REGULATORY IMPACT ASSESSMENT

for the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024

This Regulatory Impact Assessment (RIA) has been prepared by the Cabinet Secretary - Ministry of Roads and Transport pursuant to sections 6 and 7 of the Statutory Instruments Act, CAP 2A

November 2024

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1.0 Chapter One – Introduction

1.1 Regulatory Authority and the Legal Mandate

Kenya Civil Aviation Authority (KCAA) is established under the Kenya Civil Aviation Act, Cap. 394 (the Act). The object and purpose for which the Authority was established is to economically and efficiently plan, develop and manage civil aviation, regulate and operate a safe civil aviation system in Kenya in accordance with the provisions of the Act. It also has the primary functions to regulate and oversight aviation safety and security; economic regulation of air services and development of civil aviation; provision of air navigation services; and training of aviation personnel as guided under the provisions of the Convention on International Civil Aviation, related ICAO Standards and Recommended Practices (SARPs), the Act, and the Civil Aviation Regulations.

Section 4 of the Act provides that the provisions of the Act and regulations made thereunder unless expressly excluded apply to: aerodromes used for civil aviation in Kenya; air services established or operating in Kenya; any aircraft registered by the Authority; any foreign aircraft within the Kenya territory; aviation personnel and training schools certified by the Authority; enterprises operating in Kenya in the design, manufacture, maintenance, repair and modification of aircraft and aircraft parts or components; and air navigation facilities and services in Kenya.

Section 82 provides for the power of the Cabinet Secretary responsible for aviation matters to make regulations to give effect to the Act and for regulating air navigation, air transport, air accident investigation and carrying out and giving effect to any convention on aviation ratified by Kenya. The draft Civil Aviation (Environmental Protection – Aircraft Noise) Regulations, 2024 have been developed under the Act.

Section 82(1) of the Act empowers the Cabinet Secretary responsible for transport to make regulations to give effect to and for the better carrying out of the objects and purposes of the Act, and to provide generally for regulating air navigation, air transport, air accident investigation and carrying out and giving effect to any convention.

Further, section 82(2) of the Act is more specific and provides that the Cabinet Secretary may make regulations for, among others:

(a) regulating, by establishing licensing authorities and a system of licensing and otherwise, the use of aircraft (i) for commercial transport; and (ii) for aerial work;
(b) prohibiting the flying of any aircraft — (i) unless there is in force in respect of such aircraft a certificate of airworthiness or permit to fly issued or recognized in accordance with regulations made under this Act; and (ii) except upon compliance with such conditions as to maintenance and repair as may be prescribed or specified in the certificate or permit;
(c) requiring the flight crew, and persons, performing prescribed functions in relation to the operation or maintenance of aircraft, air navigation services, design and construction of aircraft to be the holders of licences of specified kinds;

(d) providing for the manner and conditions of issue, validation, renewal, extension or variation of any licence required in regulations and for the form, custody, production, cancellation, suspension, endorsement and surrender of such;
(e) prescribing the fees to be paid in respect of the issue, validation, renewal, extension or variation of any license, or the undergoing of any examination or test required by regulations made under this Act or any other matters in respect of which it appears to the Cabinet Secretary to be expedient to charge fees;
(f) exempting any aircraft or persons or classes of aircraft or persons from the provisions of any regulations made under this Act;
(g) providing for the investigation in such manner as may be prescribed, including by means of a tribunal established for the purpose, of any accident arising out of or in the course of air navigation and occurring either in or over Kenya or occurring elsewhere to Kenya aircraft;
(h) requiring any person who owns an aircraft or who carries on the business of operating aircraft for hire or reward to furnish to such authorities as may be prescribed such information relating to the aircraft and the use thereof, the crew, the mail, the passengers and the cargo carried, as may be prescribed;
(i) providing for the licensing, inspection and regulation of aerodromes, access to places where aircraft, have landed or may land, access to aircraft factories or maintenance establishments or places where aircraft parts and engines are maintained, for the purpose of inspecting work therein carried on in relation to aircraft or parts thereof.
(j) the design, construction, repair, overhaul, maintenance, operation and use of aircraft, maintenance and repair of facilities and related equipment; and
(k) the control and operation of the aircraft within or directly above the aerodrome for the purpose of limiting or mitigating the effect of noise.

1.2 Statutory Instruments Act, Cap. 2A

KCAA now undertakes public and stakeholder consultations and presents this Regulatory Impact Assessment (RIA) in partial fulfilment of the requirements of the Statutory Instruments Act, Cap. 2A (SIA) which is the legal framework governing the conduct of RIA in Kenya.

The object of the Act is to provide a comprehensive regime for the making, scrutiny, publication and operation of statutory instruments by:

(a) requiring regulation-making authorities to undertake appropriate consultation before making statutory instruments;
(b) requiring high standards in the drafting of statutory instruments to promote their legal effectiveness, clarity and intelligibility to anticipated users;
(c) improving public access to statutory instruments;
(d) establishing improved mechanisms for parliamentary scrutiny of statutory instruments; and

(e) establishing mechanisms to ensure that Statutory Instruments are periodically reviewed and, if they no longer have a continuing purpose, repealed.

The Act also makes provision for the making of regulatory impact statements under section 6 as well as contents of the regulatory impact statement under section 7.

Sections 6 and 7 require that if a proposed statutory instrument is likely to impose significant costs on the community or a part of the community, the Regulation-Making Authority (RMA) shall, prior to making the statutory instrument, prepare a regulatory impact statement about the instrument. SIA further sets out certain key elements that must be contained in the RIA namely:

(a) a statement of the objectives of the proposed legislation and the reasons for them;
(b) a statement explaining the effect of the proposed legislation including in the case of a proposed legislation which is to amend an existing statutory instrument the effect on the operation of the existing statutory instrument;
(c) a statement of other practicable means of achieving those objectives, including other regulatory as well as non-regulatory options;
(d) an assessment of the costs and benefits of the proposed statutory rule and of any other practicable means of achieving the same objectives;
(e) the reasons why the other means are not appropriate;
(f) any other matters specified by the guidelines; and
(g) a draft copy of the proposed statutory rule. Section 5 of SIA requires an RMA to conduct public consultations drawing on the knowledge of persons having expertise in fields relevant to the proposed statutory instrument and ensuring that persons likely to be affected by the proposed statutory instrument are given an adequate opportunity to comment on its proposed content.

What is a Regulatory Impact Assessment?

RIA is a systemic approach of critically assessing the positive and negative effects of proposed or existing regulations and non-regulatory alternatives. It is an analytical report to assist decision makers to arrive at an informed policy decision.

As an aid to decision making, RIA includes an evaluation of possible alternative regulatory and non-regulatory approaches with the overall aim of ensuring that the final selected regulatory option provides the greatest net public benefit.

Typically, the structure of a RIA should contain the following elements:

(a) title of the proposal; the objective and intended effect of the regulatory policy;
(b) an evaluation of the policy problem;
(c) consideration of alternative options;
(d) assessment of all their impacts distribution;
(e) results of public consultation;

(f) compliance strategies; and
(g) processes for monitoring and evaluation.

RIA promotes evidence-based policymaking as new regulations typically lead to numerous impacts that are often difficult to foresee. From a societal viewpoint, RIA confirms whether a proposed regulation is welfare enhancing, in that, the benefits will surpass costs.

RIA therefore has an overall objective of not only improving understanding of the real-world impact of regulatory action, including both the benefits and the costs of action, but also integrating multiple policy objectives, improving transparency and consultation; and enhancing governmental authority.

1.3 International Legislation

Kenya, by virtue of Article 2(5) and (6) of the Constitution has ratified and become part of the international participants in the aviation space. The International Civil Aviation Authority (ICAO) was established as a specialized United Nations (UN) agency under the Convention of International Civil Aviation (Chicago Convention) which helps 193 countries to cooperate and share their skies to their mutual benefit. To achieve this, ICAO has provided for the establishment of international Standards and Recommended Practices (SARPs) the uniform application of which is necessary in order to achieve the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation.

The draft Civil Aviation (Environmental Protection–Aircraft Noise) Regulations, 2024 correspond to the SARPs issued by ICAO as Annex 16 Vol. I to the Convention on international civil aviation. Kenya as a contracting State has an obligation under Article 37 to the Convention on International Civil Aviation to domesticate the SARPs into legally enforceable legislative material.

These regulations are therefore issued in fulfilment of Kenya's international obligations as an ICAO contracting state and to ensure the safety, security, regularity and economic viability of global air transport system.

1.4 Regional Legislative Initiatives

Regionally, Kenya is a member of the African Civil Aviation Commission (AFCAC) which is a specialized body of the African Union (AU) whose mandate is to create a safe, secure, efficient, and sustainable civil aviation industry across Africa that propels development through furthering connectivity.

Further, under the East African Community, Kenya is a member of Civil Aviation Safety and Security Oversight Agency (CASSOA) which is established under Article 92 of the EAC Treaty which in summary states that the Partner States shall undertake to make air transport services safe, efficient and profitable; adopt common policies for the development of civil air transport in the region; harmonize civil aviation rules and regulations and coordinate measures and co-operate in the maintenance of high security.

Under commitments under these regional arrangements and the aspiration to ensure that the regional air transport industry is appropriately managed, Kenya is obliged to issue these regulations to fulfil the regional obligations to a safe, secure and economically viable air transport system.

2.0 Chapter Two – Purpose and Objects of the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024

2.1 Scope

These Proposed Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 shall be applicable to all aircraft included in the classifications defined for noise certification purposes where such aircraft are engaged in air navigation.

2.2 Objective

The objective of the proposed Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 is to establish clear, enforceable limits on aircraft noise emissions, incentivizing the use of quieter aircraft and technologies, and promoting best practices in airport operations, these regulations will contribute to the reduction of environmental noise pollution and the improvement of community well-being.

2.3 Specific Objectives

The draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 are designed to achieve a balanced, comprehensive approach to managing the environmental impact of aviation noise. This includes preventing, mitigating, and managing aircraft noise through various measures such as stricter emissions standards, noise-abatement procedures, monitoring systems, and community engagement.

Specifically, the draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 are intended to:

(a) reduce Aircraft noise emissions at source: To establish limits and standards for aircraft noise emissions at various stages of flight (takeoff, approach, landing, etc.) to minimize the environmental impact of aviation activities;
(b) promote quiet Aircraft design and technology: To incentivize the development, adoption, and certification of quieter aircraft through the integration of advanced noise-reduction technologies, such as quieter engines, aerodynamically optimized airframes, and improved landing gear designs;
(c) mitigate Aircraft noise impact on communities: To protect communities living near airports from the harmful effects of noise pollution by implementing noise abatement procedures, managing flight paths, and establishing noise zones;
(d) establish noise monitoring, reporting, and enforcement mechanisms: To implement a comprehensive system for monitoring and reporting aircraft noise levels, ensuring that operators comply with prescribed noise limits, and enforcing penalties for non-compliance;
(e) encourage sustainable airport operations and noise abatement procedures: To promote the implementation of noise abatement operational procedures (such as optimized flight paths, continuous descent approaches, and night curfews) that minimize noise at the airport level;

(f) implement night-time flight restrictions and curfews: To reduce the impact of night-time aircraft operations on local communities, particularly in residential or noise-sensitive areas, by introducing restrictions or curfews during specified hours;
(g) phasing out older, noisier aircraft and promoting fleet modernization: To phase out older aircraft that do not comply with modern noise standards and encourage the modernization of fleets with quieter, more fuel-efficient aircraft that meet Chapter 4 noise certification levels;
(h) create noise zones and land-use planning guidelines around airports: To establish noise zones around airports and enforce appropriate land-use planning measures to prevent the development of residential or noise-sensitive areas in high-noise regions; and
(i) engage with stakeholders and the public on noise issues: To engage with airlines, airport operators, local governments, and the general public to raise awareness of noise issues and ensure the participation of relevant stakeholders in decision-making processes.

By ensuring alignment with ICAO's global standards and promoting cooperation across stakeholders, these regulations will contribute to the sustainability of the aviation industry, improve public health and well-being, and foster international harmonization in aircraft noise management. These objectives will ensure that the benefits of aviation are maximized while minimizing its environmental footprint.

2.4 The Structure of the Draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024

This overview aims to evaluate the clarity, consistency, comprehensibility, and comprehensiveness of the proposed Regulations in relation to the identified issue. It is essential that the rules are easily understood by those who may be impacted. To achieve this, the Kenya Civil Aviation Authority has implemented measures to enhance the clarity of both the text and structure of the proposed Regulation.

The structure of the proposed Civil Aviation (Environmental Protection - Aircraft Noise) Regulation is as follows:

Part I - Preliminary Provisions
Part II - Aircraft Noise Certification
Part III - Subsonic Jet Aeroplanes (Application for Type Certificate Submitted before 6 October 1977)
Part IV - Subsonic Jet Aeroplanes (Application For Type Certificate Submitted On or After 6 October 1977 and Before 1 January 2006)
Part V - Subsonic Jet Aeroplanes and Propeller-Driven Aeroplanes with Maximum Certificated Take-Off Mass 55 000kg and Over
Part VI - Propeller-Driven Aeroplanes Not Exceeding 8 618 Kg
Part VII - Propeller-Driven STOL Aeroplanes
Part VIII - Helicopters
Part IX - Propeller-Driven Aeroplanes Not Exceeding 8 618 Kg
Part X - Helicopters Not Exceeding 3 175 Kg Maximum Certificated Take-Off Mass
Part XI - Tilt-Rotors

Part XII - Subsonic Jet Aeroplanes and Propeller-Driven Aeroplanes with Maximum Certificated Take-Off Mass 55 000 Kg And Over

SCHEDULES

First Schedule - Monitoring Aircraft Noise On and In the Vicinity of Aerodromes (Part II, refers)

Second Schedule - Evaluation Method for Noise Certificate of Subsonic Jet Aeroplanes-Application for Type Certificate before 6 October 1977

Third Schedule - Equations for the Calculation of Maximum Permitted Noise Levels as a Function of Take-Off Mass

Fourth Schedule - Applicability of Annex 16 Noise Certification Standards for Propeller-Driven Aeroplanes

Fifth Schedule - Evaluation Method for Noise Certification of:

1. Subsonic jet aeroplanes — Application for Type Certificate submitted on or after 6 October 1977;
2. Propeller-driven aeroplanes over 8 618 kg — Application for Type Certificate submitted on or after 1 January 1985;
3. Helicopters; and
4. Tilt-rotors.

Sixth Schedule - Evaluation Method for Noise Certification Of Propeller-Driven Aeroplanes Not Exceeding 8 618 Kg — Application for Type Certificate submitted before 17 November 1988

Seventh Schedule - Guidelines for Noise Certification of Propeller-Driven STOL Aeroplanes

Eighth Schedule - Guidelines for Obtaining Helicopter Noise Data for Land-Use Planning Purposes

Ninth Schedule - Guidelines for Noise Certification of Installed Auxiliary Power Units (APU) and Associated Aircraft Systems during Ground Operation

Tenth Schedule - Evaluation Method for Noise Certification of Propeller-Driven Aeroplanes Not Exceeding 8 618 Kg — Application for Type Certificate or Certification of Derived Version Submitted On or After 17 November 1988

Eleventh Schedule - Evaluation Method for Noise Certification of Helicopters Not Exceeding 3175 Kg Maximum Certificated Take-Off Mass

Twelfth Schedule - Monitoring Aircraft Noise On and In The Vicinity of Aerodromes

3 Chapter Three – Background and Context

3.1 Policy Background

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Goal 9 of the SDGs advocates for building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. Kenya intends to provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport by 2030.

Kenya Vision 2030 is a nationwide multi-sectorial document that outlines the main policies, legal and institutional reforms as well as programs and projects that the Government plans to implement.

The Vision 2030 aspires for a country firmly interconnected through a network of roads, railways, ports, air, water and sanitation facilities, and telecommunications. The expansion, modernization and management of the aviation sector continues to enhance air transport safety, security, and connectivity across the country and beyond. Civil aviation is a critical catalyst for global and national development. Air transport in Kenya has continued to grow and has contributed to job creation and increased interaction and trade with other countries.

Bottom-Up Economic Transformation Agenda (BETA): The Bottom-Up Economic Transformation Agenda 2022-2027 is the manifesto of the Kenya Kwanza administration that is being implemented from 2022 to 2027. It is built on six main pillars, to be being implemented through five (5) MTP IV sectors that include infrastructure. One of the aims under infrastructure sector is to enhance transport connectivity and the provisions of the regulations are meant to institutionalize a civil aviation regulatory and oversight framework that promotes a sustainable safe and secure air transport system in Kenya.

Kenya Aviation Policy: The Policy aims to foster the growth of aviation business in Kenya to support job creation by positioning Kenya as a recognized regional leader in aviation; maximize the contribution of the aviation sector to Kenya's economic growth and development; and 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. The 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.

The Kenya Airspace Master Plan: The Plan outlines the evolution and associated investments to be made by the Kenya Civil Aviation Authority (KCAA) in Air Navigation Services (ANS) over the next 15 years. The objectives of the Plan include global and

regional consistency, legal/regulatory considerations, and stakeholder expectations. The Plan covers operational evolutions, technical improvements, and human resources development.

The National Aviation Safety Plan (NASP): The Plan is aligned with the International Civil Aviation Organization's (ICAO) Global Aviation Safety Plan (GASP), the NASP outlines objectives, strategic priorities, and safety actions to be taken over three years (2023 to 2025). The Plan includes key elements such as identification of national safety issues, setting aviation safety goals and targets, implementing safety enhancement initiatives (SEIs), and collaborating with industry stakeholders and agencies responsible for safety oversight. The NASP complements Kenya's State Safety Programme (SSP) Document.

3.2 Constitutional and Legal Background

The Constitution: The Constitution recognizes civil aviation as one of the functions under the National Government in the Fourth Schedule.

Chapter 4 of the Constitution provides for the Bill of Rights with Article 46 providing for consumer protection where it applies to goods and services offered by public entities or private persons. Aviation consumers have rights for services of reasonable quality; information necessary for them to get full benefit from the services; and protection of their economic interests.

Chapter 6 of the Constitution provides for leadership and integrity of State officers. Employees of the Authority are public officers and are bound by the various principles provided for in the Constitution. The regulations have largely provided for standardized ways of provision of quality services, information to be used by its consumers for protection of their economic interest, data protection issues, access to information while maintaining technical infrastructure within the aviation sector.

Article 94(6) of the Constitution gives Parliament the power to delegate its legislative authority to a State organ, State officer or person to make provision having the force of law in Kenya.

Civil Aviation Act: The Act was enacted to provide for the control, regulation and orderly development of civil aviation in Kenya; and for connected purposes.

Section 4 of the Act provides that the provisions of the Act and regulations made thereunder unless expressly excluded shall apply to: aerodromes used for civil aviation in Kenya; air services established or operating in Kenya; any aircraft registered by the Authority; any foreign aircraft within the Kenya territory; aviation personnel and training schools certified by the Authority; enterprises operating in Kenya in the design, manufacture, maintenance, repair and modification of aircraft and aircraft parts or components; and air navigation facilities and services in Kenya. Section 82 provides for the Regulations that can be made by the Cabinet Secretary responsible for aviation matters to give effect to the Act and for

regulating air navigation, air transport, air accident investigation and carrying out and giving effect to any convention on aviation ratified by Kenya.

3.3 Domestic Context

The KCAA is established under the Civil Aviation Act with the object and purpose to economically and efficiently plan, develop and manage civil aviation, regulate and operate a safe civil aviation system in Kenya in accordance with the provisions of the Act. Further, the Act requires that the Cabinet Secretary shall make regulations to give effect to and for the better carrying out of the objects and purposes of the Act, to provide generally for regulating air navigation, air transport, air accident investigation and carrying out and giving effect to any convention on aviation.

The Civil Aviation (Environmental Protection – Aircraft Noise) Regulations, 2024 enable KCAA to effectively discharge its mandate by establishing operational standards that ensure that the aviation system in Kenya is aligned to the standards established internationally and applicable globally. The Regulations therefore fulfil the obligations set out in the Civil Aviation Act and in support of the mandate of KCAA.

3.4 International Context

The Convention on International Civil Aviation, which, Kenya has ratified, established the International Civil Aviation Organization (ICAO) with a mandate to support, coordinate and help countries to diplomatically and technically realize a uniquely rapid and dependable network of global air mobility, connecting families, cultures, and businesses all over the world, and promoting sustainable growth and socio-economic prosperity wherever aircraft fly.

As a global forum of States for international civil aviation, ICAO develops policies and standards, undertakes compliance audits, performs studies and analyses, helps and builds aviation capacity through many other activities and the cooperation of its Member States and stakeholders.

Article 37 of the Convention on International Civil Aviation provides for the adoption of international standards and procedures requiring each contracting State undertaking to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation.
The International Civil Aviation Organization adopts and amends international standards and recommended practices and procedures dealing with various aspects of air navigation and such other matters concerned with the safety, regularity, and efficiency of air navigation as may from time to time appear appropriate.

Further, Article 12 of the Convention requires that each contracting State undertakes to adopt measures to ensure that every aircraft flying over or manoeuvring within its territory complies with the rules and regulation and that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with the rules and regulations relating to the flight and manoeuvre of aircraft there in force. Each contracting State undertakes to keep its own regulations in these respects uniform, to the greatest possible extent, with those established from time to time under the Convention. Over the high seas, the rules in force shall be those established under the Convention. Each contracting State undertakes to ensure the prosecution of all persons violating the regulations applicable.

Internationally, each of the 193 contracting States has, in compliance with their national commitments and obligations under the Convention, promulgated, national civil aviation regulations with the objective of governing the aviation industry in their jurisdiction.

Article 12 of the Convention relating to scheduled air services provides that no scheduled international air service may be operated over or into the territory of a contracting State, except with the special permission or other authorization of that State, and in accordance with the terms of such permission or authorization.

The lack of an appropriate set of regulations in one contracting state jeopardizes the safety, security and economic status of international air navigation. The Civil Aviation (Environmental Protection – Aircraft Noise) Regulations, 2024 are therefore proposed to ensure fulfilment of State obligation and alignment of the Kenyan aviation system with international requirements. They also allow Kenya to effectively explore the potential economic and geopolitical benefits of participating in international air navigation.

4 Chapter Four – Evaluation of the Problem

4.1 Currency of the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations

The Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 are new regulations (being published for the first time). ICAO adopted Annex 16, Volume I of the Chicago Convention, containing Standards and Recommended Practices relating to the implementation of Environmental Protection - Aircraft Noise. Annex 16 Vol. I was first published in 1981 and the current publication is eighth edition of July 2017. Kenya is therefore not in compliance with the terms of the Convention of which it is a signatory. The gap in the regulations can only be bridged through promulgation of these new regulations.

4.2 Sustainability of Civil Aviation System

4.2.1 International Obligation

The Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024 play a crucial role, the absence of these Regulations could undermine Kenya's ability to meet international climate obligations, damage its global reputation for environmental responsibility, and create serious economic and legal consequences for both the aviation sector and broader international relations. It could also hinder global efforts to reduce the environmental impact of aviation and may isolate the country from key international collaborations and markets.

4.2.2 Aviation Safety

The Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 are primarily focused on minimizing the environmental impact of aviation. However they are closely linked with technological advancements, operational practices, and industry standards that can directly or indirectly influence safety.

The absence of noise regulations may cause the aviation sector to miss out on economic opportunities tied to sustainability and innovation. As the aviation industry moves towards greener technologies, those who invest in quieter, more energy-efficient aircraft early on will likely enjoy financial rewards (e.g. through government incentives, grants, or new market opportunities).

Countries failing to regulate aircraft noise could also face losses in tourism revenues, as environmentally-conscious travellers might opt for airlines operating in countries with stronger environmental regulations.

Airlines operating noisy aircraft may face increased operational costs in the long run as international noise regulations tighten or as the demand for quieter aircraft

grows. They could also encounter higher airport fees at airports with noise-related policies or higher insurance premiums due to environmental non-compliance.

4.2.3 Operational rights to other jurisdictions

Lack of the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations could have serious ramifications for Kenya's operational rights in international aviation. If the regulations are not aligned with ICAO noise standards, international regulatory bodies may impose penalties or restrictions on airlines operating in and out of the country. Airlines may face increased operational restrictions such as curfews or bans on older, noisier aircraft at foreign airports, especially those in regions with stringent noise regulations.

Airlines operating Aircraft that do not comply with ICAO Chapter 4 standards (the most stringent international noise standard for new aircraft) may face limitations on their operational routes or may need to reconfigure their fleet to meet international standards.

4.2.4 Reduction of Cost of doing Business

These regulations, while primarily aimed at environmental protection, also play a crucial role in shaping operational efficiency, long-term sustainability, and financial viability for airlines and related businesses.

Airlines could face higher long-term operational costs without noise regulations, especially if they are forced to comply with stricter regulations in foreign jurisdictions or are unable to access international markets that require quieter aircraft. For instance, aircraft with higher noise emissions may incur airport access charges or taxes at foreign airports.

5 Chapter Five – Stakeholder Consultation

5.1 Legal requirements relating to public participation and consultation

Public participation plays a crucial role in democratic governance by ensuring transparency, inclusivity and accountability in decision-making processes. The Constitution places emphasis on public participation as a fundamental principle of governance. Article 10 of the Constitution outlines the national values and principles of governance, including public participation, which is crucial for achieving accountability, transparency, and public involvement in decision-making processes.

In addition, Article 118 of the Constitution provides the right to public participation in legislative and other processes of the State. This ensures that the public has an opportunity to participate in matters that affect them directly.

The requirement for public participation applies to regulation making too. As such, before the draft regulations would be forwarded for promulgation, a series of stakeholder and public engagement was conducted.

5.2 The Process of Public Consultation

The first of a series of stakeholder meetings covering a set of eleven (11) civil aviation regulations was physically held at the Ole Sereni Hotel in Nairobi on 30th April 2019. The second stakeholders meeting was held hybrid (both physically at Four Points by Sheraton Hotel and virtually) between 14th – 18th June 2021. The third public engagement was a physical meeting with stakeholders held at the Emara Ole Sereni Hotel between 14th and 15th February 2022.

In each of the engagements, comments and input from stakeholders was taken and incorporated into the regulations as appropriate and the outcome presented in the succeeding engagement forum. To conclude stakeholder engagement, KCAA organized for a final regulations validation workshop at the Panari Hotel in Nairobi between 6th and 8th May 2024 to allow stakeholders to confirm that the Authority had considered and incorporated their comments and input in the final drafts of the regulations. This was the final activity that paved way for the review of the regulations to proceed to the next stage.

5.3 Public Notice and Awareness

Each stakeholders engagement fora was advertised at least twenty-one (21) days before the date of the engagement in a major local daily in accordance with applicable requirements for stakeholder engagement. Additionally, formal notice of the same was posted on the KCAA official website. All sets of regulations to be discussed during the public participation fora were well spelt out in the adverts. An online registration form was provided on the website in addition to a form to collect stakeholder comments which was uploaded alongside the regulations on the KCAA website www.kcaa.or.ke.

5.4 Public participation forum

The physical stakeholder engagement was conducted at the Ole Sereni Hotel in Nairobi on 30th April 2019 and attended by 102 participants. The hybrid stakeholder engagement held between 14th and 18th June 2021 attracted a total attendance of 718 aviation stakeholders and members of the public. The stakeholder engagement reports, local daily newspaper adverts, copies of signed or digital attendance lists as applicable, matrices containing input from stakeholders and how the same were incorporated in the regulations form annexures to this RIA.

5.5 Analysis and Feedback

The Authority received many memoranda from the industry and general public using the forms provided to collect stakeholder feedback. Some memoranda were delivered physically, in writing or by email. Memoranda received before stakeholder meetings were analysed, the Authority's response documented in a matrix and the same presented during the physical or virtual stakeholder engagement sessions.

Each comment was analysed feedback given to every input received from stakeholders initially on the floor of the physical or virtual engagement during question and-answer sessions which came immediately after presentations of the regulation, or in writing where stakeholder input and comments were received in writing or after the engagement sessions.

For stakeholder input and comments requiring substantial analysis and amendment to draft regulations, the stakeholders were invited to shed more light on their comments and requests through physical or virtual meetings, in writing or email. Their input was then discussed and analysed together with the drafters of the regulations and where consensus was reached, the regulations were either redrafted to incorporate their input or retained in cases where taking the stakeholder comments would contravene ICAO standards or international standards and practices.

The Authority kept in touch with stakeholders at all stages of the development of the regulations ensuring that they were fully involved and part of the process.

5.6 Credibility and Integrity of the Process

To ensure that the process of public participation was credible and passed the integrity test, KCAA:

(a) did not engage in conduct involving dishonesty, fraud, deceit, misrepresentation or discrimination and avoided relationships or actions which could be legitimately interpreted as a conflict of interest; and

(b) took into consideration the social and economic status, religious beliefs, ethnicity, and other social diversities of those engaging in public participation.

Any complaint arising from the public participation process was to be referred to the Director-General and resolved as appropriate including provision of additional time and contact to address any stakeholders concerns. However, no complaint was received.

6 Chapter Six – Cost Benefit Analysis

6.1 Costs and Benefits Generally

The draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulation 2024 aims to foster a sustainable aviation industry that prioritizes environmental stewardship while maintaining safety and operational efficiency in civil aviation activities as well as ensure that Kenya aligns with international environmental protection standards for aircraft registered in Kenya and any foreign registered Aircraft operating in Kenya.

It is however impossible to fully quantify the cost that goes into ensuring that Aircraft Noise for International Aviation, which is a cardinal element of all civil aviation activities, is maintained at all times. Furthermore, standards complied with the promulgation of these regulations have been meticulously studied and trialled at an international level. The results of such trials and tests have proven that the benefits accrued are worth the cost, hence the adoption of the standards and recommended practices into ICAO Annex 16 Volume II.

The table below summarizes the problems promulgation of new regulations is supposed to treat, the proposed amendments as well as the attached benefits and costs.

Table 01

PROBLEM	PROPOSED REFORM	BENEFITS	COST
Non-Existent Regulations	Introduction of new regulations to align with international standards set by the International Civil Aviation Organization (ICAO) i.e. Annex 16, Vol I Eighth Edition of July 2018.	Improved alignment with international standards will enhance safety of Aircraft.	Cost of running Aircraft noise oversight function

6.2 Consideration of Alternatives to the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024

Table 02

Option	Impact
Option One: Maintenance of the Status Quo	Maintaining status quo means that no regulations are developed, thus the challenges of currency and keeping up with the international obligations and requirements will not be addressed.
Option Two: Administrative measures	Issuance of directives and circulars to the various entities and hoping that they will be implemented. Administrative measures do not have the force of law and may be challenged in court of law. The risks associated with non-enforceable measures include inconsistent noise reduction, delayed action, and potential for free rider behaviour, which may ultimately fail to deliver meaningful noise relief for affected communities or ensure alignment with ICAO's global noise reduction standards.
Option Three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024	The promulgation of the civil aviation (Environmental Protection - Aircraft Noise) Regulations ,2024 will establish clear, enforceable limits on aircraft noise emissions, incentivizing the use of quieter aircraft and technologies, and promoting best practices in airport operations, these regulations will contribute to the reduction of environmental noise pollution and the improvement of community well-being.

6.3 Impact analysis of the Options

Table 03

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
Airlines	1. If regulations are not aligned with ICAO noise standards, international	1. Without enforceable regulations, there is a	1. By promoting the adoption of quieter, more fuel-efficient aircraft, the

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
	regulatory bodies may impose penalties or restrictions on airlines operating in and out of the country. Airlines may face increased operational restrictions such as curfews or bans on older, noisier aircraft at foreign airports, especially those in regions with stringent noise regulations. 2. Airlines that do not comply with evolving global environmental expectations may find themselves at a competitive disadvantage compared to carriers in jurisdictions where noise reduction regulations are in place. This could affect their brand reputation, particularly among environmentally conscious customers who prefer quieter, more sustainable travel options. 3. Airlines could face higher long-term operational costs without noise regulations, especially if they are forced to comply with stricter regulations abroad or are unable to access international markets that require quieter aircraft.	risk of non-uniform implementation of noise reduction practices. Airlines may selectively comply with administrative measures based on their business model, leading to inconsistent noise reduction across the sector. This could create operational imbalances and unequal noise exposure for communities near different airports. 2. Administrative measures may delay the adoption of necessary technologies to reduce noise emissions, as the incentive to act may not be strong enough without the pressure of legal deadlines. Gradual voluntary measures might prolong the use of older, noisier aircraft, exacerbating the health and environmental impacts of aviation noise in the long run. 3. Some airlines may benefit from the noise-	regulations will encourage innovation within the airline industry. Airlines that invest in modern technologies (e.g. advanced engines and aerodynamic improvements) will benefit from better operational performance, including lower fuel consumption and reduced maintenance costs. 2. Airlines operating quieter, more environmentally-friendly aircraft may gain a competitive advantage in a market increasingly focused on sustainability and corporate social responsibility (CSR), improving brand reputation and customer loyalty. 3. Airlines operating quieter aircraft may benefit from reduced operational costs in the long run, including savings on fuel and maintenance, as well as reduced environmental taxes or levies. 4. By adhering to noise reduction standards, airlines may avoid

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
		reduction efforts of other carriers without incurring the costs themselves, relying on the broader industry to lead the way. This "free rider" behaviour could reduce the overall effectiveness of noise management strategies, as not all stakeholders participate in noise reduction efforts.	stricter operational restrictions, such as flight bans or curfews that could be imposed on noisy aircraft. This will ensure smoother operations and a greater ability to maintain flight schedules.
Airports	1. The absence of noise regulations would likely lead to increased aircraft noise in surrounding communities, especially in densely populated areas near airports. This could lead to higher levels of public dissatisfaction, protests, or complaints about noise pollution, and, in the worst case, opposition to airport expansion. 2. Airports may find it harder to meet environmental sustainability goals without national regulations on noise management. This could put airports at risk of not aligning with international environmental commitments, such as carbon-neutral targets or	1. Without mandatory regulations, noise mitigation measures may be adopted inconsistently across airports. Some airports might invest heavily in noise reduction technologies, while others might delay or forgo such measures altogether. This leads to a lack of uniformity in the implementation of noise control practices across the aviation industry. 2. In areas with high population density or sensitive communities, airports may come under intense pressure from residents and advocacy groups to address noise	1. Airports that implement noise-reduction strategies (such as quiet operations or optimized flight paths) will likely experience improved relations with surrounding communities, reducing noise-related complaints and public opposition to airport operations. 2. Airports that implement effective noise mitigation measures (such as sound barriers, reconfigured flight paths, or land-use planning policies) may be seen as leaders in environmental sustainability, attracting environmentally-conscious passengers and airlines.

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
	broader sustainability goals set by ICAO and other international organizations. 3. Without noise regulations, airports might face operational challenges as noisy aircraft continue to operate during peak hours, particularly near residential zones. The lack of flight restrictions (e.g. night curfews) may result in overburdened airspace, flight delays, or congestion, limiting airport throughput and efficiency, especially at high-traffic airports.	pollution. If administrative measures fail to sufficiently address these concerns, airports may face public backlash, which could damage their reputation and result in community protests, regulatory challenges, or even political action. 3. The voluntary nature of administrative measures may delay critical noise reduction initiatives. Airports may not take immediate action to improve noise control if the measures are seen as optional or insufficiently incentivized, leading to greater long-term environmental and social costs.	3. Airports that actively engage in noise reduction can gain certification or recognition under green airport initiatives, which enhances their brand image and competitiveness.
Local Communities	1. The most significant negative impact of not promulgating noise regulations would be increased noise pollution in communities near airports. Continuous exposure to high levels of aircraft noise can lead to a range of health issues, such as	1. Without mandatory regulatory enforcement, administrative measures may not produce meaningful or immediate results in reducing aircraft noise. Communities living near busy airports may continue	1. By reducing aircraft noise around airports, the regulations will significantly improve public health and quality of life for residents living near airports. Studies have shown that high levels of aviation noise can lead to sleep disturbances,

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
	(a) Sleep disturbances, leading to chronic fatigue and stress. (b) Cardiovascular problems such as hypertension and increased risk of heart disease. (c) Mental health problems such as anxiety and depression, especially for those living in high-noise areas. 2. The absence of noise mitigation efforts could lead to public protests, community opposition to airport operations, and potentially political challenges for local governments and airport authorities. This could also manifest in increased demands for relocation or compensation, placing financial burdens on airports and the government.	to suffer from high noise levels, leading to health problems (e.g. sleep disturbances, cardiovascular stress, mental health issues). 2. Without enforceable regulations, airlines and airports may not be held fully accountable for exceeding acceptable noise thresholds. Local communities may feel frustrated by the lack of clear, consistent action, leading to increased public dissatisfaction and greater opposition to airport operations. 3. Administrative measures may result in delayed action on noise reduction, causing continued exposure to high noise levels. Over time, this could exacerbate health issues for residents living near airports, including stress, hypertension, and increased risk of heart disease, leading to higher public health costs and social discontent.	cardiovascular diseases, and increased stress. 2. Communities around airports will benefit from lower noise pollution levels, which can have a positive impact on local ecosystems, wildlife, and biodiversity, especially in areas close to natural reserves or recreational zones. 3. By addressing aviation-related noise, the regulations support broader environmental protection goals, including air quality improvements and reducing disturbances to local wildlife.

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
The Authority	1. Not aligning national regulations with ICAO standards on aircraft noise could harm the country's reputation in the international aviation community. Countries that do not comply with ICAO's recommended noise standards may be seen as lagging behind in aviation sustainability, which could impact their standing in global aviation negotiations. 2. ICAO's noise regulations are designed to harmonize global standards for aircraft noise. By not promulgating national noise regulations, the country risks fragmenting the international regulatory framework, making it harder for global airlines to operate across borders with uniform standards. 3. Without the legal framework in place for aircraft noise, regulatory authorities may struggle to address complaints and enforce noise standards, resulting in poor enforcement of noise control measures. This could lead to inconsistent	1. Administrative measures lack the enforceability of formal regulations, making it difficult for regulatory authorities to ensure that noise reduction goals are being consistently met. Airlines or airports that fail to comply may face limited consequences, undermining the effectiveness of the measures. 2. Lack of clear mandates could result in gaps in the regulatory framework, leading to inconsistent noise management and missed opportunities to address high levels of aircraft noise in a timely manner. 3. Without regulatory backing, progress on noise reduction could be slow and fragmented. Certain stakeholders, such as older fleet operators or airlines with fewer resources, may opt out of adopting noise mitigation measures, resulting in	1. Promulgating noise regulations will give the Authority a clear framework for overseeing the aviation sector's noise compliance. This will improve their ability to monitor and enforce noise standards effectively, ensuring that the aviation industry meets global environmental protection goals. 2. The regulations will also enable the standardization of noise measurement and reporting systems, providing a consistent approach for monitoring and ensuring compliance. 3. The regulations will align the country's aviation noise management policies with ICAO standards and global best practices, fostering international cooperation and contributing to global environmental goals. Countries that comply with ICAO's noise standards are more likely to gain recognition in international forums and aviation agreements.

Aviation Sector	Option one: Maintenance of the Status Quo	Option two: Administrative measures	Option three: Promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024
	noise management practices, undermining efforts to ensure fair and equitable noise mitigation across the aviation sector.	insufficient overall reductions in noise pollution.	

6.4 Preferred Option

Based on the above analysis it is clear that the third option the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 is the preferred option. The benefits and impact of promulgating the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 by far outweigh any estimated cost of its implementation. The other two options have little or no impact in addressing the problems outlined above.

7 Chapter Seven – Compliance and Implementation

As different aspects of the proposed Regulations are evaluated and analysed, it is important to determine how compliance and implementation of the actual provisions will be achieved. It is the duty of the Regulator to assess the adequacy of the institutional framework and other incentives through which the Regulations will take effect, and design responsive implementation strategies that make the best use of them.

In an ideal situation an institution responsible for enforcement of the Regulations should have the capacity of co-ordination of institutional frameworks from a whole-of-government perspective, independent and sufficient authority, political support at a high political level, and integration into a broad concept of reform.

KCAA has put in place a plan as outlined in the Strategic Plan 2023/24-2027/2028 to strengthen its institutional capacity to enable it enforce compliance with the proposed Regulations once they are published.

8 Chapter Eight – Conclusions & Recommendations

8.1 Conclusions

8.1.1 Based on the above analysis, the following conclusions are drawn in respect of the draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024:

8.1.2 Regulations making mandate: Article 94 (6) of the Constitution gives parliament the power to delegate its legislative authority to a State organ, State officer or person to make provision having the force of law in Kenya. Subsequently, Section 82 of the Civil Aviation Act empowers the Cabinet Secretary in Consultation to give effect to and for the better carrying out of the objects and purposes of this Act, to provide generally for regulating air navigation, air transport, air accident investigation and carrying out and giving effect to any convention.

8.1.2.1 Provisions of the Statutory Instruments Act: Section 5 requires that a regulation making authority to conduct public consultations and drawing on the knowledge of persons having expertise in fields relevant to the proposed statutory instrument; and to ensure that persons likely to be affected by the proposed statutory instrument had an adequate opportunity to comment on its proposed content. Sections 6 and 7 require that a RIA be prepared where a statutory instrument is likely to impose significant costs on the community. This RIA thus contains certain the following key elements:

(a) a statement of the objectives of the proposed legislation and the reasons.
(b) a statement explaining the effect of the proposed legislation.
(c) a statement of other practicable means of achieving those objectives, including other regulatory as well as non-regulatory options.
(d) an assessment of the costs and benefits of the proposed statutory rule and of any other practicable means of achieving the same objectives; and
(e) the reasons why the other means are not appropriate.

8.1.2.2 The RIA structure and content requirements established in the Statutory Instruments Act requirements have been fully met. Additionally, public consultation requirements in respect of the Civil Aviation (Environmental Protection - Aircraft Noise) Regulations will be fully adhered to.

8.1.2.3 Other legal frameworks: The draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 proposes to publish

regulations in harmony with other civil aviation regulations to effectively govern the civil aviation system in Kenya.

8.1.2.4 The draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations 2024 as drafted are clear, consistent, comprehensible and comprehensive enough to cover all matters and meet the established drafting standards.

8.2 Recommendations

8.2.1 In view of the above conclusions, it is recommended that the draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024 be adopted.

9 Annexures

9.1 The Draft Civil Aviation (Environmental Protection - Aircraft Noise) Regulations, 2024
9.2 Matrix for Stakeholder Consultations