

TCAA Bulletin



TCAA HANDS OVER BOREHOLE TO KIWANJA CHA NDEGE PRIMARY SCHOOL IN DODOMA





UNITED REPUBLIC OF TANZANIA
MINISTRY OF TRANSPORT
TANZANIA CIVIL AVIATION AUTHORITY



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MESSAGE FROM DIRECTOR GENERAL



Dear Esteemed Readers, As we present Issue Number 63 of the TCAA Bulletin, we do so at a moment that calls for solemn reflection, empathy, and renewed commitment. Civil aviation is an industry defined by progress, innovation, and connectivity; yet above all, it is an industry entrusted with the protection of human life. It is in recognition of this responsibility that we begin this edition by acknowledging a tragic event that profoundly affected Tanzania's aviation community and the nation at large.

On 24 December 2025, an accident involving an Airbus Helicopters H125, registration 5H-KMA, occurred at Barafu Camp, Mount Kilimanjaro. At the time of the accident, the helicopter was carrying five (5) persons on board. Tragically, all five lives were lost. On behalf of the Tanzania Civil Aviation Authority, and on my own behalf, I extend our deepest and most heartfelt condolences to the bereaved families, friends, and colleagues. Our thoughts remain with them during this time of immense loss.

Such moments remind us that aviation safety is not an abstract concept measured only in statistics or compliance indicators, but a lived responsibility with real human consequences. Immediately following the accident, the

Tanzania Civil Aviation Authority, in close coordination with relevant government authorities and emergency response agencies, initiated formal response actions. In line with national law and international aviation safety standards, a full and independent investigation is underway to determine what happened, why it happened, and how it can be prevented in the future. This work is being carried out with urgency, technical expertise, and complete transparency, not only to meet regulatory requirements, but to clearly demonstrate our commitment to learning from this event and further strengthening aviation safety across the industry.

Issue 63 of the TCAA Bulletin highlights the resilience, growth, and steady progress of Tanzania's aviation sector. Inside,

you'll find stories of cooperation, expansion, and opportunity showing how aviation continues to drive national development while we remain alert to its risks.

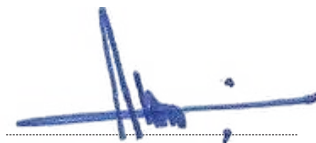
This edition highlights significant milestones such as the signing of a Bilateral Air Services Agreement with Hungary, opening new gateways to Central Europe and strengthening trade, tourism, and diplomatic relations. It also captures Tanzania's active engagement in regional and global aviation forums, including cooperation with Zambia and participation in international platforms such as the ICAO Assembly, underscoring our commitment to harmonised and collaborative aviation development.

Equally important, this Bulletin reflects our dedication to people-centred service delivery. From nationwide passenger rights awareness campaigns to Customer Service Week engagements, TCAA continues to listen, learn, and improve, guided by the voices and expectations of the public we serve. Beyond regulation, we are proud to share stories that demonstrate our broader social responsibility, including the handover of a borehole to Kiwanja cha Ndege Primary School in Dodoma, reaffirming our belief that aviation development must go hand in hand with community well being.

For readers seeking a deeper understanding of how aviation

works, this edition offers accessible and engaging explanatory features, alongside analytical pieces exploring Tanzania's growing presence among Africa's busiest airports; the role of government aviation training in job creation and flight safety; and the global and national megatrends shaping the future of our aviation market, as well as passengers' rights awareness campaigns. As you read through this Bulletin, I encourage you to continue sharing your views, insights, and suggestions. Your constructive feedback remains the backbone of our improvement journey and a vital source of strength for our institution.

Even in moments of sorrow, we remain committed to safeguarding the skies, serving the public interest, and advancing a safe, resilient, and progressive aviation sector for Tanzania. I thank you for your continued trust and support, and I invite you to engage fully with the stories, lessons, and achievements captured in this edition.



Salim Msangi
Director General
Tanzania Civil Aviation Authority (TCAA)



TCAA HANDS OVER BOREHOLE TO KIWANJA CHA NDEGE PRIMARY SCHOOL IN DODOMA

➤ By Staff Reporter

The Tanzania Civil Aviation Authority (TCAA) has officially handed over a clean and safe borehole to Kiwanja cha Ndege Primary School in Dodoma, fulfilling a commitment made in 2023 and reaffirming the Authority's dedication to corporate social responsibility and the improvement of learning environments in schools across the country.

The handover ceremony, held on 10 October 2025, coincided with the school's 50th anniversary celebrations and the graduation ceremony for Standard Seven pupils. The occasion was marked by a vibrant event that brought together parents, teachers, pupils, and representatives from the education sector and government.

Addressing the gathering, the Chairman of the TCAA Board of Directors, Dr. Hamis Mwinyimvua, reiterated the Authority's commitment to continue supporting Kiwanja cha Ndege Primary School as its patron. He underscored

TCAA's broader role in contributing to national development by supporting initiatives that address challenges within the education sector.

"TCAA will remain the patron of this school. We will continue to work closely with the school leadership to progressively address various challenges and ensure a sustainable and conducive learning environment. Water is life, and our goal is to ensure that every pupil learns in a clean and safe setting," said Dr. Mwinyimvua.

The Ward Education Officer, Ms. Prisca Barnabas, expressed her appreciation

to TCAA for the timely and impactful contribution and assured stakeholders that measures would be taken to ensure the proper use and long-term sustainability of the borehole for the benefit of both the school and the surrounding community.

“We sincerely thank TCAA for its continued support to education. We are committed to ensuring that this borehole is well managed and maintained for many years to come,” she said.

The Head Teacher, Mr. Cassian Henry, noted that the new borehole would significantly improve access to clean water, enhance sanitation, and support the maintenance of the school’s gardens, thereby contributing to a healthier and

more conducive learning environment. “This borehole is a great relief to the school. It will help us maintain cleanliness, reduce operational costs, and create a better environment for teaching and learning,” he said.

As part of the school’s golden jubilee celebrations, Dr. Mwinyimvua planted a commemorative tree within the school grounds, symbolizing environmental conservation and the enduring partnership between TCAA and the school community.

Valued at more than Tanzania Shillings 20 million, the borehole is expected to provide a lasting solution to water shortages previously affecting pupils, teachers, and nearby residents.



TANZANIA AND HUNGARY SIGN BILATERAL AIR SERVICES AGREEMENT TO BOOST CONNECTIVITY AND TRADE

By Dickson Mulashani



The Governments of the United Republic of Tanzania and Hungary have signed a Bilateral Air Services Agreement (BASA), marking a significant milestone in strengthening air connectivity, enhancing trade relations, and promoting tourism between the two countries.

The agreement was formalized at the headquarters of the Tanzania Civil Aviation Authority (TCAA) in Dar es Salaam. It was signed on behalf of the Government of Tanzania by the Director General of TCAA, Mr. Salim Msangi, and on behalf of the Government of Hungary by the Director General of the Hungarian Civil Aviation Authority, Dr. Máté Löwinger.



Speaking at the signing ceremony, Mr. Msangi underscored the strategic importance of the agreement in unlocking new commercial and diplomatic opportunities.

“The BASA between Tanzania and Hungary represents a strategic achievement. It will enable Tanzanian airlines to operate direct flights to Hungary, providing improved access to Central Europe. This development is expected to stimulate economic growth, enhance tourism, and further strengthen international cooperation,” he said.

Dr. Löwinger echoed these sentiments, highlighting Tanzania’s strategic geographic position in East Africa and its role as a key regional gateway.

“Through this agreement, we are opening a new chapter in the bilateral

relations between Hungary and Tanzania. Our objective is to deepen economic, technical, and social cooperation through the aviation sector,” he remarked.

The signing ceremony was attended by senior officials from the Ministry of Transport, the Ministry of Foreign Affairs and East African Cooperation, the Office of the Attorney General, as well as members of TCAA management.

The agreement aligns with Tanzania’s broader aviation diplomacy agenda under the leadership of Her Excellency President Samia Suluhu Hassan. The Sixth Phase Government continues to advance initiatives aimed at liberalizing the country’s airspace, attracting international carriers, and positioning Tanzania as a competitive aviation hub within the East African region.





TCAA MARKS CUSTOMER SERVICE WEEK WITH STAKEHOLDER ENGAGEMENT INITIATIVES

➤ By Staff Reporter

As part of the Customer Service Week celebrations, the Tanzania Civil Aviation Authority (TCAA) is engaging with and serving various customers visiting its offices, as part of its ongoing efforts to strengthen service excellence and enhance stakeholder relations

The global celebration, observed from 6 to 10 October, encourages organizations and institutions worldwide to deliver high-quality, innovative, and customer-focused services. TCAA is using the occasion to reaffirm its commitment to continuous improvement in service delivery across the aviation sector. Throughout the week, the Authority is actively receiving and addressing feedback, suggestions, and challenges from a diverse range of

customers, including pilots, aviation engineers, students, and representatives of airline companies. TCAA recognizes that close and consistent engagement with stakeholders is essential to improving service delivery systems and ensuring efficient, timely, and high-quality services. The celebrations are guided by this year's theme, "Mission: Possible," which reflects TCAA's dedication to providing innovative, customer-centered solutions

and achieving service excellence. Through these initiatives, the Authority also underscores the vital role of its staff in supporting institutional objectives and fostering a strong culture of customer service. TCAA has reaffirmed that through teamwork, innovation, and a sustained commitment to quality service, delivering exceptional customer experiences is not merely an aspiration, but an achievable mission.

TANZANIA AND ZAMBIA STRENGTHEN AVIATION TIES AT ICAO ASSEMBLY

➤ By Staff Reporter

The United Republic of Tanzania and the Republic of Zambia have taken significant steps to strengthen bilateral aviation cooperation following a high-level meeting held on the margins of the ongoing ICAO Assembly in Montreal. The respective delegations were led by Mr. Salim Msangi, Director General of the Tanzania Civil Aviation Authority (TCAA), and Captain Derrick Lumbe, Director General of the Zambia Civil Aviation Authority (ZCAA).

Discussions focused on the review of the existing Bilateral Air Services Agreement (BASA), including the consideration of granting Fifth Freedom Traffic Rights to national carriers. Both parties agreed that the review process will be concluded during the forthcoming ICAO Air Services Negotiation Event (ICAN 2025).

The delegations also made progress toward the development of a Memorandum of Understanding on Search and Rescue (SAR), aimed at enhancing joint preparedness and operational coordination in anticipation of the upcoming ICAO Universal Safety Oversight Audit Programme (USOAP). In addition, Tanzania extended an invitation

to Zambia to participate in the ICAO International Air Law Treaty Workshop, scheduled to be held in Dar es Salaam from 4 to 6 November 2025. The workshop will bring together aviation experts to deliberate on the legal frameworks underpinning international civil aviation. The meeting reaffirmed the shared commitment of both countries to enhancing regional connectivity, strengthening aviation safety oversight, and promoting cooperation in accordance with ICAO Standards and Recommended Practices. The delegations expressed confidence that these initiatives will support sustainable growth in civil aviation and further reinforce regional collaboration.





TANZANIA'S DOUBLE ENTRY INTO AFRICA'S TOP 10 BUSIEST AIRPORTS: WHAT IT MEANS FOR THE NATION

➤ By Ally Changwila

Tanzania has made history by securing two positions among Africa's Top 10 busiest airports as of July 2025. Abeid Amani Karume International Airport (AAKIA-ZNZ) ranked ninth, handling an average of 92 flights per day, while Julius Nyerere International Airport (JNIA-DAR) in Dar es Salaam ranked tenth with an average of 84 flights per day. This notable achievement places Tanzania alongside leading continental aviation hubs such as Johannesburg and Addis Ababa.

A key catalyst for this growth has been the tourism diplomacy spearheaded by Her Excellency President Samia Suluhu Hassan, particularly through the production and global promotion of The Royal Tour documentary. By personally inviting the world to experience Tanzania, the President elevated the nation's natural and cultural attractions onto the global stage. This initiative has significantly increased international awareness, resulting in record tourist arrivals in both Zanzibar and mainland Tanzania. The consequent rise in passenger demand has translated into increased flight frequencies and higher airport traffic.

The inclusion of both Zanzibar and Dar es Salaam airports among Africa's busiest extends beyond prestige; it is a clear indicator of economic growth and enhanced global connectivity. Zanzibar's ascent underscores its position as one of Africa's premier tourist destinations, with increased air traffic generating higher visitor numbers, foreign exchange earnings, and employment across the hospitality, transport, and cultural sectors. Meanwhile, Dar es Salaam, as the nation's principal commercial gateway, benefits from improved connectivity that supports cargo operations, business travel, and investment flows, particularly within the East African region and with global partners. Collectively, these developments strengthen Tanzania's national brand and international standing.

Central to these achievements is the regulatory

oversight of the Tanzania Civil Aviation Authority (TCAA). As the national aviation regulator, TCAA has continued to ensure compliance with international safety and security standards, streamline licensing and certification processes, and coordinate closely with airport authorities and airlines to support sustainable sector growth. Concurrently, airlines, ground handling companies, and airport operators have invested in service enhancements, fleet expansion, and improved customer experience, positioning Tanzania as an emerging aviation hub.

As Tanzania's airports gain prominence on Africa's aviation map, the focus now shifts to sustaining and scaling this growth. This will require continued investment in airport infrastructure, strengthened regional and international connectivity to consolidate Tanzania's role as a hub for East and Central Africa, and enhanced public-private partnerships to expand capacity while maintaining world-class service standards.

Tanzania's entry into Africa's Top 10 busiest airports is both a symbol and a signal: a symbol of the nation's progress in aviation, tourism, and economic development, and a signal of the vast opportunities that lie ahead. Guided by the visionary leadership of President Samia Suluhu Hassan, the regulatory stewardship of TCAA, and the commitment of aviation stakeholders, Tanzania's aviation future remains exceptionally promising.

WHY DO CABIN LIGHTS DIM DURING TAKE-OFF AND LANDING?

➤ By Dickson Mulashani

As passengers settle into their seats for take-off or prepare for landing, one subtle yet noticeable change often occurs inside the aircraft cabin: the lights are dimmed. To many travellers, this may appear to be a routine cabin procedure or a measure intended solely for comfort. However, in aviation, every action serves a specific and carefully considered purpose.

The dimming of cabin lights is a deliberate safety practice designed to enhance passenger preparedness during the most critical phases of flight—take-off and landing. These stages occur when the aircraft operates closest to the ground and when, although rare, the likelihood of an emergency is statistically higher.

From a human factors perspective, reduced cabin lighting allows passengers' eyes to gradually adapt to lower external light conditions. This visual adjustment is essential should an evacuation become necessary, as it enables passengers to more quickly identify illuminated exit signs, floor path lighting, and external visual references.

Captain Brian Wamala, a Boeing 787 Dreamliner pilot with Air Tanzania Company Limited (ATCL), explains that the procedure is firmly grounded in both technological design and human safety considerations.

“Dimming the cabin lights during take-off and landing helps the human eye adapt to the external lighting environment. In the unlikely event of an emergency, this adaptation allows passengers and crew to identify exits more quickly and move more safely,” says Captain Wamala.

He further notes that modern aircraft, such as the Boeing 787, are equipped with advanced lighting systems specifically designed to function effectively under reduced cabin illumination. In low-light conditions, emergency floor lighting and exit indicators become more prominent, significantly enhancing visibility and reducing response time.



Beyond passenger safety, dimmed lighting also supports cabin crew operations. It improves their ability to monitor the cabin environment while maintaining visual alignment with outside conditions, particularly during night operations or low-visibility approaches.

While many passengers may barely notice the moment the cabin lights are lowered, the practice exemplifies aviation's layered approach to safety—where even the smallest details are carefully planned, tested, and globally standardized.

In aviation, comfort and safety often go hand in hand. The next time the cabin lights dim during take-off or landing, passengers can be assured that the adjustment is not merely procedural, but a deliberate measure designed to protect lives—quietly reinforcing the industry's unwavering commitment to safe and informed air travel.

TANZANIA ANS DIVISIONS: A NIBBLE ON HOW WE KEEP FLIGHTS SAFE

➤ By Brian Martin Kapolesya

(Aeronautical Information Officer, TCAA-JNIA)

The Recipe for Safe Skies. What makes a great dish unforgettable? It's the balance of the right ingredients, proper utensils, a clear recipe, and a skilled chef. The same principle applies to maintaining safety in our skies. In Air Navigation Services (ANS), our "dish" is the safe, orderly, and expeditious flow of air traffic—in short, safe flight.

Ingredients: *Aeronautical Information Management (AIM)*

Every safe flight begins with accurate information. AIM provides the essential ingredients: Aeronautical Information Publications, including amendments and supplements, Aeronautical Information Circulars, aeronautical charts, NOTAMs, and flight plans. Pilots, dispatchers, and controllers rely on this information from pre-flight planning to the final approach. Without it, there is nothing to prepare.

Utensils: *Communication, Navigation, and Surveillance (CNS)*

Once the ingredients are ready, the right tools are required. CNS provides those essential utensils: clear radio communication, dependable navigation aids, and reliable surveillance systems. These tools enable aircraft to be guided, tracked, and safely separated. Aviation without CNS would be like cooking without pots and pans.

The Chef: *Air Traffic Management (ATM)*
Finally, the chef brings everything together. ATM operates on the front

line, communicating directly with pilots, coordinating movements, and ensuring traffic flows smoothly from the maneuvering area through controlled airspace. Just as a chef combines ingredients and tools to create a perfect dish, ATM harmonizes information and technology to ensure safe operations.

The Recipe for Safety: *Teamwork*

No single part of ANS can operate in isolation. AIM, CNS, and ATM must work in close coordination—just as ingredients, utensils, and a chef must unite to create a great meal. Our regulations, manuals, and procedures serve as the recipe, while our dedicated staff—Aeronautical Information Officers, Air Navigation Engineers, and Air Traffic Controllers—are the hands that bring it to life.

When all divisions support one another, we do more than keep aircraft moving; we deliver confidence and peace of mind to crews and passengers alike. That harmony is the true measure of a quality Air Navigation Service.





TCAA ROLLS OUT NATIONWIDE PASSENGER RIGHTS AWARENESS CAMPAIGN

➤ By Staff Reporter

The Tanzania Civil Aviation Authority (TCAA) has launched a nationwide campaign to educate air passengers about their rights and the procedures for seeking redress when those rights are violated.

The campaign was officially inaugurated on 18 November 2025 at Julius Nyerere International Airport (JNIA) and has since been extended to Kilimanjaro International Airport (KIA), where it commenced on 11 December 2025. The awareness drive will continue to be rolled out at other airports across the country.

Implemented on behalf of the TCAA Director General, Mr. Salim Msangi, the campaign is led by the Authority’s Public Relations Unit in collaboration with the Consumer Complaints Unit (CCU) and the TCAA Consumer Consultative Council (TCAA-CCC).

Operating under the theme “Your Ticket, Your Rights,” the initiative aims to inform travellers about their entitlements, the role and responsibilities of the Consumer Complaints Unit, and the step-by-step process for lodging complaints whenever passengers feel their rights have been infringed.

Through direct engagement, passengers are guided on how the CCU functions and the mechanisms established by the Authority to receive, assess, and resolve complaints against aviation service providers.

Beyond raising awareness, the campaign encourages passengers to provide feedback on their travel

experiences and the quality of air transport services in Tanzania—input the Authority considers vital for improving service delivery and strengthening the aviation sector.

The Consumer Complaints Unit was established under Section 59(7) of the Civil Aviation Act as part of TCAA’s regulatory mandate to safeguard consumer interests within the aviation industry.

TCAA has reaffirmed its commitment to ensuring that all air travellers across the country are well-informed of their rights and empowered to exercise them whenever necessary.

TCAA WINS TOP PRIZE IN NBAA'S BEST PRESENTED FINANCIAL STATEMENTS AWARDS 2024

By Ally Changwila



The Tanzania Civil Aviation Authority (TCAA) has achieved a major milestone after being named 1st Place Winner in the Regulatory Authorities Category at the 2024 Best Presented Financial Statements Awards, organized by the National Board of Accountants and Auditors (NBAA).

The award was presented on 4th December 2025, in recognition of TCAA's exceptional financial reporting, transparency, and adherence to international accounting standards. This year's achievement marks a notable improvement for the Authority, which last year, in November 2024, secured 3rd place in the 2023 awards.

The Director of Corporate Services, Dastan Nkanabo, received the award on behalf of TCAA.

TCAA officials, led by Director General Salim Msangi, celebrated the accomplishment, highlighting that the recognition reflects ongoing reforms in financial governance, strengthened reporting frameworks, and

enhanced accountability throughout the Authority. The NBAA awards aim to promote best practices in financial management across institutions. TCAA's rise from 3rd place in 2023 to 1st place in 2024 demonstrates the Authority's unwavering commitment to continuous improvement and its leadership in Tanzania's aviation regulatory sector.



WHEN TIME STANDS STILL: UNDERSTANDING FLIGHT DELAYS, SAFETY AND PASSENGER RIGHTS

➤ By Ally Changwila

Amina had never flown before. Her journey to Mwanza was meant to be simple—a short flight marking both her first experience of air travel and her first step into a wider world. She arrived at the airport early, documents neatly arranged, excitement mingled with nervous anticipation. Check-in was smooth, security professional, and the boarding gate calm. Everything suggested that air travel was as efficient, fast, and reliable as she had imagined.

Then came the announcement:

“Ladies and gentlemen, we regret to inform you that your flight has been delayed.”

At first, the reaction was muted. A short delay is something most passengers accept without complaint. Aviation, after all, operates on one unbreakable principle: safety comes first. Aircraft may require additional technical inspections, weather conditions can suddenly become unsafe, security concerns may arise, or airspace may be temporarily restricted due to

operational or diplomatic reasons. Some of these factors cannot always be fully explained to passengers, but they exist for one reason only—to protect lives.

As time passed, however, patience began to wear thin. Thirty minutes became an hour, then several more. The departure board continued to display the word DELAYED, while clear information remained scarce. Amina understood that safety might be the reason, yet like many others, she struggled with the uncertainty. Safety decisions may

delay a flight, but passengers should never be left confused or unsupported.

Around her, the terminal slowly changed. Children grew restless. Elderly passengers searched for somewhere to rest. Frustration built at the customer service desk. Some began preparing for the possibility of traveling the next day. It became clear that while many delays are unavoidable, the manner in which they are communicated and managed determines the passenger experience.

Not all delays are avoidable-or malicious-and this is an important message for passengers to understand. Airlines do not benefit from delaying flights. Delays cost money, disrupt operations, and can erode trust. No airline wishes to inconvenience its passengers intentionally. However, it is also true that some delays are poorly managed. When communication is weak or passenger care is neglected, even a necessary safety delay can feel unfair and frustrating.

Like many first-time fliers, Amina did not know her rights. She was unaware that during long or overnight delays, passengers may be entitled to assistance such as refreshments, meals, or accommodation, depending on the circumstances. She assumed that if support were available, it would automatically be offered. Often, airlines assume the opposite-that passengers do not know what to request.

This is where passenger awareness becomes essential. In Tanzania, the Tanzania Civil Aviation Authority (TCAA) plays a key role in protecting air travellers. Part of its mandate is to ensure that airlines comply with aviation regulations and respect passenger rights. TCAA also

encourages passengers to be informed, proactive, and confident in asserting their rights when they feel they have been compromised.

When a passenger believes they have been treated unfairly, the first step is to lodge a complaint directly with the airline or service provider, either at the airport or through official customer service channels. Airlines are expected to respond within a reasonable timeframe. If the response is unsatisfactory, or if no response is provided, the passenger may escalate the matter to the Civil Aviation Authority, providing relevant documentation such as boarding passes, receipts, or correspondence.

Upon receiving a complaint, the Authority reviews it to determine whether it falls within its mandate and whether proper procedures were followed. It may request explanations from the airline, direct the airline to resolve the issue within a specified period, or take enforcement action if necessary. These measures exist to ensure a fair balance between maintaining the highest safety standards and safeguarding passenger dignity.

By morning, Amina would eventually continue her journey to Mwanza. She accepted that the delay may have been necessary for safety and that safety must always come first. What stayed with her, however, was the realization that air travel works best when passengers are informed, airlines communicate transparently, and regulators actively protect consumer rights.

Despite moments of delay and frustration, air transport remains the most convenient, rapid, and safest mode of transportation globally. It connects countries, cultures, economies, and families faster than any other system in human history. Every day, thousands of flights operate safely and on time, quietly proving why aviation continues to be the backbone of global connectivity.

For passengers like Amina, the message is clear and reassuring: understand that not all delays are intentional, remain patient when safety requires waiting, know your rights, and trust that oversight bodies are vigilant. Delays may test patience, but they should never diminish confidence in air travel—an industry built to connect the world safely, efficiently, and responsibly.





TCAA ENABLES A HISTORIC AND HEARTFELT BALLOON FLIGHT OVER TARANGIRE

By Dickson Mulashani

The Tanzania Civil Aviation Authority (TCAA) proudly played a pivotal role in making history over Tarangire National Park by successfully coordinating and overseeing a remarkable solo hot air balloon flight by Dr. Allie Dunnington. This flight officially made Tanzania the 123rd country in Dr. Dunnington's global attempt to set a new world record for solo balloon flights.

The early morning journey over Tarangire was no ordinary flight. It marked the first-ever solo hot air balloon mission to take place within the park's boundaries—an achievement made possible only after TCAA meticulously reviewed every safety, technical, and regulatory requirement for operating in such a sensitive wildlife environment.



TCAA confirmed that the mission complied with all national and international aviation safety standards. The Authority worked closely with conservation teams and security agencies to ensure that the flight was conducted smoothly and responsibly, with minimal disturbance to the park's unique ecosystem.

For Dr. Dunnington, the flight held meaning far beyond the technical achievement. As she continues her mission to fly a hot air balloon across countries worldwide, she described her experience over Tarangire as one of the most breathtaking moments of her journey. The sweeping views of wildlife, ancient baobabs, and the golden savannah offered her a perspective of Tanzania she said she would never forget.

Dr. Dunnington's world record attempt also carries a personal dimension. Behind her journey is the legacy of her late husband, Phil Dunnington, a pioneering balloonist who once flew over 127 countries. While his achievement serves as historical context, Dr. Dunnington's mission stands firmly on her own dedication, skill, and adventurous



spirit. She navigates a single-seat hot air balloon, lifted by a propane cylinder and gas burner—simple equipment powering an extraordinary global expedition.

Women in Aviation Tanzania also provided crucial support, offering encouragement and coordination that added an extra layer of strength to the effort.

This historic flight adds another accolade to Tanzania's aviation profile, highlighting the country's robust regulatory framework, commitment to safety, and openness to supporting unique international initiatives that promote tourism, aviation innovation, and global collaboration.





TCAA MARKS INTERNATIONAL CIVIL AVIATION DAY (ICAD) 2025

➤ By Dickson Mulashani

The Tanzania Civil Aviation Authority (TCAA) joined nations worldwide in commemorating International Civil Aviation Day (ICAD) 2025, observing the occasion this year with a unique approach.

Speaking at the event held at TCAA Headquarters in Banana, Ukonga, Dar es Salaam, Acting Director General Eng. Furaha Sanga emphasized that ICAD serves as an important global reminder of the aviation sector's pivotal role in economic growth, trade, tourism, communication, and security.

While TCAA conducted its national commemoration on December 5, 2025, the official global observance





of ICAD will take place on December 7, 2025, in accordance with the ICAO calendar. As part of the ceremony, the flag of the International Civil Aviation Organization (ICAO) was officially hoisted.

This year's celebration carried the theme "Safe Skies & Sustainable Future for All," highlighting the importance of strengthening aviation safety while promoting sustainable growth for the benefit of current and future generations.

Eng. Sanga stressed that public education is central

to fostering understanding and collaboration among aviation stakeholders. In line with ICAD activities, TCAA utilized various media platforms to raise awareness about its regulatory role, aviation safety, responsible drone use, passenger rights, and career opportunities in the aviation sector. The Authority also highlighted the training services provided by the Civil Aviation Training Centre (CATC).

Beyond the main event in Dar es Salaam, all 15 TCAA regional stations marked ICAD with a variety of



community and stakeholder engagements, including awareness sessions, stakeholder dialogues, and visits to centres supporting children living in vulnerable conditions.

Eng. Sanga commended the regional stations for their creativity and dedication, noting that ICAD is a national event that involves all TCAA employees. He urged staff to uphold professionalism, integrity, and openness to technological advancements shaping the global aviation sector. He reaffirmed TCAA's commitment to enhancing systems, services, and regulatory oversight to meet international standards, particularly by improving safety indicators such as USOAP and SASO under ICAO.

The Acting Director General also expressed gratitude to airlines, government agencies, pilots, engineers, and security partners for their continued cooperation in maintaining the safety and efficiency of Tanzania's airspace.

He concluded by wishing all employees and stakeholders a successful ICAD 2025 and reiterated TCAA's commitment to advancing this year's theme: "Safe Skies & Sustainable Future for All."



TCAA RANKED SECOND BEST PERFORMING INSTITUTION UNDER TRANSPORT MINISTRY

By Ally Changwila



The Tanzania Civil Aviation Authority (TCAA) has been recognized as the second-best performing institution under the Ministry of Transport for the financial year 2024/2025, in acknowledgment of its exemplary institutional performance and quality of service delivery.



The award was presented on December 17, 2025, during the closing session of the 18th Joint Transport Sector Performance Review Meeting held in Arusha. This recognition positions TCAA among the top-performing authorities within the transport sector, reflecting its sustained efforts to enhance aviation safety, regulatory oversight, and institutional efficiency. The accolade was formally handed over by the Guest of Honour, Arusha District

Commissioner Mr. Joseph Mkude, to the Principal of the Civil Aviation Training Centre (CATC), Mr. Aristid Kanje, who received it on behalf of TCAA Director General, Mr. Salim Msangi. The award underscores TCAA's pivotal role in advancing civil aviation services in Tanzania, including promoting regulatory compliance, fostering capacity building, and supporting national development priorities within the transport sector.



HOW GOVERNMENT AVIATION TRAINING IS CREATING JOBS AND STRENGTHENING FLIGHT SAFETY IN TANZANIA

By Ally Changwila

For many years, the aviation sector has relied on highly skilled professionals to ensure safety, reliability, and sustainable growth. Through the Tanzania Civil Aviation Authority (TCAA), the Government of the United Republic of Tanzania has taken deliberate steps to equip Tanzanians with these critical skills, enabling them to directly benefit from the sector.

As the national aviation regulator, TCAA oversees the Pilot Training Fund, which facilitates professional pilot training abroad in collaboration with air operators. This initiative addresses the high cost of pilot training while ensuring a steady supply of qualified Tanzanian pilots trained at internationally recognized institutions.

In parallel, TCAA operates the Civil Aviation Training Centre (CATC), which provides specialized aviation training essential for daily operations. The Centre offers courses in Air Traffic Management, Aeronautical Information Services, and a wide range of short courses, including drone pilot training. While CATC does not offer pilot training, it focuses on developing the technical workforce that keeps aviation systems operating safely and efficiently. One notable beneficiary is Pendo Andrew Charles, a graduate of the Air Traffic Management Officer course at CATC,

now serving at TCAA's Julius Nyerere International Airport station.

"The training I received at CATC enabled me to secure employment and contribute directly to flight safety. It completely changed my life," she says.

In the 2024/2025 period alone, CATC conducted 131 courses, training 1,967 participants 1,799 Tanzanians and 168 international students. These professionals now serve across airports nationwide, ensuring accurate aeronautical information, safe air traffic management, and regulated use of emerging technologies such as drones. For ordinary citizens, the impact is tangible: safer flights, more reliable air transport services, and a growing aviation sector that continues to create employment opportunities. This story illustrates how government services, implemented through TCAA, are transforming lives by investing in skills, safety, and sustainable aviation development.



ECONOMIC REGULATION OF AIR TRANSPORT

By Euphrasia Bille

Economic regulation of air transport refers to the policies and rules that govern how airlines and related services operate within the aviation market. It focuses on controlling market entry, pricing, competition, and consumer protection to ensure fair and efficient air services. Governments and regulatory authorities use these measures to balance public interests with commercial objectives, promote safety and reliability, and prevent monopolistic practices. Through licensing, route allocation, and financial oversight, economic regulation helps maintain stability and transparency in the global aviation industry.

In the context of aviation, licensing is a key regulatory tool that ensures market entry, competition, safety, and consumer protection are properly balanced. Unlike technical or safety regulation, economic regulation primarily addresses **who can operate, under what conditions, and how markets are structured.**

Foundation of Economic Regulation

The **legal basis** for economic regulation in international air transport is anchored in the **Chicago Convention (1944), Article 6**, which requires that scheduled international air services be conducted under specific agreements between States.

The primary objectives of economic regulation are:

- Ensuring fair and equal opportunities for airlines to compete;

- Promoting efficient use of resources and infrastructure;
- Protecting consumer interests;
- Supporting the sustainable economic development of air transport.

Key ICAO Guidance on Economic Regulation

1. ICAO Doc 9626 - Manual on the Regulation of International Air Transport

A central reference for States developing or reforming their air transport regulatory frameworks.

2. ICAO Doc 9587 - Policy and Guidance Material on the Economic Regulation of International Air Transport

Provides detailed policy guidance and best practices for regulators.

3. ICAO Core Principles on Consumer Protection

Outlines the standards for fair treatment, transparency, and effective redress mechanisms for passengers.

Good Regulatory Practices aim to:

- Improve policy-making and the regulatory process;
- Reduce unnecessary burdens on consumers and businesses;
- Deliver better, more cost-effective outcomes.

These practices are divided into two main categories: **policy design principles and regulatory process principles.**

Main Licensing Components in Economic Regulation

1. Air Operator Licensing (AOL) / Air Transport Licensing (ATL)

This license authorizes airlines to operate commercial air transport services. Key economic considerations include:

- **Financial fitness** - the ability to meet financial obligations;
- **Ownership and control requirements** - often requiring majority national ownership;
- **Business viability and insurance coverage;**
- **Compliance with competition and consumer protection standards.**

Examples of local operators: Air Tanzania Company Ltd, Precision Air Services PLC, Coastal Travels, Flightlink Ltd, Auric Air Services.

2. Route and Traffic Rights

These regulations govern access to specific routes and markets. Key elements include:

- **Bilateral Air Service Agreements (ASAs)** for international routes;
- **Cabotage restrictions** to prevent foreign airlines from entering domestic markets;
- **Allocation of route rights** to carriers;
- **Control of capacity, frequency, and pricing** in some regulatory regimes;
- **Promotion of fair competition and market access.**

Examples of airlines operating in Tanzania under these agreements: KLM, Emirates, Qatar Airways, Fly Dubai.

3. Ground Handling Licensing

This ensures that market entry for services such as ground handling, catering, and fuel supply is regulated. Economic considerations include:

- Ensuring non-discriminatory access to airport facilities;
- Encouraging competition among service providers;
- Compliance with safety and security standards;
- Maintaining economic efficiency.

Examples of service providers: Swissport PLC, Dnata, NAS-Dar, Skychefs, Puma.

4. Foreign Carrier Permits / Licensing

This permits foreign airlines to operate into or over a country's airspace. Regulatory focus includes:

- Bilateral or multilateral agreement compliance;
- Reciprocity;
- Financial soundness and insurance requirements;
- Approval of schedules, tariffs, and capacity.

Example: Short-term licenses granted to foreign-registered aircraft intending to land in or overfly Tanzanian airspace.

Importance of Economic Regulation

Economic regulation of air transport ensures that the aviation industry operates efficiently, competitively, and in the public interest. Through licensing systems, governments regulate market entry, route access, pricing, and consumer protection. These measures:

- Maintain financial stability among airlines;
- Prevent unfair competition;
- Promote safe, reliable, and economically sustainable services.

While deregulation and liberalization have increased competition and lowered fares in many regions, effective oversight remains essential to balance commercial freedom with national interests and passenger rights.

In summary, economic regulation provides the framework that ensures air transport remains both economically sustainable and socially responsible in an increasingly globalized market.

HOW MEGATRENDS IN THE COUNTRY AND GLOBALLY SHAPE THE AVIATION MARKET OF TANZANIA.

➤ By James Mwala - Principal Business Analyst

General Overview

Aviation, one of the most dynamic sectors in the modern world, is highly sensitive to economic fluctuations, technological advancements, social changes, and environmental pressures. For Tanzania, these forces are particularly significant as the nation positions itself as a competitive regional hub for tourism, trade, and investment. Understanding the megatrends shaping the aviation ecosystem is essential not only for industry stakeholders but also for policymakers, regulators, and the wider public, who depend on air transport for connectivity, commerce, and national development.

As Tanzania aligns with the evolving global aviation landscape, several key domestic and international trends are shaping the sector's future. These megatrends highlight opportunities, identify risks that must be managed, and guide civil aviation institutions in steering the sector toward sustainable growth and global competitiveness.

Key Megatrends Influencing Tanzania's Aviation Market

Economic Growth and Regional Integration

Tanzania's steady economic expansion serves as a major catalyst for aviation development. Growth in sectors such as tourism, mining, energy, agriculture, and logistics has increased

demand for both passenger travel and cargo services. As businesses expand across borders and foreign investment continues to flow into the country, the need for reliable air connectivity becomes ever more critical.

Within the East African Community (EAC), regional integration continues to reshape travel patterns. Efforts to harmonize aviation regulations, promote open skies, and streamline cross-border procedures are creating a foundation for improved intra-African mobility. For Tanzania, this presents opportunities to attract new airlines, open additional routes, and strengthen its role as a regional transit hub.

Demographic Shifts and the Power of the Young Generation

Tanzania is experiencing a demographic transformation, with a rapidly growing population dominated by young people (Gen Z) and an emerging middle class. This shift is driving increased demand for domestic and regional air travel.

As more Tanzanians pursue business, education, leisure, and international opportunities, the need for frequent and affordable air services grows. Urbanization in Dar es Salaam, Arusha, Mwanza, Dodoma, and other cities is creating concentrated travel markets, which airlines can serve efficiently.

Additionally, the rising middle class brings expectations for higher service quality, seamless travel experiences, and modern airport facilities. This demographic momentum is influencing investment decisions, route planning, and infrastructure development across the aviation sector.

Technological Advancements

Globally, aviation is undergoing a digital transformation, and Tanzania is steadily aligning with this shift. Technologies such as biometric identification, automated border control systems, API/PNR solutions, e-ticketing platforms, digital safety oversight tools, and advanced CNS/ATM systems are revolutionizing operations and passenger experiences.

At TCAA, digital tools are enhancing surveillance, safety data management, and efficiency in certification and oversight processes. Airports are integrating modern technologies such as automated check-in systems, advanced passenger screening, and improved communication networks.

As global aviation becomes increasingly data-driven, Tanzania's ability to adopt new technologies will be a key determinant of its competitiveness. Continued investments in digital infrastructure and workforce development are essential to meet international best practices.

Sustainability and Environmental Stewardship

The international aviation sector faces increasing pressure to address climate change and environmental sustainability. Global frameworks, such as ICAO's CORSIA, are guiding airlines and regulators toward greener operations. Tanzania is embracing this global movement, recognizing the need to balance aviation growth with environmental protection.

Efforts include energy-efficient airport designs, renewable energy adoption, strengthened environmental compliance frameworks, and promotion of fuel-efficient aircraft. Participation in the global transition toward sustainable aviation fuels (SAF) and carbon reduction targets will shape the industry's evolution.

Environmental resilience—such as preparing for extreme weather events and safeguarding sensitive ecosystems—has also become integral to Tanzania's aviation planning and policy.

Urbanization and Infrastructure Expansion

Tanzania's transport infrastructure is rapidly developing. New terminals, runway expansions, upgraded navigation systems, and airport enhancements in Dar es Salaam, Dodoma, Kilimanjaro, Mwanza, Zanzibar, Songwe, Msalato, Songea, and other regions are transforming

air travel capacity.

Integration of air transport with emerging transport modes, including the Standard Gauge Railway (SGR) and modern road networks, is redefining passenger and cargo mobility. Multimodal connectivity is increasingly essential, as travelers seek seamless transitions between air, rail, and road systems.

For TCAA, this trend underscores the importance of strengthening oversight capacity, ensuring compliance with global safety and security standards, and supporting airports as they expand operational capabilities.

Changing Tourism Trends

Tourism remains a cornerstone of Tanzania's economy, and global tourism trends are evolving rapidly. Travelers increasingly seek eco-tourism, cultural experiences, adventure travel, and digital-first planning. Iconic destinations such as the Serengeti, Ngorongoro, Zanzibar, and Kilimanjaro continue to attract visitors, yet competition from other regional and international destinations is intensifying.

Reliable air transport is essential to sustaining tourism growth. Modern airports, efficient flight schedules, safe operations, and quality passenger services are key differentiators. Regulatory support that facilitates new routes, charter services, and international airline partnerships will further

expand Tanzania's tourism footprint. The aviation-tourism relationship remains mutually reinforcing, driving growth in both sectors.

Market Volatility and Resilience

Aviation is uniquely sensitive to global shocks such as fuel price fluctuations, pandemics, geopolitical tensions, currency instability, and cybersecurity threats. The COVID-19 pandemic illustrated how quickly the industry can be disrupted, and how resilience and preparedness influence recovery.

In Tanzania, building resilience is now a strategic priority. This involves robust crisis management systems, risk-based regulatory approaches, cybersecurity enhancements, and flexible operational planning. Collaboration among airlines, airports, regulators, and service providers is essential to safeguard continuity and protect the industry from future disruptions. Strengthening resilience is not only defensive but also fosters investor confidence and long-term sustainability.

Analyst Viewpoints

Tanzania's aviation market is shaped by a complex interplay of economic, demographic, technological, environmental, and global trends. These forces present both exciting opportunities and significant challenges.

It is therefore critical for all stakeholders to proactively align strategies with these megatrends to ensure safety, competitiveness, sustainability, and innovation. As Tanzania continues to rise on the regional and global stage, its aviation sector will remain a key enabler of connectivity, development, and national ambition. By embracing these megatrends with foresight and coordination, the country is well-positioned to build a resilient, future-ready aviation ecosystem.



WHY DO PASSENGERS EXPERIENCE EAR PAIN DURING AIR TRAVEL?

➤ By Dickson Mulashani

For many air travellers, ear discomfort or pain is one of the most common experiences during a flight, particularly during take-off and landing. While often uncomfortable, this condition is usually harmless and results

from normal changes in air pressure as an aircraft ascends or descends.

What Causes Ear Pain During Flights?

Ear pain occurs due to rapid changes in cabin air pressure, a condition medically





known as **ear barotrauma**. As an aircraft climbs or descends, the air pressure inside the cabin changes more quickly than the pressure in the middle ear.

The **Eustachian tube**, a small passage connecting the middle ear to the back of the nose and throat, plays a key role in equalizing pressure. When this tube does not open properly—due to congestion, allergies, or a cold—pressure builds up, causing discomfort, muffled hearing, or pain.

“Ear pain during air travel is primarily caused by sudden changes in cabin pressure. If the Eustachian tube, which helps equalize pressure, does not function properly, passengers may experience discomfort, a blocked sensation, or temporary hearing difficulties,” explains Dr. Mary Kalleku of TCAA.

Children and infants are more affected because their Eustachian tubes are narrower and less developed, making pressure equalization more difficult.

When Does It Happen Most?

Ear discomfort is most common:

- **During take-off**, when cabin pressure decreases

- **During landing**, when cabin pressure increases rapidly
- **When a passenger has a cold, sinus infection, or nasal congestion**

How Can Passengers Prevent Ear Pain?

Several simple measures can help reduce or prevent ear discomfort during flights:

- Swallowing or yawning frequently during ascent and descent
- Chewing gum or sucking sweets, which stimulates swallowing
- Performing the **Valsalva manoeuvre** (gently blowing with the nose pinched and mouth closed)
- Staying awake during take-off and landing
- Using nasal sprays or decongestants before descent (where medically appropriate)
- For infants, breastfeeding or bottle-feeding during descent helps relieve pressure

What Should You Do If Ear Pain Persists After Landing?

In most cases, ear discomfort disappears within minutes or hours after landing as pressure normalizes. To aid recovery:

- Continue swallowing, yawning, or gently equalizing pressure
- Apply a warm compress to the ear to ease discomfort
- Stay hydrated
- Avoid inserting objects into the ear

If pain, hearing loss, or ringing persists for more than a few days, passengers are advised to seek medical attention, as prolonged symptoms may indicate inflammation or fluid buildup in the middle ear.

A Small Discomfort with a Scientific Explanation

Modern aircraft cabins are pressurized to enhance comfort, but pressure changes remain unavoidable during flight. Ear discomfort is a natural response of the human body to altitude changes—an experience shared by millions of passengers worldwide.

Understanding the causes, preventive measures, and recovery techniques can help travellers fly more comfortably and confidently, turning an unpleasant sensation into a manageable aspect of air travel.

THE ROLE OF AVIATION MEDICINE IN AIRCRAFT ACCIDENT INVESTIGATION

By Dr. Mary Kalleku & Dr. Alexander Mkwizu

Have you ever wondered what aviation doctors actually do, or how they help prevent aircraft accidents? Most people picture pilots, engineers, and investigators at work after a crash, poring over metal fragments and black boxes. Yet behind the scenes stands another kind of detective: the aviation medical expert. Their work is not about engines or instruments, but about people the human body, the human mind, and the invisible limits that can turn a routine flight into a tragedy.

Beyond Mechanical Failure

Behind every aircraft accident lies more than mechanical failure. There is always a human story waiting to be told. Aviation Medicine provides the lens through which investigators see beyond the wreckage, revealing how the health, mindset, and physiological condition of aircrew can shape the final moments of a flight.

When an accident occurs, public attention often focuses on technical issues or weather conditions. Yet these factors rarely explain why a normal flight ends in disaster. Somewhere in that chain of events stands a person—perhaps fatigued, distracted, unwell, or under stress. Understanding that story is the starting point of Aviation Medicine.

Seeing Beyond the Obvious

Aviation Medicine examines the unseen factors affecting performance, including fatigue, dehydration, hypoxia, stress, and even the side effects of medication.



These influences leave no mark on an aircraft, yet they can quietly erode a pilot's effectiveness.

Fatigue, for instance, can impair alertness as much as moderate alcohol consumption. A pilot may appear composed, yet physiologically respond seconds slower than necessary. Medical investigators often reconstruct duty rosters, rest schedules, and workload patterns to determine where human endurance was stretched too far. Stress tells its own story. Personal pressures, operational demands, or time constraints can cloud judgment and narrow perception. By reviewing health records and psychological data, aviation medical specialists interpret why certain decisions were made in the cockpit, turning technical evidence into human understanding.

When Health Becomes a Silent Risk

Every medical certificate issued to a pilot represents a snapshot in time. Yet health

is dynamic; it changes with age, lifestyle, and circumstances. A pilot who passed an examination six months ago may develop hypertension, diabetes, or cardiac issues without realizing their impact on performance.

Medical Examiners and Assessors play a critical role in linking these developments to safety outcomes. Their work is not about assigning blame but about learning. By examining whether illness, medication, or fatigue contributed to an incident, they identify ways to strengthen certification systems and encourage pilots to disclose health issues before they become risks.

In Aviation Medicine, trust is paramount. Honest communication between pilots and medical authorities is the cornerstone of flight safety. Silence, conversely, can be dangerous.

Interpreting the Invisible

Sometimes, crucial evidence comes from forensic toxicology—the analysis of biological samples for alcohol, drugs, or toxic gases such as carbon monoxide. While the numbers tell one story, their meaning tells another. Medications that are safe on the ground can become hazardous in flight, where oxygen levels and pressure differ.

Aviation Medicine interprets such results, distinguishing relevant factors from incidental ones. These insights have shaped preventive programs, including random alcohol testing, medication awareness campaigns, and enhanced guidance for Aviation Medical Examiners.

From Investigation to Prevention

Modern investigative frameworks recognize the critical role of the medical perspective. ICAO Annex 13 recommends including an aeromedical specialist in every aircraft accident investigation, ensuring that human factors, health, and performance are analyzed alongside engineering and operational data.

Within the Tanzania Civil Aviation Authority (TCAA), this approach is strengthened through collaboration with the Centre for Aviation Medicine (CAM) in Nairobi and the wider East African Community. The vision is clear: to make Aviation Medicine an active partner in every investigation, supporting toxicology, physiology, and human-factors analysis.

With this harmonized approach, investigations no longer stop at what happened—they go deeper to explore why it happened and how similar risks can be prevented before the next flight takes off.

The Mind in the Cockpit

Even the most sophisticated aircraft depends on one vulnerable component: the human mind. Fatigue, stress, or emotional strain can quietly reduce situational awareness long before a mistake occurs.

Across the EAC region, initiatives through CAM Nairobi and CASSOA are addressing these challenges. Psychological assessments and peer-support systems help pilots seek confidential support early. By recognizing mental well-being as integral to professional fitness, Aviation Medicine ensures pilots are equipped to perform at their best, both physically and mentally.

What the Body Reveals

Aviation Medicine also examines biomechanics and human response to impact forces. Injury patterns can indicate whether a pilot was conscious, braced, or incapacitated at the time of impact, guiding improvements in seat design, restraint systems, and emergency procedures.

Passengers also contribute to these lessons. Investigations involving children and infants have underscored the importance of proper restraints and cabin safety awareness, demonstrating that medical insight extends to everyone on board—not just the flight crew.

A Shared Regional Vision

In Tanzania and across East Africa, partnerships between TCAA, CASSOA, and CAM Nairobi place Aviation Medicine at the heart of safety. Shared expertise, modern laboratory capabilities, and coordinated research programs directly inform regulatory oversight and preventive strategies.

Each investigation adds to a growing knowledge base that strengthens regulations, examiner training, and safety policies, safeguarding both crew and passengers.

The Human Story Behind Every Flight

Every accident tells a human story—of courage, decision-making, and sometimes, unseen struggle. By listening to that story through medical and psychological insight, Aviation Medicine transforms tragedy into prevention.

It reminds us that aviation safety is built not only on technology or procedures but on people—their health, decisions, and resilience. For TCAA and the East African aviation community, this human-centered approach is shaping a smarter, safer future, one where every flight begins with a sound aircraft, a healthy crew, and a system that truly understands both.

LOW-COST CARRIERS: TRANSFORMING GLOBAL AND AFRICAN AVIATION

➤ By Eng. Abdalla Salim Abdalla, Senior Air Navigation Engineer, AAKIA Zanzibar. —

The evolution of low-cost carriers (LCCs) represents one of the most transformative developments in global aviation. Originating from market deregulation in the United States and Europe, LCCs gained significant momentum during the 1990s and 2000s, eventually establishing a presence across all continents. The concept was pioneered by Southwest Airlines, founded in 1967, which commenced operations on 18 June 1971. Departing from the conventional hub-and-spoke system, Southwest adopted a point-to-point network that enabled faster turnaround times, reduced operational complexity, and lowered costs. Its success demonstrated that efficiency and low fares could coexist sustainably, establishing a model that reshaped global air transport.

The LCC model, however, is not defined by a single standard approach. While strategies vary among carriers, several key characteristics are commonly observed. Most LCCs operate a uniform fleet to minimize maintenance and training costs, rely on a single cabin class—typically all-economy with high seating density—and offer simple fare structures with limited flexibility. To maintain low base fares, these airlines generate significant ancillary revenue from non-ticket sources, such as baggage fees, seat selection, in-flight meals, and travel insurance. They also emphasize online ticket sales and mobile applications, maintain lean staff structures with multi-tasking personnel, and build strong brand identities that equate low cost with reliability and value. Operationally, many prefer secondary airports, which offer lower charges and reduced congestion,

allowing faster aircraft turnaround and higher utilization rates.

The success of LCCs has compelled legacy or full-service carriers (FSCs) to adapt. Many introduced “carrier-within-a-carrier” strategies, establishing low-cost subsidiaries to protect market share and optimize costs. In South Africa, for example, South African Airways (SAA) launched Mango, while Comair created Kulula Air. However, these ventures faced challenges: Comair ceased all operations in 2022, and Mango’s revival attempts collapsed in 2025, leading to a court-mandated wind-down process. Meanwhile, independent South African LCCs, such as LIFT and FlySafair, continue to grow, becoming among the most punctual airlines in the region. To compete with LCCs, many legacy carriers have adopted hybrid or unbundled pricing strategies that begin with low-cost, LCC-like base fares and progressively increase through optional add-ons and premium services, allowing them to capture both budget-conscious and high-end market segments.

Across Africa, the LCC sector is expanding, though at a slower pace than in other regions. According to OAG data, LCCs now account for approximately 16 percent of total seat capacity on the continent, up from around 9 percent a decade ago. Growth of roughly 9 percent year-on-year between 2024 and 2025 reflects rising demand for affordable air travel and gradual regulatory liberalization. Nonetheless, challenges remain, including fragmented regulatory frameworks, limited inter-state cooperation, and infrastructure



constraints. The African aviation landscape continues to be characterized by high operational costs, inconsistent enforcement of liberalization policies, and residual protectionism among national carriers.

In East Africa, the experience of LCCs has been mixed. Carriers such as Fly540 in Kenya and Fastjet Tanzania once provided low-cost options but faced regulatory and financial challenges. Fly540 lost its Air Operator Certificate in 2022, while Fastjet Tanzania ceased operations in late 2018 and was formally liquidated in 2019. Today, only Jambojet, a subsidiary of Kenya Airways launched in 2013, remains a stable LCC in the region. As of 2025, Tanzania has no airline officially operating under the low-cost model. However, some local carriers exhibit partial LCC characteristics, including online booking with discounts, no-frills services, simplified fare structures, fees for optional extras like checked baggage, strict operational rules, and single fleet types. These developments suggest an emerging, if cautious, demand for low-cost travel within the country.

The absence of a fully operational LCC in Tanzania presents both a challenge and an opportunity. As air travel demand grows, the Tanzania Civil Aviation Authority (TCAA) could consider regulatory incentives to attract new LCC entrants or support the emergence of hybrid business models. Encouraging the use of secondary airports, streamlining licensing processes, and ensuring

transparent fee structures would help create a conducive environment for such carriers. Additionally, fostering investor confidence through consistent regulatory oversight and safety assurance could position Tanzania as a competitive base for regional LCC operations.

Low-cost carriers have become integral to modern aviation by democratizing air travel and driving efficiency across the sector. Although Africa and Tanzania in particular has been slower to adopt this model, the global success of LCCs offers valuable lessons. With the right policy framework, ongoing infrastructure developments such as New Msalato International Airport, and the upgrade of regional airports—including terminals, runways, lighting, and air navigation facilities to meet international safety and security standards—alongside private-sector engagement, Tanzania could position itself to benefit from the next wave of affordable air travel expansion across the continent.

It is important to note that this article does not provide an exhaustive study of LCCs in Africa. Certain countries, particularly in North Africa, have stronger LCC connectivity due to proximity to Europe, resulting in more advanced low-cost operations. This piece primarily offers insight into the LCC concept, its evolution, and general trends relevant to East Africa and Tanzania, rather than a detailed analytical assessment of the continent's current LCC market dynamics.

STRENGTHENING ACCESS CONTROL THROUGH A ROBUST SECURITY CULTURE: THE CORNERSTONE OF SUSTAINABLE AVIATION SECURITY IN TANZANIA



By Daniel Makina

(AVSEC PM, ICAO Certified Aviation Security Instructor & Senior Aviation Security Inspector – Tanzania Civil Aviation Authority (TCAA))

Effective control of access to Security Restricted Areas (SRAs) remains one of the most critical pillars of aviation security. Yet, the effectiveness of these measures depends not only on systems and procedures, but also on the collective mindset of those entrusted to implement them. This article highlights how strengthening access control and fostering a strong security culture are mutually reinforcing goals essential for safeguarding Tanzania's civil aviation system.

Aviation security continues to evolve amid dynamic global threats, technological advancements, and growing passenger traffic. For Tanzania, maintaining a secure and resilient aviation system is vital to protecting national interests, promoting safe air transport, and sustaining international confidence.

While sophisticated access control systems—such as biometric gates, CCTV surveillance, and staff screening—play a crucial role, experience and global audits indicate that security breaches often arise from human complacency, procedural lapses, or lack of awareness. Consequently, cultivating a strong security culture is essential to ensure that these control measures achieve their intended purpose.

The International Civil Aviation Organization (ICAO) emphasizes in Annex 17 and related guidance that a sustainable security system must integrate both physical safeguards and a culture of vigilance, responsibility, and shared ownership.

Access Control: The First Line of Defense

Access control establishes the boundary

between secure and non-secure areas within an airport. In Tanzania, this principle is embedded in the National Civil Aviation Security Programme (NCASP) and airport-specific Aviation Security Programmes (ASPs).

Security Restricted Areas (SRAs) are safeguarded through physical barriers, controlled entry points, identification systems, and surveillance. Personnel, vehicles, and goods entering these areas are subjected to screening and validation. At major airports—such as Julius Nyerere International Airport (JNIA), Abeid Aman Karume International Airport (AAKIA), and Kilimanjaro International Airport (KIA) access control measures have continuously evolved, incorporating technology to enhance reliability and traceability.

However, even the most advanced systems are only as effective as the people operating them. Incidents such as tailgating, misuse of access passes, or failure to challenge unauthorized individuals often result from behavioral gaps rather than system deficiencies. This underscores the need to complement physical controls with a security-conscious workforce.

The Human Factor: Building a Strong Security Culture

Security culture encompasses the shared values, attitudes, and behaviors that shape how people view and execute their security responsibilities. ICAO encourages States to foster security culture beyond mere compliance, embedding it in everyday operations.

In Tanzania, the importance of security culture is increasingly recognized across aviation entities. Airport operators, airlines, ground handlers, and regulatory bodies are investing in awareness campaigns, staff briefings, and refresher trainings that emphasize individual accountability.

When personnel understand the rationale behind security measures—such as keeping doors closed or displaying ID badges—they are more likely to comply and take initiative when irregularities arise. Moreover, fostering trust and open communication enables employees to report security concerns without fear of blame or reprisal.

A positive security culture transforms compliance from a regulatory obligation into a personal commitment. Every individual, regardless of rank, becomes an active participant in safeguarding the aviation environment.

Integrating Security Culture into Daily Operations

Creating a strong security culture requires deliberate action. Leadership plays a crucial role by setting clear expectations, modeling desired behavior, and recognizing good security practices.

Practical initiatives include:

- **Regular briefings** at access control points to reinforce procedures and share recent observations.
- **Recognition programs** to reward personnel who demonstrate vigilance or report irregularities.
- **Joint exercises** involving security, operations, and airline staff to strengthen teamwork.
- **Visual campaigns**, such as posters and digital reminders, highlighting messages like *“Security is Everyone’s*

Responsibility” or “See Something, Say Something.”

Consistency and inclusivity are essential. When employees at all levels feel engaged, access control procedures become more effective because staff internalize them as part of their professional identity.

Sustaining Improvements: A Shared Responsibility

Maintaining effective access control and a strong security culture is an ongoing process, not a one-time achievement. Regular inspections, internal audits, and performance reviews help identify weaknesses and reinforce accountability.

Coordination among TCAA, airport operators, and other aviation stakeholders ensures that lessons learned from audits and incidents are transformed into practical improvements. Periodic review of procedures and investment in modern technologies—such as biometric identification and electronic access logs—further enhance system integrity.

Ultimately, sustaining progress depends on leadership commitment and continuous empowerment of personnel. When staff observe management actively supporting security initiatives and responding promptly to reported issues, their sense of ownership and responsibility is strengthened.

Access control remains the first physical and procedural barrier protecting civil aviation from unlawful interference. Yet, its true strength lies in the people who uphold it every day.

Tanzania’s continued investment in both infrastructure and human capacity demonstrates the nation’s commitment to ICAO standards and global best practices. To ensure enduring effectiveness, access control must be reinforced by a culture in which every employee—whether a security officer, technician, cleaner, or pilot—understands that security begins with them.

As the aviation sector continues to expand, the integration of robust access control measures and a positive security culture will remain the cornerstone of sustainable aviation security in Tanzania.

SPACE WEATHER AND AVIATION: A REGULATORY PERSPECTIVE

➤ By Patricia Stanislaus Chenga, _____
Aviation Law Specialist, Tanzania Civil Aviation Authority (TCAA)

The international community marked World Space Week (4-10 October 2025) as a global celebration of science and technology, highlighting their contributions to the advancement of humanity. The United Nations General Assembly declared in 1999 that World Space Week would be observed annually from 4 to 10 October. These dates commemorate two landmark events:

- 4 October 1957: Launch of Sputnik 1, the first human-made Earth satellite, opening the way for space exploration.
- 10 October 1967: Signing of the Treaty on Principles Governing the Activities of States in the Exploration and Peaceful Uses of Outer Space, including the Moon and Other Celestial Bodies (the Outer Space Treaty).

The theme for World Space Week 2025 was “Living in Space”. This theme highlights humanity’s journey toward making space a sustainable habitat, emphasizing the innovative technologies, challenges, and international collaboration required to realize this vision.

Modern aviation already operates in a “space-enabled” environment. From Global Navigation Satellite Systems (GNSS) to satellite communications, and from spaceborne weather monitoring to the influences of solar and magnetospheric activity, the connection between aviation and space is no longer abstract—it is operational.

Understanding Space and Space Weather

Outer space, or simply “space,” is the vast expanse beyond Earth’s atmosphere, comprising celestial bodies, gas, plasma, and dust. The boundary between Earth’s atmosphere and space is generally accepted to be at an altitude of approximately 100 kilometres above sea level.

While the world celebrated World Space Week—a landmark in humanity’s quest to inhabit space—it is critical to recognize the growing importance of space-related hazards, particularly space weather, in

aviation planning and regulation.

Through decades of observation and satellite monitoring, scientists have established that the Sun’s dynamic activity interacts with the near-Earth space environment, giving rise to phenomena collectively known as space weather. These phenomena—including solar flares, coronal mass ejections (CMEs), geomagnetic storms, and solar energetic particle events—have tangible impacts on aviation. In the context of the World Space Week 2025 theme, aviation’s operational dependence on the space environment presents several risks:

- High-Frequency (HF) radio communication blackouts: Sudden ionospheric disturbances can render HF channels unusable, particularly over polar or remote routes.
- Satellite communication disruptions: Intense solar activity can disturb the Earth’s ionosphere, causing delays, attenuation, or temporary loss of satellite signals. Such disruptions may degrade or interrupt Controller–Pilot Data Link Communications (CPDLC) and Automatic Dependent Surveillance–Contract (ADS-C) operations.
- GNSS signal degradation and integrity loss: GNSS receivers, including those supported by Satellite-Based Augmentation Systems (SBAS) or Ground-Based Augmentation Systems (GBAS), may lose signal lock, reduce navigation accuracy or temporarily compromising Required Navigation Performance (RNP) procedures.
- Increased radiation exposure: Elevated particle fluxes during solar energetic particle events can raise cumulative radiation doses for crew and passengers, particularly at high altitudes.

ICAO’s Role in Space Weather Management

The International Civil Aviation Organization (ICAO) has proactively addressed the operational risks posed by space weather.

Following global studies and industry consultations, ICAO introduced, in 2018, a requirement in Annex 3 (Meteorological Service for International Air Navigation) to provide space weather advisory services. This ensures that space weather information receives the same operational attention as traditional meteorological data.

To operationalize this requirement, ICAO designated three global Space Weather Centres (SWXCs)—a network of Space Weather Information Service Providers responsible for monitoring solar and geomagnetic activity, issuing advisories, and disseminating alerts to aviation users worldwide. These SWXCs include:

- ACFJ consortium: Australia, Canada, France, Japan
- PECASUS consortium: Austria, Belgium, Cyprus, Finland, Germany, Italy, Netherlands, Poland, United Kingdom
- United States

The SWXCs operate on a rotational basis to provide 24-hour global advisories in formats similar to Significant Meteorological Information (SIGMET), enabling seamless integration into flight planning and dispatch systems. Two additional regional SWXCs were also designated: the China/Russian Federation consortium and South Africa.

All SWXC outputs are disseminated through the Aeronautical Fixed Service (AFS) as Operational Meteorological Information (OPMET), ensuring that air navigation service providers, meteorological authorities, and operators receive standardized, ICAO-compliant space weather information.

In 2019, ICAO published the Manual on Space Weather Information in Support of International Air Navigation (Doc 10100), providing guidance on data dissemination, hazard classification, and coordination between aviation and space weather agencies. Furthermore, through the inclusion of space weather in the Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBU) framework, ICAO is embedding space weather risk management into the evolution of global aviation systems.

Tanzania's Regulatory Approach

In alignment with ICAO Annex 3 and global best practices, Tanzania has demonstrated regulatory foresight through the Civil Aviation (Meteorological Service for

International Air Navigation) (Amendment) Regulations, 2023 (Government Notice No. 352 of 2023), which introduced Regulation 15A on Space Weather Centres.

This regulation mandates that the meteorological service provider arrange for advisory information on space weather phenomena affecting HF radio communications, satellite communications, GNSS-based navigation and surveillance, and radiation exposure at high altitudes. This milestone positions Tanzania to institutionalize space weather resilience within its aviation regulatory framework, safeguarding communications, navigation, and surveillance systems from solar-induced disruptions.

The next step involves translating the regulation into operational capability, ensuring the aviation industry can receive, interpret, and act upon real-time space weather advisories. To achieve this, the Tanzania Civil Aviation Authority (TCAA), in collaboration with the Tanzania Meteorological Authority (TMA) and other stakeholders, must implement a structured programme, including:

- Capacity building and training
- Development of standard operating procedures
- Integration of space weather contingencies within operators' Safety Management Systems (SMS)
- Continuous 24-hour monitoring and redundancy planning
- Participation in international coordination mechanisms

As the global aviation community increasingly relies on space-based infrastructure, Tanzania's regulatory approach underscores its commitment to maintaining a safe, secure, and efficient aviation system. This initiative aligns with ICAO's broader vision, as articulated by Dr. Fang Liu, then Secretary General:

"This new capability will permit flight-crew and flight-operations experts to make use of the most updated information possible on any solar events which could potentially impact aircraft systems or passenger health."

Through regulatory foresight and operational implementation, Tanzania is poised to strengthen resilience against space weather risks, ensuring the continued safety and reliability of its air navigation systems.

For years, the journey from Dar es Salaam to Dodoma was a test of endurance. Travellers would spend more than six hours on the road, navigating winding routes through Morogoro before finally arriving in the capital. Then came aviation-first through chartered flights and later scheduled services-slashing travel time to less than two hours. Airfares were higher than bus tickets, but the convenience was worth every shilling.



NEW TRACKS, NEW SKIES: HOW SGR IS REDEFINING TANZANIA'S AVIATION OPPORTUNITIES

➤ By Henry Machoke

Now, a new player has entered the race: the Standard Gauge Railway (SGR). With travel times of under four hours and affordable fares, the SGR has swiftly become the people's choice. Many have shifted from the skies to the tracks, but this transition is not a defeat for aviation. Rather, it is an awakening a sign that the aviation sector must now look beyond the Dar-Dodoma route and explore new frontiers.

The story of Tanzania's transport evolution is one of constant reinvention. From the expansion of national air connectivity to massive investments in ports and modern railways, the government has worked to create an interconnected transport ecosystem. Tanzania's Air Tanzania Company Limited (ATCL) now operates a fleet of 16 aircraft, including Boeing 787 Dreamliners, Airbus A220s, and Bombardier Dash 8s, connecting the

country's regions and linking Tanzania to the world.



At the same time, major airports such as Julius Nyerere International, Kilimanjaro, and Abeid Amani Karume have been upgraded, alongside regional airports in Mwanza, Tabora, Kigoma, Mtwara, and Mbeya. In parallel, new momentum has been injected into maritime and rail infrastructure, from expanded ports to the electrified Standard Gauge Railway now operating between Dar es Salaam and Dodoma.

Since its launch in 2024, the SGR has transformed how people travel between the commercial capital and the administrative heart of the country. Passenger statistics tell the story clearly.

Passenger Trends Before and After the SGR

In 2023/2024, airlines carried 189,891 passengers between Dar es Salaam and Dodoma. A year later, this number

dropped to 105,113, representing a 55.3% decline—approximately 84,774 passengers shifting from air travel to the SGR.

One-Year Passenger Trend

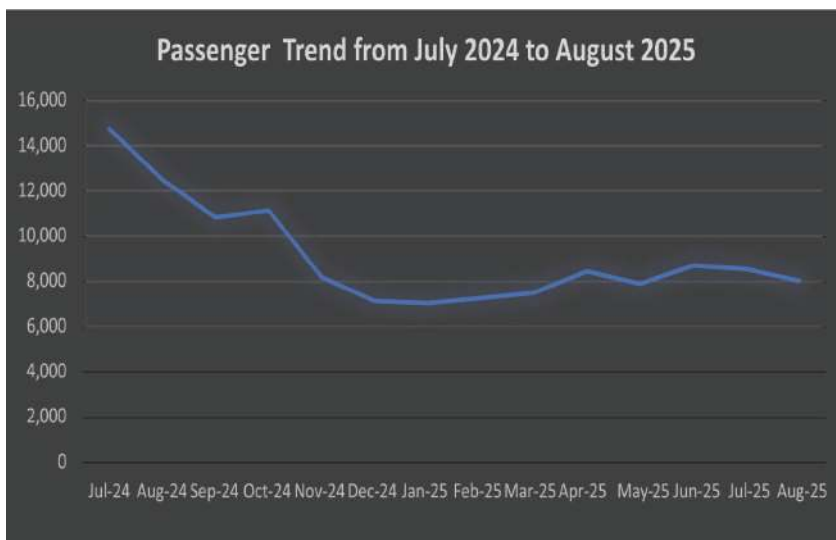
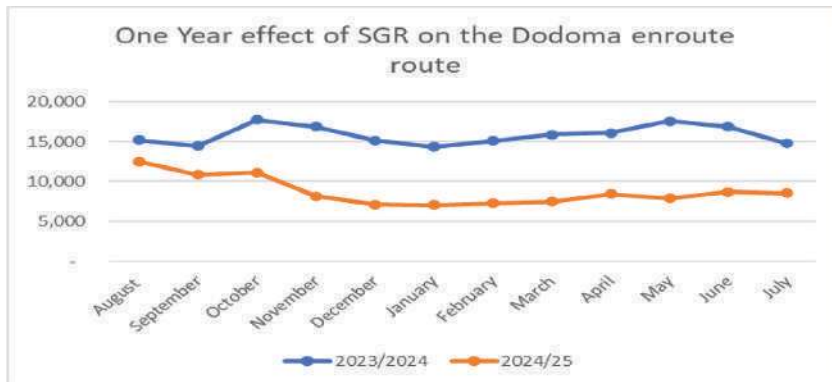
The ripple effect extends to flight movements. The number of aircraft flying the Dar-Dodoma route dropped from 4,604 to 3,398 over the year a reduction of 1,206 flights.

Yet, this isn't a story of decline, it's a story of adaptation. As analysts observe, the rise of the SGR is prompting airlines to rethink strategies, pricing, and destination networks. With the Dar-Dodoma corridor now increasingly dominated by rail, new opportunities are emerging across the map: Dodoma-Mwanza, Dodoma-Kilimanjaro, Dodoma-Arusha, and Dodoma-Tabora are just a few of the promising

routes that could redefine domestic aviation.

The shift also signals broader economic benefits. New air routes mean more regional connectivity, job creation, and tourism potential. As the SGR extends to Mwanza and Kigoma in the coming years, the aviation industry will be watching closely not to compete head-on, but to complement, diversify, and innovate.

Tanzania's skies are far from empty. They are simply opening toward new horizons.





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MINISTRY OF TRANSPORT
TANZANIA CIVIL AVIATION AUTHORITY



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