit, Planning Department
John Ssendendo	Project coordinator, Uganda Reproductive Maternal & Child Health Service Improvement Project
Batesaaki M. P. Aggrey	Assistant Commissioner-Inspection and Compliance, Standards, Compliance, Accreditation and Patient Protection (SCAPP) Department, Directorate of Governance and Regulation (DGR)
Sarah Byakika Kyeyamwa	Commissioner, Planning, Financing & Policy
Miriam Tibaaga	Account Department, MoH
Ambrose Jakira	Pharmaceutical Department, MoH
Charles Muhumuza	Human Resources Officer
Muwanga Moses	Assistant Commissioner Health Service

Ministry of Finance, Planning & Economic Development	
Maris Wanyera	Acting Director
Bryam Akimanzi	Research Assistant
Doreen Ankunda	Accounts Assistant

Soroti Regional Referral Hospital	
Watmon Benedicto	Hospital Director
Omoya Bezy	Principal Hospital Administrator
Ojwang James	Senior Hospital Administrator
Etolu John Wilson	Consultant Physician
Okello Robert Julius	Hospital Planner
James Elwange	Principal Orthopedic Officer
Chemwajar Lenard	Senior Radiographer
Ajiko M Margaret	Consultant Surgeon
Akunguru Philip Denis	Medical Officer
Abito Betty	Central Sterilization Unit
Apio Elizabeth	Consultant ophthalmologist
Okello Charles Adupa	Dental staff
Aluo Ann Grace	Private wing staff
Bagambe Silver	Medical Officer (Private wing)
Osinde Welborn	Biostatistician
Apio Grace Eliko	Senior Nursing Officer (OPD)
Billy Ostelle	Orthopedic Officer
Atim Rebecca	Registered Nurse (Surgical Ward)
Piius Engety	Senior Physiotherapist
Butele Richard	Audiological Technician, ENT
Walter Muho	Dental staff
Egwalu Daniel	Theater assistant
Ogwal Walter	Workshop Manager
Akatusasira Alex	Workshop Technician

Jinja Regional Referral Hospital	
Yayi Alfred	Hospital Director (as of the Explanation on Draft Preparatory Survey Report)
Angella Namara	Acting Hospital Director (as of the Field Survey)
Semakula David	Principal Hospital Administrator
Alero Susan Rose	Senior Principal Nursing Officer
Jakuma Stephen Ojaj	Workshop Manger
Wanume Muniru	Radiographer
Kwikiriza Abert	Data officer
Mudondo Loy	Senior Nursing Officer
Nambuya Harriet	Senior Consultant Paediatrician
Masereka Robert	Surgeon
Kayiwa Denis	Pharmacist
Geria Esau	Dental Officer
Nkalubo Julius	Consultant, OBGYN
Moses Mwebaza	Biostatistician/ Monitoring & Evaluation Specialist
Mutema Charles Aiok	Principal Human Resource Officer
Lakidi Joyce	Laundry staff
Ongica James	Civil Technician
Asiimwe Edmand	Electrical Technician

Uganda National Bureau of Standards, National Drug Authority	
David Livingstone Ebiru	Executive Director, UNBS
Namara Inocent	PVoC contract manager, UNBS
Harrison Ndugga	Directorate of Inspectorate and enforcement, National Drug Authority

Naguru National Referral Hospital (NRH) /China Uganda Friendship Hospital	
Favour Joseline	Biomedical engineer
Mugisha N Regina	Principal Hospital Administrator
Ojwang Juma	Principal Radiographer

Uganda Cancer Institute	
Jackson Orem	Executive Director
Alfred Jatho	Director on Community Health
Nixon Niyonzima	Laboratory Director, Head Research and Training Directorate

Infrastructure	
Kibirige Hassan	Technical Officer - UMEME Jinja
Gutti Norbert	Engineer - National Water and Sewerage Corporation (NWSC) Jinja
Barasa Johnson	District Supervisor - UMEME Soroti
Mwase Geoffrey	Technical Officer - UMEME Soroti
Odeke Martin	Engineer - NWSC Soroti

Local distributors	
S.P Kunder	Country director, Meditec Uganda Ltd.
Rhitah Abigaba	Admin &Account Executive, Meditec Uganda Ltd.

Local distributors	
Olivia Nakachwa	Account Executive, Meditec Uganda Ltd.
S.P Kunder	Managing Director, Klass Africa Ltd.
Rhitah Abigaba	Operations Manager, Klass Africa Ltd.
Sam Byamukama	Director, Mark Biomedical
Faridah Nakamya	Sales Representative, Mark Biomedical
Solomon Owino	Biomedical Head of Technical team, Mark Biomedical
Albear Emil Ayoub	CEO, MEDEquip (U) LTD
Andrew Eretu	Sales Manager, MEDEquip (U) LTD
Benjamin Wamala	Head of Technical team, MEDEquip (U) LTD
Mawa David	Executive, Zicopp (U) Ltd.
Dr. Byaba Martin	Director Bio-Medical Engineering, Zicopp (U) Ltd.
Sneh Parekh	Director, Nairobi Enterprises(U) Ltd.
Sanjay Joshi	General Manager, Nairobi Enterprises(U) Ltd.
Josephat NG'ANG'A	Biomed / Manager, Nairobi Enterprises(U) Ltd.
Akash Shan	Strategic Business Unit Head, Phillips Pharmaceuticals (Uganda)
Vignesh Ravichandran	Business Development Manager, Medical Equipment, Phillips Pharmaceuticals (Uganda)
CVETA SHIRAZI	CEO, Pacific Diagnostics Ltd.
TONY BITHUM	Sale & Logistics Coordinator, Pacific Diagnostics Ltd.
Priscilla KABACWAMBA	Field Sales/Key Account Manager, Bollore Logistics
Desire Mugume	Sales Executive, Bollore Logistics
Florence Namayanja	Projects Manager, SPEDAG INTERFREIGHT
Stella Kembabazi	Head Projects, SPEDAG INTERFREIGHT
Joel.O. AKABWAY	Managing Director, Biomed System Centre Ltd.
Jude Odele	Biomedical Engineer, Biomed System Centre Ltd.
Bonthala REjesh Khanna	GM Customer Relationship Management, Abacus Pharma(A) Ltd.
Dean Rwankote	Chief Executive, Palin Corporation Ltd
Smith Edoni	Chief Operating Officer, Palin Corporation Ltd

Embassy of Japan in Uganda	
OYAMA Tomoko	First Secretary
TERADA Eri	Researcher

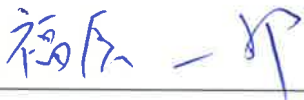
JICA Uganda Office	
UCHIYAMA Takayuki	Chief Representative
FUKUHARA Ichiro	Senior Representative
IMAMURA Mariko	Representative
SANO Yasuko	Project Formulation Advisor
Judith Zungu Mutabazi	Program Officer (Education & Health)

JICA Project on Patient Safety Establishment through 5S-KAIZEN-TQM	
TASEI Hiroshi	Vice Chief Advisor
ONOSAKA Emi	Japanese Expert on Patient Safety/ Training Management

**Minutes of Discussions
on the Preparatory Survey for the Project for
Improvement of Medical Equipment for Regional Referral Hospitals**

Based on preliminary discussions held between the Government of the Republic of Uganda (hereinafter referred to as “Uganda”) and Japan International Cooperation Agency (hereinafter referred to as “JICA”) in respect to the letter dated 15 March, 2022 (ref. no. JICA (UG) 202203150011), JICA dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as “the Team”) of the Project for Improvement of Medical Equipment for Regional Referral Hospitals (hereinafter referred to as “the Project”) to Uganda. The Team held a series of discussions with the officials of the Government of Uganda and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Kampala, 12th April, 2022
12/4/2022



Mr. FUKUHARA Ichiro
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



Dr. Diana Atwine
Permanent Secretary
Ministry of Health
The Republic of Uganda

WITNESS



Ms. Maris Wanyera
Acting Director, Directorate of Debt and Cash Policy
For: Permanent Secretary/Secretary to the Treasury
Ministry of Finance, Planning, and Economic Development
The Republic of Uganda

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the diagnostic and treatment capabilities of selected Regional Referral Hospitals (hereinafter referred to as “RRH”) in the eastern region of Uganda by providing medical equipment, thereby contributing to the improvement of the quality of health care services in eastern Uganda.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Improvement of Medical Equipment for Regional Referral Hospitals.”

3. Project site

Both sides confirmed that the sites of the Project are in Jinja and Soroti RRHs, which is shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

- 4-1. The Health Infrastructure Department under the Directorate of Strategy, Policy, and Development will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.

5. Items requested by the Government of Uganda

- 5-1. As a result of discussions, both sides confirmed that the items requested by the Government of Uganda are as shown in Annex 3.
- 5-2. JICA will assess the feasibility of the above requested items through the survey, and report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.
- 5-3. The Ugandan side agreed to provide additional data and information when requested by the Japanese side, especially regarding the fluoroscopy X-ray machine, gastrofiberscope, bronchoscope, and mammography, in order for JICA to further assess the needs, impact, and feasibility of these equipment.

3





5-4. The Government of Uganda shall submit an official request to the Government of Japan through a diplomatic channel before the appraisal of the Project, which is scheduled in May, 2022.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Ugandan side agreed that the procedures and basic principles of Japanese Grant (hereinafter referred to as “the Grant”) as described in Annex 4 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires the Ugandan side to submit the Project Monitoring Report, the form of which is attached as Annex 5.

6-2. The Ugandan side agreed to take the necessary measures, as described in Annex 6, for smooth implementation of the Project. The contents of the Annex 6 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.

The contents of Annex 6 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Tax Treatment

Both sides confirmed the tax treatment for the Japanese Grant Aid Project based on the following letters from Ministry of Finance, Planning and Economic Development (MOFPED) in Uganda attached as Annex 7.

- Letter: Ref. No. TPD 130/167/01 dated 19th July 2017
- Letter: Ref. No. TPD 130/167/01 dated 6th April 2018

8. Schedule of the Survey

8-1. The Team will proceed with further survey in Uganda until 21st April, 2022.

8-2. An official request to the Government of Japan will be submitted before May, 2022.

8-3. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Uganda in order to explain its contents around August, 2022.

8-4. If the contents of the draft Preparatory Survey Report is accepted and the undertakings for the Project are fully agreed by the Ugandan side, JICA will finalize the Preparatory Survey Report and send it to Uganda around December, 2022.

8-5. The above schedule is tentative and subject to change.

3

9. Environmental and Social Considerations

9-1. The Ugandan side confirmed to give due attention to environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).

9-2. The Project is categorized as “C” based on the following considerations:

Not located in a sensitive area, nor has it sensitive characteristics, nor falls in sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

10. Other Relevant Issues

10-1 Maintenance and Equipment to be procured

(a) CT Scanners and Radiology Buildings

Both sides agreed that CT scanners will not be provided in the Project, as the Ugandan side will procure CT scanners and construct new radiology buildings in Jinja and Soroti RRH, under the Ministry of Health’s plan to install CT scanners in 14 RRHs. Some equipment provided by the Project will be installed in the new radiology building, therefore the Ugandan side also agreed to prioritize construction in Jinja and Soroti among other RRHs.

(b) Allocation of Budget and Human Resources

The Ugandan side agreed to secure and allocate budget (operational and maintenance costs) and human resources (health service providers and any other personnel) necessary for the proper and sustainable operation and maintenance of the equipment provided by the Project.

The Ugandan side agreed to recruit and/or train appropriate specialized personnel for the operation and maintenance of advanced medical equipment and newly introduced equipment such as fluoroscopy X-ray machine, endoscope, etc., before the installation of the equipment.

(c) Maintenance Services

The team explained the importance of routine and periodical maintenance services of some major medical equipment. In response to this, both sides agreed to consider the inclusion of maintenance service contract for major medical equipment that require frequent maintenance to the Project scope.

The Ugandan side also agreed to secure maintenance costs after the maintenance contract and/or manufacturer guarantee covered by the Grant expires. The period

of maintenance contract and/or manufacturer guarantee depend on the equipment. Therefore, the JICA mission dispatched for explanation of the Draft Preparatory Survey Report will share the maintenance service of each equipment to be covered by the Grant.

(d) Pre-condition of the Installation of Equipment

The Ugandan side agreed to take necessary measures to secure installation space for the equipment procured by the Grant, including the construction of radiology buildings by June, 2023, generator houses with change-over switches and compressor cages in Jinja and Soroti RRHs, before the installation of equipment, and decommission of existing equipment. The construction of generator houses with change-over switches and compressor cages may be covered by the Grant, but will be confirmed during the explanation of the Draft Preparatory Survey Report. The Ugandan side agreed to refurbish electrical installations in the power houses and install new power distribution boards to the generator houses.

(e) Soft Components

The Ugandan side took note of the importance of operational and management training for equipment and requested to consider incorporating such soft components into the Project. The team agreed to plan to include operational and management training as soft components, and the Ugandan side agreed to support these training. The concrete contents will be developed and explained as part of Draft Preparatory Survey Report.

10-2 Uganda National Bureau of Standards “Pre-Export Verification of Conformity to Standards Programme” and National Drug Authority “Equipment Registration and Inspection”

The Ugandan side agreed to support registration and inspection of medical equipment by the National Drug Authority (hereinafter referred to as “NDA”) “Equipment Registration and Inspection” and secure exemption of “Pre-Export Verification of Conformity to Standards Programme” by Uganda National Bureau of Standards, for equipment supplied under the Project. The inspection fees for NDA clearance will be covered by the Grant.

10-3 Gender Mainstreaming

Both sides confirmed that following gender elements shall be duly reflected in the scope of the Preparatory Survey.

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- (a) Collecting information and gender disaggregated data for assessment of gender needs. Specifically, to conduct gender-specific needs survey since there may be differences in disease burden, medical examination rate, etc.
- (b) Elucidating benefits for women by examining data such as gender statistics.
- (c) Giving the Ugandan side suggestions on gender-specific needs and gender considerations related to the equipment plan.

Annex 1 Project Sites

Annex 2 Organization Chart

Annex 3 List of Equipment Requested by the Ugandan Side

Annex 4 Japanese Grant

Annex 5 Project Monitoring Report (template)

Annex 6 Major Undertakings to be taken by the Government of Uganda

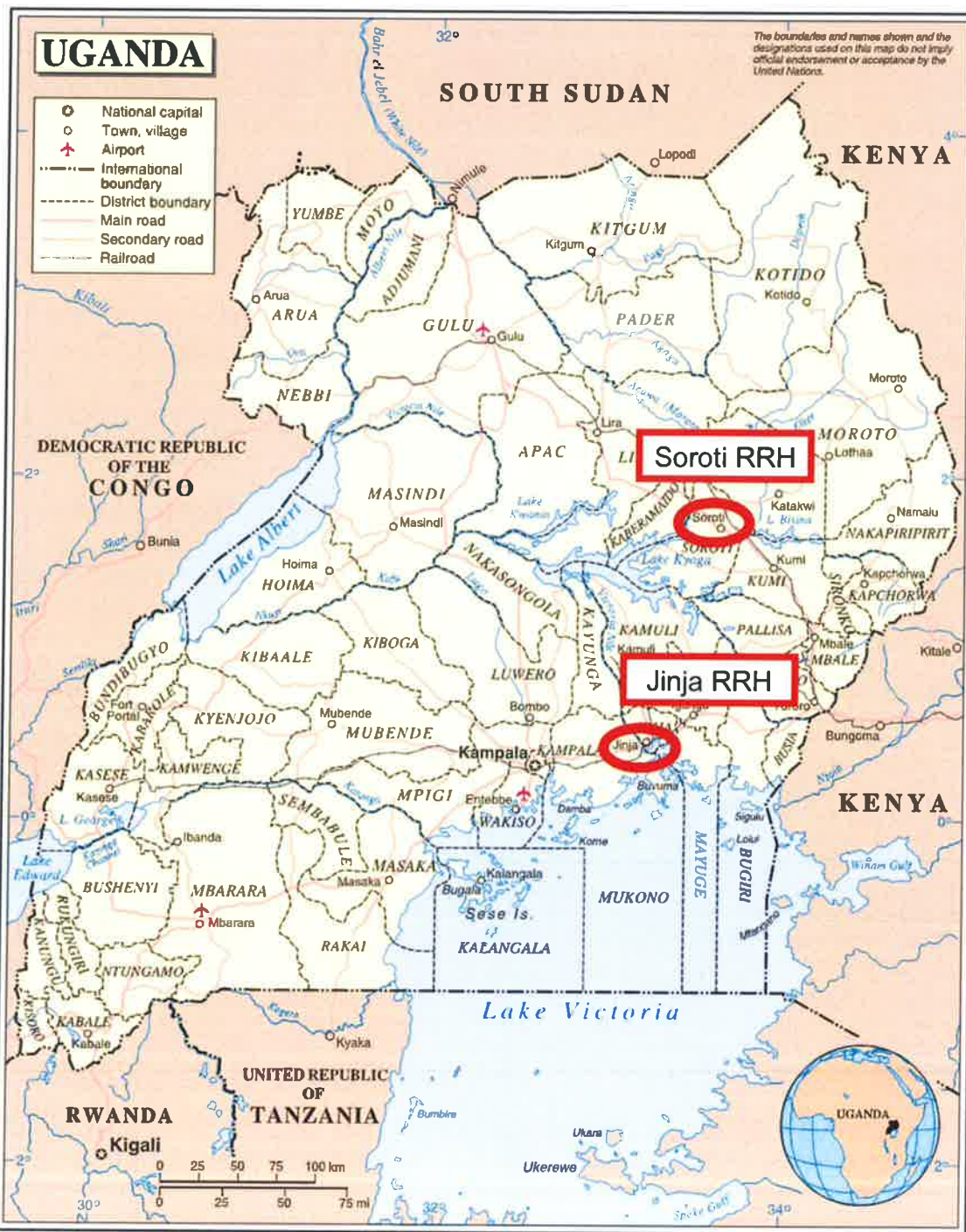
Annex 7 Tax Treatment of Japanese Grant Aid Projects

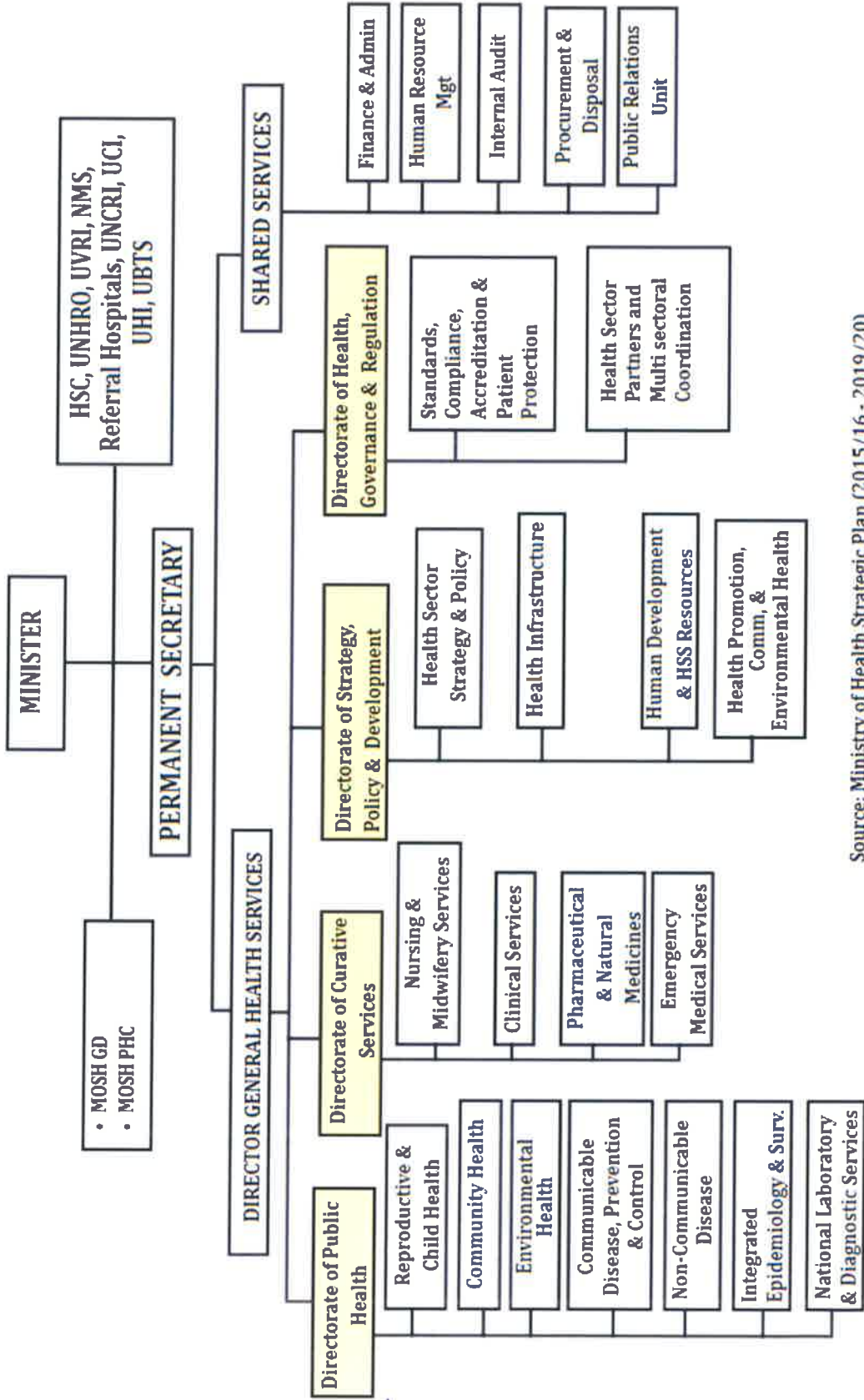
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Project Sites





Source: Ministry of Health Strategic Plan (2015/16 - 2019/20)

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No.	Name of Equipment [Definition of Priority] A: High (High-impact and high-value equipment for diagnosis and treatment) B: Medium (Commonly used equipment that need replacement or critically needed equipment with concern on human resources, maintenance capacity and/or impact) C: Low (Inexpensive equipment, medical furniture or equipment for which alternative options are available)	Priority	Soroti RRH (Quantity by Department/Unit)																					
			Operating Theatre	Orthopaedics	X-ray	OB/GYN	NCU	Sterilization	Dental	Emergency	OPD	Private Wing	Laundry	Physiotherapy	Surgical Ward	Paediatric Ward	Ophthalmology	Internal Medicine Ward	Mortuary	Pharmacy	ENT	Others	Sub-total Q'ty (Soroti)	
42	Examination Light	B				3			2	2	2										1			10
43	Instruments Set, Surgical Toilet and Suturing	B							6	4														10
44	Instrument Trolley	C	3			3				3	4			3	2									18
45	Nebulizer	A							2	2					3									10
46	Oxygen Concentrator	A				1	1			2	2			2	2			3						10
47	Oxygen Therapy Apparatus	C	2			4	2		3	4	4			6	5									30
48	Patient Monitor	A	2			3	2		3	1			2	3	1			4						21
49	Patient Trolley	B	2			3			1	2	3													11
50	Pulse Oximeter	A	2			3	3		2	6	4			2	3	2	5							32
51	Refrigerator, Pharmaceutical	A				1			1	1	1						1			5				9
52	Resuscitator Set, Manual	A	2			3			2															9
53	Sterilizing Drum Set	B	3			3			3	2				3										17
54	Suction Apparatus, Electric	A	3			1			1					2							1			11
55	Weighing Scale, Adult	C				1			1	1				1	2									7
56	Weighing Scale, Baby	C				1	1		1		1													4
57	Wheel Chair	B	1			2			1	2	3			2	2	4	5							22
58	X ray Film Viewer	C							1	3														9
59	Dental Unit	A							2															2
60	Instruments Set, Dental Extraction and general treatment	B							4															4
61	B scan, Ultrasound Biometry	A																				1		1
62	Auto Refractometer	A																				1		1

No.	Name of Equipment [Definition of Priority] A: High (High-impact and high-value equipment for diagnosis and treatment) B: Medium (Commonly used equipment that need replacement or critically needed equipment with concern on human resources, maintenance capacity and/or impact) C: Low (Inexpensive equipment, medical furniture or equipment for which alternative options are available)	Priority	Soroti RRH (Quantity by Department/Unit)																				
			Operating Theatre	Orthopaedics	X-ray	OB/GYN	NCU	Sterilization	Dental	Emergency	OPD	Private Wing	Laundry	Physiotherapy	Surgical Ward	Paediatric Ward	Ophthalmology	Internal Medicine Ward	Mortuary	Pharmacy	ENT	Others	Sub-total Q'ty (Soroti)
84	Mortuary Refrigerator	A																3					3
85	Generator, approx. 100KVA	A																		1			1
86	Generator, approx. 30KVA	A																					
87	Television Set for Education	B					2						1		3								8
88	Voltage Stabilizer	A																				10	10
89	Gastrofiberscope	A	1																				1
90	Bronchoscope	B																			1		1
91	LEEP Machine	B																					
92	Diagnostic Set	A					2								3								5
93	Mobile X-ray Machine	C																					
94	Audiometer, Clinical	A																			1		1
95	Instruments Set, ENT, Middle Ear	A																			1		1
96	Diagnostic Microscope, ENT	B																					
97	Mammography	B									1												1
	TOTAL (Quantity)		67	7	10	77	22	5	11	38	52	54	3	18	42	79	32	28	3	10	7	11	572
	TOTAL (Item)		24	5	7	25	9	2	6	20	18	20	3	10	13	15	16	10	1	2	7	2	88

No.	Name of Equipment [Definition of Priority] A: High (High-impact and high-value equipment for diagnosis and treatment) B: Medium (Commonly used equipment that need replacement or critically needed equipment with concern on human resources, maintenance capacity and/or impact) C: Low (Inexpensive equipment, medical furniture or equipment for which alternative options are available)	Priority	Jinja RRH- Main Campus (Quantity by Department/Unit)														Jinja RRH- Children Campus								TOTAL Q'TY (Soroti+Jinja)			
			Operating Theatre	Orthopaedics	X-Ray	OB/GYN	NICU	Sterilization	Emergency	OPD	Dental	ENT	Laundry	Ophthalmology	Mortuary	Physiotherapy	Pharmacy	Others	Emergency & Triage	Ward-1	Ward-2	OPD	Neonates room	Nutrition unit		Isolation & Tetanus	Private (for staff)	Sub-total Q'ty (Jinja)
26	Oscillating Cutter /Amputation Saw Set	B	2																								2	3
27	Bed with Traction Frame Set	A	6																								6	12
28	Drill Machine	C	2																								2	3
29	Instrument Set, Orthopaedics	A	3																								3	3
30	Plaster Cutting Set	B	2																								2	4
31	Operating Table, Hydraulic, Orthopaedics	A	1																								1	1
32	Bed, Adult (Ordinary)	C		30																							15	90
33	Bed, Adult (High Dependency Unit)	B		6																							2	10
34	Baby Cot	C																									5	15
35	Bed, Paediatric	B																									6	80
36	BP Machine	C		8																							5	43
37	Cabinet, Instruments, Lockable	C	1	2																							2	63
38	Crash Cart (Emergency Cart)	B		4																							2	25
39	ECG	B																									1	21
40	Examination Couch	B	2	1																							1	3
41	Examination Couch, Gynaecology	B			2																						2	40
																											2	7

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

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2) Banking Arrangements (B/A) (See “Financial Flow of Japanese Grant (A/P Type)” for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA’s procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project’s implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the “Meeting”) will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

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Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

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PROCEDURES OF JAPANESE GRANT

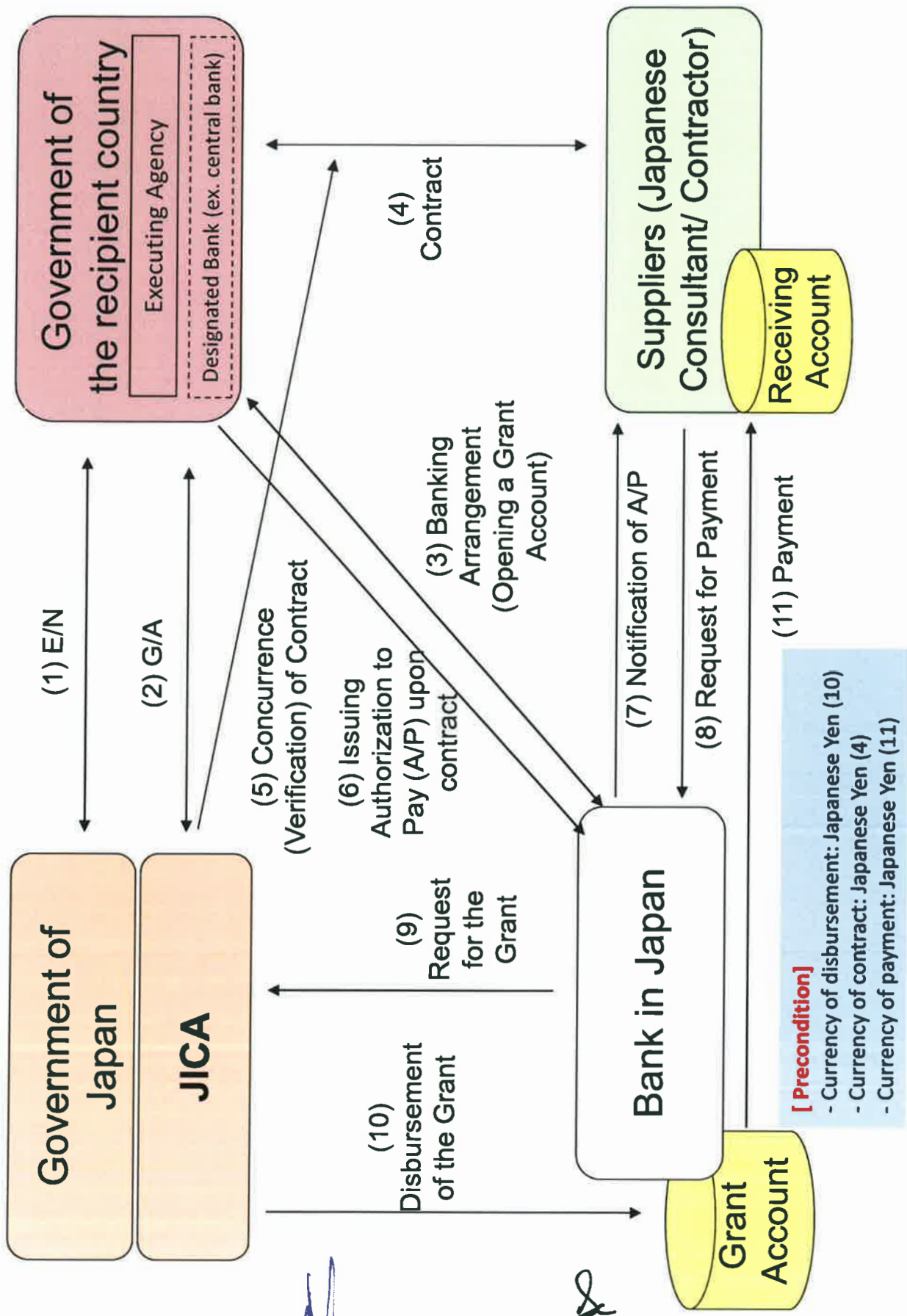
Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
4. Ex-post monitoring & evaluation	(14) Completion certificate		x			x	x	
	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

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Financial Flow of Japanese Grant (A/P Type)



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Date:
Ref. No.

JAPAN INTERNATIONAL COOPERATION AGENCY
JICA XXX OFFICE

[Address specified in the Article 5 of the Grant Agreement]

Attention: Chief Representative

Ladies and Gentlemen:

NOTICE CONCERNING PROGRESS OF PROJECT

Reference : Grant Agreement, dated 署名日(signed date of the G/A), for プロジェクト名(name of the Project)

In accordance to the Article 6 (3) of the Grant Agreement, we would like to report on the progress of the Project up to the following stages:

[Common]

- Preparation of bidding documents - result of detailed design
- Completion of final works under construction/procurement contract

[Construction]

- Monthly progress [Month/Year]

[Procurement of Equipment]

- Shipping/delivery, hand-over (take over) of equipment
- Installation works
- Operational training

- Other _____

Please see the details as per attached Project Monitoring Report (PMR).

Very truly yours,

[Signature]

[Name of the signer]

[Title of the signer]

[Name of the executing agency]

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cc:
Director General
Financial Cooperation Implementation Department
Japan International Cooperation Agency
[Address specified in the Article 5 of the Grant Agreement]

2



Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
20XX, Month

Organizational Information

Signer of the G/A (Recipient)	<p>Person in Charge (Designation) _____</p> <p>Contacts _____</p> <p style="margin-left: 100px;">Address: _____</p> <p style="margin-left: 100px;">Phone/FAX: _____</p> <p style="margin-left: 100px;">Email: _____</p>
Executing Agency	<p>Person in Charge (Designation) _____</p> <p>Contacts _____</p> <p style="margin-left: 100px;">Address: _____</p> <p style="margin-left: 100px;">Phone/FAX: _____</p> <p style="margin-left: 100px;">Email: _____</p>
Line Ministry	<p>Person in Charge (Designation) _____</p> <p>Contacts _____</p> <p style="margin-left: 100px;">Address: _____</p> <p style="margin-left: 100px;">Phone/FAX: _____</p> <p style="margin-left: 100px;">Email: _____</p>

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

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1: Project Description	
-------------------------------	--

1-1 Project Objective

--

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

--

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

--

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				
Total				

Note: 1) Date of estimation:

2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				

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- Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)
Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

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Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks *(at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

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	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

3



Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
 - Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
8. Pictures (by JPEG style by CD-R) (PMR (final) only)
9. Equipment List (PMR (final) only)
10. Drawing (PMR (final) only)
11. Report on RD (After project)

3

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
					Price (Decreased) E=C-D	Price (Increased) F=C+D
1 Item 1	●●t	●	●	●	●	●
2 Item 2	●●t	●	●	●		
3 Item 3						
4 Item 4						
5 Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

Items of Specified Materials	1st month, 2015	2nd month, 2015	3rd month, 2015	4th	5th	6th
1 Item 1	●	●	●			
2 Item 2						
3 Item 3						
4 Item 4						
5 Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Major Undertakings to be taken by the Government of Uganda

1. Specific obligations of the Government of Uganda which will not be funded with the Grant**(1) Before the Tender**

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To sign the banking arrangement (B/A) with a bank in Japan (the Agent Bank) to open bank account for the Grant	within 1 month after the signing of the G/A	MOH/ MOFPED		
2	To issue A/P to the Agent Bank for the payment to the consultant	within 1 month after the signing of the contract(s)	MOH/ MOFPED		
3	To bear the following commissions to the Agent Bank for the banking services based upon B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)	MOH/ MOFPED		
	2) Payment commission for A/P	every payment	MOH/ MOFPED		
4	To submit Project Monitoring Report (with the result of Detailed Design)	before preparation of the bidding documents	MOH		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

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(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue A/P to the Agent Bank for the payment to the supplier.	within 1 month after the signing of the contract(s)	MOH/MOFPED		
2	To bear the following commissions to the Agent Bank for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)	MOH/MOFPED		
	2) Payment commission for A/P	every payment	MOH/MOFPED		
3	To ensure prompt customs clearance and to assist the Supplier(s) with internal transportation in the country of the Recipient	during the Project	MOH/MOFPED		
4	To accord Japanese physical persons and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MOH/MOFPED		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted	during the Project	MOH/MOFPED		
6.	To remove existing equipment and if needed, renovate existing facilities, to install new ones.	before or during the Project	MOH		
7.	To bear all expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MOH		
8.	To notify JICA promptly of any incident or accident, which has, or is likely to have a significant adverse effect on the environment, the affected communities, the public or workers	during the installation	MOH		
9.	To submit Project Monitoring Report				
	1) To submit Project Monitoring Report after each work under the contract(s) such as shipping, hand over, installation and operational training	within 1 month after completion of each work	MOH		
	2) To submit Project Monitoring Report concerning construction work on imaging building.	at the start and end of the construction of imaging building	MOH		
	3) To submit Project Monitoring Report (final) (including as-built drawings, equipment list, photographs, etc.)	within 1 month after issuance of Certificate of Completion for the works under the contract(s)	MOH		
10.	To submit a report concerning the completion of the Project	within 1 month after completion of the Project	MOH		
11.	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)				
	1) Electricity If required, relocation of electrical lines, exchange of the transformers, and addition of power outlets to increase the power receiving capacity.	before the start of the installation	MOH		
	2) Water Supply If required, increase capacity of the city water distribution main to the site	before the start of the installation	MOH		

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	3) Drainage If required, increase capacity of the city drainage main to the site	before the start of the installation	MOH		
12.	To recruit sufficient staff with appropriate skills and experience for the operation and maintenance of new equipment provided under the Grant Aid	Before installation of the equipment	MOH		

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the installation	MOH		

2. Other obligations of the Government of Uganda funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*
1	To provide equipment		
	1) To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country a. Ocean (Air) transportation of the products from Japan/third country to the recipient country b. Internal transportation from the port of disembarkation to the project site		
	2) To provide equipment with installation, commissioning and training		
2	To implement detailed design, tender support, and procurement supervision, if any (Consultanting Service)		
3	Contingencies		
	Total (estimate)		XXX

*The Amount is provisional. This is subject to the approval of the Government of Japan.

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In any correspondence on this
subject please quote No. TPD 130/167/01

THE REPUBLIC OF UGANDA

July 19, 2017

The Chief Representative,
Japan International Cooperation Agency
Uganda Office
KAMPALA

RE: TAX TREATMENT OF JAPANESE GRANT AID PROJECTS

I refer to your letter dated 22nd June, 2017 seeking to confirm the tax treatment of Japanese grant aid projects. This is a follow up on the outcome of the meetings with officials of the Tax Policy Department held at the Ministry on 4th April, 2017 and 16th May, 2017 respectively.

This is therefore to reiterate Governments commitment to the implementation of the framework agreed to between the Government of Japan and the Government of the Republic of Uganda by means of Note Verbales NV/JE/009 dated 13th January 2017, NV/JE/031/17 dated 20th February, 2017 and ASI 179/326/01 dated 23rd March, 2017.

We accordingly wish to reaffirm that the Japanese grant shall not be used to pay taxes. Taxes arising from the execution of the project shall be borne by Government of Uganda. It is also understood that the intervention on income tax (PAYE, Corporate Tax and Withholding Tax) shall only apply to Japanese main contractors and Japanese sub-contractors. The Details of the implementation arrangements are as follows:

1. Taxes on import and re-export of necessary materials and equipment
 - 1.1. Taxes on import and re-export of necessary materials and equipment for exclusive use on the Japanese Grant Aid project are exempted from import duty under the East African Community Customs Management Act 2004.
2. Taxes on purchase of any products and/or any service in the Republic of Uganda which are necessary for the Project
 - 2.1. Value Added Tax (VAT)
 - 2.1.1. The VAT Act deems the payment of VAT on supplies to projects financed by a foreign government through a grant, donation or loan.

Mission

"To formulate sound economic policies, maximize revenue mobilization, ensure efficient allocation and accountability for public resources so as to achieve the most rapid and sustainable economic growth and development"

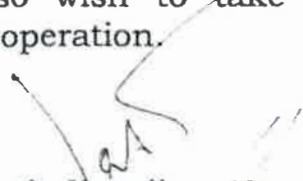
- 2.12. Based on the VAT Act, VAT shall be deemed to have been paid if the supply is for use solely and exclusively for the Japanese Grant Aid Project.
 - 2.13. In case a supplier charges VAT to any products and/or any services which are for use solely and exclusively for the Japanese Grant Aid Project, URA shall refund the VAT to the contractors and sub-contractors assigned under the Japanese Grant Aid Project.
3. All taxes imposed on total income or on elements of income
 - 3.1. Pay as You Earn (PAYE)
 - 3.1.1. Based on Exchange Notes, PAYE for Japanese employees of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project shall be paid by the Government of Uganda executing agency.
 - 3.1.2. The procedure for payment of PAYE of eligible resident office shall be as follows: Japanese main contractors and Japanese sub-contractors shall file PAYE returns with URA and submit a copy of the returns to the executing agency notifying them to pay the taxes.
 - 3.2. Corporate Tax/ Withholding Tax
 - 3.2.1. Based on Exchange Notes, Corporate Tax of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project shall be paid by the executing agency.
 - 3.2.2. The procedure and tax treatment of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid project who are tax resident in Uganda shall be as follows:
 - 3.2.2.1. Japanese main contractors and Japanese sub-contractors shall file returns with URA and submit a copy of the returns to the Executing Agency notifying them to pay the taxes.
 - 3.2.3. The procedure and tax treatment of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project who are not tax resident of Uganda shall be as follows:
 - 3.2.3.1. Where withholding tax is due, the Executing Agency shall pay tax due to URA.
4. To ensure smooth implementation of above mentioned items, JICA and MoFPED take measures as follows:

4.1 JICA and Executing Agency shall write to MoFPED informing

them of the Japanese main contractors and Japanese sub-contractors contracted to implement the Japanese Grant Aid Project.

- 4.2. The Ministry shall accordingly write to URA with a copy to JICA to confirm the Grant Aid project under implementation and Japanese main contractor and Japanese sub-contractor executing the project.
- 4.3. URA shall facilitate Japanese main contractors and Japanese sub-contractors in line with provisions 1, 2 and 3 above.
5. Any challenges that may be encountered in implementing the tax arrangements provided above shall be settled amicably between the JICA and the Ministry through mutual consultations.
6. In case of changes in relevant tax laws and regulations, the Ministry and JICA shall discuss necessary measures to take.

I hope this will facilitate the smooth implementation of the agreed programs. I also wish to take this opportunity to commend you for your continued cooperation.


Matia Kasaija (MP)

MINISTER OF FINANCE, PLANNING AND ECONOMIC DEVELOPMENT

C.C. Embassy of Japan in the Republic of Uganda
KAMPALA

C.C. The Commissioner General
Uganda Revenue Authority
KAMPALA







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In any correspondence on
this subject please quote No. TPD130/167/01

THE REPUBLIC OF UGANDA

6th April 2018

Hon. Kazuaki Kameda,
Ambassador of Japan to the Republic of Uganda,
Embassy of Japan,
KAMPALA.

RECEIVED

10 APR 2018

JICA - UGANDA

Your Excellency,

INCOME TAX TREATMENT OF JAPANESE GRANT AID PROJECT

Reference is made to the above captioned matter and to your letter dated 11th October, 2017.

This is to reiterate Government's position on income tax treatment of Japanese grant aid projects as provided for in the Note Verbale dated 13th January 2017 and 3rd July 2017. This is therefore to affirm that PAYE, Corporate Tax and Withholding Tax will be borne by the designated project executing agency without using Japanese grants. The benefits of the above treatment shall only apply to (i) main contractors and sub-contractors that are Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons and to (ii) their employees who are not citizens of Uganda.

Please accept, Your Excellency, the assurances of my highest consideration.


Matia Kasaija (MP)
MINISTER OF FINANCE, PLANNING AND ECONOMIC DEVELOPMENT

C.c: **The** Chief Representative,
Japan International Cooperation Agency,
Uganda Office,
KAMPALA

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C.c: The Commissioner General,
Uganda Revenue Authority,
KAMPALA

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4. Minutes of Discussions (Explanation on Draft Preparatory Survey Report)

**Minutes of Discussions
on the Preparatory Survey for the Project for
Improvement of Medical Equipment for Regional Referral Hospitals
(Explanation on Draft Preparatory Survey Report)**

With reference to the minutes of discussions signed between the Ministry of Health (hereinafter referred to as "MOH") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 12th April, 2022 and in response to the request from the Government of the Republic of Uganda (hereinafter referred to as "Uganda") dated 27th May 2022, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Improvement of Medical Equipment for Regional Referral Hospitals (hereinafter referred to as "the Project").

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

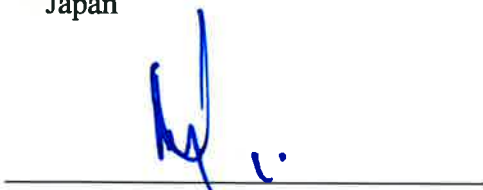
Kampala, 12th August, 2022



Ms. TAKAHASHI Sonoko
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



Dr. Diana Atwine
Permanent Secretary
Ministry of Health
The Republic of Uganda



Ms. Maris Wanyera
Acting Director, Directorate of Debt and Cash Policy
For: Permanent Secretary/Secretary to the Treasury
Ministry of Finance, Planning, and Economic Development
The Republic of Uganda

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the diagnostic and treatment capabilities of selected Regional Referral Hospitals (hereinafter referred to as “RRH”) in the eastern region of Uganda by providing medical equipment, thereby contributing to the improvement of the quality of health care services in eastern Uganda.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Improvement of Medical Equipment for Regional Referral Hospitals” in Uganda.

3. Project Site

Both sides confirmed that the sites of the Project are in Jinja and Soroti RRHs.

4. Responsible Authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

The Health Infrastructure Department under the Directorate of Strategy, Policy, and Development, MOH, will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be taken care by relevant authorities properly and on time.

5. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Ugandan side agreed to its contents. JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Ugandan side around January 2023.

6. Project Cost

The project cost will be communicated just before the Japanese Cabinet approval.

7. Confidentiality of the Cost Estimate and Technical Specifications

Both sides confirmed that the cost estimate and technical specifications of the Project should never be disclosed to any third parties until all the contracts under the Project are concluded.

8. Procedures and Basic Principles of Japanese Grant

The Ugandan side agreed that the procedures and basic principles of Japanese Grant (hereinafter referred to as “the Grant”) as described in Annex 1, which is the revised version of the one attached in the Minutes of Meeting dated 12th April, 2022, shall be applied to the Project. The Ugandan side noted the revisions and agreed to take necessary measures accordingly.

9. Timeline for the Project Implementation

The Team explained to the Ugandan side that the expected timeline for the project implementation is as attached in Annex 2.

10. Expected Outcomes and Indicators

Both sides agreed that key indicators for expected outcomes are as listed in the following table. The Ugandan side will be responsible for the achievement of agreed key indicators targeted in year 2027 and shall monitor the progress for Ex-Post Evaluation based on those indicators.

[Quantitative indicators]

Indicator (per year)	Baseline 【Actual record in 2021】		Annual Target 【After 3 years from the Project completion (in 2027)】		
	Soroti RRH	Jinja RRH	Soroti RRH	Jinja RRH	
1	Number of examinations				
	Number of general X-ray exams	N/A	2,067	N/A	4,000
	Number of dental X-ray exams	0	0	300	350
	Number of ultrasound exams	2,133	131	4,500	7,000
	Number of upper gastrointestinal endoscope exams (including biopsy and treatment)	0	0	150	300

2	Number of outpatients				
	Number of outpatients of all departments	160,056	213,260	192,000	255,000
	Number of outpatients of ophthalmology department* ¹	1,762	4,020	3,500	8,000
	Number of outpatients of dental department* ¹	5,720	6,512	8,500	9,000
	Number of outpatients of physiotherapy department* ¹	2,786	2,256	3,700	5,000
3	Number of operations				
	Number of major surgery* ² including Caesarean section	2,427	2,338	3,200	4,000

*¹ Noted that as a precondition, the number of medical doctors will not be decreased.

*² Surgery which involves general anaesthesia

[Qualitative indicators]

Indicator	
1	<p>Increased patients' satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Improved diagnostic and therapeutic services in each clinical department • Improved patient safety by effective operation of the post-operative recovery room in the central operating room and expanding the space and functions of wards and the high dependency unit (HDU) • Reduced burden on patients and medical staff through improved and efficient services by operating rapid ultrasonic diagnosis in the obstetrics and gynaecology department, emergency department and wards • Improved medical treatment environment by updating medical furniture such as patient beds
2	<p>Improved quality of hospital services</p> <ul style="list-style-type: none"> • Improved cancer diagnosis function in gynaecology and gastrointestinal medicine • Improved function of patient care in pregnancy and delivery • Improved prognosis for newborns with respiratory failure • Improved surgical environment • Improved physiotherapy services
3	<p>Increased hospital staff satisfaction by improving hospital functions as a referral hospital</p> <ul style="list-style-type: none"> • Improved staff motivation • Improved staff retention

11. Ex-Post Evaluation

JICA will conduct Ex-Post Evaluation after three (3) years from the project completion, in principle, with respect to six evaluation criteria (Relevance, Coherence, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Ugandan side is required to provide necessary support for the data collection.

12. Technical Assistance (“Soft Component” of the Project)

Considering the sustainable operation and maintenance of the products and services granted through the Project, the following technical assistance is planned under the Project. The Ugandan side confirmed to select competent participants.

- (1) Teaching on goods management using the 5S-CQI-TQM method
- (2) Conducting training related to clinical knowledge, clinical techniques and maintenance management skills for equipment that is newly introduced or replaced equipment where there are concerns about technical and operational aspects

13. Undertakings of the Project

- (1) Both sides confirmed the undertakings of the Project as described in Annex 3, which will be used as an attachment of the G/A.
- (2) The Ugandan side committed to take the necessary measures and coordination including allocation of the necessary budget for the Project. The total estimated cost to be borne by the Ugandan side is 176,300,000 Ugandan Shillings for the pre-installation and project management costs. The breakdown is provided in Annex 3. It was further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.
- (3) Both sides confirmed that customs duties, internal taxes and other fiscal levies as stipulated in (2). 6 of Annex 3 which may be imposed in Uganda will be budgeted for by MOH without using the Grant, according to the agreement between the Government of Uganda and the Government of Japan. Both sides confirmed that such customs duties, internal taxes and other fiscal levies shall be clarified in the bid documents by MOH during the implementation stage of the Project.
- (4) The Ugandan side agreed to provide support with regard to exemption from the “Pre-Export Verification of Conformity to Standards Programme” (PVoC) inspection as described in Annex 3. With regard to the registration and inspection of medical equipment by the National Drug Authority (NDA), the Ugandan side agreed to support with the procedures as described in Annex 3.
- (5) With regard to the pre-conditions of the installation of equipment, the Ugandan side agreed to take necessary measures to secure installation space for the equipment, construction of radiology buildings by June 2023; and decommissioning and disposal of existing/obsolete equipment. The Ugandan side agreed to refurbish electrical installations in the power houses and install new power distribution panels to the generator houses. In case the new radiology building in Jinja RRH is not completed

within reasonable time for installation of the General X-ray Machine (including the Laser Imaging System), the Ugandan side agreed to provide appropriate storage for the equipment. In this case, the equipment will be installed by the Ugandan side with assistance of the local distributor.

14. Tax Treatment

Both sides confirmed the tax treatment for the Japanese Grant Aid Project based on the following letters from MoFPED in Uganda attached as Annex 4.

- Letter with Ref. No. TPD 130/167/01 dated 19th July 2017
- Letter with Ref. No. TPD 130/167/01 dated 6th April 2018

15. Equipment

- (1) The Ugandan side requested additional equipment as follows:
 - Soroti RRH: Item No. 78 Autoclave, Electric, approx. 20L for Ophthalmology: 1 unit
 - Jinja RRH: Item No. 13 Ultrasound Scanner, Portable (B) for Children Campus: 1 unit
- (2) The Ugandan side requested for Automatic Voltage Regulator (AVR) to be included in the composition for Item No. 15 General X-ray Machine in Jinja RRH
- (3) The Ugandan side proposed exclusion of equipment as follows:
 - Soroti RRH: Item No. 31 Bed, Adult (Ordinary) for OB/GYN: 5 units (20 to 15)
 - Jinja RRH: Item No. 84 Generator, approx. 100KVA with its generator house: 1 unit (1 to 0)
- (4) The Ugandan side requested that the bed mattress platform height above ground for the following equipment be higher than currently specified in both Soroti and Jinja RRHs:
 - Item No. 31 Bed, Adult (Ordinary)
 - Item No. 40 Examination Couch

The Team understood the necessity of the requested changes. The Japanese side will reconsider it within the limitation of the project cost. The revised equipment list is attached as Annex 5.

16. Priority of Equipment

The project cost could increase depending on the foreign exchange rate being used for the Cabinet approval of the Government of Japan. Considering such a case, both

sides agreed that the scope of the Project will be considered based on the prioritized list of equipment, shown as Annex 5, and finalized in accordance with the project cost approved by the Government of Japan.

17. Monitoring during the Implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 6. The timing of submission of the PMR is described in Annex 6.

18. Project Completion

Both sides confirmed that the Project completes when all the equipment procured by the Grant is installed and in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

19. Environmental and Social Considerations

19-1. Environmental Guidelines and Environmental Category

The Team explained that ‘JICA Guidelines for Environmental and Social Considerations (April 2010)’ (hereinafter referred to as “the Guidelines”) is applicable for the Project. The Project is categorized as C because the Project is likely to have minimal adverse impact on the environment under the Guidelines.

20. Other Relevant Issues

20-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

Annex 1 Japanese Grant

Annex 2 Project Implementation Schedule

Annex 3 Major Undertakings to be taken by the Government of Uganda

Annex 4 Tax Treatment of Japanese Grant Aid Projects

Annex 5 List of Equipment

Annex 6 Project Monitoring Report (template)

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See “Financial Flow of Japanese Grant (A/P Type)” for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA’s procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project’s implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the “Meeting”) will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Measures to ensure more efficient implementation of the Grant

- i) In the event that the E/N and the G/A concerning a project cannot be signed by the end of the following Japanese fiscal year of the cabinet decision concerned by the GOJ, the authorities concerned of the two Governments will discuss the cancellation of the project.

ii) In the event that the period, specified in the G/A, during which the grant is available expires before the completion of the disbursement, the authorities concerned of the GOJ will thoroughly review the status, situation and perspective of the implementation of the project concerned before extending the said period. The authorities concerned of the two Governments will discuss the termination of the project including a refund, unless there are concrete prospects for its completion.

iii) Regardless of the period mentioned in ii) above, the authorities concerned of the two Governments will, in the event that five years have passed since the cabinet decision concerned by the GOJ before the completion of the disbursement, except as otherwise confirmed between them, discuss the termination of a project including a refund, unless there are concrete prospects for its completion.

4) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

5) Export and Re-export

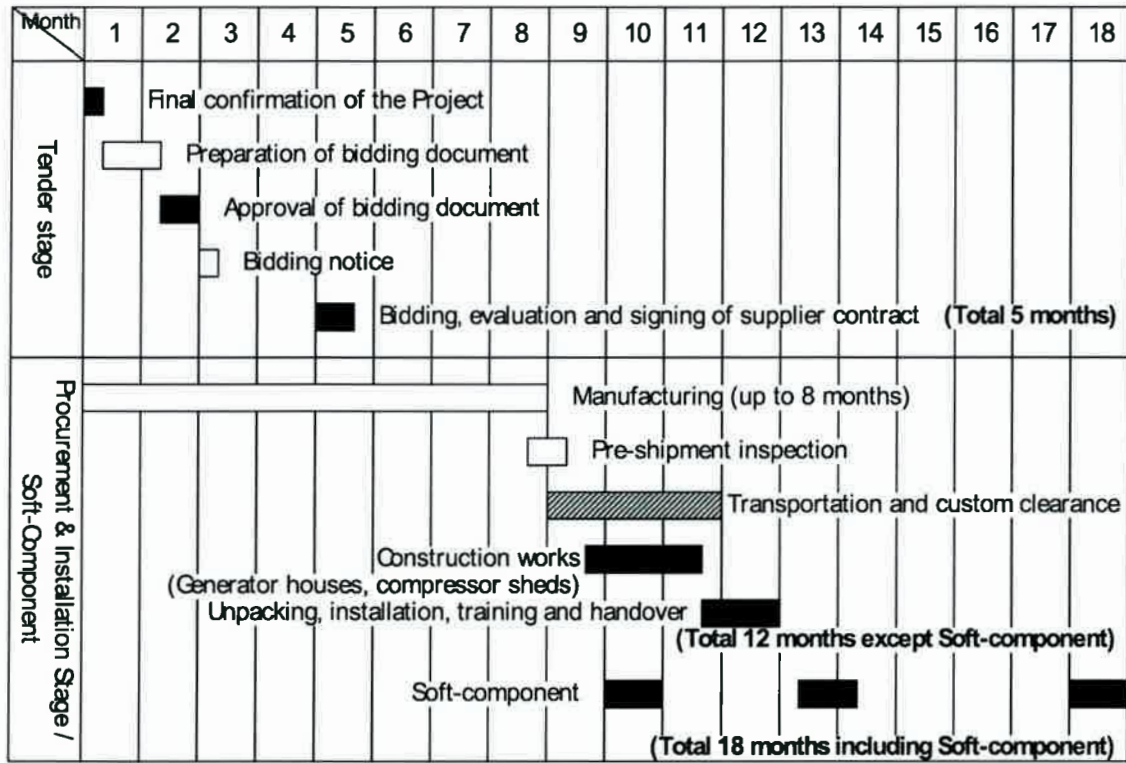
The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

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Project Implementation Schedule



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Major Undertakings to be taken by the Government of Uganda

1. Specific obligations of the Government of Uganda which will not be funded with the Grant

(1) Before the Tender

No.	Items	Deadline	In charge	Estimated Cost (Ushs)	Ref.
1	To request and secure the budget for the following:				
	1) Soroti RRH			Total of 86,000,000	
	1)-1. Decommissioning and disposal of existing/obsolete equipment	by December 2023	Soroti RRH	25,000,000	
	1)-2. Wiring works for generators and large equipment (including Procurement of additional power outlets and isolation switches)			6,000,000	
	1)-3. Installation of transformers and distribution panels			35,000,000	
	1)-4. Cable installation from the distribution panels to the new radiology building			20,000,000	
	2) Jinja RRH			Total of 75,300,000	
	2)-1. Partial removal of concrete countertop in laundry	by December 2023	Jinja RRH	1,300,000	
	2)-2. Decommissioning and disposal of existing/obsolete equipment			25,000,000	
	2)-3. Wiring works for generators and large equipment (including Procurement of additional power outlets and isolation switches)			6,000,000	
	2)-4. Installation of transformers and distribution panels			35,000,000	
	2)-5. Cable installation from the distribution panels to the new radiology building			8,000,000	
2	To sign the banking arrangement (B/A) with a bank in Japan (the Agent Bank) to open bank account for the Grant	within 1 month after the signing of the G/A	MoFPED, MOH	N/A	
3	To issue authorization to pay (A/P) to the Agent Bank for all the payments to the consultant	within 1 month after the signing of the consultant agreement	MoFPED, MOH	1,400,000	
4	To bear the following commissions to the Agent Bank for the banking services based upon B/A				
	1) Advising commission of A/P for the consultant agreement	within 1 month after the signing of the consultant agreement	MoFPED, MOH		
	2) Payment commission for A/P for the consultant agreement	every payment			
5	To submit Project Monitoring Report (with the result of Detailed Design)	before preparation of the bidding documents	MOH	N/A	

(Ushs: Ugandan Shilling, MoFPED: Ministry of Finance, Planning and Economic Development, MOH: Ministry of Health, N/A: Not Applicable)

(2) During the Project Implementation

No.	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue A/P to the Agent Bank for the payment to the Supplier	within 1 month after the signing of the supplier's contract	MOH	13,600,000	
2	To bear the following commissions to the Agent Bank for the banking services based upon the B/A				
	1) Advising commission of A/P for the Supplier's contract	within 1 month after the signing of the supplier's contract	MoFPED, MOH		
	2) Payment commission for A/P for the Supplier's contract	every payment			
3	To ensure prompt customs clearance and to assist the Supplier with internal transportation in the country of the Recipient	during the Project	MoFPED, MOH	N/A	
4	To obtain building permit	before construction	MOH	N/A	
5	To accord Japanese physical persons and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MoFPED, MOH	N/A	
6	To ensure that the Grant is not used to pay customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products	during the Project	URA, MoFPED, MOH	N/A	
7	To support the procedure to obtain exemption from pre-shipment and destination Pre-Export Verification of Conformity to Standards Programme (PVoC) inspection, the Permanent Secretary of MOH shall write to the Uganda National Bureau of Standards (UNBS) to secure exemption from PVoC inspection	before arrival and after shipping the equipment	MOH	N/A	
8	To support the procedures regarding the registration and inspection of medical equipment by the National Drug Authority (NDA), the Permanent Secretary of MOH shall write to NDA	before arrival and after shipping the equipment	MOH	N/A	
9	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MOH	Not determined	
10	To construct the new radiology building for installation of equipment	by June 2023	MOH	N/A	
11	To remove existing equipment and if needed, renovate existing facilities, to install new ones.	before or during the Project	MOH	N/A	
12	To notify JICA promptly of any incident or accident, which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers	during the installation	MOH	N/A	
13	To submit Project Monitoring Report after each work under the contract(s) such as shipping, hand over, installation and operational training	within 1 month after completion of each work	MOH	N/A	
14	To submit Project Monitoring Report (final) (including as-built drawings, equipment list, photographs, etc.)	within 1 month after issuance of Certificate of Completion for the works under the contract(s)	MOH	N/A	

(URA: Uganda Revenue Authority)

No.	Items	Deadline	In charge	Estimated Cost	Ref.
15	To submit a report concerning completion of the Project	within 6 months after completion of the Project	MOH	N/A	
16	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the sites				
	1) Electricity If required. relocation of electrical lines. installation of the transformers. and addition of power outlets to increase the power receiving capacity	before start of the installation	Target hospitals		
	2) Water Supply If required. increase capacity of the city water distribution main to the site	before start of the installation	Target hospitals		
	3) Drainage If required. increase capacity of the city drainage main to the site	before start of the installation	Target hospitals		
17	To provide equipment, furniture, facilities necessary for the implementation of the Project in the sites	before start of the installation	MOH		
18	To recruit sufficient staff with appropriate skills and experience for the operation and maintenance of new equipment provided under the Grant	before start of the installation	MOH		

(3) After the Project

No.	Items	Deadline	In charge	Estimated Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the installation	MOH	N/A	

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In any correspondence on this
subject please quote No. TPD 130/167/01

THE REPUBLIC OF UGANDA

July 19, 2017

The Chief Representative,
Japan International Cooperation Agency
Uganda Office
KAMPALA

RE: TAX TREATMENT OF JAPANESE GRANT AID PROJECTS

I refer to your letter dated 22nd June, 2017 seeking to confirm the tax treatment of Japanese grant aid projects. This is a follow up on the outcome of the meetings with officials of the Tax Policy Department held at the Ministry on 4th April, 2017 and 16th May, 2017 respectively.

This is therefore to reiterate Governments commitment to the implementation of the framework agreed to between the Government of Japan and the Government of the Republic of Uganda by means of Note Verbales NV/JE/009 dated 13th January 2017, NV/JE/031/17 dated 20th February, 2017 and ASI 179/326/01 dated 23rd March, 2017.

We accordingly wish to reaffirm that the Japanese grant shall not be used to pay taxes. Taxes arising from the execution of the project shall be borne by Government of Uganda. It is also understood that the intervention on income tax (PAYE, Corporate Tax and Withholding Tax) shall only apply to Japanese main contractors and Japanese sub-contractors. The Details of the implementation arrangements are as follows:


1. Taxes on import and re-export of necessary materials and equipment
 - 1.1. Taxes on import and re-export of necessary materials and equipment for exclusive use on the Japanese Grant Aid project are exempted from import duty under the East African Community Customs Management Act 2004.
2. Taxes on purchase of any products and/or any service in the Republic of Uganda which are necessary for the Project
 - 2.1. Value Added Tax (VAT)
 - 2.11. The VAT Act deems the payment of VAT on supplies to projects financed by a foreign government through a grant, donation or loan.

- 2.12. Based on the VAT Act, VAT shall be deemed to have been paid if the supply is for use solely and exclusively for the Japanese Grant Aid Project.
 - 2.13. In case a supplier charges VAT to any products and/or any services which are for use solely and exclusively for the Japanese Grant Aid Project, URA shall refund the VAT to the contractors and sub-contractors assigned under the Japanese Grant Aid Project.
3. All taxes imposed on total income or on elements of income
 - 3.1. Pay as You Earn (PAYE)
 - 3.1.1. Based on Exchange Notes, PAYE for Japanese employees of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project shall be paid by the Government of Uganda executing agency.
 - 3.1.2. The procedure for payment of PAYE of eligible resident office shall be as follows: Japanese main contractors and Japanese sub-contractors shall file PAYE returns with URA and submit a copy of the returns to the executing agency notifying them to pay the taxes.
 - 3.2. Corporate Tax/ Withholding Tax
 - 3.2.1. Based on Exchange Notes, Corporate Tax of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project shall be paid by the executing agency.
 - 3.2.2. The procedure and tax treatment of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid project who are tax resident in Uganda shall be as follows:
 - 3.2.2.1. Japanese main contractors and Japanese sub-contractors shall file returns with URA and submit a copy of the returns to the Executing Agency notifying them to pay the taxes.
 - 3.2.3. The procedure and tax treatment of Japanese main contractors and Japanese sub-contractors for Japanese Grant Aid Project who are not tax resident of Uganda shall be as follows:
 - 3.2.3.1. Where withholding tax is due, the Executing Agency shall pay tax due to URA.
 4. To ensure smooth implementation of above mentioned items, JICA and MoFPED take measures as follows:
 - 4.1 JICA and Executing Agency shall write to MoFPED informing

them of the Japanese main contractors and Japanese sub-contractors contracted to implement the Japanese Grant Aid Project.

- 4.2. The Ministry shall accordingly write to URA with a copy to JICA to confirm the Grant Aid project under implementation and Japanese main contractor and Japanese sub-contractor executing the project.
- 4.3. URA shall facilitate Japanese main contractors and Japanese sub-contractors in line with provisions 1, 2 and 3 above.
5. Any challenges that may be encountered in implementing the tax arrangements provided above shall be settled amicably between the JICA and the Ministry through mutual consultations.
6. In case of changes in relevant tax laws and regulations, the Ministry and JICA shall discuss necessary measures to take.

I hope this will facilitate the smooth implementation of the agreed programs. I also wish to take this opportunity to commend you for your continued cooperation.


Matia Kasaija (MP)

MINISTER OF FINANCE, PLANNING AND ECONOMIC DEVELOPMENT

C.C. Embassy of Japan in the Republic of Uganda
KAMPALA

C.C. The Commissioner General
Uganda Revenue Authority
KAMPALA







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In any correspondence on
this subject please quote No. TPD130/167/01

THE REPUBLIC OF UGANDA

6th April 2018

Hon. Kazuaki Kameda,
Ambassador of Japan to the Republic of Uganda,
Embassy of Japan,
KAMPALA.

RECEIVED

10 APR 2018

JICA - UGANDA

Your Excellency,

INCOME TAX TREATMENT OF JAPANESE GRANT AID PROJECT

Reference is made to the above captioned matter and to your letter dated 11th October, 2017.

This is to reiterate Government's position on income tax treatment of Japanese grant aid projects as provided for in the Note Verbaie dated 13th January 2017 and 3rd July 2017. This is therefore to affirm that PAYE, Corporate Tax and Withholding Tax will be borne by the designated project executing agency without using Japanese grants. The benefits of the above treatment shall only apply to (i) main contractors and sub-contractors that are Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons and to (ii) their employees who are not citizens of Uganda.

Please accept, Your Excellency, the assurances of my highest consideration.


Matia Kasaija (MP)

MINISTER OF FINANCE, PLANNING AND ECONOMIC DEVELOPMENT

C.c: **The** Chief Representative,
Japan International Cooperation Agency,
Uganda Office,
KAMPALA

C.c: The Commissioner General,
Uganda Revenue Authority,
KAMPALA


Mission





Embassy of Japan

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NV/JE/009/17

The Embassy of Japan in the Republic of Uganda presents its compliments to the Ministry of Foreign Affairs of the Republic of Uganda, and has the honor to inform the latter of the position of the Government of Japan on the tax exemption issue concerning the Japanese official development assistance as follows:

- 1 Under the official development assistance framework, grant assistance projects funded by the Government of Japan and the Japan International Cooperation Agency (hereinafter referred to as "the Projects") presuppose all taxes and any other fiscal levies imposed on main contractors and sub-contractors of the Projects as well as their employees (except citizens of Uganda) with respect to the supply of products and/or services provided under the Projects to be exempted in the Republic of Uganda.
- 2 The taxes to be exempted as mentioned in paragraph 1 above include:
 - (a) all taxes imposed on total income or on elements of income;
 - (b) taxes on purchase of any products and/or any service necessary for the Projects; and
 - (c) taxes on import and re-export of necessary materials and equipment

The Embassy has further the honor to request the Government of the Republic of Uganda to ensure the above-mentioned tax exemption for the Projects to be implemented in the Republic of Uganda.

The Embassy of Japan in the Republic of Uganda avails itself of this opportunity to renew to the Ministry of Foreign Affairs of the Republic of Uganda the assurances of its highest consideration.

13 January 2017

Ministry of Foreign Affairs of the Republic of Uganda

Kampala

Uganda

Copy to The Permanent Secretary, Ministry of Finance, Planning and Economic Development



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Embassy of Japan

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NV/JE/031/17

The Embassy of Japan in the Republic of Uganda presents its compliments to the Ministry of Foreign Affairs of the Republic of Uganda, and has the honor to inform the latter that "main contractors and sub-contractors", mentioned in the Embassy's Note Verbale No NV/JE/009/17 dated 13th January 2017, can be interpreted as "Japanese main contractors and Japanese sub-contractors" as far as taxes described in 2 (a) in the above-mentioned NV are concerned (The term "Japanese main contractors and Japanese sub-contractors" in the present Note Verbale means main contractors and sub-contractors that are Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons)

The Embassy of Japan avails itself of this opportunity to renew to the Ministry of Foreign Affairs of the Republic of Uganda the assurances of its highest consideration

20 February 2017

Ministry of Foreign Affairs of the Republic of Uganda
Kampala
Uganda



Copy to The Permanent Secretary Ministry of Finance Planning and Economic Development

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Ministry of Foreign Affairs
P. O. Box 7048,
KAMPALA,
UGANDA.

THE REPUBLIC OF UGANDA

In any correspondence on
this subject please quote no. **ASI 179/326/01**

The Ministry of Foreign Affairs of the Republic of Uganda presents its compliments to the Embassy of Japan and in reference to the former's Note Verbale No. ASI 179/326/01 of 23rd March 2017, has the honour to refer to the **"Clarification on Taxes Concerning Grant Assistance Projects Funded By the Government of Japan."**

The Ministry of Foreign Affairs has the honour to further clarify that the exemption (Government of Uganda's intervention by paying the taxes) on income or elements of income, is applicable to only main contractors and sub-contractors that are Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons and their employees, who are not citizens of Uganda, undertaking projects funded by the grant assistance from the Government of Japan.

The Ministry of Foreign Affairs of the Republic of Uganda avails itself of this opportunity to renew to the Embassy of Japan the assurances of its highest consideration.

KAMPALA: 03 July, 2017

Embassy of Japan
KAMPALA



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A second handwritten signature in blue ink, appearing to be the name of the official.

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THE REPUBLIC OF UGANDA

Ministry of Foreign Affairs
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UGANDA



In any correspondence on
this subject please quote no. **ASI 179/326/01**

The Ministry of Foreign Affairs of the Republic of Uganda presents its compliments to the Embassy of Japan and in reference to the latter's Notes NV/JE/009/17 of 13th January 2017 and NV/JE/031/17 of 20th January 2017 concerning taxes for grant assistance projects funded by the Government of Japan, has the honour to communicate the following:

The Ministry confirms that the clarification provided by the Embassy of Japan on the above subject matter reflects the negotiated position between the two Governments. In so doing, the Ministry affirms that the taxes to be exempted include;

- i. Taxes imposed on the income of the contractors, subcontractors and their employees who are not citizens of Uganda;
- ii. VAT on goods and services acquired for the sole use on the project;
- iii. Customs duties on import and re-export of materials and equipment necessary for the project in accordance with the East African Customs Management Act. Re-exportation shall exclude consumables and shall also be subject to customs verification procedures.

The Ministry of Foreign Affairs of the Republic of Uganda avails itself of this opportunity to renew to the Embassy of Japan the assurances of its highest consideration.

KAMPALA, 23rd March 2017

The Embassy of Japan
KAMPALA

Embassy of Japan

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NV/JE/232/17

The Embassy of Japan in the Republic of Uganda presents its compliments to the Ministry of Foreign Affairs of the Republic of Uganda, referring to Note Verbales between the Embassy of Japan in the Republic of Uganda and the Ministry of Foreign Affairs of the Republic of Uganda concerning taxes for grant assistance projects funded by the Government of Japan and the Japan International Cooperation Agency (hereinafter referred to as "the Projects") regarding NV/JE/009/17 of 13th January 2017, ASI 34/179/01 of 1st February 2017, NV/JE/031/17 of 20 February 2017, ASI 179/326/01 of 23rd March 2017 and ASI 179/326/01 of 3rd July 2017, and has the honour to state the following

1. The Government of the Republic of Uganda, through its designated authority will bear all taxes and any other fiscal levies imposed in the Republic of Uganda on Japanese main contractors and Japanese sub-contractors of the Projects as well as their employees (except for nationals of the Republic of Uganda) with respect to the supply of products and/or services provided under the Projects

2. The taxes and fiscal levies to be borne by the Government of the Republic of Uganda as mentioned in paragraph 1 above include
 - (a) all taxes and fiscal levies imposed on the income of Japanese main contractors, Japanese sub-contractors and their employees except for nationals of the Republic of Uganda,
 - (b) value added tax on purchase of any products and/or any service necessary for the Projects and
 - (c) taxes and fiscal levies on import and/or re-export of materials and equipment necessary for the Projects

3. The Government of Republic of Uganda will take all necessary measures including budgetary arrangements in order to refund all taxes and fiscal levies mentioned in paragraph 2 and to bear such taxes and fiscal levies through its designated authority

4. The authorities concerned of the two Governments will consult with each other with respect to any matter that may arise from or in connection with the present recognition.

5. The term "Japanese main contractors and Japanese sub-contractors" mentioned in the present Note Verbale means main contractors and sub-contractors that are Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.

The Embassy of Japan in the Republic of Uganda avails itself of this opportunity to renew to the Ministry of Foreign Affairs of the Republic of Uganda the assurance of its highest consideration.

19 December 2017



Ministry of Foreign Affairs of the Republic of Uganda
Kampala
Uganda

.../Enclosure

Copy to The Permanent Secretary, Ministry of Finance, Planning and Economic Development

稿、附言を植子回理の上書(案)

[Draft Response Note Verbal from Ugandan Government]

The Ministry of Foreign Affairs of the Republic of Uganda presents its compliments to the Embassy of Japan in the Republic of Uganda and has the honour to acknowledge the receipt of the latter's Note Verbale No. [NV/JE/232/17] dated [19 December 2017].

The Ministry has further the honour to inform the Embassy that the Government of the Republic of Uganda confirms and has no objection to the contents in the Embassy's Note Verbale mentioned above.

Telegram: EXTERIOR, KAMPALA
Telephone: +256-414-345661 / 257525 /
258252
Fax: 258722 / 232874 / 230911
Website: www.mofa.go.ug
E-mail: ps@mofa.go.ug



Ministry of Foreign Affairs
P. O. Box 7048,
KAMPALA,
UGANDA.

THE REPUBLIC OF UGANDA

In any correspondence on
this subject please quote no: IEC/179/326/01

The Ministry of Foreign Affairs of the Republic of Uganda presents its compliments to the Embassy of Japan and, in reference to diplomatic note NV/JE/232/17, dated 19th December 2017, has the honour to inform the latter that the Ministry of Finance, Planning and Economic Development of the Republic of Uganda has no objection to the contents of the Note Verbale.

The Ministry of Foreign Affairs of the Republic of Uganda avails itself of this opportunity to renew to the Embassy of Japan, the assurances of its highest consideration. *g.s*



KAMPALA, 12th January 2018

Embassy of Japan
KAMPALA

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No.	Name of Equipment [Definition of Priority] A: High B: Medium	Priority	Soroti RRH (Quantity by Department/Unit)															Sub-total Q'ty (Soroti)				
			Operating Theatre	Orthopaedics	X-ray	OB/GYN	NCU	Dental	Emergency	OPD	Private Wing	Physiotherapy	Surgical Ward	Paediatric Ward	Ophthalmology	Internal Medicine Ward	Pharmacy		ENT	Others		
1	Anaesthesia Machine	A	2												1						3	
2	Electro Surgical Unit	A	2																			2
3	Instruments Set, General Surgery	A	6																			6
4	Instruments Set, Laparotomy	A	3																			3
5	Mayo Stand	A	4																			4
7	Operating Light, Mobile	A	2												1							3
8	Operating Table, Hydraulic	A	2																			2
9	Dental X-ray Machine	A								1												1
11	Imaging System for Dental X-ray	A								1												1
12	Ultrasound Scanner, Portable (A)	A			1	1																3
13	Ultrasound Scanner, Portable (B)	A							1												1	2
16	CPAP Machine	A									3											3
17	Delivery Bed	A																		2		5
18	Doppler Foetal Detector	A																		1		4
19	Infant Incubator	A																				4
20	Infant Warmer	A	1																	1		3
21	Instruments Set, Caesarean Section	A	8																			8
22	Instruments Set, Delivery	A																			2	2

List of Equipment

No.	Name of Equipment [Definition of Priority] A: High B: Medium	Priority	Soroti RRH (Quantity by Department/Unit)														Sub-total Q'ty (Soroti)			
			Operating Theatre	Orthopaedics	X-ray	OB/GYN	NCU	Dental	Emergency	OPD	Private Wing	Physiotherapy	Surgical Ward	Paediatric Ward	Ophthalmology	Internal Medicine Ward		Pharmacy	ENT	Others
45	Nebulizer	A						2	2				3			3				10
46	Oxygen Concentrator	A				1			2	2			2							10
47	Oxygen Therapy Apparatus	B				4		3	4	4			4							25
48	Patient Monitor	A	2			3		3	1			2	3	1	2					19
49	Patient Trolley	A	2			3		1	2	3										11
50	Pulse Oximeter	A	2			3		2	4	3		2	3	2	4					27
51	Refrigerator, Pharmaceutical	A				1		1		1					1	3				7
52	Resuscitator Set, Manual (A)	A				2							2							4
53	Resuscitator Set, Manual (B)	A	2					2												4
54	Sterilizing Drum Set	A	3					3	2					2				3		16
55	Suction Apparatus, Electric	A	3			1		1				2		2	1	2		1		11
56	Weighing Scale, Adult	B						1	1			1	1		1					5
57	Weighing Scale, Baby	B						1		1										4
58	Wheel Chair	A	1			2		1	2	2		2	2	2	2					16
59	X ray Film Viewer	B						1	3			2								9
60	Dental Unit	A																2		2
61	Instruments Set, Dental Extraction and Treatment	A																4		4
62	B Scan Ultrasound	A																1		1
63	Auto Refractometer	A																1		1
64	Instruments Set, Ophthalmology	A																6		6
65	Operating Microscope, Ophthalmology	A																1		1
66	Ophthalmoscope, Direct	A																4		4

List of Equipment

Annex 5

No.	Name of Equipment [Definition of Priority] A: High B: Medium	Priority	Jinja RRH-Children Campus													TOTAL Q'TY (Soroti+Jinja)										
			Operating Theatre	Orthopaedics	X-Ray	OB/GYN	NICU	Emergency	OPD	Dental	ENT	Ophthalmology	Physiotherapy	Pharmacy	Others											
92	Automatic voltage regulator, 1 KVA	A	4	2														1	1	1	1	1	1	24	48	
93	Automatic voltage regulator, 3 KVA	A							4																4	7
94	Uninterruptible Power Supply, 1 KVA	A								4															8	15
95	Uninterruptible Power Supply, 2 KVA	A	1	1	1	1																			6	10
96	Uninterruptible Power Supply, 3 KVA	A	3	2																					6	10
97	Uninterruptible Power Supply, 5 KVA	A			2																				4	6
98	Power Transformer and Distribution Panel (A)	A																							0	1
99	Power Transformer and Distribution Panel (B)	A																							1	1
TOTAL (Quantity)			48	47	10	142	30	51	64	16	6	36	9	4	10	38	41	35	13	10	19	15	644	1,188		

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
 20XX, Month

Organizational Information

Signer of the G/A (Recipient)	_____ Person in Charge (Designation) _____ Contacts _____ <u>Address:</u> _____ <u>Phone/FAX:</u> _____ <u>Email:</u> _____
Executing Agency	_____ Person in Charge (Designation) _____ Contacts _____ <u>Address:</u> _____ <u>Phone/FAX:</u> _____ <u>Email:</u> _____
Line Ministry	_____ Person in Charge (Designation) _____ Contacts _____ <u>Address:</u> _____ <u>Phone/FAX:</u> _____ <u>Email:</u> _____

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____





1: Project Description	
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1-1 Project Objective

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1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

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1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

--

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant (Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				
Total				

Note: 1) Date of estimation:
 2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				

- Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original (at the time of outline design)

name:

role:

financial situation:

institutional and organizational arrangement (organogram):

human resources (number and ability of staff):

Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)

Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

--

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

--

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
 - Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
8. Pictures (by JPEG style by CD-R) (PMR (final) only)
9. Equipment List (PMR (final) only)
10. Drawing (PMR (final) only)
11. Report on RD (After project)
12. Report on the Management of Safety for Construction Works

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

Items of Specified Materials		Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment Price (Decreased) E=C-D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

Items of Specified Materials		1st month, 2015	2nd month, 2015	3rd month, 2015	4th	5th	6th
1	Item 1	●	●	●			
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

●

✓

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
 (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Report on the Management of Safety for Construction Works

Month/Year 2022年×月	Cumulative number of labor 労働延人数	Cumulative number of public accident 公衆災害件数	Cumulative hours worked 延べ実労働時間数	Number of deaths and injuries due to industrial accidents 労働災害による死傷者				Frequency rate 度数率	Severity rate 強度率
				Death and injuries 死傷者数	Aggregated number of calendar days absent 延べ休業日数	Aggregated number of work-days lost 延べ労働損失日数			
This Month 当月				Death 死者					
				More than 4 calendar days absent 休業4日以上					
				1 to 3 calendar days absent 休業1～3日					
				Total 計					
Total including this month 当月迄累計				Death 死者					
				More than 4 calendar days absent 休業4日以上					
				1 to 3 calendar days absent 休業1～3日					
				Total 計					
<p>Note 注)</p> <p>1. Frequency rate is the frequency of occurrence of industrial accidents. 度数率 = (Number of deaths and injuries due to industrial accidents ÷ Cumulative hours worked) × 1,000,000 度数率 = (労働災害による死傷者数 ÷ 延べ実労働時間数) × 100万時間</p> <p>2. Severity rate is degree of seriousness of the industrial accident. Severity rate = (Aggregated number of work-days lost ÷ Cumulative hours worked) × 1,000 強度率 = (延べ労働損失日数 ÷ 延べ実労働時間数) 1000時間</p> <p>3. Aggregated number of work-days lost = Aggregated number of calendar days absent × (300 ÷ 365) Death (7,500 days) : death as a result of an industrial accident includes not only instantaneous death but also death as a result of occupational injury or disease. 延べ労働損失日数 = 延べ休業日数 × (300 ÷ 365) . . . 死亡 7500日 (即死のほか負傷が原因で死亡したものを含む)</p> <p>4. Frequency rate and severity rate are rounding off the third decimal place. 度数率・強度率は小数点第3位以下四捨五入</p>									





5. Soft Component Plan

Soft Component Plan (Minor Technical Assistance)

1. Background

“The Project for Improvement of Medical Equipment for Regional Referral Hospital” (The Project) targets two hospitals in eastern Uganda: Soroti Regional Referral Hospital (RRH) and Jinja RRH including Jinja RRH children campus. The objective of the Project is to improve the diagnostic and treatment capabilities of both RRHs as well as to upgrade the specialized medical services that RRHs should have, through the procurement of medical equipment. The number of targeted departments/units for Soroti RRH is 19 and it is 22 for Jinja RRH, including operating theatre, radiology, emergency, outpatients, specialized clinics, inpatient wards, and physiotherapy etc., with more than 90 different equipment items planned. Although a majority of the equipment is categorized as replacement or refilling quantities, some issues are identified.

The first issue is the weakness of the goods management and logistics for the good such as accessories, spare parts, and consumables of the medical equipment. When RRHs procure the equipment, they receive not only the equipment itself but also the above-mentioned goods at the same time. In some cases, all goods are delivered to the user’s department/unit, while in other cases, some goods are stored in the central warehouse of the RRH or equipment maintenance workshop, but the rules are not standardized. Moreover, when receiving large quantities of the equipment and goods at once, the RRH staff often confused because they cannot identify what it is and do not know where the acquired goods are stored. Consequently, the equipment may not be able to work temporarily or long period. To avoid such undesirable situations, strengthening goods management through the 5S-CQI-TQM method is effective. As other benefits, synergy and mutual collaboration with the ongoing JICA technical cooperation " Project on Patient Safety Establishment through the 5S-CQI-TQM (2021 - 2026)" may also be realized.

In the second issue, a few numbers of the equipment are newly introduced, or are experienced but where the users are concerned about technical and operational aspects due to advanced digitalization and multifunctionality. According to experiences with the previous JICA Grant Aid Project, brushing up on users' clinical knowledge, skills and maintenance techniques is an effective way to address this issue.

In view of the above, the following two different soft components are requested by the Ugandan side, and will be designed under this Project.

- 1) Coaching on goods management using the 5S-CQI-TQM method.
- 2) Training on Clinical Techniques and Maintenance for specific equipment (5 items: Imaging

system for general X-ray¹, gastroendoscope, imaging system for dental X-ray, CPAP machine and patient monitor)

2. Goals of the Soft Components

The goal of the 1st soft component on goods management, which is management assistance, is to make effective use of limited resources and maintain maximum utilization of the equipment. The goal of the 2nd component for clinical techniques and maintenance skills, as a technical support, is to expand specialized medical services through the proper use of the equipment.

3. Expected Outputs

The expected outputs of both soft components are as follows.

Component	Expected outputs	Measurement of Achievements
1) Coaching on Goods Management using 5S-CQI-TQM	Clarify the operational system for goods related to the equipment.	Copy of ledger book (goods list, place of storage, in charge, contact information of agent, etc.)
	Improve the status of managing goods	Photos before and after teaching Existing goods management sheets/records showing status of stock, place of storage etc.
	Easier planning for procurement of spare parts and consumables	Copy of ledger book
2) Training on Clinical Techniques and Maintenance	Able to perform imaging diagnosis utilizing X-ray imaging systems (only for Jinja RRH)	The actual images will be evaluated by the physician, radiologist and trainers.
	Able to diagnose upper gastrointestinal disorders by endoscopy	The results will be evaluated by the physician, endoscopist and trainers using check sheet.
	Able to perform neonatal respiratory therapy with a CPAP machine CPAP	The status of respiratory control will be evaluated by the NICU staff and trainers.
	Able to perform dental imaging diagnosis utilizing Dental X-ray imaging systems	The actual images will be evaluated by the dentist, dental assistants and trainers.
	Improve vital sign monitoring and management for critically ill patients	The status of monitoring will be evaluated by the equipment user trainers, users and trainers using check sheet.
	Develop a daily check and maintenance system for the above equipment	The status of monitoring will be evaluated by the workshop manager, engineer and trainers using SOP/check sheet.

4. Measurement of Achievements

It is summarized in "3. Expected Outputs " above.

¹ This imaging system only covers Jinja RRH, whereas Soroti RRH is excluded because the system will be procured by the government of Uganda.

5. Activities (Input Plan)

An overview of both components is as follows.

Table1: Overview of the Soft Components

Item	Coaching on Goods Management	Training on Clinical Techniques and Maintenance
Objectives	Effective use of limited resources (accessories, spare parts, consumables etc.) and maintaining maximum use of planned equipment through 5S-CQI-TQM method.	Expand specialized medical services through the training of selected equipment that is newly introduced, or is experienced but where the users are concerned about technical and operational aspects.
Target RRHs	Soroti RRH and Jinja RRH	Soroti RRH and Jinja RRH
Teaching Methods	Small group discussions and group work in each department/unit	Lectures and practical sessions
Target Equipment	All procured equipment is targeted, except the equipment that does not require accessories, spare parts, consumables and after-sales service.	5 items (Imaging system for general X-ray, imaging system for dental X-ray, CPAP machine, gastroendoscope, and patient monitor) Note: Imaging system for general X-ray is covered only for Jinja RRH.
Trainees at each RRH (Estimated number of participants)	<ul style="list-style-type: none"> - Main store staff (5) - Maintenance staff (8) - Target departments/units: 20 at Soroti RRH and 22 at Jinja RRH (5-10 person each) 	Users and maintenance staff for: <ul style="list-style-type: none"> - Imaging system for general X-ray (10) - Gastroendoscope (10) - CPAP machine (10) - Imaging system for dental X-ray (10) - Patient monitor (15)
Frequency and Timing	3 times: <ol style="list-style-type: none"> 1) 2 months before equipment arrival 2) Shortly after equipment handover 3) 4-6 months after handover 	2 times: <ol style="list-style-type: none"> 1) Shortly after equipment handover 2) 4-6 months after handover
Number of Trainers/ Experts	Soroti RRH & Jinja RRH: One (1) Japanese expert 1) Chief/Trainer on goods management	Soroti RRH: Five (5) trainers including, <ol style="list-style-type: none"> 1) Japanese training coordinator 2) Local trainer B (for endoscope) 3) Local trainer C (for CPAP machine) 4) Local trainer D (for patient monitor) 5) Local trainer E (for dental X-ray imaging) Jinja RRH: Six (6) trainers, <ol style="list-style-type: none"> 1) Japanese training coordinator 2) Local trainer A (for General X-ray imaging system) 3) Local trainer B (for endoscope) 4) Local trainer C (for CPAP machine) 5) Local trainer D (for patient monitor) 6) Local trainer E (for dental X-ray imaging system)

As a note to the above technical training, the Ugandan side requested to include the training for ophthalmic equipment, anesthesia machine, electrosurgical unit, large autoclave, and washing machine, in addition to the above five equipment items. However, the users already have a moderate level of knowledge and skills, and the initial operation and routine maintenance training done by the supplier can be partially covered, so the above training shall be limited to the said five items.

5-1 Activity Period

“Goods Management using 5S-CQI-TQM” will be carried out three times: 1) 2 months before equipment arrival, 2) shortly after equipment handover and 3) 4–6 months after handover of the equipment. “Training on Clinical Techniques and Maintenance” will be carried out two times: 1) shortly after equipment handover and 2) 4–6 months after handover of the equipment. Regarding the period, both components will be implemented simultaneously to reduce costs and enhance operational efficiency.

5-2 Breakdown of Trainers/Experts

A total of 7 trainers (2 Japanese and 5 local experts) will be assigned as shown below.

Goods Management using 5S-CQI-TQM :

- 1) Chief/Trainer on goods management : Japanese expert, dispatched 3 times
(This person will also be responsible for overseeing both soft components.)

Training on Clinical Techniques and Maintenance :

- 2) Training coordinator : Japanese expert, dispatched 2 times
3) Local trainer A (Imaging system for general X-ray) : Local expert, dispatched 2 times
4) Local trainer B (Gastroendoscope) : Local expert, dispatched 2 times
5) Local trainer C (CPAP machine) : Local expert, dispatched 2 times
6) Local trainer D (Patient monitor) : Local expert, dispatched 1 time
7) Local trainer E (Imaging system for dental X-ray) : Local expert, dispatched 1 time

In addition to the above experts, a local assistant will be hired for assisting preparation works and communication with the Ministry of Health (MoH), the targeted RRHs, and the local trainers.

5-3 Plan of Activities

The first, second, and third on-site activities and work in Japan are described below in detail.

5-3-1 1st On-Site Activity in Uganda (2 months before equipment arrival)

Only "Goods Management using 5S-CQI-TQM" is covered. The planned activities, work days and tentative schedule are as follows.

(1) Planned Activity:

The Japanese trainer will visit the targeted department/unit individually and discuss the following points with the staff including the head of the unit, and support the optimal goods management plan.

- Confirm the details of the equipment to be procured by department/unit (items, quantities, compositions, accessories, etc.)
- Check the status of 5S-CQI activities and take pictures for each department/unit
- Consultation on the proposed location of procured equipment

- In case of replacement, advice to facilitate the removal and disposal of existing equipment done by Ugandan side before the equipment arrival
- Provide suggestions on the storage locations and storage methods for accessories, spare parts, consumables, operation manuals, etc.
- Clarify and agree on the activities to be undertaken by the department/unit staff before the equipment arrived.

(2) Work Days and Tentative Schedule:

- Chief/Trainer on goods management 30 days
- Local assistant 26 days

Table 2 : 1st On-Site Activity Schedule (Draft)

Days	Tentative schedule on goods management		Site
1	Wed.	Tokyo -- >	-
2	Thu.	--> Entebbe (PM)	Kampala
3	Fri.	Meeting: JICA, MoH, JICA Patient Safety Project	
4	Sat.	Preparations	Kampala
5	Sun.	Kampala -- > Soroti (7 hrs.)	Soroti
6	Mon.	Kick-off Meeting: Soroti RRH	Soroti
7	Tue.	Discussion & coaching on goods management by department/unit individually. 3-4 units will be implemented per day. (Planned target departments/units: Operating Theatre, Orthopaedics, Radiology, OB/GYN, Neonatal ICU, Dental, Emergency, Outpatients, Private Wing, Physiotherapy, Surgical Ward, Paediatrics Wards, Ophthalmology, Internal Medicine Ward, ENT, Central Sterilization, Laundry, Central Warehouse and Maintenance Workshop)	
8	Wed.		
9	Thu.		
10	Fri.		
11	Sat.		Activity evaluation and reporting
12	Sun.	Documentation	Soroti
13	Mon.	Continuation of previous week in Soroti RRH	Soroti
14	Tue.	Meeting: Soroti RRH (wrap up & way forward), Soroti -- > Jinja (4 hrs.)	Jinja
15	Wed.	Kick-off meeting: Jinja RRH, then start coaching for 2 units	
16	Thu.	Discussion & coaching on goods management by department/unit individually. 3-4 units will be implemented per day.	
17	Fri.		
18	Sat.	Activity evaluation and reporting	Jinja
19	Sun.	Documentation	Jinja
20	Mon.	Continuation of late last week in Jinja RRH	
21	Tue.	(Planned target departments/units: Operating Theatre, Orthopaedics, Radiology, OB/GYN, Neonatal ICU, Dental, Emergency, Outpatients, Physiotherapy, Ophthalmology, ENT, Sterilization, Laundry, Central Warehouse, Maintenance Workshop and Children campus)	
22	Wed.		
23	Thu.		
24	Fri.		Meeting: Jinja RRH (wrap up & way forward)
25	Sat.	Jinja -- > Kampala (3 hrs.)	Kampala
26	Sun.	Activity evaluation and reporting	Kampala
27	Mon.	Meeting: JICA Patient-Safety Project (issues, way forward, collaboration)	
28	Tue.	Report to MoH, JICA	
29	Wed.	Entebbe -- >	-
30	Thu.	-- > Tokyo	-

5-3-2 2nd On-Site Activity in Uganda (Shortly after equipment handover)

Both "Goods Management using 5S-CQI-TQM" and "Training on Clinical Techniques and Maintenance" are covered at the same time. The planned activities, work days and tentative schedule are as follows.

(1) Planned Activity:

Goods Management using 5S-CQI-TQM

Same as the 1st on-site activity, the Japanese trainer will perform the followings by the department/unit individually.

- Check the progress of the activities agreed at the previous visit (1st on-site activity).
- Clarify the procured spare parts and other goods that cannot be identified by the users.
- Identify where and what type of goods will be stored in the hospital central warehouse, maintenance workshop or the departments where the equipment is used, with using an existing goods ledger book. It also clarifies goods ordering procedures, if necessary.
- Facilitate to storage the goods in easy-to-find and easy-to-take ways, using 5S tools.
- Clarify and agree on the required activities and way forward.

Training on Clinical Techniques and Maintenance (except Patient Monitor)

Training for each equipment will be carried out for 2-3 days per hospital. The program is expected to include the followings and about 10 participants for each equipment (4 items such as Imaging system for general X-ray, gastroendoscope, CPAP machine and imaging system for dental X-ray) will be considered.

- Understand the functions and clinical applications.
- Resolve technical concerns by learning the initial settings and operating processes.
- Learn clinical techniques and precautions through hands-on practice with simulated patient cases.
- Learn the key points of daily checks, cleaning and troubleshooting.
- Clarify the scope of services that can be handled by the user or the maintenance workshop.
- Question and answer
- Evaluation before and after training

(2) Work Days and Tentative Schedule:

Goods Management using 5S-CQI-TQM

- Chief/Trainer on goods management 27 days

Training on Clinical Techniques and Maintenance

- Training coordinator 27 days
- Local trainer A (Imaging system for general X-ray) 7 days
- Local trainer B (Gastroendoscope) 12 days
- Local trainer C (CPAP machine) 10 days

- Local trainer E (Imaging system for dental X-ray) 10 days
- Local assistant 23 days (also supports Goods Management activity)

Table 3: 2nd On-Site Work Schedule (Draft)

Days		Tentative schedule by each component			Site	
		Goods Management using 5S-CQI-TQM	Training on Clinical Techniques and Maintenance			
1	Sun.	Tokyo -- >			-	
2	Mon.	-- > Entebbe (PM)			Kampala	
3	Tue.	Meeting: JICA, MoH, and preparations				
4	Wed.	Kampala -- > Jinja	Meeting: Trainers and other parties		Jinja/ Kampala	
5	Thu.	Kick-off Meeting; Jinja RRH, coaching 2 units	Logistics, Preparations, and meeting			
6	Fri.	Coaching 3 units				
7	Sat.	Evaluation & reporting	Kampala -- > Jinja		Jinja	
8	Sun.	Documentation	Preparations and documentation			
9	Mon.	Coaching 4 units	Training in Jinja RRH [Two groups simultaneously]		Jinja	
10	Tue.	Coaching 4 units	1 st day	Imaging system for general X-ray, in 3 days		Gastroendoscope, in 3 days
11	Wed.	Coaching 4 units	2 nd day			
12	Thu.	Coaching 4 units	3 rd day	CPAP Machine, In 2 days		Imaging system for dental X-ray, in 2 days
13	Fri.	Coaching 2 units, Wrap up meeting, Jinja	4 th day			
14	Sat.	Jinja -- > Soroti			Soroti	
15	Sun.	Evaluation & preparations for Soroti RRH				
16	Mon.	Kick-off Meeting; Jinja RRH, coaching 3 units	Training in Soroti RRH [Two groups simultaneously]		Soroti	
17	Tue.	Coaching 5 units	6 th day	Gastroendoscope, in 3 days		
18	Wed.	Coaching 5 units	7 th day			
19	Thu.	Coaching 4 units	8 th day	CPAP Machine, In 2 days		Imaging system for dental X-ray, in 2 days
20	Fri.	Coaching 3 units, Wrap up meeting, Soroti	9 th day			
21	Sat.	Soroti -- > Kampala (7 hrs.)				
22	Sun.	Documentation			Kampala	
23	Mon.	Evaluation and Reporting			Kampala	
24	Tue.	Meeting: JICA Patient-Safety Project (issues, way forward, collaboration)				
25	Wed.	Report to MoH, JICA				
26	Thu.	Entebbe -- >			-	
27	Fri.	-- > Tokyo			-	

5-3-3 3rd On-Site Activity in Uganda (4-6 months after handover)

Same as the 2nd on-site activity, both components are covered. The planned activities, work days and tentative schedule are as follows.

(1) Planned Activity:

Goods Management using 5S-CQI-TQM

Through the consultation with RRH top management and maintenance engineers, the trainer will perform the followings to the selected units that have poor progress.

- Review the issues
- Clarify the procured spare parts and other goods that cannot be identified by the users.
- Follow up coaching the goods management.
- Clarify the activities to be undertaken in the future, and promote goods management as a routine work.
- Share the findings to the RRH top management and JICA technical cooperation project, and request continuous support for the goods management as well.

Training on Clinical Techniques and Maintenance (except Imaging system for dental X-ray)

A two-days training for each equipment will be carried out per hospital. The program is planned as below, but may be modified according to the equipment operational status and the needs of the users. The number of participants will be maximum 15 for patient monitor and 10 for other three items (Imaging system for general X-ray, gastroendoscope and CPAP machine). For patient monitor, the training program will be determined according to the participants' levels of skills and knowledge.

- Re-study poor understanding areas about equipment functions and clinical applications.
- Practice and re-study of the initial settings and basic operation.
- Learn clinical techniques and precautions through hands-on.
- Re-study of daily checks, cleaning and troubleshooting.
- Practice related to maintenance that can be handled by the user or the workshop staff.
- Question and answer
- Evaluation before and after training

(2) Work Days and Tentative Schedule:

Goods Management using 5S-CQI-TQM

- Chief/Trainer on goods management 24 days

Training on Clinical Techniques and Maintenance

- Training coordinator 24 days
- Local trainer A (Imaging system for general X-ray) 6 days
- Local trainer B (Gastroendoscope) 10 days
- Local trainer C (CPAP machine) 10 days
- Local trainer D (Patient monitor) 10 days
- Local assistant 20 days (also supports Goods Management activity)

Table 4: 3rd On-Site Work Schedule (Draft)

Days		Tentative schedule by each component				Site	
		Goods Management using 5S-CQI-TQM		Training on Clinical Techniques and Maintenance			
1	Tue.	Tokyo -- >				-	
2	Wed.	-- > Entebbe (PM)				Kampala	
3	Thu.	Meeting: JICA, MoH, local trainers etc.					
4	Fri.	Meeting: local trainers, Preparation for training					
5	Sat.	Kampala -- > Soroti (7 hrs.)				Soroti	
6	Sun.	Documentation					
7	Mon.	Briefly evaluate Soroti RRH target units, and coaching for approx. 10 units that have poor progress during 4 days.	1 st day	Gastroendoscope, in 2 days	/	Soroti	
8	Tue.		2 nd day				
9	Wed.		3 rd day	CPAP machine, In 2 days			Patient monitor, In 2 days
10	Thu.		4 th day				
11	Fri.	Meeting: Soroti RRH (wrap up, sharing results, issues, way forwards)				Jinja	
12	Sat.	Soroti -- > Jinja (4 hrs.)					
13	Sun.	Evaluation and Reporting					
14	Mon.	Briefly evaluate Jinja RRH target units, and coaching for approx. 10 units that have poor progress during 4 days.	5 th day	Imaging system for general X-ray, in 2 days	Gastroendoscope, in 2 days	Jinja	
15	Tue.		6 th day				
16	Wed.		7 th day	CPAP machine, In 2 days			Patient monitor, In 2 days
17	Thu.		8 th day				
18	Fri.	Meeting: Jinja RRH (wrap up, sharing results, issues, way forwards)				Kampala	
19	Sat.	Jinja -- > Kampala (3 hrs.)					
20	Sun.	Evaluation and Reporting					
21	Mon.	Meeting: JICA Patient-Safety Project (way forward, collaboration)				Kampala	
22	Tue.	Report to MoH, JICA					
23	Thu.	Entebbe -- >				-	
24	Fri.	-- > Tokyo				-	

The training will be planned for the four items listed above, but the target equipment and the program maybe flexibly modified when the modification is required to achieve the goals.

5-3-4 Works in Japan

The works in Japan related to the first, second, and third on-site activities are planned for two Japanese experts, as described below.

(1) Planned Activity :

Goods Management using 5S-CQI-TQM

- Pre-coaching consultations and planning the activity with the MoH, the targeted RRHs, and other relevant parties
- Preparation of handouts, coaching materials, etc.
- Check the progress of the ongoing activities and identify the issues
- Reporting and Submission

Training on Clinical Techniques and Maintenance

- Pre-training consultations and planning the activity with the MoH and the local trainers
- Request preparation of the training materials by the local trainers
- General works such as issuing invitations, securing training venues, etc.
- Reporting and Submission

(2) Working Days in Japan:

Table 5: Working Days in Japan

Component	Personnel	Before 1 st Activity	Before 2 nd Activity	3 rd Activity		Total days
				Before	After	
Goods Management using 5S-CQI-TQM	Chief/Trainer on goods management	3 days	2 days	2 days	3 days	10 days
Training on Clinical Techniques and Maintenance	Training coordinator	-	4 days	2 days	2 days	8 days

6. Methods of Procuring Resources for The Implementation

"Goods Management" will be conducted by Japanese consultants who has a coaching experience. "Training on Clinical Techniques and Maintenance" will be handled by local resources who know the situation in Uganda, and the training coordination will be handled by a Japanese consultant as a training coordinator.

A trainer on Goods Management will be an expert who is knowledgeable in 5S-CQI-TQM, knows the situation in Uganda and is able to explore collaboration with ongoing JICA Project.

The local trainers for the "Training on Clinical Techniques and Maintenance" will be selected from the healthcare professionals or engineers who have the required skills and knowledge, in consultation with the Health Infrastructure Department (HID) of the MoH and major local distributors. The local trainers in Uganda would be more appropriate than the trainers who come from other countries in terms of cost, language, sustainability after termination of the soft component, and prompt after-sales support.

7. Implementation Schedule of Soft Component

The project schedule from the start of detailed design to the handover of the equipment is expected to take a total of 17 months. The first on-site activity is scheduled to begin approximately 2 months before equipment arrival, which means around 15 months from the start of the project implementation. The third on-site activity is scheduled to carry out 4 to 6 months after handover of the equipment, which means around 23 months from the start of the project implementation. The draft of the soft component implementation schedule is as follows.

Table 6: Soft Component Implementation Schedule (Draft)

Year (Expected)		2024						2025			Work days	
Month (Expected)		7	8	9	10	11	12	1	2	3	Japan	Uganda
Total Month of Implementation		15	16	17	18	19	20	21	22	23		
Dispatched Experts	Goods Management: 1) Chief/ Trainer(Japanese)	■	■	■	■				■	■	10	81
	Training on Clinical Techniques: 2) Training coordinator			■	■				■	■	8	51
	3) Local trainer-A (Imaging system for general X-ray)				■				■	■	-	13
	4) Local trainer-B (Gastroendoscope)				■				■	■	-	22
	5) Local trainer-C (CPAP machine)				■				■	■	-	20
	6) Local trainer-D (Patient monitor)								■	■	-	10
	7) Local trainer-E (Imaging system for dental X-ray)				■						-	10
												18
Implementation Schedule	Handover of the Equipment (Estimated September 2024)			▲								
	Teaching on Goods Management using 5S-CQI-TQM	■			■					■		
	Training on Clinical Techniques and Maintenance				■					■		
	Preparation and submission of Progress Report		■		■							
	Preparation and submission of Soft Component Final Report									■		

■ : Work days in Uganda □ : Work days in Japan

8. Deliverables of Soft Component

The following documents will be the deliverables of the soft component.

- Training materials and textbooks for both activities
- Comparative photos before and after introduction of goods management
- Evaluation records of the Training on Clinical Techniques and Maintenance
- Soft component completion report

9. Responsibilities of The Uganda Side

The HID-MoH, the Top Managements of both RRHs and the Maintenance Workshops are required to support the overall preparations, including scheduling, providing the venues, and selecting appropriate participants. Recommended that the person in charge of HID-MoH will join in the trainings, as needed. These parties shall endeavor to secure the budget, personnel, spare parts, and consumables to sustain the management system to be developed by the soft components' activities, as well as support regular user trainings so that the equipment can be used properly.

END

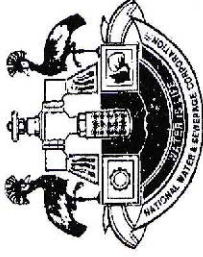
6. References

No.	Reference Name	Form	Language	Publication	Issuance Year
1	Third National Development Plan (NDPIII)2020/21-2024/25	Electronic data	EN	National Planning Authority	2020
2	Ministry of Health Strategic Plan 2020/21-2024/25	Electronic data	EN	Ministry of Health	2020
3	Comprehensive Health Standards Manual	Electronic data	EN	Ministry of Health	2021
4	The Second National Health Policy	Electronic data	EN	Ministry of Health	2010
5	Country Assistance Policy for the Republic of Uganda	Electronic data	JP	Ministry of Foreign Affairs, Japan	2017
6	Human Resources for Health Strategic Plan2020-2030	Electronic data	EN	Ministry of Health	2021
7	Human Resources for Health Strategic Plan2020-2030, Operational Plan 2020/21-2024/25	Electronic data	EN	Ministry of Health	2021
8	Mid-Term Review Report for the Health Sector Development Plan2015/16-2019/20	Electronic data	EN	Ministry of Health	2018
9	Service Standards and Service Delivery Stanards for the Health Sector	Electronic data	EN	Ministry of Health	2016
10	Re-Aligned Organization Structure	Electronic data	EN	Ministry of Health	2017
11	Operation Manual for Regional Medical Equipment Maintenance Workshops and Medical Equipment Maintenance Guidelines Volume I	Electronic data	EN	Health Infrastructure Department, Ministry of Health	2020
12	National Medical Equipment Policy, Detailed Technical Specifications per Health Care Level, Regional Referral Hospital	Electronic data	EN	Ministry of Health	2009
13	Jinja Regional Referral Hospital Strategic Development Plan2015/2016-2019-2020	Electronic data	EN	Jinja Regional Referral Hospital	2018
14	JINJA REGIONAL REFERRAL HOSPITAL STRATEGIC DEVELOPMENT PLAN 2020 - 2025	Electronic data	EN	Jinja Regional Referral Hospital	Unauthorized
15	SOROTI REGIONAL REFERRAL HOSPITAL STRATEGIC PLAN FY 2020/2021 - 2024/2025	Electronic data	EN	Soroti Regional Referral Hospital	Unauthorized
16	Annual Health Sector Performance Report FY2015-16	Electronic data	EN	Ministry of Health	2016
17	Annual Health Sector Performance Report FY2016-17	Electronic data	EN	Ministry of Health	2017
18	Annual Health Sector Performance Report FY2017-18	Electronic data	EN	Ministry of Health	2018
19	Annual Health Sector Performance Report FY2018-19	Electronic data	EN	Ministry of Health	2019
20	Annual Health Sector Performance Report FY2019-20	Electronic data	EN	Ministry of Health	2020
21	Annual Health Sector Performance Report FY2020-21	Electronic data	EN	Ministry of Health	2021
22	Annual Budget Performance Report FY 2017-18	Electronic data	EN	MOFPED	2018
23	Annual Budget Performance Report FY 2018-19	Electronic data	EN	MOFPED	2019
24	Annual Budget Performance Report FY 2019-20	Electronic data	EN	MOFPED	2020
25	Annual Budget Performance Report FY 2020-21	Electronic data	EN	MOFPED	2021
26	Semi-Annual Budget Performance Report FY 2021-22	Electronic data	EN	MOFPED	2022
27	Soroti Regional Referral Hospital Medical Equipment Activity Report on Training Needs Assessment Suervye conducted in 3rd Quarter FY2021/2022	Electronic data	EN	Soroti	2022
28	Sustainable Development Report 2022	Electronic data	EN	Cambridge University Press	2022
29	Globocan 2020	Electronic data	EN	World Health Organization	2021
30	National Health Facility Master List 2018	Electronic data	EN	Ministry of Health	2018
31	2021 Statistical Abstract	Electronic data	EN	Uganda Bureau of Statistics	2021
32	A Reprint of Various Tax Laws and Compendium for Domestic Tax Laws of Uganda	Electronic data	EN	The Republic of Uganda	2021
33	Uganda Tax Datacard 2021/2022	Electronic data	EN	PWC	2021
34	Uganda Cancer Institute Strategic Plan2015/16-2019/20	Electronic data	EN	Uganda Cancer Institute	2019
35	Guidelines for Regional Referral Hospital Management Boards	Electronic data	EN	Ministry of Health	2018

7. Other Relevant Data /Results of Water Quality Analysis (Soroti RRH)

NWSC Soroti on 07 Apr. 2022

NATIONAL WATER AND SEWERAGE CORPORATION
WATER QUALITY MANAGEMENT DEPARTMENT



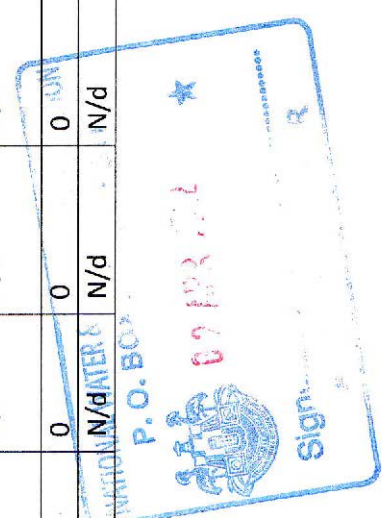
TO: AREA MANAGER, SOROTI
SENIOR MANAGER OPERATIONS, EASTERN REGION
AREA QUALITY CONTROL OFFICER

Date sampled: 26/03/2022

Date reported 02/04/2022

REPORT ON PHYSICO-CHEMICAL WATER QUALITY

Water sample No	Unit	Raw water	Final water	Pamba psp	Nakatunya psp	Television	Soroti Prisons	Moruapesur psp	National Standards for potable water
Water sample No.		N1739	N1740	N1741	N1742	N1743	N1744	N1745	
pH	--	7.06	7.2	7.13	7.2	7.23	7.25	7.22	5.5 – 8.5
Electrical Conductivity	Us/cm	457	438	488	448	490	472	469	1500
Colour Apparent	PtCo	53	2	2	9	2	3	2	15
Turbidity	Ntu	2.94	0.98	1.14	1.05	0.93	0.70	0.80	5
Total suspended Solids	Mg/l	1	0	0	6	0	0	0	0
Alkalinity; Total	Mg/l as CaCO ₃	140	90	N/d	N/d	N/d	N/d	N/d	500
Hardness; Total	Mg/l as CaCO ₃	110	100	N/d	N/d	N/d	N/d	N/d	300
Iron: Total	Mg/l	0.67	0.18	N/r	N/r	N/r	N/r	N/r	<0.300
Aluminium residual	Mg/l	N/r	0.12	N/r	N/r	N/r	N/r	N/r	<0.2
Chlorine : free residual	Mg/l	N/r	0.72	0.30	0.23	0.4	0.22	0.3	0.2 – 0.50
Chlorine: Total residual	Mg/l	N/d	N/d	N/d	N/d	N/d	N/d	N/d	Not specified
Faecal Coliforms	CFU/100ml	76	0	0	0	0	28	0	0
E-coli	CFU/100ml	N/d	N/d	N/d	N/d	N/d	N/d	N/d	0



NR – Not Required, N/d – Not Determined, N/A Not Applicable,

Remarks:

Treatment produced water of satisfactory physico-chemical quality (except TSS at Nakatunya) and bacteriological characteristics (except at Soroti prisons which is doubtful). A repeat sample shall be taken to ascertain the doubt. The rest of the sampled sources showed compliance with National Standards for potable water. Routine cleaning of process units and flushing of network is recommended.



SENIOR QUALITY CONTROL OFFICER- EASTER REGION

