

**THE REPUBLIC OF UGANDA**

**THE CIVIL AVIATION AUTHORITY**



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**Upgrading Aerodromes In Uganda  
Arua, Kasese, Gulu , Pakuba, Kisoro and Kidepo**

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## **PROJECT PROFILE**

**Title:** Rehabilitation and Modernisation of selected Regional Aerodromes

**Implementing Agency:** Civil Aviation Authority, Uganda

**Location** : Arua, Gulu, Pakuba, Kasese, Kisoro, and Kidepo

### **1.0 Background**

#### **1.1 Air transport system in Uganda**

The Civil Aviation Authority (CAA) is an autonomous statutory body mandated to establish, maintain, develop, and operate Entebbe International Airport and other gazetted Regional (Upcountry) aerodromes. Presently there are 13 upcountry aerodromes falling within the jurisdiction of CAA. These include Arua, Gulu, Pakuba, Kasese, Kidepo, Kisoro, Mbarara, Moroto, Lira, Jinja, Masindi, Tororo and Soroti aerodromes. Out of these airports, Kasese, Arua, Gulu, Pakuba and Kidepo are gazetted as points of entry/exit for International flights for the purpose of promoting tourism industry and economic activities across borders. Equally important are Soroti Airport which provides infrastructure for aviation training by the East African Civil Aviation Academy (EACAA), Mbarara, Jinja and Tororo for their strategic locations to tourist sites and commercial centers of the country. The growth of traffic in this sector has been steadily increasing despite the current inadequate facilities precipitated by lack of investment capital to upgrade them to acceptable levels so as to attract air operators.

The Airports currently have minimum international standards in terms of Aviation Safety, Passengers handling and facilitation, air navigation and communication facilities, fire fighting and rescue services. However fall short of the ICAO recommended standards and practices for commercial aircrafts expressing interests of operating in and out of the above regional airports.

The air transport system in Uganda is however structured around EIA as both the domestic and International hub. Practically all domestic traffic is radial in nature and emanates /destinates from/to EBB. Efforts have been made in the past few years to change this radial nature of the air traffic flow. Firstly 5

airports have been designated as entry exit points. The importance of this is to allow appropriate aircraft destined to specific regional interests to directly move to those areas. The second step will be to upgrade facilities at these aerodromes in order to catalyse growth of services.

### **1.2 The Role of air transport in the Economy**

The air transport sector in Uganda is small, contributing about 1% of GDP but with an annual growth rate of 13%, it is the fastest growing sub-sector within the transport sector. Main drivers for this growth are business travel, tourism and humanitarian activities within the great lakes region. This growth is reflected in growth of air traffic statistics for Entebbe International Airport over the past 16 years as shown in ANNEX 1 attached.

## **2.0 The Goal and Purpose of the Program**

The goal of the project is to improve and upgrade facilities and services at all the designated aerodromes in-order to bring the existing airport facilities and infrastructure in line with international ICAO standards and recommended practices (SARPS). The project aims at primarily improving the Airport facilities and services to enhance safety and security standards but also to promote commercial activities which are important for sustainability of the facility in the long term.

The objective of the modernization and rehabilitation plan for the selected aerodromes is to improve the airports infrastructure so as to ensure safe, regular and secure air transport services in and outside Uganda.

### **2.1 Specific Objectives**

- i. Enhancement of safety through implementation of planned modernization programs that provide air safety, upgrade runway surfaces and associated systems to attain aerodromes certification.
- ii. Enhancement of aviation security to provide confidence to airports users
- iii. Development of infrastructure to support National policies on Plan for Modernization of Agriculture (PMA), Poverty Eradication Action Plan (PEAP) and regional integration.
- iv. Promote air transport as an intermediate means of transport for faster economic decisions for the private sector and increase the revenue base for CAA.

## **3.0 Justification for each Aerodrome**

### **3.1 Arua Aerodrome**

Arua Airfield is gazetted as an International Entry/ Exit point. It is one of the busiest domestic Airports in the country with an average of 8 air traffic movements and 120 Passengers both in and out per day. At present, Arua is the furthest major town from Kampala, a distance of 532 kms. Presently we have two- three scheduled flights to Arua mounted by Eagle Air and United Airlines of 19- seater aircrafts daily. The state of the physical infrastructure is as follows;

#### a) Runway

The Runway, taxiways and apron were recently re-gravelled to first class murrum surface at a cost of Uganda shillings 480m. The technical characteristics of the runway are:-

Designation	:	18/36
Location	:	03°03'N 30°55'E
Length	:	1800m
Width	:	30 m
Planned length	:	2500m
Runway Surface	:	Marrum
Present fenced Area	:	30 Hectares
Airfield Land Limit	:	119 Hectares

#### b) Buildings

Terminal building:	Too small to handle increased number of Passengers
Fire tender shade:	In fair condition
Fire quarters :	In poor state, however plans to construct new staff quarters is under tender process
Police quarters :	10 uniports are available as accommodation and office space for the Aviation police.

#### c) Communication

The Airfield has an HF-Communication System which links it with Entebbe and other Airfields all over the Country.

We have both UTL landline and a Mobile set that enables close Co-ordination between Entebbe and Arua Airports.

d) Fire and rescue services:

There is a fire tender Vehicle manned by three firemen. This fire fighting facility is the only one in the district and therefore covers fire outbreaks in the Municipality. However the Municipality has always declined to meet the costs that go with fire fighting in their area of jurisdiction.

### 3.2 Gulu Airport

Gulu Airport is one of the five Civil Aviation Authority gazetted International Entry / Exit point Aerodrome, It is used for both military and civil operations. There is a national desire to develop the airport as an alternate airport to Entebbe International Airport and hence the airport will play an important role in export agriculture. The following are the characteristics found at Gulu Airport.

#### **Runway**

Designation	:	35/17
Location	:	02°48'N 32°16'E
Runway length	:	3100m
Runway width	:	45m
Runway Surface	:	Asphalt
Apron	:	Paved

#### **Buildings**

The Passenger terminal, supervisor's house, Fire quarters were rehabilitated to some reasonable condition. However the terminal building is too small and we have plans to construct a new terminal building once resources allow.

#### **Communication.**

The Airfield has an HF Communication system which links it with Entebbe and other Airfields all over the Country we have both UTL land line and a mobile set that eases co-ordination between Entebbe and the Airports.

### **3.3 Kasese Airport**

Kasese Airfield is gazetted as an international entry/ exit point. It is 4 km from Kasese town. It is strategically located to boost cross border traffic, tourism and cargo transportation by air as well as mining. The following are the major current airfield characteristics

#### **Runway**

Designation	:	01/19
Location	:	00°11'N 30°06'E
Length	:	1750M
Width	:	30 M
Altitude	:	3146ft (960m)
Runway surface	:	Grass
Navigational Aids	:	NDB,RWYmarkers and Windsock in place.
Planned length	:	3000M
Fence	:	Nil
Land Area	:	122.5 Hectares

#### **Communication**

The airfield has an HF-Communication System which links with Entebbe and other airfields all over the Country.

The Supervisor has a mobile telephone and a fixed MTN line sets that enables close co-ordination between Entebbe and Kasese airports beyond working hours.

### **3.4 Kidepo Airfield**

Kidepo Airfield which was originally private was transferred to CAA in 1995, after being gazetted as an international Entry/Exit point. Kidepo Airfield provides access to Kidepo National park . The airfield has a substantial bearing on regional and international tourism and the need for the Authority on behalf of Government to ensure that minimum standards prevail by directly carrying out maintenance and development programmes. The state of infrastructures is as follows;

Position	:	03°45' N 33° 42° E - Kidepo Valley National Park
Runway length	:	1500 M
Runway width	:	21 M
Surface	:	Marrum
Markers	:	Available
Windsock	:	Available

Met services : Provided at the Park Headquarters 4kms way  
Perimeter fence : Electric power fence in place

### **Buildings**

The contractor is on the site to construct a terminal building in an attempt to upgrade from the existing terminal shade. The power and storage house is in good condition.

### **Communication**

The airfield has an HF communication system which links it with Entebbe and other airfields all over the country..

## **3.5 Pakuba Airfield**

Pakuba is located in Murchison fall National Park. It is also gazetted as an international Entry / Exit Point, serving the Murchison Park Area.

Runway designation : 25/07  
Length : 1800 Metres  
Width : 30 Metres  
Planned length : maintain length  
Surface : Marrum(to upgrade to tarmac)  
Security fence : Electric power fence  
Airfield Land Limit : 65 Hectares

### **Buildings**

Terminal Building: Renovated and in good condition in 1998

Staff house : Renovated and in good condition in 1998  
Store and Fire Shade: In good condition  
Communication room and Office-Adequate and holds both HF and VHF Radio.

## **3.6 Kisoro Aerodrome**

Runway Length : 1300m  
Surface : Tarmac  
Width : 40m  
Navigation aids : NDB



Planned length : 1800m

Terminal Building: existing

Plans for upgrading of Kisoro aerodrome are being worked on and details are included in the investment plan.

## **4.0 Capital Investment Plan**

### **4.1 Arua Aerodrome**

Item	Description	Estimated costs
		in US \$
1	Installation of new AGL system	600,000.00
2	Provision of security equipments	160,000.00
3	Procurement of new standby generator 250 KVA 450/240 V 50 HZ 3 Phase	100,000.00
4	Procurement of 1 new fire tender to replace the existing one plus auxiliary equipment	700,000.00
5	Major Upgrading of passengers and service buildings	500,000.00
6	Surfacing of the existing runway to asphalt or concrete surface and extending length to 2.5km	5,000,000.00
7	Upgrading facilities for meteorological services and navigation services(AWOS +ILS)	550,000.00
8	Office and human capacity building	150,000.00
9	Extend the fence	100,000.00
10	Consultancy Services(design and supervision) Including carrying out an Environment Impact assessment.	700,000.00
11	Contingency	100,000
	Total Costs	<b>8,668,000.00</b>

#### 4.2 Gulu Aerodrome

Item	Description	Estimated costs
		in US \$
1	Installation of new AGL system	600,000.00
2	Provision of security equipments	160,000.00
3	Procurement of new standby generator 250 KVA 450/240 V 50 HZ 3 Phase	100,000.00
4	Procurement of 1 new fire tender to replace the existing one and auxiliary equipment	700,000.00
5	Major Upgrading of passengers, Fire, service and Air traffic management buildings	500,000.00
6	Repair and overlay of the existing asphalt runway /taxiways	4,000,000.00
7	Upgrading facilities for meteorological services and air navigation services	500,000.00
8	Provision of a chain link fence	600,000.00
9	Office and human capacity building	50,000.00
10	Consultancy Services (design and supervision) Including carrying out an Environment Impact assessment.	700,000.00
11	Contingency	100,000.00
	Total Costs	<b>8,010,000.00</b>

#### 4.3 Pakuba Aerodrome

Item	Description	Estimated costs
		in US \$
1	Provision of security equipments	50,000.00
2	Fencing of the airport	200,000.00
3	Procurement of 1 new fire tender to add to the existing one	300,000.00
4	Major Upgrading of passengers and service buildings. Provision of a fire station building.	200,000.00
5	Upgrading of the runway surface to tarmac to be at par with the tourist circuit requirements including taxiways	3,000,000.00
6	Construction of staff quarters	250,000.00
7	Basic met and navigation equipment(awos+NDB)	300,000.00
8	Consultancy services (design and supervision) Including carrying out an Environment Impact assessment.	400,000.00
9	Office and human capacity building	25,000.00
10	Contingency	100,000.00
	Total Costs	<b>4,825,000.00</b>

#### 4.4 Kasese Aerodrome

Item	Description	Estimated costs
		in US \$
1.	Consultancy Fees(Including carrying out an Environment Impact assessment).	700,000.00
2	Installation of new AGL system	500,000.00
3	Provision of security equipments	160,000,.00
4	Procurement of new standby generator 250 KVA 450/240 V 50 HZ 3 Phase	120,000.00
5	Provision of staff houses	250,000.00
6	Procurement of 1 new fire tender to add to the existing one	600,000.00
7	Major Upgrading of passengers, Fire, service and Air traffic management buildings	1,000,000.00
8	Fencing	600,000.00
9	Land Acquisition	500,000.00
10	Upgrading the existing runway from grass to tarmac from a length of 1800m to 3000m including taxiways	12,000,000.00
11	Upgrading facilities for meteorological services and air navigation services	500,000.00
12	Office and human capacity building	150,000.00
13	Contingency	100,000
	<b>Total Costs</b>	<b>17,180,000.00</b>

#### 4.5 Kidepo Aerodrome

Item	Description	Estimated costs
		in US \$
1	Provision of security equipments	50,000,.00
2	Fencing of the airport	200,000.00
3	Procurement of 1 new fire tender	300,000.00
4	Major Upgrading of passengers and service buildings. Provision of a fire station building.	200,000.00
5	Extending the runway to 1800m and tarmacing of the runway surface including taxiways	3,000,000.00
6	Construction of staff quarters	250,000.00
7	Basic met and navigation equipment(awos+NDB)	300,000.00
8	Consultancy services (design, supervision + Including carrying out an Environment Impact assessment.)	400,000.00
9	Office and human capacity building	25,000.00
10.	Contingency	100,000
11	<b>Total Costs</b>	<b>4,825,000.00</b>

#### 4.6 Kisoro Aerodrome

Item no.	Description	Estimated costs
		in US \$
1.	Consultancy Fees(Including carrying out an Environment Impact assessment.)	100,000.00
2	Provision of security equipments	50,000,.00
3	Provision of staff houses	250,000.00
4	Procurement of 1 new fire tender	300,000.00
5	Major Upgrading of passengers, Fire, service and Air traffic management buildings	300,000.00
6	Fencing	600,000.00
7	Land Acquisition	100,000.00
8	Lengthening existing tarmac runway from 1300m to 1800m	1,300,000.00
9	Basic met services	100,000.00
10	Consultancy services	300,000.00
11	Office and human capacity building	25,000.00
	Contingency	100,000
	Total Costs	<b>3,525,000.00</b>

#### 4.7 Summary Table

Item	Description	Estimated Costs in US\$
1.0	Arua Aerodrome	8,668,000.00
2.0	Gulu Aerodrome	8,010,000.00
3.0	Pakuba Aerodrome	4,825,000.00
4.0	Kasese Aerodrome	17,180,000.00
5.0	Kidepo Aerodrome	4,825,000.00
6.0	Kisoro Aerodrome	3,525,000.00
	Total	<b>47,053,000.00</b>

#### 4.8 Secured Funding Requirements And Possibilities Of Public Private Partnerships.

CAA has just made a large capital investment at Entebbe International Airport to handle the recently successfully held Commonwealth Heads of Government

Meeting (CHOGM). Currently the funding available is basically reserved for the maintenance of the aerodromes.

Therefore the capital funding required to execute the works tabled in 4.7 still remains the same.

The Act that established the Civil Aviation Authority Uganda does not prevent the Authority from entering into **Public Private Partnerships (PPP)**.

Presently the authority is exploring avenues of building a cargo centre at Entebbe and a PPP is one of them.

For the projects in this submission the possibility of exploring this avenue can be pursued once preliminary feasibility studies have been carried out.

## **5.0 Available Data**

- i. Technical Design and implementation Reports
- ii. Estimated cost of work and work plan
- iii. Approval by the Central Government
- iv. Priority in the National Transport Master Plan (Under consideration)
- v. Priority in the Civil Aviation Authority Uganda Master plan 2025.

## **6.0 Regional Impact**

The importance of individual aerodromes both to the national economy and the greater EAC economy varies with each but generally all aerodromes are located near northern and south-western borders which make them important as economic outposts for access to the Southern Sudan and DRC economies. Arua, Kisoro, Kasese and Gulu aerodromes are important for regional trade.

There is increasing recognition of the interconnectivity of tourism potentials in the region. Uganda has tourism attractions which are unique and are desired by visitors coming to either Kenya or Tanzania. Pakuba, Kidepo,

Kisoro and Kasese are important aerodromes as part of regional tourism circuit. They offer access to unique regional tourist attractions in Murchison falls National Park, Kidepo National Park , Mountain Gorrillas in Mgahinga National Park, and Queen Elizabeth National Park on the floor of the western arm of the great East African rift valley.

## ANNEX 1: IMPORTANT AIRPORT STATISTICS

### Traffic through Entebbe International Airport 1991/2-2006/7

	1991/2 <sup>1</sup>	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8	1998/9	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2006/7
OVERFLIGHTS	1,754	1,800	2,098	2,542	2,736	3,107	2,592	3,104	2,821	3,037	3,117	3,207	3,443	4,395	5,997
DOMESTIC PASSENGERS	5,405	6,514	6,619	13,290	19,137	31,725	30,473	34,369	29,767	27,012	26,097	41,608	45,948	40,639	36,310
TRANSIT PASSENGERS	33,535	38,508	56,946	52,884	49,356	56,591	68,763	78,630	66,792	57,427	29,208	35,324	24,978	25,159	33,107
INTERNATIONAL PAX	121,431	137,622	164,070	221,246	277,357	315,898	334,646	334,530	347,313	341,389	348,707	390,290	437,050	515,656	581,124
COMMERCIAL MOVEMENTS	6,379	9,035	9,284	12,391	13,407	16,015	15,945	17,797	16,588	15,971	13,500	16,064	17,523	16,703	18,161
IMPORTS (tons)	4,981	5,462	8,170	11,560	11,210	13,410	15,529	16,064	13,608	14,763	13,393	12,648	13,599	14,569	14,537
EXPORTS (tons)	1,545	2,131	4,206	6,207	10,786	14,484	11,401	16,275	8,805	18,791	22,549	21,748	27,749	37,107	37,418

<sup>1</sup> Financial years commence in July and end in June of the next year.

