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SESSIONAL PAPER NO. 6 of 2024

ON

NATIONAL AVIATION POLICY

AUGUST, 2024

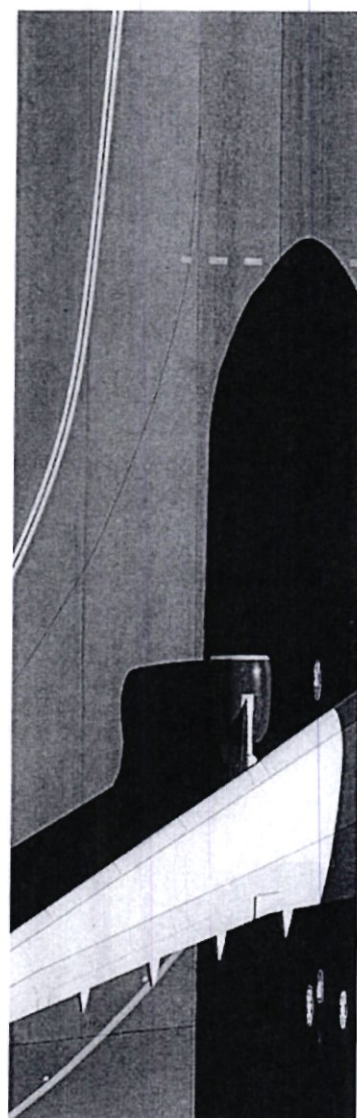
	
THE NATIONAL ASSEMBLY PAPERS LAID	
DATE: 14 AUG 2024	DAY: Wednesday
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NATIONAL AVIATION POLICY FOR KENYA

Table of Contents

1	Introduction	4
2	Governance	7
3	Regulation and sustainability	11
3.1	Safety	11
3.2	Security	13
3.3	Environment and Sustainability	15
3.4	Economic regulation	18
4	Connectivity and aviation services	20
4.1	Air transport market	20
4.2	Airlines	22
4.3	Cargo	23
4.4	Regional and general aviation	24
4.5	Taxation	25
4.6	Maintenance and Repair Organizations (MRO)	27
5	Airports	29
5.1	Management and operation	29
5.2	Planning and development	31
5.3	Investment needs and financing	32
6	Air Navigation	36
7	Human resources development	38
8	Data and statistics	40
	Annex 1 – Aviation Policies and Policy Statements	42



List of acronyms

Acronym	Meaning	Acronym	Meaning	Acronym	Meaning
ASSR	Aviation Safety and Security Regulation Directorate	Doc	Document	MET	Meteorological services
AAID	Aircraft Accident Investigation Department	EAC	East African Community	MRO	Maintenance, Repair and Overhaul
AFCAC	African Civil Aviation Commission	EASA	East African School of Aviation	NAP	National Aviation Policy
AFI	Africa-Indian Ocean Region	EMS	Environmental Management System	NASP	National Aviation Safety Plan
AFRAA	Africa Airlines Association	FAA	Federal Aviation Administration	NAVAIDS	Navigational Aid System
AIG	Accident Investigation and Prevention	GA	General Aviation	NCASP	National Civil Aviation Security Programme
AIM	Aeronautical Information System	GANP	Global Air Navigation Plan	ORG	Organization
AIP	Aeronautical Information Publication	GASeP	Global Aviation Security Plan	pax	passenger
AMO	Approved Maintenance Organization	GDP	Gross Domestic Product	PBN	Performance Based Navigation
ANS	Air Navigation Service	GDS	Global Distribution Systems	PPP	Public-Private Partnership
ANSP	Air Navigation Service Provider	GHG	Greenhouse Gases	PQ	Protocol Questions
AOC	Air Operator Certificate	GNSS	Global Navigation Satellite Services	R&D	Research and Development
API	Advanced Passenger Information	IASA	International Aviation Safety Assessment Program	SAF	Sustainable Aviation Fuels
ATM	Air Traffic Management	ICAO	International Civil Aviation Organization	SAR	Search and Rescue
ATO	Approved Training Organization	ICT	Information and Communications Technology	SARP	Standards and Recommended Practices
BASA	Bilateral Air Service Agreement	JKIA	Jomo Kenyatta International Airport	SAATM	Single African Air Transport Market
CASSOA	Civil Aviation Safety and Security Oversight Agency	k	thousand	SEZ	Special Economic Zone
CNS	Communication, Navigation and Surveillance	CAA	Kenya Airports Authority	SSP	State Safety Programme
COMESA	Common Market for Eastern and Southern Africa	KCAA	Kenya Civil Aviation Authority	SWIM	System-Wide Information System
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation	KRA	Kenya Revenue Authority	USD	United States Dollar
COVID19	Coronavirus Disease 2019	m	million	USOAP	Universal Safety Oversight Audit Program

1 Introduction

The aviation sector is a major contributor to the Kenyan economy as well as a key enabler to its further development as an economic and social reference country in Africa. As one of the most visited countries in Eastern Africa, aviation is essential not only for the tourism industry but also to connect the country with the rest of the world strengthening trading ties and generating new business opportunities. The aviation sector contributes US\$1.5bn to the GDP comprising US\$740m from aviation itself, US\$515m through indirect activities down the supply chain and US\$294m from employees' and stakeholders spending. It generates 26,000 jobs directly, a further 104,000 indirectly and 59,000 more induced. The aviation impact on Kenya's tourism industry accounts for an extra US\$1.6bn contribution to GDP and 336,000 jobs.¹

In 2019, Kenya registered the highest number of air traffic passengers ever, surpassing 12 million annual passengers; of which 7 million came from outside the country. This way, the air transport mode serves as the main point of entry for international arrivals into Kenya.

This sector is supported by an extensive network of more than 440 airports and

airfields throughout the country, 18 of which are actively managed by Kenya Airports Authority (KAA).

However, the aviation sector in Kenya is not only reduced to air passenger transportation but also comprises a varied range of other aviation-related activities such as maintenance of both light and large aircraft, aviation schools, and cargo transportation, among others. These activities do not only support the air transport industry but also allow other sectors to benefit from a well-developed network to trade goods and services with other countries.

The Government acknowledges the importance of the aviation sector to the country's social and economic development and is committed to creating an environment in which the sector as a whole can maximize its potential for the benefit of Kenya.

The aviation sector is considered a key enabler for the transformation of the country into a newly industrializing, middle-income country, as per Kenya Vision 2030, with its citizens enjoying a high quality of life in a clean and secure environment.

Through the development of an aviation policy, Kenya will create the enabling environment and set the foundation for

industry growth. The demand for air transport infrastructure and services is expected to be influenced by the policies stated in this document, directly impacting on trade, productivity, and even population growth and urbanization.

The global economic downturn caused by the COVID19 pandemic has had a major impact on aviation across the world and Kenya has not been immune to its adverse effects. Aviation is a particularly cyclical industry with an elastic behaviour to economic development and remains especially susceptible to economic shocks. The aviation sector in Africa, especially in Eastern Africa, was particularly hit by the side effects of the measures adopted throughout the pandemic with airline and airport profitability significantly affected as air transport came to a halt for several months, causing long-lasting negative effects on the sector from which it is still recovering.

National airlines, led by Kenya Airways and its subsidiary Jambojet, were severely affected as flights were disrupted due to restrictions. Despite that, passenger numbers in the country are progressively returning to pre-pandemic levels.

¹ Aviation Benefits Beyond Borders, September 2020

Kenya has a long aviation tradition and has earned its reputation as an African aviation hub. Apart from welcoming large numbers of tourists and visitors and managing millions of passengers each year the country hosts one of the best-equipped Civil Aviation Training Centers in Africa such as the East African School of Aviation and is home to successful maintenance and repair organization such as Kenya Airways Maintenance, Repair and Overhaul (MRO) division.

1.1 Strategic policy objectives

The policies set in this document aim to enable the national aviation industry to strengthen its position in the global market.

As a result, this document is intended to provide a primary framework for the future actions of the Government in the aviation industry of the country involving the formulation of the national strategy as the guideline to the entire sector development.

Therefore, the main objectives of this National Aviation Policy are:

- To foster the growth of the aviation business in Kenya to support job creation by positioning Kenya as a recognized regional leader in aviation;
- To maximize the contribution of the aviation sector to Kenya's economic growth and development; and

- To enhance Kenya's connectivity at a national and international level by ensuring safe, secure and competitive access which is responsive to the needs of businesses, tourism and the population.

In particular, the National Aviation Policy commits to:

- Maintaining safety as the number one priority in Kenyan aviation and ensuring that safety regulation is robust, effective, and efficient;
- Optimizing the operation and maintenance of the Kenyan airport network to ensure safety, efficiency, and maximum connectivity to the rest of the world while contributing to boost their financial performance;
- Ensuring that the regulatory framework for aviation reflects best international practices and that economic regulation facilitates continued investment in aviation infrastructure at Kenyan airports to support traffic growth and industry development;
- Ensuring a high level of competition among airlines operating in Kenya aiming to benefit consumers while protecting the country national interests;
- Creating conditions to encourage the development of new routes and services at a national and international level,

particularly to those countries with new market opportunities;

- Developing Aviation Infrastructure such as airports etc.
- Supporting aviation school and MRO sectors to maintain Kenya's leading position in these spheres;
- Providing the adequate environment for small airlines operating to/from Kenya's most touristic destinations;
- Supporting aviation training institutions excel in preparing young skilled professionals; and
- Maintaining a safe and innovative general aviation sector to support Kenya's broader aviation industry.

The commitments and objectives set out in this document shall be translated into action through the development of implementation plans and strategies.

1.2 National Aviation Policy structure

This National Aviation Policy covers the entire aviation sector in Kenya including key air transport challenges related to regulatory framework, safety, security, environmental aspects, economic regulation, institutional framework, air transport market and stakeholders, air transport infrastructure including planning, development, operation, and management, air transport personnel, and air transport statistics.

In this manner, this policy document has been structured into the following parts presenting each part the background, critical issues, and resulting policies of each topic:

1. **Governance** addressing the current institutional framework and the recommended institutional setting.
2. **Regulation and sustainability** comprising safety, security, environment and sustainability, and economic regulation.
3. **Connectivity and aviation services** covering air transport market, airlines, cargo, regional and general aviation, taxation, and Maintenance and Repair Organizations (MRO).
4. **Airports** including management, operation, planning, development, and investment.
5. **Air Navigation** addressing both the provision of services and the related infrastructure.
6. **Human resources development** covering the attraction, recruitment, and retention of aviation personnel.
7. **Data and statistics** comprising the collection of statistical data and information on the aviation sector and their publication.

In addition, Appendix 1 contains a compilation of the Policy Statements set out in the

following chapters of this National Aviation Policy.

2 Governance



2.1 Background

The institutional framework revolves around the Ministry of Roads and Transport which is responsible for air transport and holds various responsibilities as Kenya's representative to ICAO, including service provision and regulatory oversight.

Within the Ministry, duties and responsibilities are distributed among different organizations:

- State Department of Transport, responsible for policy formulation, the negotiation of Bilateral Air Service Agreements and enforcement and exemptions.
- Aircraft Accident Investigation Department (AAID), responsible for the investigation of aviation accidents.
- Kenya Civil Aviation Authority (KCAA) responsible of the provision of regulatory services and oversight functions as well as acting as the provider of the Air Navigation Services (ANS). Moreover, it also coordinates aircraft Search and Rescue (SAR) operations.
- Kenya Airports Authority (KAA), responsible for the operation and ownership of 18 aerodromes in the country. Many others aerodromes are owned or managed by the Government, government agencies

e.g. Kenya Wildlife Services and private operators.

In addition to the entities carrying out the primordial activities that allow for the air transport sector to function, the East African School of Aviation (EASA), the training directorate of KCAA, is part of the institutional framework as an Approved Training Organization (ATO).

On the other hand, it should be mentioned the national flag carrier, Kenya Airways (and its subsidiary Jambojet), in which the Government has a 48.9% equity stake, is part of the country's institutional setting. There are another 11 Kenyan air carriers with active Air Operator Certificates (AOCs) providing regular commercial and charter services.

In addition, it should be noted that ICAO Eastern and Southern African Regional Office, which was established in 1983 and is accredited to 24 States, is located in Nairobi.

2.2 Critical issues

Based on all international best practices, a country's air transport institutional framework should present a clear separation between

four core functional roles: policy making, technical regulation, operation of infrastructure, and air accidents/incidents investigation. The sphere of operations is divided into three separate responsibilities: Air Navigation Services, Airports, and Airlines.

The separation between these roles prevents conflicts of interest that could hamper the effectiveness of each function. Furthermore, clear separation of entities responsible for investigation of aviation accidents and incidents should be fully independent from other bodies within the institutional framework.

1. The policy making authority is responsible for the formulation of a country's national aviation policy. The aviation policy involves the formulation of the national strategy as the guideline to the entire sector development.

Aviation policy involves issues such as the role of the government in the operation of airlines, airports, and air navigation services, the adoption of guidelines with respect to the safety and security of aviation, the intervention of the private sector in the development and/or the provision of those services, the conceptual design of the national airport system, the celebration of international

agreements, including the access to domestic and international markets, economic issues with respect to the fees, charges, and duties related to services and use of the infrastructure, the level of competition with respect to the provision of airline services, with respect to service providers at airports, the strategy with respect to the development of human resources, the provision of public service obligations for essential air services, and the approach of the sector with respect to the protection of the environment, among others.

2. The sector technical regulator is the entity that is empowered to oversee and enforce all technical aspects of the civil aviation sector according to the standards and recommendations adopted by the country.

All signatory countries of the 1944 Chicago Convention should adopt, at minimum, the entire set of Standards and Recommended Practices (SARPs) described in the Annexes to the Convention.

Among others, these Annexes address issues such as the licensing of aviation personnel (flight and cabin crews), the certification of aircraft airworthiness and maintenance facilities, the

certification of airports and all facilitations that need to be provided, air traffic services and telecommunications, the operation of aircraft, the provision of meteorological services, standards with respect to aeronautical charts and units, procedures for the search and rescue and for the investigation of aircraft accidents and incidents, the prevention of acts of unlawful interference, the transport of dangerous goods, and the development of safety management systems.

In summary, the scope of the technical regulator involves the oversight for all matters with respect to safety and security relating to civil aviation. Typically, this function resides at the civil aviation authority.

3. The sphere of operations is divided into three separate activities: (i) Air Traffic Control (also called Air Navigation Services); (ii) Airports, and (iii) Airlines.
 - i. Air Traffic Control (ATC) should ideally be vested at a specialized body at arms' length from the civil aviation authority.

- ii. The operation of airports is often carried out by a specific body such as an airports company or authority (which in some cases can also be in charge of the operation of ATC), of public, private, or mixed ownership.

- iii. The operation of airlines is typically carried out by a dedicated company, completely unrelated to any other body within the institutional framework, of private, public, or mixed capital.

4. International standards are very clear in specifying that anybody responsible for the investigation of accidents and incidents in aviation should be completely independent from any other body within the institutional framework.

To this end, it is common practice to constitute a specific board or commission that reports directly to the head of state or to the parliament or congress. This body should also bypass the Ministry of Roads and Transport or any other public body. This is the only effective way to guarantee the impartial opinion of the investigators, independent from any decision that could affect another body within the government apparatus.

Regarding Kenya's institutional framework, the latter has some misalignments with ICAO recommendations regarding the separation of entities according to its function and responsibility.

In particular, there is one main sector governance challenge to the existing framework, the lack of independence from the accident investigation body which could compromise the development of the air transport sector, apart from such main challenge, two other minor misalignments are identified:

1. Lack of independence from the accident investigation body. The current institutional framework maintains a lack of independence of Kenya's AAID, which operates within the structure of the country's aeronautical authority i.e. the Ministry of Roads and Transport.

Currently, the AAID is responsible for the investigation of aircraft accidents and incidents in the country involving both local and foreign aircraft. The AAID also participates in overseas investigations of accidents and incidents involving Kenyan aircraft, operators, or citizens.

The Government set up the AAID to comply with the ICAO Convention, and it investigates aircraft accidents

and incidents following the Annex 13 to the Chicago Convention. However, the AAID derives its mandate from the Civil Aviation Act No. 21 of 2013 as amended by the Civil Aviation (Amendment) Act 2016 although there is an initiative to revise the regulatory framework for the AAID.

It is thus critical to develop an effective AIG framework including autonomy, financial independence, powers of investigations, and organizational capabilities.

It is a common practice for modern institutional frameworks to assure complete independence of the accident and incidents investigation body, by placing it on an independent board reporting directly to either the president or the parliament, bypassing any other ministry or public body. This is the only effective way to guarantee the impartial opinion of the investigators, independent from any decision that could affect another body within the government apparatus.

2. Concentration of technical regulation and infrastructure operation functions. In Kenya's case the operation of Air Navigation Services is carried out by KCAA, the same entity responsible for

safety oversight. Full independence of the technical regulator from the operation of the infrastructure is intended to ensure the correct implementation of ICAO's SARPs.

There remains an inherent conflict of interest with KCAA certifying safety obligations of its own air navigation services, as well as training credentials and licensing compliance for all personnel through its own providers. If the regulator is not at arms-length in the operation of infrastructure (even through informal influence), self-regulation could present a clear conflict of interest, potentially compromising the level of safety.

In this manner, an effective separation between the regulator and the provider of ANS (ANSP) should take place even if both activities are performed by the same entity. Even though in many countries the regulator and ANSP are separate entities, it is also possible to ensure the aforementioned separation with effective firewalls keeping the current organizational structure.

To this end, effective financial firewalls are key to ensure that there is no conflict of interest between entities (or within its departments and

directorates) which are already set in place.

3. Concentration of policy making and technical regulation functions. The effective performance of the institutional framework may be compromised if the functions of policy-making and technical regulation are performed by a single body. It is important to assign these functions to independent entities to avoid any interference between actors' responsibilities, where tensions can go both directions.

The separation and assignment of policy making and technical regulation functions to two different entities independent from each other both in financial and operational terms is of vital importance, not only to prevent the application of any potential unstated policies, but also to promote competition in the sector and foster the involvement and investment in infrastructure from the private sector.

On the other hand, it is considered that even though the Ministry is the primary responsible for the negotiation of Air Service Agreements, there is no formal delegation for the involvement of other State departments and/or KCAA.

2.3 Policy statement

The Government will ensure that the institutional framework of the aviation sector is effective and aligned with international practices

The Government will implement the necessary legislative changes to clearly separate the functions of air accident investigation and policy formulation

3 Regulation and sustainability



3.1 Safety

3.1.1 Background

The constant improvement of safety standards has been and continues to be the main pillar on which the development of Kenyan aviation sector is based on.

Kenya Civil Aviation Authority (KCAA) has statutory responsibility for regulating safety standards as well as for the oversight of their compliance. These are performed by the Aviation Safety and Security Regulation (ASSR) Directorate.

As a contracting state to the Chicago Convention, aviation safety standards in the country are set by ICAO at international level. At regional level, as a partner state of the East African Community (EAC), the Civil Aviation Safety and Security and Oversight Agency (CASSOA) is also a reference body establishing aviation safety rules and policies.

Even though aviation is considered to be one of the safest modes of transport, every State needs to plan to prevent accidents and incidents and investigate such occurrences. Apart from setting safety-related policies and

regulations to minimize the risk of accidents and incidents, it is also necessary to launch the corresponding investigations so that the conclusions deriving from them can be used to prevent similar occurrences from happening in the future.

As a result, all entities performing such tasks need to be able to cope with the growing number of passengers and registered aircrafts in the country.

3.1.2 Critical issues

In order to assess the adequacy of aviation safety, external audits serve as an input to identify key improvement areas. One of the most important safety audits in aviation is the Universal Safety Oversight Audit Programme (USOAP) by ICAO which was implemented in 1999 as a response to the widespread concerns about the adequacy of aviation safety oversight around the world.

Initially, USOAP activities consisted in regular and mandatory audits of ICAO Member States' safety oversight systems focusing on the state's capability in providing safety oversight by assessing if the state has implemented the Critical Elements (CEs) of a safety oversight system in an effective and consistent manner. The result of the audit consists of a value representing the country's compliance with ICAO safety standards, the level of Effective Implementation (EI).

It is internationally recognized that there is a direct relationship between the compliance with safety standards, measured by USOAP activities, i.e., the resulting EI and the number of commercial Air Traffic Movements (ATMs) for ICAO Member States. The ratio between EI and commercial traffic is thus one of the most used safety coefficients.

The better the country's level of USOAP EI, the more traffic it receives and emits, considering safety as a key enabler of air traffic growth. However, it should be noted that safety is not the sole enabler, as economics, population size, security, market liberalization, and tourism play a relevant role.

In this manner, the country has been working on the continuous improvement on the USOAP EI which is also envisaged to support the increase of the international traffic. Kenya already achieved a positive value above ICAO's target of 60% for all Contracting States when 67.3% was reached in its first audit in 2008. Furthermore, the EI was significantly improved at the latest ICAO audit activity, which took place in July 2018, reaching an overall EI of 78.05%, also above the 75% target of ICAO for 2022. However, some areas audited under USOAP require to be further improved to reach the expected target as well as to comply with the Abuja Safety Target of 80% mark which was set for attainment by 2022.

In particular, as the audits are performed according to each of the identified critical elements (legislation, organization, licensing, operations, airworthiness, accident investigation, air navigation services, and aerodromes), it is possible to identify those areas in which the country needs to strengthen its efforts to improve the level of effective implementation. The areas which scored the lowest value in the 2018 ICAO audit are Accident Investigation (AIG) due to lack of capabilities, investigators training and lack of tools and Organization due to a lack of function separation and understaffing.

In accordance with the latest ICAO mission (2018) and the associated report, Kenya is developing a comprehensive AIG framework that includes policies and procedures to supplement legal requirements and regulatory provisions. This resulting AIG framework should be revised and enhanced to achieve ICAO compliance with Annex 13 and its Protocol Questions (PQ) and ensure continuous safety improvement. It should also include legislative, regulatory, and associated procedures and policies.

Considering that the country is located in a region with a fast-developing aviation sector and air transport market, maximization of the use of the available resources could be achieved using a regional approach. This would imply the creation of an international agency between neighbouring contracting

states aiming to avoid duplicities in the provision of AIG activities, especially for those type of aircrafts and operations not common enough to justify the existence of a subdivision in each country.

Findings regarding accidents and recommendations to avoid and minimize the risk of such occurrences from happening again shall be shared with all stakeholders including joint user airfields, to help adopting a proactive approach. Implementation of recommendations of these investigations shall be reviewed periodically. For these, adequate and timely funding shall be made available for unforeseen search and rescue activities.

On the other hand, it is important that the entities entitled to the investigation of air accidents as well as search and rescue activities are coordinated with the ones appointed for other transport modes such as maritime, especially in those airports where a water environment is near the airport (e.g., Mombasa and Kisumu).

Within the AIG policies, ICAO has also developed the assistance to aircraft accident victims and their families, which is also recommended to be included in the AIG framework.

In addition, as a means to improve the level of effective implementation, it is important that a State Safety Policy is developed and

included into the State Safety Programme (SSP) (ICAO Annex 19) and/or National Aviation Safety Plan (NASP) (ICAO Doc 10131). It shall set out the objectives, main hazards, and risks that the country and its civil aviation system shall take into consideration.

Although Kenya has already promulgated the safety policy in 2013, as part of the SSP, the policy should be revised in order to incorporate the latest best practices and align it with the current country's system. The revision of the State Safety Policy is to be done in line with ICAO guidance (Annex 19, Doc 9859, and PQ ORG 2.311), including the strategy for continuous revision to be aligned with any new guidance being issued within a reasonable time.

3.1.3 Policy statement

Aviation Safety of the air transport system will remain the Country's priority

The Government is committed to ensuring the strengthening of the State Safety Oversight (SSO) system and the implementation and maintenance of the State Safety Programme (SSP) to achieve a consistent and continuous compliance with the ICAO SARPs. To this end, the establishment of appropriate regulatory provision and implementation of a robust oversight system including enforcement of regulatory provisions will continue to be promoted

3.2 Security

3.2.1 Background

Kenya is firmly committed to ensure a long-lasting high quality national aviation security system. Similar to the case of safety, a high level of commitment by all involved stakeholders, from airports and airlines to other regulated entities down in the supply chain, is required in order to ensure a long-lasting quality national aviation security system.

Kenya Civil Aviation Authority (KCAA) has statutory responsibility for regulating security standards as well as for the oversight of their compliance. These are performed by the Aviation Safety and Security Regulation (ASSR) Directorate.

As a contracting state to the Chicago Convention, Kenya is committed to implement the security standards and recommended practices defined by ICAO at international level. At regional level, the country is also involved in following the aviation security guidelines and policies developed by the Civil Aviation Safety and Security and Oversight Agency (CASSOA) as a partner state of the East African Community (EAC).

During the past years, political instabilities in the region, outside Kenya, and global threats have required that Kenya adopts specific

measures to ensure that its air transport market and associated industry is secure and potential risks are minimized.

To this end, it should be highlighted that Kenya has recently scored 91.77% after a mandatory ICAO universal security audit, the highest result ever recorded for the region. The ICAO Audit was conducted from 16th May to 27th May 2022 and the scope included security and facilitation as per ICAO Annexes 9 and 17.

This score is a major milestone for Kenya's Civil Aviation system surpassing the target set by ICAO in the current Global Aviation Security Plan (GASeP) to attain an Effective Implementation (EI) of above 90% by 2030 and showing the country's commitment towards security.

3.2.2 Critical issues

ICAO has developed and published the GASeP, a document that addresses the needs of States and industry in guiding all aviation security enhancement efforts through a set of internationally agreed priority actions, tasks, and targets.

In this manner, ICAO recommends developing a National Civil Aviation Security Programme (NCASP) that also includes policies for national and international action in ensuring the security and integrity of traveler

identification and border controls and Passenger Data Exchange Systems. The policy should detail the strategic vision, objectives and supporting plans to address the service provision and the oversight.

As of today, the security policy has been put in place in Kenya's NCASP. Moreover, Advanced Passenger Information (API) is currently being implemented in Kenya.

Therefore, a Civil Aviation Security Policy, including its strategy for recurrent revisions should be developed, promulgated, and included in the NCASP. The development of a policy to accelerate the effective implementation of API and other passenger data exchange systems in consultation with relevant stakeholders should also be assessed.

Moreover, a comprehensive facilitation framework should be developed, including the revision of the facilitation provisions in accordance with the latest ICAO Annex 9 provisions. The development and implementation of facilitation provisions aims to establish a sustainable, effective, and compliant framework.

This is an area to be further developed, in close coordination with the regulatory oversight function of the KCAA in order to ensure ICAO compliance with Annex 9. In addition, it should be explored the development of a policy for international and

regional cooperation on facilitation matters or include international cooperation as part of the overall facilitation policy.

By maintaining and improving the level of security in Kenyan airports, Last Point of Departure (LPD) status awarded by the Transportation Security Administration (TSA) shall be maintained as proof of the efforts performed by all administrations in favor of a secure aviation sector in Kenya.

The enhancement and harmonization of aviation security systems in accordance with ICAO Annex 17 shall also be prioritized so that passengers, aircraft personnel, luggage, cargo, and aircraft are secured, both on the ground and while in flight.

3.2.3 Policy statement

Aviation security will remain one of the top priority areas of the Government

The Government is committed to updating the National Civil Aviation Security Programme and ensuring that all necessary arrangements are put in place to contribute to security in the air transport sector in

adherence to ICAO's SARPS and international best practices

The enhancement of the level of cooperation between security organs in Kenyan airports is considered of paramount importance

3.3 Environment and Sustainability

3.3.1 Background

Aviation environmental sustainability tends to revolve around two main issues: aircraft emissions of greenhouse gases (GHG) product of the combustion of fossil fuels and the impact of noise in the communities and natural spaces surrounding airports.

Even though the contribution of aviation to the overall GHG emissions is relatively low, the sector's fast rate of growth, not only in Kenya but worldwide, has become a cause for concern.

There have been remarkable technological advances that have provided the industry with constantly improved aircraft in terms of fuel consumption, efficiency, and noise reduction. In the recent future, current trends point to even more efficient aircraft, powered by alternative sources of energy such as biofuels or electricity.

Moreover, the current and future needs of the aviation sector and the resilience of its infrastructure against a scenario under the effects of climate change may have an impact on its development.

3.3.2 Critical issues

Kenya has specific state organs in charge of environmental protection laws and policies such as the Ministry of Environment and National Resources and the National Environment Management Authority (NEMA). However, the current framework for aviation environmental protection in Kenya is still under development.

Moreover, KCAA performs some duties and responsibilities related to civil aviation environmental protection, under ICAO guidelines, and some policies in this regard have been defined (e.g., KAA Environmental Policy). Nevertheless, waste management, aircraft noise, and other environmental pollution remain major challenges in the country's aviation industry.

As a result, an environmental protection policy shall be developed in conjunction with the national program/plan for environmental protection. It should also include a combined management of all environmental protection subjects related to air transport, such as the uncontrolled disposal of waste (including the abandonment of equipment) which has recently become a major contributor to environmental degradation.

In addition, a policy for climate change management in the aviation sector should be defined as part of the environmental

protection subject and revise the framework accordingly.

These plans and programs should be developed for all major international and domestic airports including provision on how to mitigate the adverse effects of aviation and link them to climate change.

In order for these plans to be effectively put in place, it is important to enable KCAA, KAA, and other agencies involved in the enforcement in this regard, to carry out the mandate.

Noise

Due to the characteristics of Kenyan airports, some of them are located within nuclei of population and others close to natural reserves and conservancies. In both cases, the noise produced by aircraft landing and taking off from these airports can seriously disturb both people and wildlife.

Thus, a "Balanced Approach" to noise management at Kenyan airports should be implemented, with special emphasis on those airports located near populated areas and natural reserves, following the guidelines stated in the ICAO Doc 9829, Guidance on the Balanced Approach to Aircraft Noise Management.

The "Balanced Approach" methodology is based upon four main pillars:

- Making aircraft quieter by setting progressively stricter noise standards.
- Managing the adjacent land around airports in a way people and wildlife are affected the minimum by the operation of the airport.
- Adapting operational procedures (especially the ones concerning flying at a lower altitude, such as landing and taking off) so that the noise impact on the ground is reduced.
- If required, introducing restrictions for those operations whose effects on the environment are considered to be excessive.

Other reference documents consider the phase-out of subsonic jet aircraft which exceed the noise levels in Volume I of Annex 16, local noise-related operating restrictions at airports or land-use planning and management.

The draft Kenya Civil Aviation (Airworthiness) Regulations (2022) contain environmental protection provisions related to noise management in the aviation sector. However, a policy for noise management as part of the environmental protection subject has not been yet formulated. It is recommended to explore the development of these policies

with key stakeholders (primarily AOCs holders, the National Environment Management Authority, and CASSOA).

An enhanced design of operational procedures guiding landings and take offs may be used to optimize aircraft trajectories in benefit of noise reduction and fuel reduction. As a consequence, the necessary tools and data, such as contour maps, shall be prepared.

Alternative fuels

Biofuels have been a component of Kenyan energy policy for several years. As part of the Feasibility Study on the Use of Sustainable Aviation Fuels developed by ICAO and the European Union, several aspects should be addressed:

- Research & Development on biofuel feedstock.
- Collaborate with other stakeholders to ensure efficient use of land resources for biofuel feedstock, food production, and other human needs.
- Create stakeholder awareness and sensitization on the importance and viability of biofuel production and consumption.
- Establish and implement pilot tests for bioethanol or biodiesel blend.

- Apart from biofuels, the country needs to revise the current legal, fiscal, regulatory, and institutional framework, to provide sufficient incentives for Sustainable Aviation Fuels (SAF) production and consumption to encourage their development.

Waste

Abandoned or written-off aircraft and other waste (such as aircraft parts and fluids) remain an issue in many aerodromes throughout Kenya, especially in those with large number of operations of general aviation and light commercial aircraft (e.g., Wilson Airport).

It is important, that these elements are properly managed as they may represent both an environmental and safety threat, due to operational efficiency and economic reasons.

Climate change and harmful emissions

ICAO has urged the aviation industry to be prepared for severe disruptions as a result of climate change and that it needs to make full use of clean technology and policy tools in order to reduce its carbon footprint along with other environmental impacts.

Therefore, the Kenyan aviation sector shall evolve to one of the most resource-efficient sectors balancing economic sustainability with not only the social benefits to Kenyans but

also with environmental and ecological protection.

To achieve so, many actions need to be explored, including the use of sustainable aviation fuels, more energy efficient infrastructure, the use of electric vehicles in all areas possible, or the introduction of electric green taxiing systems, among others. A proper regulatory framework and favourable market conditions will help in Aviation GHG reduction.

As an effective measure to reduce aviation emissions, the use of next generation aircraft shall be encouraged. To facilitate such replacement, taxation shall not hamper the purchase of new aircraft while incentives and infrastructure investments should be established. At the same time, regulations would need to be updated to welcome new types of aircraft using new aviation sustainable fuels.

Nevertheless, nowadays, one aspect that still requires to be tackled is the negative impact of emissions to the air quality surrounding the airports. This issue is not addressed under the current regulations. As a result, local air quality management should be considered as part of the environmental protection regulations.

As an effective mean to mitigate the negative effects of climate change and to prevent it from worsening, Kenya has decided to voluntarily participate in the Carbon Offsetting

and Reduction Scheme for International Aviation (CORISIA) with effect from 2021 to 2023 and KCAA has drafted the Civil Aviation (Carbon Offsetting and Reduction Scheme for International Aviation) Regulations, 2022. However, the full framework that requires legislative and regulatory provisions, policies, adequate financial resource allocation, qualified personnel, and procedures to support KCAA staff and the industry has not been developed.

It is thus considered key to promulgate the drafted regulations and develop policies and associated tools to reinforce the implementation. Local industry, environmental regulatory and regional organizations need to be consulted throughout the whole process.

All these initiatives and the respective plans of action, which ensure its implementation, shall be laid down in an Environmental Management System (EMS) approach. To this end, it is critical to involve all relevant stakeholders to provide the foundation for enhancing the integration of environmental sustainability and regulatory requirements into the planning, decision-making process, approvals, and operations of airports, airlines, air navigation services, ground handling, etc.

3.3.3 Policy statement

The Government is committed to facilitate an efficient and clean air transport system. To achieve such objective, the Government shall encourage the development of sustainable aviation fuels

The Government shall promote the development of an environmental protection plan at airport level that contributes to the sustainable growth of the latter

The use of next generation aircraft shall be encouraged throughout air transport operators so that the fleet is progressively renewed to more efficient aircraft

The introduction of the Balanced Approach to Aircraft Noise Management is considered of paramount importance to reduce noise around airports during operating hours

3.4 Economic regulation

3.4.1 Background

An adequate economic regulation, adapted to the country current needs and future expectations, enables to develop the overall aviation sector in an economically self-sustainable manner.

By regulating some activities in the sector, such as the provision of the basic operational airport services and air navigation services, revenue is collected benefiting the further development of the aviation sector.

The distribution of the collected revenue in the industry itself ensures that the infrastructure can be maintained and upgraded when necessary and that all the regulatory and oversight activities can be performed according to the highest standards of quality and rigor.

As happens in the constantly globalizing aviation sector with the introduction of new managing schemes in airports such as Public-Private Partnerships (PPPs), economic regulation also adapts to these changes in a way it balances both the development of the aviation sector in benefit of the passengers and the Kenyan industry with the profitability and sustainability of the airport network.

Smaller domestic airports around the world are not financially sustainable on the revenues generated from regulated activities alone and Kenya is not an exception. As a result, the financial success or failure of an airport is driven by the demand and the willingness of this demand to contribute towards maintaining the facility combined with the optimization of non-aeronautical revenues.

Therefore, the development of new and existing airports needs to be justified at network level via both financial and socio-economic assessments. By doing so, financially unsustainable airports that contribute to the country's connectivity and therefore have a socio-economic justification to operate, need to be adequately funded by the surpluses of other airports in a way that the airport system is financially self-sustainable.

3.4.2 Critical issues

The Common Market for Eastern and Southern Africa (COMESA), of which Kenya is a member, introduced the COMESA Regulations of the Implementation of Liberalization of Air Transport Services in 1999 and the air transport sector has been progressively liberalized. However, the remaining regulated charges are not only covering the cost of operations. ICAO guidelines on the establishment of regulated charges and tariffs establish namely the

principle of cost-recovery for this type of charges.

By doing so, the regulated charges are able to be low enough for air traffic development to be incentivized but high enough to be self-sustainable.

In order to achieve this, a clear framework on the definition of regulated charges needs to be put in place and include a proper updating mechanism.

The country shall ensure that aeronautical fees and charges (tariffs) levied on air operators are based on the ICAO guidelines on user charges and cost recovery.

Moreover, the effective participation of carriers licensed in the country in airline forums on pricing shall be encouraged.

In some countries, the update of regulated charges is performed considering different KPIs, monitoring not only operational activities but also level of service and passenger satisfaction. As a result, the improvement or maintenance of high standards is rewarded with the allowance of slightly higher tariffs, in a manner that, air traffic development is not penalized, but airports are incentivized to improve its operation and the level of service provided.

Therefore, a consultation process with the local industry and regional organizations should be encouraged in order to discuss and evaluate the expectations of each stakeholder on economic regulation of the sector so that objectives and action plans can be set.

In the specific case of a potential airport PPP, a clear framework that considers a private airport operator needs to be put in place so a level playing field is ensured throughout the different airport operators in the country, both public, e.g., KAA, and private, e.g. potential PPPs. The resulting economic regulation framework should be fully promulgated from legislative provisions to regulations, policies, and procedures.

Fees and charges for airports and air navigation services are published in the AIP. However, the Air Passenger Service Charge is published in the national primary legislation. Despite the service being provided by KAA and KCAA respectively, it is the Kenya Revenue Authority (KRA) the Government body entitled to collect the revenue.

The current legislative framework with the Air Passenger Service Charge Act promulgated as a primary legislation act hampers its updating process. It would be beneficial to regulate the passenger service charge through a more specific operating regulation according to best international practices in order to ease

updating the charge. In addition, no annual updating mechanism is provided.

3.4.3 Policy statement

The Government is committed to endorsing economic regulatory mechanisms that ensure that the economic regulation of the aviation sector is effective and adapted to the country's aviation market

A review of aviation charges will be conducted from both a regulatory and market perspective including the assessment to establish an updating mechanism

The surpluses generated by the civil aviation system shall be reinvested back in the system for the benefit and further development of the industry

4 Connectivity and aviation services



4.1 Air transport market

4.1.1 Background

An accessible and open air transport market with free competition among airport and airlines is expected to maximize the development of the aviation sector as experienced in other countries.

Pursuant to the Chicago Convention, Kenya has negotiated and signed Bilateral Air Service Agreements (BASAs) with more than 120 different countries, in which market access rights have been agreed for both passengers and cargo.

Together with the future implementation of Single Africa Air Transport Market (SAATM), the single air transport market in Africa is expected to transform air travel in the country by reducing ticket prices while increasing consumer choice and connectivity similar to the way it occurred in USA in the late 70s and in the European Union over the 90s. At the same time, the progressive liberalization of the air transport market also

² According to "Continental Study on the Benefits of the Single African Market (SAATM) and Communication Strategy for SAATM Advocacy", National Aviation Policy

led to code-sharing agreements between national and international airlines.

By having a well-connected air transport market, high-value industry and its corresponding clusters can be maintained not only allowing an easy, reliant, and effective export process for its processes goods but also providing its staff with the opportunity to travel internationally and contribute to the visibility of the country in the global market.

As a result, according to IATA Air Connectivity Index (that measures the connectivity in terms of number of routes and destinations combined with the economic potential of each destination) the country has increased the number of routes and destinations by approx. 70% in the period comprised between 2009 and 2019. South Africa and Ethiopia grew by 44% and 349% between the same period, respectively.

4.1.2 Critical issues

Code-sharing in Kenya has allowed the country to diversify its offer not only in terms of available destinations but also in the number of airlines at disposal. This has had a positive effect in the development of tourism

dated on 25th June 2021 and prepared by IATA for the African Union Commission (AUC).

in the country as the accessibility to the market has been progressively increased.

In view hereof, Intra-African and Intra-COMESA code-sharing arrangements and those made with airlines within the East African Community (EAC) should be encouraged as a means of positioning regional airlines at the centre of air traffic development.

In order to safeguard national interest in terms of economic gains and maximizing the development of the Kenyan aviation sector, all code-share agreements and bilateral (or multilateral) agreements must provide an adequate level of reciprocity.

These agreements shall be encouraged among Kenyan airlines as long as they are beneficial to the customers and the interest of the country and do not contradict any national regulation such as competition laws.

On the other hand, even though Kenya has signed the Solemn Commitment for the establishment of the Single African Air Transport Market, the level of compliance of the existing BASAs with Yamoussoukro Decision has been assessed as low².

It shall be ensured that all existing (and future) BASAs are fully compliant with the provisions of the Yamoussoukro Decision (especially of Articles 2, 3, 4, 5 and 6). Moreover, all SAATM concrete measures ought to be fully implemented.

In this regard, SAATM will ensure aviation plays a major role in connecting Africa, and Kenya, promoting its social, economic, and political integration and boosting intra-Africa trade and tourism as a result.

The impacts of liberalization extend beyond the benefits to passengers. The increased air service levels contribute to generate employment in the aviation industry to service the additional passengers and aircraft. Liberalization is also expected to stimulate tourism between countries. On top of that, the increase in air services might help develop many other economy sectors by supporting increased trade, attracting new businesses to the region, encouraging investment, and enhancing productivity, among others.

Despite that, the process of liberalization has to be gradually implemented protecting Kenya's interest and balancing the latter with the interests of foreign investors and other stakeholders.

It is expected that liberalization will ease the arrival of low cost carriers that would help reduce ticket prices and increase air travel

supply. Such airlines often require specific infrastructure or operational processes, as well as incentives to operate. Such demands and their fit in the current regulations could be studied by the relevant authorities.

Furthermore, certain areas in the northern and eastern parts of Kenya are not adequately served by air transport, partially due to the lack of intermodality between air transport and other modes of transportation. Tourism, manufacturing, and agriculture industries as well as trade in general would benefit from adequate connections between airports and the rest of the road, rail, and maritime network.

Moreover, it is important to maintain and further develop strategic aviation infrastructure in all parts of the country. In order to achieve this goal, it is important that government agencies consider working with the private sector to ensure that the infrastructure and its development is in line with the latest technological advances.

Apart from the current connectivity and the existing modes of transport, the country needs to foster innovation and the use of new technology and artifacts, not only to enhance intermodality with aviation but to develop aviation itself and the whole transportation ecosystem.

It is also important that these advances are visible to the public and the progress of the aviation industry in Kenya is transmitted to all stakeholders. For this to be accomplished, a consolidated national marketing strategy shall be put in place, involving not only airport operators and airlines but also tourism-related entities and other concerned organization and companies which may benefit from the promotion of the aviation sector in Kenya.

4.1.3 Policy statement

The gradual and progressive implementation of the Single African Air Transport Market through the Yamoussoukro Decision shall be acknowledged as a key enabler for the further development of commercial aviation

The Government to negotiate air service agreements on the basis of reciprocity and equality of opportunities for airlines including issues regarding fifth freedom rights, ensuring fair competition but also protecting the country's national interests without endangering the

development of the air transport market

4.2 Airlines

4.2.1 Background

Kenya's international market is served by both local and international airlines whereas the domestic segment is reserved for Kenyan carriers.

In this regard, the international market is led by the national carrier, Kenya Airways, which accounts for half of the offer, distributing the rest of the offer among the remaining international airlines. On the other hand, the domestic market is much more distributed between smaller carriers with different but complementing market strategies.

Competition between airlines, in both domestic and international market, is generally considered to be favourable for passengers as it tends to lower ticket prices, making air transport market more accessible to travellers, expanding the consumer base, and diversifies consumer choice by offering new destinations with multiple carriers.

4.2.2 Critical issues

Cooperation

Even though there are many airlines in Kenya with a variety of different types of aircraft, there is no relevant synergy among them and not many agreements have been put in place.

By encouraging commercial agreements between airlines (and also with other stakeholders), passengers would benefit from a more diverse offer with simpler and easier travelling options, impacting the tourism sector as a whole and helping project the country internationally as a prime touristic destination in the region. The experience in other countries, such as the partnership of Visit Britain with many airlines and tour operators, has proven to be a catalyser in the development of the tourism sector.

Airline economic environment

Economically, airlines in Kenya are constrained by high interest rates caused by high country risk ratings. On top of that, they face significant capital outlays, which are required to finance their operations and their expansion plans. As a result, local insurance companies do not have the capability to provide insurance cover for all aviation operations, especially for the airlines operating large numbers of flights.

Essential connectivity

Liberalization and increased competition may threaten connectivity to isolated communities. In this context, many countries subsidize routes (such as public service obligation routes in the EU and Norway) that lack enough demand to be profitable and ensure the connection of remote populated areas. The country could adapt and develop such policy as a means of assuring connectivity.

4.2.3 Policy statement

Essential connectivity will be assured by establishing incentives or subsidies to offer proper connectivity to isolated communities lacking sufficient air travel supply

Commercial agreements and partnerships between airlines and third parties will be encouraged in service of the development of the aviation sector

4.3 Cargo

4.3.1 Background

The global COVID19 pandemic has affected air cargo growth in the short-term but the Kenyan market has proven to be resilient by maintaining similar volumes of cargo than during pre-pandemic years. As a result, long-term forecast point to a stable growth of the air-cargo market in the country.

Globally, only 0.5% of the total tonnage of cargo is transported via air. However, in terms of value, this volume accounts for 35% of the value as products moved by air have a high density value and/or are considered to be perishable – such as flowers, vegetables and fruits –.

Approximately 95% of all Kenyan air cargo is handled at Jomo Kenyatta International Airport and most part of the remaining 5% is handled at Eldoret Airport.

In this regard, Kenya with its leading cargo airport, Jomo Kenyatta International Airport, has positioned itself as the world's third-largest export of cut flowers, being Europe its core market. As a result, the flower industry directly employs 150,000 Kenyans and contributes to approximately 1% of the country's GDP.

Recent projects such as Isiolo Airport and the facilities in Kisumu Airport show Kenya's commitment in promoting the air cargo industry in the country.

4.3.2 Critical issues

Even though cargo facilities in Jomo Kenyatta International Airport are in good condition, cargo capacity will likely not be enough to cope with the expected demand.

In some cases, bottlenecks in the airport accesses potentially hinder development of the air cargo transport industry. Even if the airport's landside facilities difficult the flow of trucks to access cargo processing areas, the processing of cargo through the airport should minimize and avoid discontinuities to be as smooth as possible.

In order to improve and ease the processing of air cargo through Kenyan airports, all facilities and infrastructure shall be located near each other in a way that a cargo village facility is conformed.

This would be achieved by implementing a single-window clearing mechanism and making available facilities for warehousing, weighing scales, airlines offices, freight forwarder, Customs House agents, regulatory bodies' offices, ground-handling agents, insurance, and banking facilities, among many others, under one single roof.

Moreover, other complementing facilities shall be used in order to further enhance the process. This includes yards dedicated to multimodal transport, cargo terminals, cold storage centres, automated storage and retrievals systems, mechanized cargo transport, dedicated express cargo terminals with airside and landside accesses, and computerization and automation of processes.

This last item, combined with the recent concept of e-freight (or near-paperless environment) and the development of the corresponding system supporting the digitalization of the processes, has been proven to increase the efficiency in all stages of the cargo management supply chain. Moreover, transition from paper to digital processing impacts directly on other concepts of this Policy; from the reduction of wastepaper and other resources to maintaining an organized database with all historic information.

Cargo villages shall also implement One-Stop-Border-Posts (OSPs) so that goods, people, and vehicles could stop in a single facility in which they undergo necessary controls following applicable regional and national laws to exit one state and enter the adjoining state. As a result, national products are better interconnected with the rest of markets as well as better integrated at a regional and continental level.

In order to achieve the mentioned cargo village facility, a PPP model could be encouraged for its development. Major international cargo airports have been promoted as trans-shipment cargo hubs through the development of a cargo village around and the support of the private sector through a PPP.

On the other hand, a lack of consistency in cargo reporting shall be avoided, especially relevant in smaller aerodromes, hindering the collection of aeronautical revenue which contributes to the system financial sustainability. This issue also impacts directly to the generation of statistical data which later can be used to adequately monitor the evolution of the sub-sector and accurately present the business to potential operators and investors.

4.3.3 Policy statement

The Government will facilitate foreign trade by removing any unnecessary paperwork and avoiding excessive taxation

The Government will explore and implement as appropriate, the concept of cargo villages to improve

the processing of air cargo in the country

The participation of the private sector in the development, management, and operation of cargo facilities will continue to be encouraged to foster the development of state-of-the-art facilities and boost the air cargo transport market in the country

4.4 Regional and general aviation

4.4.1 Background

General aviation in Kenya, including regional commercial aviation, supports a variety of aviation-related business in the country from small aerodromes to dedicated maintenance and repair organizations which specialize in this sub-sector of the aviation industry.

By involving a wider range of aircraft types such as helicopters, light aeroplanes, or corporate jets, the scope of activities performed by this group complement the well-established commercial aviation. The activities include international business travel or locals flying out private aircraft in recreational flights.

Particularly in Kenya, the general aviation sector complements the market gaps that could not be filled by larger commercial airliners by providing a secondary network allowing further connectivity between the country's regions.

Moreover, general aviation is supported by the training of pilots as well as by other entities of the educational system of the region.

4.4.2 Critical issues

In Kenya, there is an extensive network of aerodromes with different levels of infrastructure, from Jomo Kenyatta International Airport where large wide-body aircraft operate to Wilson Airport where light aircraft of commercial airlines coexist with business, recreational, and corporate operations. While the majority of the smaller aerodromes are privately owned and operated, maintaining the mentioned network is considered key given the vibrant aviation sector of the country and the expected growth thereof.

Regional commercial aviation connects different regions in Kenya that do not have, and are unlikely to develop, large commercial scheduled air services or other direct transport links. In addition, General Aviation aerodromes can also complement commercial air transport, especially in the case of Kenya and its thriving safari market. These links are particularly important for local businesses.

Given the importance of the regional network, while bearing the challenges that arise when operating in congested airports with commercial scheduled operations, operators shall be encouraged to ensure that small aircraft continue to have equitable access to Kenyan airports taking into account the needs of all users.

4.4.3 Policy statement

The Government acknowledges the importance of regional commercial aviation and general aviation as the backbone of domestic connectivity throughout the country

General Aviation, including regional commercial aviation, will be supported given its paramount role of supporting specific business in the aviation industry, especially in secondary aerodromes

4.5 Taxation

4.5.1 Background

Kenya's aviation system has enough resources to sustain its operation without considering any investments. Despite that, it is an industry in expansion that requires large investment needs. Furthermore, such funds are required in a non-recurrent basis, having to use previous operational surpluses in a very short period of time due to the magnitude and time-sensitiveness of such investments (e.g., runway or terminal expansions, air traffic services surveillance equipment renewal, etc.).

As defined by ICAO, a tax is a levy to raise state revenues to be applied for non-aviation purposes and therefore to take industry resources outside the system. In this manner and as recommended by ICAO, taxes on the sale and use of international air transport should be reduced to their fullest practicable extent and make plans to eliminate them as soon as the economic conditions permit. Additionally, ICAO recommends entering into agreements between States to avoid double taxation and reinvest all profits from the aviation industry in the air transport sector. The aim of ICAO recommendations is to elude adverse economic and competitive impacts on air transport operations.

4.5.2 Critical issues

Kenya's aviation system is not built as a closed-circuit and taxes have a direct effect on the funding of the different Civil Aviation system entities. Kenyan industry players are exposed to multiple taxes including the APSC, ANSC, KAA levies, import declaration fees, import tax, value added tax, income tax, Railway Development Levy, and KPC Fuel Levy.

As an example, the materials needed by Maintenance, Repair and Overhaul (MRO) sub-sector organizations are subject to not only the import tax (up to 25%) and the value added tax (16%) but also import declaration fees (3.5%) and the Railway Development Levy(2%). Those last two taxes were issued in January 2020. Note that in the case of MRO, specific parts and other materials necessary for their activities, need to be imported due to the fact that they are not being manufactured or produced in Kenya. As a result, the added cost associated to the import, which is later transferred to the final customer, hampers the country competitiveness in the business, positioning Kenya in the expensive range of MROs in the region.

Such annual tax burden potentially affects not only selected sectors but air travel competitiveness as a whole. Moreover, Kenyan civil aviation system is forced to fund, in some instances, the cost of providing facilities and services for alternative mode of transportation such as trains through the Railway

Development Levy dedicated to fund railway transportation.

Therefore, efforts to assess taxation proportionality should be undertaken in order to protect the civil aviation system from an excessive tax burden that take resources outside the civil aviation system, not allowing such cash flows to be reinvested in the system and contribute to its improvement. In addition, if elimination would not be possible, income from taxes should be reinvested in the Civil Aviation System, albeit partially.

At the same time, as stated in the ICAO Supplement to Doc 8632 (2021) foreign countries continue to impose taxes that are analogous to Kenyan to airlines that end up being charged in both countries, hampering their competitiveness. Double taxation also occurs in some countries with tax exemptions in place set by bilateral air service agreements. Despite that, such exemptions are not honoured.

Kenya's civil aviation system could attain self-sustainability and produce sufficient surpluses to support the required development of the system as well as the achievement of overall Kenya's objectives. However, disproportionate taxation hampers air travel competitiveness and development causing adverse economic impacts. To this end, the following policies are drafted.

4.5.3 Policy statement

The Government will put in place measures to continue ensuring that Kenyan designated airlines are not subjected to double taxation and to further ensure that excessive taxation, especially on the sale and use of international air transport is avoided or reduced to the fullest practicable extent

Civil aviation surpluses shall be reinvested back in the civil aviation system

4.6 Maintenance and Repair Organizations (MRO)

4.6.1 Background

A growing aviation sector, with an increasing number of aircraft registrations, requires a certain number of Approved Maintenance Organizations (AMO) able to meet the demand of the sector. The continuity of this sub-sector is linked to the country's ability to attract and to train new licenced engineers.

For MRO business to succeed four pillars must be well founded in those airports where it seeks development:

1. Availability of spaces and location
2. Cost competitiveness and time efficiency
3. Skilled labour
4. Compliance with regulations

Kenya, and especially its airport capital, JKIA, enjoys a privileged location, with a strong airline based on the airport, the potential to serve several MRO markets simultaneously while being far away from the sea.

Though Kenya has a number of Approved Training Organizations (ATOs), only one, namely the East African School of Aviation

(EASA), is licensed to train aircraft maintenance engineers.

Given the importance of having an appropriate number of qualified personnel to the country's aviation business industry, it is necessary that the availability of this training organization as well as its courses is maintained. In addition, it is also key to expand the latter in order to be aligned with the needs and developments of the industry.

4.6.2 Critical issues

Aircraft in general and engines in particular require periodic maintenance and overhaul according to a specific maintenance schedule. Some types of aircraft cannot be maintained domestically while others are too expensive to maintain in the country compared to neighbouring countries.

Excessive taxation on imported goods (required to perform maintenance activities) is one of the reasons why a high number of aircraft operators rely on maintenance in foreign countries rather than Kenya.

These aircraft are sent abroad for maintenance and major overhauls, involving high expenses and outflow of foreign exchange. However, the development of AMOs/MROs requires significant investments. Therefore, certified AMOs/MROs shall be incentivized to establish such facilities in Kenya. This will accrue foreign

exchange, generate local high-value jobs, bring in technology, and save local operators aircraft down-time.

In order to promote the development of the AMOs/MROs industry the following initiatives should be put in place:

- Consider the introduction of tax incentives for maintenance-related activities.
- Discount KCAA charges for the issuance of approvals.
- Avoid excessive taxation on imported parts and systems.

4.6.3 Policy statement

The Government will promote the creation and development of AMOs/MROs industries by implementing an optimal taxation regime and introducing incentives to reduce cost overruns

5 Airports



5.1 Management and operation

5.1.1 Background

Kenya has an extensive network of 446 aerodromes driven by the particularities of the country. Kenya has a vast extension (580,367 square kilometres) with multiple scattered population nuclei across its geography.

Population is namely centered around Nairobi, the coast, and Lake Victoria's Bay. These are the most economically developed zones and where most airports and air traffic are concentrated. Outside these areas, Kenya's population is dispersed with their economy relying on a critical level on inbound tourism.

Access to the different regions appears complex due to the nature of the road infrastructure, currently underdeveloped with a small portion of paved roads. Thus, there are multiple aerodromes serving tourism, industry cities, and remote locations of the country, with different levels of infrastructure.

Aerodromes in Kenya are both stated-owned and private. There are 230 public aerodromes including 18 actively managed and manned by the Kenya Airports Authority (KAA), 53 by Kenya Wildlife services, 9 are military, and the

rest are managed by the State Department of Interior.

Aerodromes managed by KAA include the country's most relevant airports in terms of traffic Jomo Kenyatta (JKIA), Wilson, and Mombasa, as well as 15 additional aerodromes: Kisumu, Eldoret, Malindi, Ukunda, Wajir, Lamu Manda, Isiolo, Kakamega, Eldoret Airstrip, Kabunde Airstrip, Kitale, Nanyuki, Lokichogio, Lodwar, and Garissa.

Jomo Kenyatta, Wilson, Mombasa, and Kisumu airports are the busiest airports in Kenya accounting for 95% of total passenger traffic. Thus, these four airports play a critical role in supporting economic development at country level by promoting tourism and business travel as well as facilitating trade. Nevertheless, primary and secondary aerodromes play also an important role for both tourism and internal mobility.

Jomo Kenyatta International Airport (JKIA) is Kenya's main airport, operating almost all international flights to the capital, Nairobi, as well as serving as the base for domestic operations with larger aircraft. JKIA connects Kenya not only with East African countries but with relevant destinations in Europe, the Middle East, Asia, and North America such as Doha, Amsterdam, London and New York.

In particular, JKIA's strategic importance extends beyond its role as international

gateway positioning Kenya as a reference hub in Africa. Kenya Airways has namely established a hub-and-spoke operation model at JKIA with more than 40% of connecting traffic in 2021, acting as the main gateway to the country. The national carrier leads the country's international and domestic market (with its low-cost subsidiary, Jambojet) from its dominant position at JKIA.

Moreover, JKIA's domestic market is complemented with Wilson Airport, located also in Nairobi but serving the main touristic destinations (game reserves) as well as connecting the remote areas of the country (North-Northwest) that can only be accessed with smaller aircraft.

Wilson Airport structures namely the domestic air traffic network and has a strategic role in serving the connectivity needs of the tourists. The tourism sector in Kenya is well developed and Wilson Airport has benefitted from the increasing foreign interest in travelling to the country.

Wilson Airport's unique position as a gateway to each of the main tourism attractions in the country makes the airport essential for the development of the aviation sector. In particular, small airlines provide the backbone of tourism, especially safari, in many regions, with dedicated airlines operating scheduled and charter flights to the main tourism attractions of the country.

Tourism marketing at country level also provides an important support in boosting the airport's traffic. Wilson Airport is thus encouraged to continue exploiting all growth opportunities and continue developing its network.

Mombasa International Airport also holds a strategic importance for the connectivity of the coastal region serving as both domestic and international tourists gateway to the worldwide famous beach destinations. The second largest city of the country, Mombasa, has namely also benefitted from increasing national tourism interest. The airport enjoys the advantage of having modern and international airport facilities with the ability to handle up to code E aircraft. These features enable the operation of leisure and vacation airlines connecting Mombasa with the busiest hubs in Europe and the Middle East by flying point to point to Mombasa.

In addition, Kisumu International Airport plays a critical role providing connectivity to the West part of the country as well as serving Lake Victoria's Bay, one of Kenya's strategical points.

These features underpin the country's ambitions to expand existing routes network and boost air traffic demand.

5.1.2 Critical issues

KAA is responsible for maintaining and operating all public aerodromes, which are regulated by KCAA. In total there are more 440 aerodromes in Kenya which are both stated-owned and private. 18 airports out of the 230 public aerodromes are actively manned and managed by KAA, but it is unclear the maintenance and operation responsibility as well as funding mechanisms for the remaining public aerodrome network.

Most aerodromes in the country are non-viable from a financial perspective resulting in significant issues in their operation and maintenance. Thus, several aerodromes face some safety and security problems as well as operational difficulties that jeopardize their own development and hinder their traffic growth.

These critical issues include congestion at terminal buildings and bottlenecks of traffic flow, especially in security areas and port health stations as well as inadequate aviation support facilities including navigation aids, which are not always serviceable, potentially causing diversions to alternative airport, IT systems, and utilities, such as water and electricity supply that are not available at some stages, compromising the effective operations of the airports as well as the overall level of service perceived by the passengers.

In this manner, it is considered that there is an ineffective facilitation of aircraft, passengers, cargo, and others at the airports causing a decrease in the perceived level of service by overall airport's customers. ICAO defines namely the SARPs and guidance material regarding facilitation in Annex 9 providing a frame of reference for planners and managers of international airport operations by describing the obligations of industry as well as the minimum facilities to be provided by governments. Furthermore, a National Air Transport Facilitation Committee (NATFC) and Airport Facilitation Committees (AFC) should also be established according to ICAO Annex 9.

In Kenya, both the national committee and airport committees are established at each airport although the recommendations provided are mainly advisory and there is no enforcement mechanism.

Moreover, infrastructure maintenance is generally not performed in a regular and continuous manner causing the reduction of the designed lifecycle of some facilities. Similarly, there is no effective control of flora and fauna in airports considering the particularities of operating close to natural reserves favoring bird strikes.

In addition, most aerodromes in the country present deficiencies related to port health (human, animal, plant, and quarantine

matters) driven by both inadequate facilities and personnel. Inadequate port health facilities and controls could cause the introduction and spread of diseases in the country. Thus, it is of paramount importance that aerodromes have the required resources to perform port health controls.

This includes the aircraft's disinfection procedure, which should be aligned with both ICAO requirements and the country of destination requirements.

5.1.3 Policy statement

The Government acknowledges the important role that primary and secondary aerodromes play in terms of connectivity at country level

The existing capacity of the airports will be optimized to improve their performance and throughput in conjunction with timely planning to exploit their full potential

The National Air Transport Facilitation Committee as well as Airport

Facilitation Committees' roles and functions shall be enforced and enhanced

The Government is committed to facilitate public duties of governmental and other auxiliary services agencies, including health controls to minimize the introduction and spread of diseases

The Government will maintain public aerodromes to protect and ensure that they are fenced to avert encroachment and land grabbing

5.2 Planning and development

5.2.1 Background

A critical aspect of the planning and development of airports is the identification and protection of the areas considered critical for the operation and development of airport infrastructures. The safeguarding of areas should cover not only the airport boundary but also extend to land areas of the surroundings outside the airports that may be required for future developments.

In order to do it is a common international practice to develop safeguarding maps as well as land use plans.

Land use plans entail the proposed future development as well as the operation of the airport by designating zones and identifying the uses within each zone.

In this way, the main functional areas of the airport are shown, including their development possibilities, interrelationships and accessibility.

Thus, the main objective of a land use plan is to establish a long-term planning horizon for the airport, allowing the airport operator to expand the airport facilities over the years, within an overall plan, to cope with the expected demand. In this manner, the plan will contribute to avoid potential investment

losses (both under- and over-investments), make investments at the right time based on the capacity-demand analysis, and maintain a balance in the capacity of the airport facilities.

5.2.2 Critical issues

A significant number of major and minor aerodromes in Kenya are affected by land encroachments hampering their expansion as well as jeopardizing the safety of operations.

As such, the uncoordinated use of the land surrounding the airports might endanger the operational safety by developing incompatible facilities such as extremely high buildings (infringing the Obstacle Limitation Surfaces or endangering the approach and/or take-off operations) or areas attracting wildlife (that increase bird strikes and wildlife incursions, which are common safety issues in the country) compromising the viability of the airport.

However, given the paramount importance of wildlife and nature reserves in Kenya, mitigation measures should be put in place in order to ensure the coexistence of the latter with the aviation operations.

Regarding the encroachment, human settlements have been identified in close proximity of airports, inside the airport's boundary causing runway strip infringements

and thus representing a risk to the safety and security of operations.

The underlying issue to the reported encroachments might be related to the poor land use planning which also derives in reducing the quality of life of populated areas, e.g., due to increased noise levels.

5.2.3 Policy statement

The Government will update the Master Plan of the busiest airports of the country and develop and implement a National Airport Development Plan to guide the future development of the airports and aerodromes of the country including land use plans and safeguarding maps

County governments shall be encouraged to jointly incorporate airports as part of a holistic planning approach with a view on the total transport system and the surroundings of the airports

The development and expansion of airports will be aligned with the

environmental considerations defined by the Government

5.3 Investment needs and financing

5.3.1 Background

Infrastructure is an important enabler for sustained economic growth. Effective and reliable infrastructure is namely considered critical in boosting the air traffic demand and increasing the country's competitiveness.

In the past, Kenya's aviation market has been favoured by the country's economic development that has grown steadily becoming one of the largest economies in the region with approximately 12 million passengers in 2019 (including connections). Kenya's economic development is expected to continue boosting the aviation sector driven by the Government's Vision 2030.

In particular, it is estimated that the country surpasses the 42 million passenger milestone by 2050 driven by Jomo Kenyatta International Airport, which is expected to continue serving as the country's main gateway. In addition, it is expected that JKIA reinforces its status as a regional international hub mainly driven by

Kenya Airways forecasting a total of almost 28 million passengers by 2050.

Moi International Airport serves as the second international airport of the country (1.5 million passengers in 2019), providing domestic and regional connectivity to the city of Mombasa and to the oceanic coast of Kenya and is foreseen to receive approximately 5 million annual passengers by 2050. Wilson Airport was close to handle one million passengers in 2019 (0.9 million passengers) and is expected to remain as the focal point for domestic connectivity surpassing the 2.5 million annual passengers' milestone.

Kisumu International Airport is also forecasted to reinforce its position as the reference airport in the West part of the country and on Lake Victoria's Bay growing from 0.5 million annual passengers by 2019 to more than 1.5 million passengers by 2050.

In addition, primary and secondary aerodromes play an important role for tourism and internal mobility. Thus, the safety and security of their operations as well as their capacity must also be ensured by allocating investments.

In order to meet the traffic demand, infrastructure need to be adapted and airports ought to be expanded so they are able to cope with the forecasted number of

passengers while ensuring an adequate level of service.

5.3.2 Critical issues

Given the historical air traffic volume and the foreseen air traffic boost for the next 25-30 years (from 2022) in Kenya, it is considered that current infrastructure is not adequate to handle passenger and cargo operations at most airports.

In this manner, it is estimated that KAA's aerodrome network requires an investment of approximately US\$2,000M for the mentioned period including both expansion/compliance as well as major maintenance and replacement investments.

Jomo Kenyatta International Airport is the main driver of the mentioned investment plan accounting for approximately US\$1,000M to increase its current capacity and be able to accommodate the forecasted demand.

Prior to the pandemic, JKIA was close to reaching the terminal maximum capacity as the traffic registered in 2019 was 8.3 million passengers with connecting passengers and the declared capacity reaches 7.5 million annual passengers.

Thus, some terminal processing facilities already showed congestion issues. To alleviate the congestion, Terminals 1B and 1C are

currently undergoing a refurbishment that is expected to increase the overall capacity to 8 million annual passengers.

The upgrading works are also intended to improve passenger experience by matching the level of service offered in T1A (newest terminal area) in the rest of the terminals. As of February 2022, the 12-month redesign works have started, reason for which the flights operate exclusively to/from terminals T1A and T2 for this period.

Due to COVID19, the congestion levels have lowered as the airport handled 2.8 million passengers in 2020 including connections. Therefore, the service levels are back to acceptable levels thanks to the pandemic. Nevertheless, the airport will require significant expansion in the short-term after recovering pre-COVID levels considering also Terminal 2 lifecycle. Terminal 2, which has a declared capacity of 2.5 million annual passengers, was namely designed as a temporary solution after 2013 fire with 10-year lifecycle. The terminal opened in 2015 and is thus close to the end of its lifecycle (approximately 2025). T1E is also a temporary facility for international arrivals.

Overall, both terminal buildings show a fair maintenance condition, with some key issues identified mainly of operational nature. Specifically, the existing terminal architecture hinders a smooth passenger journey

increasing connecting times and thus not allowing to unleash JKIA's potential as hub.

In terms of compliance, the airport is certified and in general, compliant with ICAO Standards and Recommended Practices according to its current operation (code 4E). In addition, the airport shows a good operating condition with recently repaved airfield pavements.

In this manner, the main investment requirements for JKIA derived from the expansion needs to accommodate the forecasted demand. In particular, JKIA is expected to require significant investments in expanding the passenger terminal building in the short-term as well as the construction of a second parallel runway in the mid-term. In addition, apron expansions are also envisaged.

Moreover, other relevant airports such as Wilson Airport and Kisumu Airport are also expected to require significant investments in the short-term to increase its current capacity. In particular, Wilson Airport is foreseen to require major development works in order to accommodate the forecasted air traffic demand.

Kenya's civil aviation system has enough resources to sustain its current operation but without considering any investments. KAA aerodrome network has namely an overall financial margin significantly below the

region's average with the three busiest airports of the country (JKIA, Mombasa, and Wilson) cross-subsidizing the remaining network.

Kenya's aerodromes main source of revenues are the aeronautical revenues including the Air Passenger Service Charge, which in total account for approximately 70% of KAA revenues. Average industry distribution tends to rely more on non-aeronautical revenues, with a 65% share of aeronautical revenues against a 35% of non-aeronautical ones.

COVID19 has deeply and adversely impacted KAA revenues due to the severe decrease of passenger traffic caused by global restrictions and lockdowns. Such impact has notably affected aeronautical revenues while non-aeronautical ones, obtained from other commercial activities such as rentals, commissions on sales, advertising, etc. has been able to better weather the impact of the pandemic. In addition, current APSC are not reviewed on a regular basis.

This situation has led to inadequate aviation infrastructure, services, and maintenance at most airports. In addition, it has derived to lower levels of safety, security, and service levels provided to the passengers driven by the overall system's inability to be self-sustainable.

Thus, it is key to review the current distribution of funds on a cost basis. In particular, the cost structure should serve as the basis for the definition of the applicable tariffs for each service based on a cost-recovery strategy, whenever possible.

As such, there is a need to analyze alternative funding mechanics specifically in terms of developing new airport infrastructure given its critical importance at country-level. These alternatives include Public Private Partnership (PPP) and Build Operate Transfer (BOT), which can be facilitated through the provisions of the Kenya Public Private Partnership Act, 2013. In particular, some cargo facilities of the country have successfully been developed under a BOT model.

5.3.3 Policy statement

The Government shall explore different funding and financing options to accelerate airport expansions

The Government will ensure that major airports in general and JKIA, in particular, will be expanded to facilitate forecasted traffic growth. The private sector is encouraged to construct and/or operate new and/or

existing airports/aerodromes on BOT or PPP frameworks

Capacity enhancement will be focused on increasing the level of service at airports, especially at JKIA, to help the airport become the most relevant airport in the region, the gateway in and to East Africa

Existing and also new airports to be constructed, should as far as possible be developed and operated on the basis of financial sustainability and viability

Existing public commercial airports are encouraged to become financially viable and self-sustainable developing revenue generation strategies and promoting non-aeronautical sources of revenue for airport maintenance with the exception of minor aerodromes which are considered critical to economic or social activities

Airports are encouraged to pursue new sources of revenues including the attraction of new business to contribute the economic development of the airport itself, its region and the overall country

Counties are encouraged to support minor aerodromes, that are considered critical to economic or social activities, in terms of development, maintenance, and management

Alternative uses for airports that are neither financially viable nor socio-economically justified shall be explored

6 Air Navigation



6.1 Background

The provision of Air Navigation Services (ANS) and Air Traffic Management (ATM) is a key component underpinning the global air transport market. In Kenya, the Kenya Civil Aviation Authority (KCAA) has statutory responsibility to provide ANS in relation to civil aviation.

The commercial development and modernisation of ATM is recognised as a priority at both global level in ICAO and at regional level by the Africa-Indian Ocean Region (AFI).

KCAA is highly regarded domestically and internationally as an efficient air navigation service provider (ANSP) being responsible, inter alia, for the control of the country's sovereign airspace and manoeuvring area at all airports of the country.

The provision of high-quality air navigation services and the maintenance of a modern aviation infrastructure on a sustainable basis is a major future challenge for the country. Despite the development of the network, its main objectives must remain unchanged, which are to increase the safety, economic, financial, and environmental performance of

the provision of air navigation services in the region.

In terms of air navigation masterplans, ICAO has developed and published the Global Air Navigation Plan (GANP). The GANP (ICAO Doc 9750) is the highest global air navigation strategic document that drives the evolution of the global air navigation system. It presents a four-layer structure: global (strategic & technical), regional, and national. At regional level, AFI (Africa-Indian Ocean) Air Navigation Regional Plan has been published, based on the third layer of the GANP.

At country level, the KCAA has also drafted the Airspace Master Plan 2015-2030 with Egis, in which the separation of the Air Navigation Service Provider (ANSP) from the regulator is analysed, among other subjects such as the economic regulation, personnel, or systems to be implemented to enhance the capacity and efficiency of the system. It includes a review of institutional, legal, and regulatory framework, organization review, environmental impact, and economic financial analysis. It also includes the investment needs for the next period.

6.2 Critical issues

Airspace management

The main issue regarding the provision of ANS is related to the managerial and operational capacity to oversee optimal airspace utilization.

Moreover, large portions of the airspace are prohibited, restricted, or declared as dangerous for civilian use making it cost inefficient and operationally challenging to air transport operators.

As experienced in other countries, Information and Communications Technology (ICT) is a key enabler for an efficient operation, management and development of both aerodromes as well as air navigation services. As the country's aviation industry has begun sensing the benefits and potentials offered by ICTs, in terms of safety, security or quality of the service, it is important that its progressive implementation continues.

By implementing new navigation procedures and technologies, including the Global Navigation Satellite Services (GNSS) and Performance Based Navigation (PBN), relevant volumes of time and fuel can be saved by air operators, as these procedures allow for straighter, point to point flights.



To achieve that, new Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) equipment has been installed to facilitate the safe and efficient air traffic flow in Kenya's airspace. This will improve the flow and accuracy of information between pilots and air traffic controllers promoting communications safety.

Systems that may be considered for their implementation are Eurocontrol's System-Wide Information System (SWIM) and its integration with the Aeronautical Information System (AIS), the upgrade or replacement of the EUROCAT-E system and the rationalization of NAVAIDS.

Meteorological services (MET)

ICAO and the global civil aviation system have emphasized the relevance of the collaboration between KCAA (as regulator and provider of various air navigation services), the civil aviation industry, and department of the Ministry of Environment responsible to provide MET services on the development of the necessary policies to ensure the provision of global and regional meteorological services for international and domestic air navigation (including establishing selection criteria for global and regional service providers and cost-recovery mechanisms). MET is a global issue considered to be a high priority and thus, it should also be assessed in Kenya.

Within the Airspace Master Plan (2015-2030), the funding scheme of the meteorological services was highlighted as a key priority, and it is to be considered in conjunction of the overall funding scheme and economic regulation framework policies. However, the definition and implementation of the aforementioned needs to be developed so that an effective and sustainable provision of ANS is ensured with an adequate funding mechanism.

Funding Mechanisms

It is important that the value of each charge is justified by the cost of the corresponding ANS provision. This includes the methodology according to which these values are updated. This process shall be performed in line with ICAO Guidance Material (including ICAO Doc 9082).

6.3 Policy statement

The Government supports the continuous development of the provision of air navigation services and encourages the upgrading of the country's systems to state-of-the-art equipment

The provision of global and regional meteorological services for international and domestic air navigation shall be ensured and its funding scheme considered

7 Human resources development



7.1 Background

In order to meet the current and future needs of the Kenyan aviation sector, it is critical to ensure that there is well-trained and highly skilled human resource, present in different institutions in both the public and private sectors.

For this to be achieved, it is important that the aviation sector is supplied with a stable flow of trained personnel through Government schools/colleges and educational centres, such as the East African School of Aviation (EASA), but also acknowledging the potential of private institutions in the training of professional staff.

EASA, as the main aviation training school of the county, offers a wide range of courses, from aviation safety and security, air navigation services and aircraft maintenance, and curriculum development to aviation business management. In FY20/21, almost 3,000 students were enrolled in the school, making EASA one of the most important aviation educational centres in the continent.

Apart from professionals trained in the country, new professionals and skilled

employees can also be engaged from foreign countries given the potential of the aviation sector in Kenya.

7.2 Critical issues

The aviation sector in Kenya is facing serious challenges in relation to the engagement of enough properly skilled staff in key areas of operation. If not addressed adequately, the provision of basic services in those areas can be compromised.

The organizational framework in Kenya has satisfied the needs and founded the continuous development of the civil aviation system of the country. However, as in most regions, attraction, recruitment, and retention of aviation technical staff has been a challenge for both private and public entities. Kenya is not an exception on this issue despite the significant industry established in the country.

The Air Transport Division of the Ministry of Roads and Transport, the KCAA, and KAA have reported to be understaffed in specific areas of operation. Specifically, the current number of staff at the Aircraft Accident and Incident Investigation Department (AAID) of the Ministry, was reported as insufficient to be able to carry out all assigned duties and responsibilities in an effective manner, based on the industry size

and complexity resulting in challenges in achieving all the targets.

The underlying issues to the reported lack of adequate staffing might be related to the difficulties in attracting and retaining trained personnel. As a result, the aviation sector is not able to have the appropriate number of resources to carry out effective operations.

Thus, provision of services undertaken by public sector entities shall ensure competitive compensation packages in line with global industry benchmarks to guarantee hiring, training, and retaining of skilled personnel.

Nevertheless, the East African School of Aviation, among other training institutions is a key player in the supply of qualified and trained personnel to Kenya's aviation sector. By reducing tuition fees, implementing a more diversified curriculum, and further approval and certification of aviation training institutions and personnel, the number of graduates can be increased.

In the majority of aviation careers and study fields, simulators are required as an essential piece of hardware for training.

However, it has to be noted that most trainings in the aviation sector, such as the ones for pilots, engineers or air traffic controllers, require government support to make them accessible to the citizenry due to

their high costs, particularly in conducting initial training.

Together with the rest of educational centres in Kenya, activities of research and development (R&D) should be encouraged to bring the industry and the academia to closely collaborate. In this case, R&D could cooperate with educational centres such as the East African School of Aviation while the industry could also benefit from the conducted research.

As a result, it is critical to ensure that the necessary cooperative mechanisms are put in place so that trained professionals can obtain practical skills and exposure by collaborating with the whole industry, for Kenya to become a hub of excellence and tackle understaffing issues.

Finally, it should be highlighted the importance of ensuring that personnel in the industry upskill and refresh their knowledge and competence periodically so as remain relevant in a rapidly changing and dynamic industry.

7.3 Policy statement

The Government is committed to develop trained and skilled aviation professionals through public and

private aviation training institutions, aligned with the industry needs

A national strategy to enhance talent attraction, recruitment, and retention will be formulated and implemented

8 Data and statistics



8.1 Background

Collecting statistical data and information on the aviation sector, including passenger numbers and air traffic movements, as well as its effective distribution among interested parties is of high importance.

This information, if available and accessible, contributes to improve the efficiency and effectiveness of the sector by ensuring timely decision-making.

Moreover, the availability of public information can be used by third parties, such as investors and other stakeholders, as a mean of attracting new initiatives, investments, and projects. Finally, it would also contribute to country's transparency.

8.2 Critical issues

Currently the available aviation statistics cover relatively limited parameters like traffic flows, aircraft registered in the country and licensed aviation personnel. In addition, the information published is not updated on a regular basis and there is no repository of historical data.

The media resources published online by KAA only include monthly passenger and aircraft numbers between selected destinations, classified between inbound and outbound flows (and connecting in the case of passengers). In the case of cargo, the information is available for Jomo Kenyatta International Airport and Mombasa International Airport and is only detailed differentiating between region of origin or destination and type of product.

It is noteworthy, that the information on KAA's website has not been updated and only three airports or groups of airports are shown: Jomo Kenyatta International Airport, Mombasa International Airport, and other airports (in the case of aircraft movements, the data is not shown by operating airport). Moreover, in the case of cargo and mail, no domestic and international split is provided.

On the other hand, the information published by KCAA is divided into three categories: aircraft movements, cargo and mail traffic, and passenger traffic. Regarding the first category, the number of annual take offs, landings, and overflights are provided, segregated between domestic and international operations. Within the second category, the annual number of landed and loaded cargo and mail is compiled, differentiating between airports. The statistics available for passenger traffic from KCAA's website offer the annual number of passengers, divided between arriving,

departing, or transiting passengers in the domestic and international segment.

The different pieces of information concerning the aviation sector are generated by different entities and not combined or compiled into one single central repository causing gaps in the availability of reliable data.

Thus, there is need to collect and update relevant industry data into a single location where it can be accessed by relevant stakeholders. In particular, there is a need to develop a central repository that covers a wide spectrum of information for the purpose of ensuring timely decision-making and effective policy interventions by providing reliable data.

In addition, it is recommended to clearly define the roles and responsibilities of each entity in the provision of data as well as synchronise their information to ensure no duplication or inconsistencies of the latter. One specific entity should be designated as responsible for holding and publishing all relevant air transport data.

In this manner, a specific role responsible for the collection of the statistics would be established and the role holder would engage with stakeholders of the industry to identify what pieces of information need to be produced and published and up to what degree of detail. By doing so, duplicities and inconsistencies between the entities

producing and collecting the data (i.e., KAA and KCAA) shall be avoided. The generated information should meet confidentiality, integrity, and availability requirements.

For example, in the United Kingdom, the Civil Aviation Authority is responsible for the data and statistics systems publishing current and past statistics of a wide range of metrics (level of detail from routes to aircraft type) on a monthly basis and uploading them to their website in both PDF and Excel format.

The information considered to be published should be regularly updated and presented in a user-friendly format. Duties and responsibilities should be clarified between the entities producing, collecting, compiling, and publishing the information considered and they should appoint a data responsible in each entity.

8.3 Policy statement

A central repository containing all relevant data and statistical information of the industry will be established and updated on a continuous basis

The duties and responsibilities of each agency in the provision of clear, consistent, and homogenous data will be defined and properly communicated to ensure their reliability

Annex 1 – Aviation Policies and Policy Statements

Topic	Policy
Governance	The Government will ensure that the institutional framework of the aviation sector is effective and aligned with international practices
	The Government will implement the necessary legislative changes to clearly separate the functions of air accident investigation and policy formulation
Safety	Aviation Safety of the air transport system will remain the Country's priority
	The Government is committed to ensuring the strengthening of the State Safety Oversight (SSO) system and the implementation and maintenance of the State Safety Programme (SSP) to achieve a consistent and continuous compliance with the ICAO SARPs. To this end, the establishment of appropriate regulatory provision and implementation of a robust oversight system including enforcement of regulatory provisions will continue to be promoted
Security	Aviation security will remain one of the top priority areas of the Government
	The Government is committed to updating the National Civil Aviation Security Programme and ensuring that all necessary arrangements are put in place to contribute to security in the air transport sector in adherence to ICAO's SARPS and international best practices
	The enhancement of the level of cooperation between security organs in Kenyan airports is considered of paramount importance
Environment and sustainability	The Government is committed to facilitate an efficient and clean air transport system. To achieve such objective, the Government shall encourage the development of sustainable aviation fuels
	The Government shall promote the development of an environmental protection plan at airport level that contributes to the sustainable growth of the latter
	The use of next generation aircraft shall be encouraged throughout air transport operators so that the fleet is progressively renewed to more efficient aircraft
	The introduction of the Balanced Approach to Aircraft Noise Management is considered of paramount importance to reduce noise around airports during operating hours

Topic	Policy
Economic regulation	The Government is committed to endorsing economic regulatory mechanisms that ensure that the economic regulation of the aviation sector is effective and adapted to the country's aviation market
	A review of aviation charges will be conducted from both a regulatory and market perspective including the assessment to establish an updating mechanism
	The surpluses generated by the civil aviation system shall be reinvested back in the system for the benefit and further development of the industry
Air transport market	The gradual and progressive implementation of the Single African Air Transport Market through the Yamoussoukro Decision shall be acknowledged as a key enabler for the further development of commercial aviation
	The Government to negotiate air service agreements on the basis of reciprocity and equality of opportunities for airlines including issues regarding fifth freedom rights, ensuring fair competition but also protecting the country's national interests without endangering the development of the air transport market
Airlines	Essential connectivity will be assured by establishing incentives or subsidies to offer proper connectivity to isolated communities lacking sufficient air travel supply
	Commercial agreements and partnerships between airlines and third parties will be encouraged in service of the development of the aviation sector
Cargo	The Government will facilitate foreign trade by removing any unnecessary paperwork and avoiding excessive taxation
	The Government will explore and implement as appropriate, the concept of cargo villages to improve the processing of air cargo in the country
	The participation of the private sector in the development, management, and operation of cargo facilities will continue to be encouraged to foster the development of state-of-the-art facilities and boost the air cargo transport market in the country
Regional and general aviation	The Government acknowledges the importance of regional commercial aviation and general aviation as the backbone of domestic connectivity throughout the country
	General Aviation, including regional commercial aviation, will be supported given its paramount role of supporting specific business in the aviation industry, especially in secondary aerodromes

Topic	Policy
Taxation	The Government will put in place measures to continue ensuring that Kenyan designated airlines are not subjected to double taxation and to further ensure that excessive taxation, especially on the sale and use of international air transport is avoided or reduced to the fullest practicable extent
	Civil aviation surpluses shall be reinvested back in the civil aviation system
Maintenance and Repair Organizations	The Government will promote the creation and development of AMOs/MROs industries by implementing an optimal taxation regime and introducing incentives to reduce cost overruns
Airports	The Government acknowledges the important role that primary and secondary aerodromes play in terms of connectivity at country level
	The existing capacity of the airports will be optimized to improve their performance and throughput in conjunction with timely planning to exploit their full potential
	The National Air Transport Facilitation Committee as well as Airport Facilitation Committees' roles and functions shall be enforced and enhanced
	The Government is committed to facilitate public duties of governmental and other auxiliary services agencies, including health controls to minimize the introduction and spread of diseases
	The Government will update the Master Plan of the busiest airports of the country and develop and implement a National Airport Development Plan to guide the future development of the airports and aerodromes of the country including land use plans and safeguarding maps
	County governments shall be encouraged to jointly incorporate airports as part of a holistic planning approach with a view on the total transport system and the surroundings of the airports
	The development and expansion of airports will be aligned with the environmental considerations defined by the Government
	The Government shall explore different funding and financing options to accelerate airport expansions
	The Government will ensure that major airports in general, and JKIA, in particular, will be expanded to facilitate forecasted traffic growth. The private sector is encouraged to construct and/or operate new and/or existing airports/aerodromes on BOT or PPP frameworks
Capacity enhancement will be focused on increasing the level of service at airports, especially at JKIA, to help the airport become the most relevant airport in the region, the gateway in and to East Africa	

Topic	Policy
	Existing and also new airports to be constructed, should as far as possible be developed and operated on the basis of financial sustainability and viability
	Existing public commercial airports are encouraged to become financially viable and self-sustainable developing revenue generation strategies and promoting non-aeronautical sources of revenue for airport maintenance with the exception of minor aerodromes which are considered critical to economic or social activities
	Airports are encouraged to pursue new sources of revenues including the attraction of new business to contribute the economic development of the airport itself, its region and the overall country
	Counties are encouraged to support minor aerodromes, that are considered critical to economic or social activities, in terms of development, maintenance, and management
	Alternative uses for airports that are neither financially viable nor socio-economically justified shall be explored
Air Navigation	The Government supports the continuous development of the provision of air navigation services and encourages the upgrading of the country's systems to state-of-the-art equipment
	The provision of global and regional meteorological services for international and domestic air navigation shall be ensured and its funding scheme considered
Human Resources Development	The Government is committed to develop trained and skilled aviation professionals through public and private aviation training institutions, aligned with the industry needs
	A national strategy to enhance talent attraction, recruitment, and retention will be formulated and implemented
Data and statistics	A central repository containing all relevant data and statistical information of the industry will be established and updated on a continuous basis
	The duties and responsibilities of each agency in the provision of clear, consistent, and homogenous data will be defined and properly communicated to ensure their reliability

