

# AVIATION SAFETY BULLETIN



CERTIFIED ISO 9001

ISSUE 4 | 2023

An official publication of the Civil Aviation Authority of Fiji

THREAT AND ERROR MANAGEMENT  
IN AVIATION

ESTABLISHING THE ADVANCED  
PASSENGER APPLICATION PROCESS (API)  
SYSTEM IN FIJI

FIRST FEMALE AERODROME  
INSPECTOR FOR CAAF

ESTABLISHMENT OF THE  
PSIDS LIAISON OFFICER

*'Promoting Effective Aviation Safety and Security in Fiji and the Region.'*





ICAO ADOPTS NEDW GLOBAL FRAMEWORK ON SAF, LCAF & OTHER CLEANER ENERGIES



ESTABLISHMENT OF THE PSIDS LIAISON OFFICER

## In this issue...



INTERNATIONAL AIR TRAFFIC CONTROLLERS DAY



AVIATION HAZARDS TROPICAL CYCLONE

Cover Pic: CAAF Gallery

<b>CHIEF EXECUTIVES MESSAGE</b>	<b>3</b>
<b>ESTABLISHMENT OF THE PSIDS LIAISON OFFICER</b>	<b>4</b>
<b>INTERNATIONAL CIVIL AVIATION DAY</b>	<b>5</b>
<b>ICAO ADOPTS NEW GLOBAL FRAMEWORK ON SAF, LCAF</b>	<b>6-7</b>
<b>INTERNATIONAL AIR TRAFFIC CONTROLLERS DAY</b>	<b>8-9</b>
<b>THREAT AND ERROR MANAGEMENT IN AVIATION</b>	<b>10-11</b>
<b>AVIATION SAFETY HAZARDS—TROPICAL CYCLONES</b>	<b>12-14</b>
<b>HIERARCHY OF FIJI CIVIL AVIATION LAWS</b>	<b>15</b>
<b>AIRPORT PAVEMENT</b>	<b>16-17</b>
<b>FLIGHT CREW FOREIGN CONVERSION APPLICATION PROCESS</b>	<b>18-19</b>
<b>ESTABLISHING THE ADVANCED PASSENGER INFORMATION (API) SYSTEM IN FIJI</b>	<b>19</b>
<b>SEEKING YOUR FEEDBACK</b>	<b>20</b>
<b>CAAF APPOINTS EXECUTIVE MANAGER AIR SAFETY</b>	<b>21</b>
<b>FIRST FEMALE AERODROME INSPECTOR FOR CAAF</b>	<b>22</b>
<b>LASER LIGHT AWARENESS</b>	<b>23</b>
<b>MANDATORY OCCURRENCE REPORTING &amp; INVESTIGATION</b>	<b>24-25</b>
<b>AVIATION MEDICINE: CATARACTS SURGERY AND BEST IOL IMPLANT OPTIONS</b>	<b>26-27</b>

## AVIATION SAFETY BULLETIN

**PUBLISHED BY THE :**

Aviation Safety Bulletin (ASB) Committee  
Civil Aviation Authority of Fiji (CAAF)  
Private Mail Bag, NAP 0354,  
Nadi International Airport, Fiji.  
Tel: (679) 8923 155  
Email: info@caaf.org.fj

Editor - *Roshni Deo*

Committee - *Alisi Namoro, Edward Dass,  
Keverieli Atama and Elisha Naidu*

Design : ASB Committee

**PUBLICATION CONTENT** Unless expressly stated as CAAF policy, the views expressed in this *Aviation Safety Bulletin* do not necessarily reflect the policy of the Civil Aviation Authority of Fiji. Articles are intended to stimulate discussion, and nothing in this *Aviation Safety Bulletin* is to be taken as overriding any Fiji Civil Aviation Legislation, or any statements issued by the Chief Executive or the Civil Aviation Authority of Fiji.

Reader comments and contributions are welcome and may be published, but the Editor reserves the right to edit or abridge them, and not to publish those that are judged not to contribute constructively towards safer aviation. Reader contributions and correspondence regarding the content of *Aviation Safety Bulletin* should be addressed to:

*Aviation Safety Bulletin* Editor, CAA Fiji, Private Mail Bag  
NAP 0354, Nadi International Airport, Fiji or  
email: info@caaf.org.fj

**DISTRIBUTION**

*Aviation Safety Bulletin* can be downloaded from CAAF's website, [www.caaf.org.fj](http://www.caaf.org.fj).

**COPYRIGHT** Reproduction in whole or in part of any item in *Aviation Safety Bulletin*, other than material shown to be from other sources or named authors, is freely permitted, provided that it is intended solely for the purpose of promoting safer and secure aviation, and provided that acknowledgment is given to *Aviation Safety Bulletin* ■

## Message from the desk of Chief Executive

**Ni Sa Bula Vinaka** and welcome to the Civil Aviation Authority of Fiji's fourth and final edition of its Aviation Safety Bulletin (ASB) for the year.

Publication of the ASB is a key component of CAAF's responsibility to promote and maintain a safe and secure aviation environment through the facilitation of the flow of critical information. This proactive approach contributes to CAAF's overall risk management strategy.

As the year 2023 draws to a close, we reflect on the year that has been with gratitude and accomplishment, noting the lessons learnt and using this to plan for the year ahead.

In the current year, the aviation industry maintained its upward trajectory, surpassing the traffic levels recorded in 2019, thus playing a crucial role in supporting Fiji's tourism sector. Nevertheless, the persistent shortage of skilled aviation personnel poses a significant challenge, prompting the recruitment and training of new staff and the continuous endeavour to retain existing technical professionals.

Following the conclusion of the preceding CAAF Board's term, the year marked the inauguration of a new nine-member CAAF board, led by the capable Chair, Mr. Eliki Kaumaititoya. Various projects initiated in the prior year were completed and implemented. Among these projects was the CAAF Capability Framework Exercise, launched to scrutinize CAAF's organizational structure, ensuring its relevance and optimizing the efficient fulfilment of CAAF's responsibilities.

The International Civil Aviation Organization (ICAO) Security Audit, part of the Universal Security Audit – Continuous Monitoring Approach, was conducted in June 2023 and resulted in Fiji achieving a healthy aviation security rating with nil significant security concerns raised.

The 2019 ICAO Pacific Aviation Needs Analysis Report recommended the creation of a Pacific Small Island Developing States (PSIDS) Liaison Officer (PLO). This role was officially established in August 2023, and the PLO office is being hosted by Fiji in Nadi. Mr. Shane Sumner, the newly appointed PLO, was welcomed to our shores in late October 2023. We consider ourselves fortunate to host this office and eagerly anticipate collaborating with Mr. Sumner to enhance the profile of aviation safety and security standards across all PSIDS. Our shared goal is to ensure the realization of ICAO's objective of leaving no country behind.

The International Civil Aviation Day was commemorated on the 07<sup>th</sup> December 2023, a day to honor the remarkable achievements in aviation that have brought the world closer together and aims to recognize and promote the



importance of international civil aviation in fostering global connectivity, peace, and prosperity. All in the aviation community have played an integral part in bringing aviation to the level it is today; a safer and more secure civil aviation system enjoyed by all.

As CAAF continues in its efforts towards a sustainable aviation system, we are ever mindful of ICAO's Assembly Resolution A41-26; *ICAO gender equality programme*, which promotes the participation of women in the global aviation sector. CAAF is proud to announce the appointment of its first female aerodrome inspector, Ms. Harieta Tudreu, in August this year.

With the continued increase in aviation activities, we are ever mindful that there are no shortcuts to protecting and sustaining a safe and secure aviation system for Fiji. The foundation we are building will serve as a launchpad for even greater accomplishments in the years ahead.

Collaborating with all of you throughout this year has been rewarding, and I express my gratitude for your contributions and for entrusting us with the chance to serve you. We look forward to sustaining this positive momentum in the upcoming year, approaching new challenges with the same enthusiasm and determination that characterize our aviation sector.

Wishing you and your loved ones a Christmas filled with joy and, clear skies and tailwinds that will propel us to greater heights in 2024.

**MS THERESA O'BOYLE-LEVESTAM**  
CHIEF EXECUTIVE



As the year takes its final approach, the Civil Aviation Authority of Fiji extends warm Season's Greetings to you all! Wishing you, clear skies, tailwinds and a New Year soaring to unprecedented altitudes.

Fly high and festive regards







# Establishment of the PSIDS Liaison Officer

The position of the Pacific Small Island Developing States (PSIDS) Liaison Officer has been established by the International Civil Aviation Organization (ICAO) in response to the recommendations of the Pacific Aviation Needs Analysis (PSIDS Study) it conducted in 2019. The PSIDS Liaison Officer coordinates and facilitates ICAO support for the 13 ICAO-member PSIDS, namely Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

The Study's recommendation to establish the PSIDS Liaison Officer stated that the position be:

- located in the Pacific;
- enhance communication and coordination between ICAO and;
  - PSIDS;
  - the Pacific Aviation Safety Office (PASO);
  - the Pacific Islands Forum Secretariat (PIFS);
  - UN organizations, Multi-National Development Banks, and other relevant international or regional stakeholders;
- enhance and facilitate technical assistance; and
- facilitate continuous monitoring over regional safety and security oversight support systems.

The PSIDS Liaison Officer is graciously hosted in Nadi by the Government of Fiji, under a hosting agreement formalized in May 2023 by the ICAO Secretary General Mr. Juan Carlos Salazar and Fiji's Deputy Prime Minister and Minister for Tourism and Civil Aviation H.E. Viliame Gavoka. Support for the PSIDS Liaison Officer is generously provided by the Government of Singapore.

The PSIDS Liaison Officer, Mr. Shane Sumner, was appointed on 1 August 2023 and deployed to Nadi on 27 October. Before his assignment to this position he served as Regional Officer (Air Traffic Management) in the ICAO Asia/Pacific Regional Office, Bangkok, Thailand, since January 2012.

The President of the ICAO Council, Mr. Salvatore Sciacchitano, Mr. Salazar, Asia/Pacific Regional Director Mr. Tao Ma, Mr. Sumner, and other ICAO officials took the opportunities presented at the 58<sup>th</sup> Conference of Directors-General of Civil

Aviation for the Asia/Pacific Region (DGCA/58, Dhaka, Bangladesh, 15 to 19 October 2023) and the Singapore Dialogue (22 – 24 October 2023) to meet with the attending delegations from PSIDS States. The meetings gave the opportunity to provide a briefing on appointment and deployment arrangements and preliminary activities being undertaken since the appointment of the Liaison Officer.

The PSIDS representatives present highlighted the importance of the Blue Pacific Continent concept, the Pacific Regional Aviation Strategy, and the critical socio-economic importance of air transport connectivity in the Pacific. They also listed their current aviation priority needs including support for inspector training, state safety plans, accident and incident investigation, search and rescue, artificial intelligence, infrastructure, supply chain logistics and cyber security.

ICAO has noted that the PSIDS Study was conducted in 2019, and since that time there has been significant global disruption which may have resulted in some changed circumstances and priorities in the region. While several projects are in their initial or planning stages, the ICAO PSIDS programme and project planning will be further developed and adapted according to the needs determined in direct coordination between ICAO and each of the PSIDS.

Mr. Sciacchitano and Mr. Salazar reaffirmed that ICAO is deeply invested in the success of this engagement initiative, and that the ICAO presence is intended to work in close collaboration with PSIDS, and with other States and organizations, to harmonize activities and efficiently mobilize resources■



Fiji's Deputy Prime Minister & Minister for Tourism and Civil Aviation Hon. Viliame Gavoka with PSIDS Liaison Officer, Mr. Shane Sumner. Pic Source: Fiji Government.






# International **CIVIL AVIATION DAY**

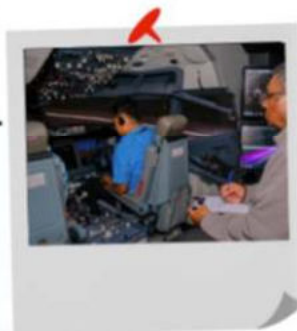
## December

### “ADVANCING INNOVATION FOR GLOBAL AVIATION DEVELOPMENT”

Join us in commemorating over a century of Safe Skies and Global Connectivity!

The 07th of December marks International Civil Aviation Day, a day to honor the remarkable achievements in aviation that have brought the world closer together.

International Civil Aviation Day is an annual observance established by the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations. Celebrated on December 7th each year, the day aims to recognize and promote the importance of international civil aviation in fostering global connectivity, peace, and prosperity.



The significance of this day lies in acknowledging the role of civil aviation in creating a reliable and efficient means of transportation for people and goods across borders. It also highlights the economic and social benefits that aviation brings to communities worldwide.

The date, December 7th, was chosen to commemorate the anniversary of the establishment of the International Civil Aviation Organization in 1944. The ICAO was created to promote the safe and orderly development of international civil aviation throughout the world.

This International Civil Aviation Day, the Civil Aviation Authority of Fiji's Board and Staff, take this opportunity to thank all our industry partners and stakeholders for your contribution and continued commitment to ensuring a safe and secure civil aviation system.

Let's salute the pioneers, embrace the future, and soar to new heights together!

  International Civil Aviation Day - Connecting People, Connecting the World!  



CIVIL AVIATION  
AUTHORITY OF FIJI 2023





# ICAO Adopts New Global Framework on SAF, LCAF and Other Cleaner Energies

## At The 3rd Conference on Civil Aviation and Alternation Fuels (CAAF/3)

The third International Civil Aviation Organization (ICAO) Conference on Aviation and Alternative Fuels (CAAF/3) was held in Dubai, United Arab Emirates from the 20<sup>th</sup> to 24<sup>th</sup> November, 2023.

Fiji's Deputy Prime Minister (DPM) and Minister for Tourism and Civil Aviation, the Hon. Mr. Viliame Gavoka led the Fiji delegation to the CAAF/3. The conference was attended by high-level officials from ICAO member States, the aviation industry and energy stakeholders.

Fiji's Honorable DPM Mr. Gavoka, from among the high-level delegates present, was elected as the Chairperson of the conference. This role was crucial to facilitating considerations put forth and, attaining a majority consensus on a Global Framework for Cleaner Energies and set a collective goal to start the shift away from fossil fuels.

During the weeklong conference, there was much debate and very challenging discussions held on these areas, particularly the quantification of a goal for 2030 to support the Long-Term Aspirational Goal (LTAG) of net-zero carbon emissions by 2050. The financing of sustainable aviation fuels (SAF), Lower Carbon Aviation Fuels (LCAF), and other aviation cleaner energies was another contentious issue.

The Hon. Viliame Gavoka played a pivotal role in negotiating and converging the different views of the ICAO member states for consideration of the CAAF/3 outcomes. Under his able leadership, and through the collective efforts of the member States and ICAO secretariat, historic milestones were achieved.

On the final day of the conference, the positive outcomes of the CAAF/3 conference were realized:

1. A 2030 goal for SAF deployment at a global level. This goal is to achieve a 5% reduction in carbon intensity by 2030, utilizing SAF and Lower Carbon Aviation Fuels LCAF. The objective is intentionally global, without attribution to individual countries, allowing swift-moving states to act while providing flexibility for those requiring more time to develop the infrastructure for SAF and build the necessary capacity.
2. A Global Framework for Cleaner Energies, offering support to aid states in their transition. This encompasses programs for building capacity, transferring knowledge and technology, ensuring access to necessary financing, and providing guidance on optimal policies to facilitate the widespread adoption of SAF.

As a precursor to this, the ICAO Conference on Aviation and Alternative Fuels (CAAF/2) which took place in 2017 endorsed the 2050 Vision for SAF. The vision aimed to promote the use of alternative and sustainable fuels in aviation with the goal of achieving a sustainable and low-carbon future for the industry.

The 2050 Vision for SAF outlined a strategic framework to guide the development and deployment of sustainable aviation fuels, emphasizing the importance of collaboration among governments, industry stakeholders, and international organizations. The endorsement of this vision indicated a global commitment to addressing environmental concerns and reducing the aviation sector's carbon footprint by promoting the use of alternative, environmentally friendly fuels by the year 2050.





Following this, the 41st Session of the ICAO Assembly held in October 2022 requested the ICAO Council to continue to assess progress on the development and deployment of SAF, LCAF and other cleaner energy sources for aviation as part of the ICAO Stocktaking process. To support this, the ICAO Council convened the CAAF/3 to review the 2050 ICAO Vision for SAF, including LCAF and other cleaner energy sources for aviation, in order to define an ICAO global framework in line with the No Country Left Behind (NCLB) initiative and taking into account national circumstances and capabilities (Assembly Resolution A41-21).

The development and deployment of SAF, LCAF and other aviation cleaner energies is crucial in enabling the sector to attain its LTAG of net-zero emissions. Supporting policies for aviation cleaner energy form an important building block in enabling the definition of the global framework.

In encouraging the successful adoption of policies in ICAO member States, the ICAO Council's Committee on Aviation Environmental Protection developed guidance on potential policies and coordinated approaches for the deployment of SAF, and updated in March 2023. The guidance included categories on Stimulating SAF supply, Increasing SAF demand and Enabling SAF markets. It contained additional comparative analysis tools, which provide order of magnitude estimations of SAF costs, investment needs, production potential as well SAF cost assessment concepts. This guidance material was used to formulate the **ICAO Global Framework on SAF, LCAF and other cleaner aviation energies**.

The ICAO Global Framework on SAF, LCAF and other Aviation Cleaner energies comprise of four building blocks –

- I. Building Block 1 - Policy and Planning
- II. Building Block 2 -Regulatory Framework
- III. Building Block 3 - Implementation and Support
- IV. Building Block 4 -Financing.



### Building Block 1

Policy and Planning of the ICAO Global Framework for SAF, LCAF, and other Aviation Cleaner Energies.

*“To support the achievement of the LTAG, ICAO and its Member States strive to achieve a collective global aspirational Vision to reduce CO2 emissions in international aviation by 5 per cent by 2030 through the use of SAF, LCAF and other aviation cleaner energies (compared to zero cleaner energy use).”*

The ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies recognizes that aviation is part of a global effort to address climate change. It provides greater clarity, consistency and predictability to all stakeholders, including those beyond the aviation sector. Following the adoption of the ICAO global framework, it is envisioned that the global framework will pave the way for other sectors at the United Nations Climate Change Conference-COP28 scheduled from 30 November until 12 December 2023.

More information is available on the ICAO website (<https://www.icao.int/Meetings/CAAF3/Pages/default.aspx>) and in the Air Transport Action Group (<https://atag.org/news/agreement-reached-on-aviation-clean-energy/>) media release issued following the conclusion of the meeting.





# International Air Traffic Controllers Day: Celebrating Unsung Heroes of the Skies

**O**n the 20th of October every year, the world comes together to pay tribute to the unseen guardians of our skies, the vigilant professionals who work tirelessly to ensure the safe passage of aircraft from take-off to landing: **air traffic controllers**.

In honour of International Air Traffic Controller Day, the GSD ANS Section under their oversight roles for air traffic services, shed light on the crucial work of these dedicated individuals.

The realm of air traffic control is an intricate and high-stakes operation. Air traffic controllers oversee the scheduling and monitoring of all flights, serving as the vigilant “eyes on the ground” for every aircraft in the sky.

## The unsung heroes of Aviation in Fiji

Air traffic control is a critical aspect of the aviation industry, ensuring the safe and efficient movement of airplanes in the sky. On the 20th of October, Fiji joins the world in celebrating the International Day for Air Traffic Controllers, recognizing the vital role these professionals play in ensuring passenger safety. This day not only presents an opportunity to acknowledge their contributions but also shed light on the rich history of air traffic control in Fiji.

## Background

Over the years, air traffic control in Fiji has undergone significant improvements in technology and efficiency. The advent of radar systems in the 1960s revolutionized air traffic control operations, allowing controllers to monitor and direct aircraft more effectively. Fiji has now adopted this technology using Automated Dependent Surveillance – Broadcast (ADS-B), enhancing safety and precision in its domestic airspace.

As the aviation industry continued to expand, the role of air traffic controllers became more crucial. With the introduction of jet aircraft and complex navigation systems, controllers needed advanced training and certifications to handle the increasing workload. Recognizing this, the Fiji Air Traffic Management Services was established in 2007, under the umbrella of Airports Fiji Limited, to provide better oversight and training to air traffic controllers throughout Fiji and even extending into the Pacific region.







### *The Importance*

Air traffic controllers are the unsung heroes of aviation, ensuring the seamless flow of air traffic and preventing potential accidents. They play a crucial role in guiding pilots, managing airspace congestion, and maintaining the necessary separation between aircraft. With their sharp instincts, knowledge of aviation regulations, and ability to handle high-stress situations, air traffic controllers are prudently responsible for the thousands of lives in their hands each day.

To put it into perspective, there are 8 operating airlines in Fiji that use its 15 aerodromes. In 2022, there were a total of approximately 112,000 flight movements controlled by 76 air traffic control staff and management, who helped to navigate and guide a total of 1.6 million passengers across Fiji's skies, including landing or departing from Fiji.

### *International Day in Fiji*

2023 ATC day was marked by Fiji Airports Limited hosting an open day of its Nadi International Airport Control Tower and Air Traffic Management Centre to honour and promote the work and dedication of air traffic controllers.

The open day aimed to raise awareness about the significant contributions made by these professionals and recognize their exceptional skills, professionalism, and commitment to aviation safety. Importantly, the day also fostered public recognition and appreciation for their invaluable service.



### *Summary*

The International Day for Air Traffic Controllers in Fiji is a momentous occasion to commemorate the 76 individuals who work as Air Traffic Controllers to ensure the safety and efficiency of flight operations in the country. Fiji's air traffic control has evolved and remained at the forefront of technological advancements.

It is important to acknowledge the contribution and dedication of air traffic controllers in making air travel safer for all. Let us celebrate these unsung heroes and reflect on the immense responsibilities they bear to keep the skies of Fiji safe ■

# Threat And Error Management in Aviation

Image: Google



*How would you understand the picture above?*

**W**hich perspective are you taking to properly understand this image? Are you viewing it from the eagle's perspective or the salmon fish that is caught by the eagle? I'd rather be comfortable and say that I will take the perspective of an observer.

## What is a threat?

In aviation, a threat is an event that occurs outside the influence of the crew, which requires their attention and management if safety margins are to be maintained. Threats increase the complexity of any aviation operation.

## The Salmon's Perspective

If the salmon fish represents any aviation operation then we should now plan on how to conduct our operation to minimize the threat that the eagle poses to the livelihood of the salmon. I would suggest that the salmon is contained and will not swim within 2 meters from the water surface. This is to eliminate the possibility of being spotted by the eagle. What do you think? Can you think of any other ways to contain the threat of the eagle feeding on the salmon?



Did you realize that from the above exercise you have just been involved in identifying a threat, in this case the presence of an eagle around the vicinity of the salmon's habitat? Our interest in this exercise is to protect the livelihood and survivability of the salmon therefore, we devised ways to protect the salmon from the error of being caught in its death.



In any Aviation Operation we can identify threats as observable threats which are known, for example weather or turbulence or unexpected threats which take the form of inflight turbulence. There are latent threats which may be observable at management levels or systems and SOP's, training and the organization culture, they are uncovered by the analysis of confidential report.

**Threats** are always abstract in nature they lurk around operations waiting for errors to occur from the operators or a system before they can manifest themselves as accidents, it takes great mental discipline to be able to identify these threats.

To understand **errors**, let's look at the definition: "action or inactions by the crew that lead to deviations from intention or expectations". Unlike threats, errors are manifested and are not abstract so the only way to address errors is to resist it as it is or has occurred. The **resolve** of operational personnel assists in

identifying and resisting errors, the worst thing to do in the case of an error is not deciding to fix it, on the other hand however, intentional non-compliance is not an error, it is a violation.

Errors are **resisted** by training and improving competencies allowing individuals to be resilient enough to recover in time after being startled by the error committed and making the correct decision for the execution of a safe and efficient operation.

Likewise, in aviation we should individually protect our operations from the threats that may materialize as errors and cause accidents and incidents if they are not identified and mitigated. Safety managements systems allow for these processes so we can consider the reality of human error and other threats, mitigate it with rules, regulations and operating procedures to safeguard the livelihood and survivability of our National Civil Aviation Industry ■



# Aviation Safety Hazards

# Tropical Cyclones



**Tropical cyclones are the most destructive larger scale storms in the world.**

The generic term "tropical cyclone" (TC) is used to describe these non-frontal synoptic-scale storms originating over tropical oceans.

The World Meteorological Organisation (WMO) has developed a classification according to the wind speed:

- **Tropical Disturbance** - A region of enhanced convection with light surface wind speed and a diameter of 200-600 km (approximately 100-30 nautical miles) having a non-frontal migratory character;
- **Tropical Depression**— A weak tropical cyclone with a definite closed surface circulation and highest sustained wind speeds (averaged over one minute or longer period) of less than 34 knots (63km/hr);
- **Tropical Storm**— A tropical cyclone with closed isobars and highest sustained wind speeds of 34 to 63 knots (117km/hr);
- **Tropical Cyclone/Typhoon/Hurricane**—A tropical cyclone with highest sustained wind speeds of more than 64 knot (119km/hr). The term "typhoon" is used in the western North Pacific. "Hurricane" is used in the Caribbean Sea, the Gulf of Mexico, the North Atlantic Ocean and the eastern and central North Pacific Ocean. Elsewhere, this is called a "tropical cyclone".

*Note. — In the case of aeronautical meteorological service provision, advisory information on tropical cyclones must be issued when the maximum of the 10-minute mean surface wind speed is expected to reach or exceed 17 m/s (34 kt) during the period covered by the advisory.*



Figure 1: Hurricane Michael, Florida Panhandle, USA, October 2018  
(Source: NOAA)

**There are necessary environmental conditions for a TC to develop:**

- sufficient ocean thermal energy (typically above 26°C to a depth of 60 m);
- enhanced mid-troposphere (600-700 hPa) relative humidity;
- conditional instability (normally met in the tropical region);
- enhanced lower troposphere relative vorticity (as a source of cyclonic rotation);
- weak vertical shear of the horizontal winds at the genesis site; and
- Coriolis force strong enough (genesis site displaced usually by at least 5° latitude from the equator).

These conditions are met in synoptic environments such as the Near Equatorial troughs (NETs) or the Monsoon troughs.

Mature tropical cyclones vary considerably in size. 500 km (270 nm) is a typical diameter but the area of high winds is usually no more than about 150 to 250 km (80 to 135 nm) across. At the centre of the storm is the "eye", a roughly circular area, typically 20 to 50 km (10 to 27 nm) in diameter.



Tropical cyclones often have erratic paths. Maps showing the tracks of cyclones over a period of years may seem chaotic at first glance, but, on closer inspection, features common to many cyclones emerge. For example, in the early stages of their lives they often move towards the west as though embedded in a general easterly flow in the tropics.

This early movement may be slow or may be rapid depending on the environmental conditions. Later, as they drift further away from the equator, they may tend to "recurve" and move towards the north-east (northern hemisphere) or south-east (southern hemisphere) until they are swept up into the westerlies of the middle latitudes. Cyclones moving out of the tropics usually decay or acquire the characteristics of extra-tropical cyclones.

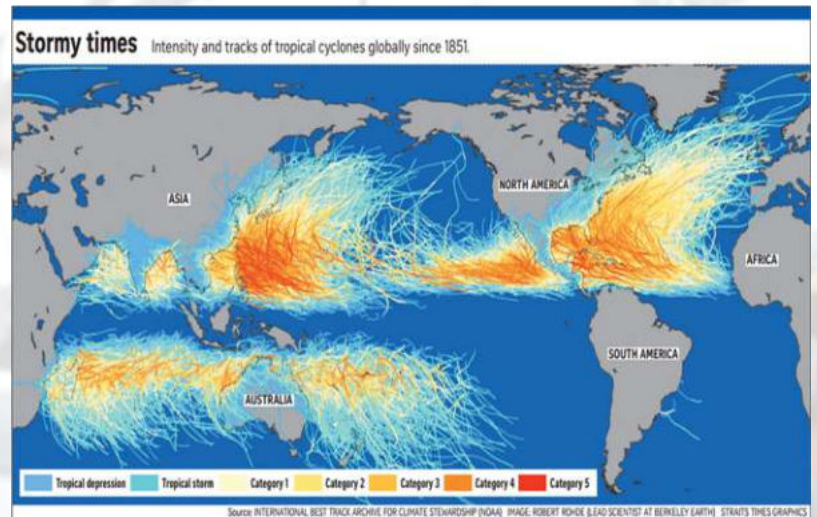


Figure 2: Climatology of the intensity and tracks of tropical cyclones globally since 1851 (Source: International Best Track Archive for Climate Stewardship, NOAA)

### Awareness of hurricane/typhoon/tropical cyclone track climatology is important for aviation operators

Operators must become aware of the seasons and regions when and where such storms can be expected. These storms are frequent over the North Atlantic and eastern North Pacific Oceans during the months June through November. Occasionally one can also encounter early or late season storms.

The western Pacific Ocean has a striking feature: typhoons can form throughout a year, although most of the typhoons occur during the months between July and November. Westward-propagating disturbances from the western tropical Pacific Ocean amplify along the tropical belt. On the Indian Ocean side over the Bay of Bengal and the Arabian Sea, these storms are only seen during pre- and post-monsoon months, i.e. April and May (pre), October and November (post). Exceptions can however occur during months adjacent to the above.

Over the southern hemisphere, the genesis occurs from November to April. Occasionally one can also encounter early or late season storms. Such storms very rarely occur over the southern Atlantic Ocean. This is primarily due to the large climatological tropospheric vertical wind shear (westerlies increasing with height present) which is too great to sustain storms.

Aircraft in flight should avoid tropical cyclones and aircraft at airports in threatened areas should be secured or evacuated to another location away from the path of the storm. The main risks arise from destructive surface winds, which exceed 64 kts in a severe cyclone (hurricane, typhoon) and can reach 160 kts or more, and from the heavy rain that can exceed 500 mm in a 24-hour period.

### In coastal areas, storm surge poses an additional hazard

The storm surge is produced by the combined effects of sudden reductions in atmospheric pressure and strong winds of the cyclone piling up sea water, which causes severe flooding when it strikes the coast. The height of the surge depends on several factors including tides, currents, the shape of the seabed and the coastline, and the angle and speed at which the surge approaches the shore. Typically, the raised dome of water is about 60 to 80 km across and 2 to 5 metres (6 to 15 ft) above normal tide level.

Pilots should know of the position and possible short-range tracks of tropical cyclones along their flight plans.

A corridor of tropical cyclone surface wind speed in excess of 80 kts is generally to be avoided. Most commercial aircraft fly at upper levels between 29,000 to 41,000 ft above sea level. Even at these upper levels there can be severe turbulence in the heavy convective portions of the eye wall and the inner rain bands.

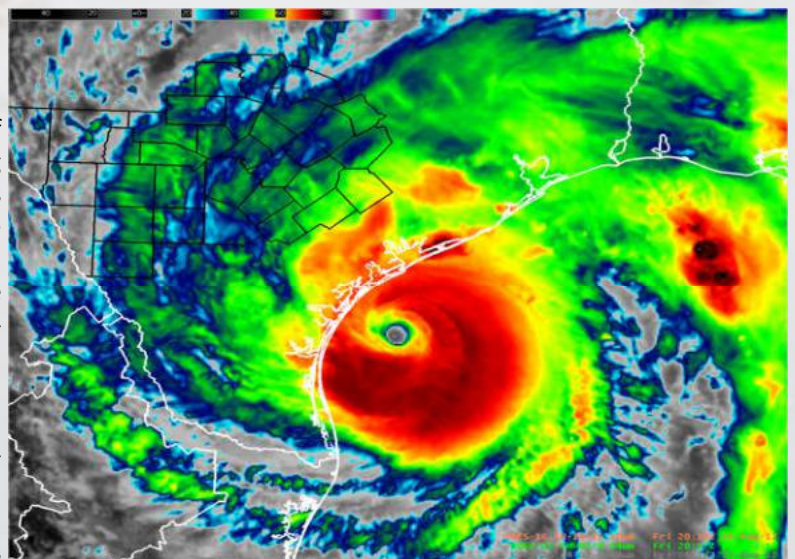


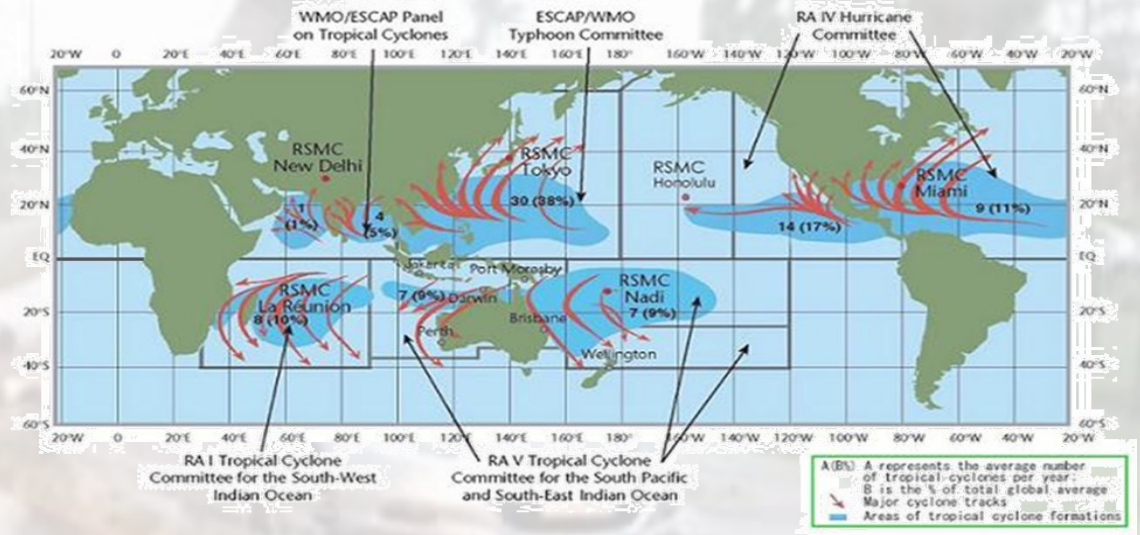
Figure 3: Radar rainfall overlaid on infrared satellite image of Hurricane Harvey as it made landfall in Texas, United States, in August 2017. (Source: NOAA)

# Aviation Safety Hazards

## Tropical Cyclones cont....

WMO Regional Specialized Meteorological Centres (RSMCs) and Tropical Cyclone Warning Centres (TCWCs) are responsible for tropical cyclones forecasting.

Some of the WMO RSMC/TCWC are also Tropical Cyclone Advisory Centres (TCACs) designated by the International Civil Aviation Organisation (ICAO) to supply aviation users and other with tropical cyclone advisory information.



In total, ICAO has designated 7 TCACs as follows:

TCAC	Area(s) or responsibility	Website
Darwin	Seas surrounding Australia, Indonesia and Papua New guinea and the eastern Indian Ocean	<a href="#">Link</a>
Honolulu	Central North Pacific	<a href="#">Link</a>
La Réunion	South-west Indian Ocean	<a href="#">Link</a>
Miami	North Atlantic, Caribbean Sea and Gulf of Mexico plus eastern North Pacific	<a href="#">Link</a>
Nadi	Central and western South Pacific	<a href="#">Link</a>
New Delhi	Arabian Sea and Bay of Bengal	<a href="#">Link</a>
Tokyo	Western North Pacific	<a href="#">Link</a>

On the public internet numerous websites provide access to real-time or near-real-time satellite imagery over the tropics. Here is a selection:

Provider	Area(s) of coverage	Website
National Oceanic and Atmospheric Administration (NOAA) Geostationary Satellite Server	Continental United States, western Atlantic Ocean, Caribbean Sea and eastern Pacific Ocean	<a href="#">Link</a>
NOAA Regional and Mesoscale Meteorology Branch (RAMMB)	Central and eastern United States	<a href="#">Link</a>
National Aeronautics and Space Administration (NASA) Earth Science Office and Short-term Prediction Research and Transition (SPoRT) Centre	West Atlantic Ocean and Caribbean Sea and far eastern Pacific Ocean	<a href="#">Link 1</a> <a href="#">Link 2</a>
Cooperative Institute for Meteorological Satellite Studies (CIMSS) Space Science and Engineering Centre (SSEC)	Multi-regional including Pacific Ocean, Atlantic Ocean, Indian Ocean and Australasia	<a href="#">Link</a>
European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)	Multi-regional including Europe, Africa, Middle East and West Asia	<a href="#">Link</a>
Japan Meteorological Agency (JMA)	Asia and Western Pacific Ocean	<a href="#">Link</a>
Korean Meteorological Administration (KMA)	Korean peninsular, East Asia, Asia and western Pacific Ocean	<a href="#">Link</a>
Australian Bureau of Meteorology (BoM)	Australia and surrounding seas	<a href="#">Link</a>

Source: Article uplifted from WMO; Aviation/Hazards/Tropical Cyclones



# Hierarchy of Fiji's Civil Aviation Laws

## Rule Making Process

**A**cts are usually subject to a longer and more involved legislative process, involving multiple readings, debates, and votes by Parliament. Regulations are typically made by the Minister through a rule-making process. The Acts empowers the making of regulations, while the regulations empower the making of SDs, National Security Programmes and other CAAF official publications■

### 2013 Fijian Constitution

#### Acts

- Civil Aviation Act 1976
- Civil Aviation Authority of Fiji Act 1979
- Civil Aviation (Security) Act 1994
- Civil Aviation Reform Act 1999
- Civil Aviation (Convention on International Interests in Mobile Equipment) Act 2012
- Civil Aviation (Ownership and Control of National Airlines) Act 2012
- Civil Aviation (Montreal Convention, 1999) Act 2016

#### Regulations

- Civil Aviation (Licensing of Air Services) Regulations 1978
- Air Navigation Regulations 1981
- Civil Aviation (Security) Regulations 1994
- Civil Aviation (Fees and Charges) Regulations 2007
- Civil Aviation (Occurrence Reporting and Investigation) Regulations 2009
- Civil Aviation (Convention on International Interests in Mobile Equipment) Regulations 2012

#### Official Publications & National Security Programmes

- CAAF Standards Documents (SDs)
- Aeronautical Information Circulars (AICs)
- National Civil Aviation Security /Training/Quality Control Programmes

The 2013 Fijian Constitution is the supreme law of Fiji.

Any other law (Acts, Regulations, SDs, etc) that is inconsistent with the Constitution is deemed void to the extent of the inconsistency■

# Airport Pavement

**A**irport pavements are complex engineering structures that must be properly designed and maintained to support an efficient national aerospace system. The airside vicinity consists of various pavements for Runways, Taxiways, Aprons and service roads.

There are two types of pavements:

1. **Flexible Pavement:** In flexible pavements, vehicular stress is transferred to subgrade through gain-to-gain contact of the aggregate through the granular structure. These types of roads have less flexural strength and act like flexible sheets (e.g. bituminous roads).
2. **Rigid Pavement:** In rigid pavement, vehicle loads are transferred to subgrade soil by the flexural strength of the pavement and the pavement acts as a rigid plate (e.g. cement concrete roads).

These pavements must provide adequate structural support for the loads imposed by aircrafts, with surfaces that are stable, smooth, skid resistance and free of particles which can be ingested by aircraft engines, picked by propellers or jet blast.

## Pavement Maintenance

**SD Aerodromes Appendix 10 Clause 1.2 states:** A maintenance program, including pavement preventative maintenance where appropriate, shall be established at an aerodrome to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation.

**SD Aerodromes Appendix 10 Clause 2.1 states:** The surface of all movement areas including pavements (runways, taxiways and aprons) and adjacent areas shall be inspected and their conditions monitored regularly as part of an aerodrome preventative and corrective maintenance program with the objective of avoiding and eliminating any foreign object debris (FOD) that might cause damage to aircraft or impair the operation of aircraft system.

## Identifying Pavement Defects

All personnel who have access to airside have a responsibility to airside safety. One of the keys skills which can be developed whilst on airside is identifying pavement defects and reporting it to the relevant airport operator for appropriate action.

Refer poster of common pavement defects which can be identified visually

Source: Federal Aviation Administration & Pavement Management Services

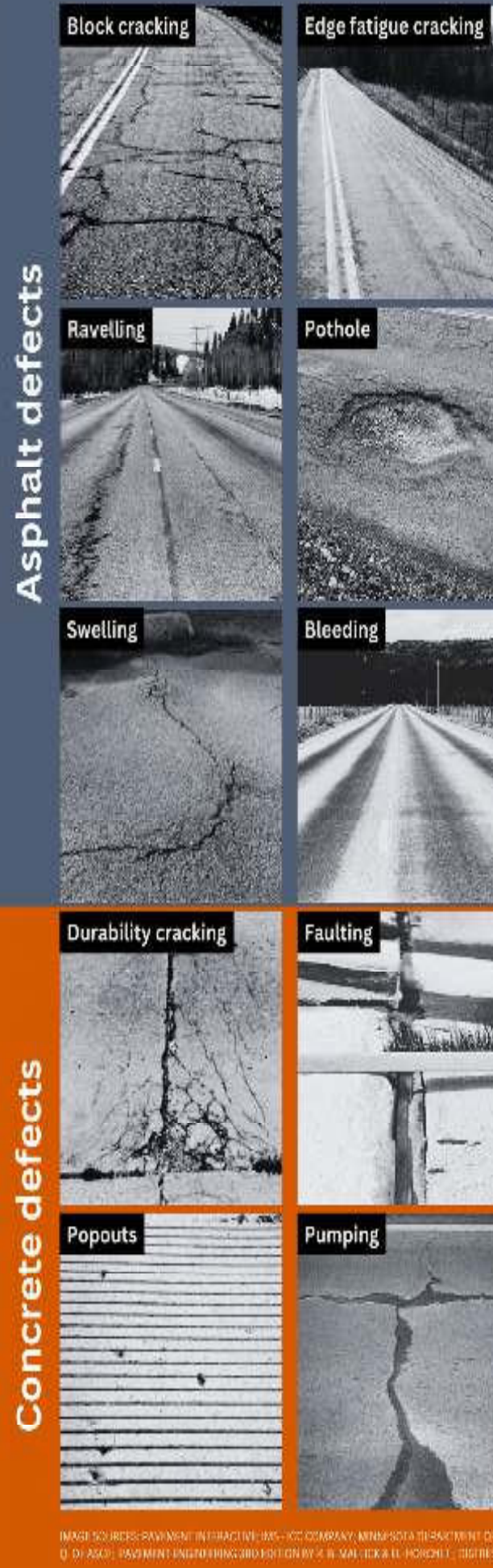


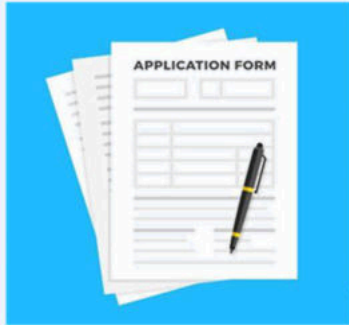
IMAGE SOURCES: PAVEMENT INTERACTIVE (WISCONSIN) COMPANY, MINNESOTA DEPARTMENT OF TRANSPORTATION, PAVEMENT ENGINEERING SOLUTIONS BY S.W. MALICK & L. PORCHET, DIGITRE







# Flight Crew Foreign Conversion Application Process



1

## Formal Application

Applicant submits PL104F form with supporting documents and pays relevant fees.

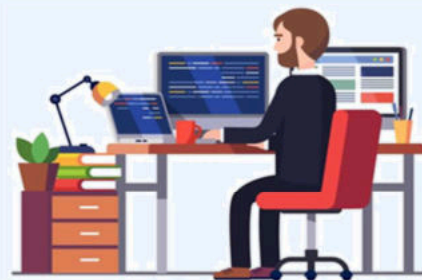
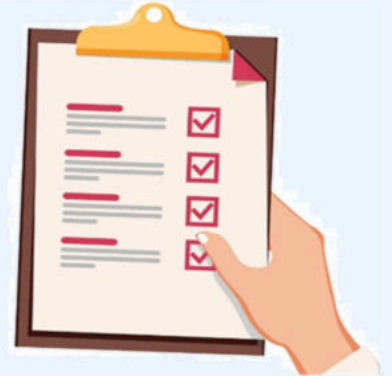
- a) Valid Instrument Rating
- b) Valid Class 1 Medical Certificate by CAAF AMA
- c) Hold a Valid Validation Certificate
- d) Pass Air Law Examination
- e) Pass Conversion Flight Test

Application Forms can be accessed from our website [www.caaf.org.fj](http://www.caaf.org.fj)

## Application Evaluation

Form is checked for completeness, accuracy and payments, then assessed as per the Standard Document. Licensing Officer will recheck with issuing Authority whether licence detail is correct and provisions of the original licence submitted is in compliance with ICAO Annex 1

2



3

## Licence Processing

Once Conversion Flight Test has been done and Pass with CAAF Inspector Licence Conversion is processed and forwarded for endorsement.

## Verification & Endorsement

4

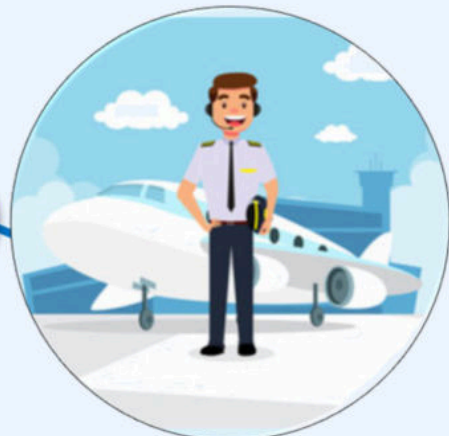
Foreign Conversion License is verified and Endorsed. Post procedures are conducted.



## Ready for collection

Fiji Licence is issued to applicant.

5





## FOREIGN PROFESSIONAL AEROPLANE PILOT LICENCE FLIGHT TEST

Holders of a valid CPL (A), or ATPL (A) issued by an ICAO Contracting State, who meet the flying experience requirements specified in paragraph 3.5, will be required to pass a foreign licence conversion check flight with an Authority Flight Operations Inspector.

## HOLDERS OF FOREIGN PILOT LICENCES

Holders of a valid pilot licence issued by an ICAO Contracting State will be required to undertake a foreign licence conversion check flight.

## FOREIGN PROFESSIONAL AEROPLANE PILOT LICENCE FLIGHT TEST

Holders of a valid CPL (A), or ATPL (A) issued by an ICAO Contracting State, who meet the flying experience requirements specified in paragraph 3.5, will be required to pass a foreign licence conversion check flight with an Authority Flight Operations Inspector.

## CONVERSION OF A FOREIGN LICENSE

As an alternative to validate a foreign licence, a State may issue a licence that is based on the foreign licence held by the applicant. In doing so, the Licensing Authority accepts the fact that holding a foreign licence is an acceptable way to demonstrate compliance with its own national licensing regulation. The conditions for the conversion are generally similar to that of a validation.

# Establishing the Advanced Passenger Information (API) System in Fiji

Fiji is in the process of establishing the Advanced Passenger Information (API) system as part of the International Civil Aviation Organisation's (ICAO) Aviation Security Standards provisions of Annex 9 – Facilitation to enhance the security of global aviation. ICAO Standard 9.7 requires each Contracting State to establish an Advanced Passenger Information (API) System.

The ICAO defines API as an electronic communications system whereby required data elements are collected and transmitted to border control agencies prior to flight departure or arrival and made available on the primary line at the airport of entry.

This information allows border agencies at the airport of entry sufficient time to check the information and match it against security databases to identify terrorists, criminal elements or persons of interest who may pose a risk to the flight and aviation.

Fiji had sought the assistance and expertise from specialized agencies of the United Nations. These agencies will be working closely with border control agencies and stakeholders in the country to develop the appropriate (legal) framework for the establishment of the API System.

The implementation of API will assist border control agencies in the advanced screening of persons, prior to entry into the country ■

## DIFFERENCE BETWEEN CONVERSION AND VALIDATION

	Conversion	Validation
Issuance	<ul style="list-style-type: none"> <li>The applicant must hold a licence issued by another ICAO Contracting State</li> </ul>	<ul style="list-style-type: none"> <li>The applicant must hold a licence issued by another ICAO Contracting State</li> <li>A validation is only valid when used in conjunction with the supporting licence</li> </ul>
Maintenance of validity	<ul style="list-style-type: none"> <li>The "converted" licence must be maintained valid in accordance with the national requirements</li> <li>The original licence may lapse without impacting the validity of the "converted" licence</li> </ul>	<ul style="list-style-type: none"> <li>The supporting licence must be maintained valid in accordance with the requirements of the issuing State</li> <li>The validation may be more restrictive (in term of duration and privileges) than the supporting licence</li> </ul>
Extension of privileges	<ul style="list-style-type: none"> <li>Additional ratings can be added to the "converted" licence in accordance with the requirements of the State that has converted the licence</li> </ul>	<ul style="list-style-type: none"> <li>A validation cannot provide more privileges than the supporting licence. If additional ratings are required, they need to be added to the supporting licence before they can be taken into account in the validation ■</li> </ul>

**YOUR  
FEEDBACK  
MATTERS!**

# Seeking Your Feedback

In this dynamic world of aviation, the Civil Aviation Authority of Fiji (CAAF) is looking at ways of improving the quality of the service we provide with the use of a Feedback Box. This initiative aims to empower our aviation customers and assist in gathering valuable insights to continually improve the quality of our services.

The Feedback Box is accessible; it is placed strategically in CAAF's high-traffic area i.e. its foyer, and provides a direct channel to share your thoughts, experiences, and suggestions regarding CAAF's services. This simple yet effective tool serves as a tangible expression of CAAF's commitment to maintaining the highest standards in aviation safety and security.

The Feedback Box concept is straightforward – CAAF's customers can drop in their comments, compliments, or concerns anonymously. There is a Feedback Form (Form No. QA 108) provided for this purpose.

CAAF believes that every person's perspective is essential, and the feedback collected serves as a crucial resource for identifying areas that require improvement and recognizing commendable practices.



Figure 1 - CAAF Feedback Box

We look forward to hearing from you.

Alternatively, you can also submit your feedback online through our website at [www.caaf.org.fj](http://www.caaf.org.fj) ■



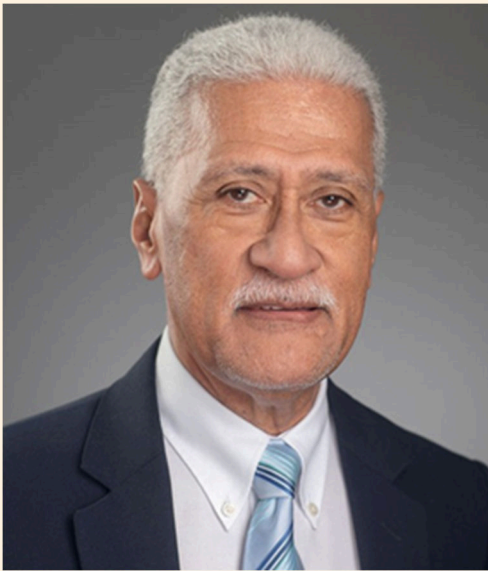
Figure 2 - Feedback Box in CAAF Foyer



Contact CAAF  
Office Number: (679) 892 3155  
E-mail: [info@caaf.org.fj](mailto:info@caaf.org.fj)  
Website: [www.caaf.org.fj](http://www.caaf.org.fj)



# CAAF Appoints Executive Manager Air Safety



**Capt. Tom (Cama) Waqa**

**C**apt. Tom (Cama) Waqa was appointed by the Civil Aviation Authority of Fiji (CAAF) as Executive Manager Air Safety (EMAS) overseeing CAAF's Airworthiness and Flight Operations Branches with effect from 30<sup>th</sup> October 2023.

Approaching 50 years of service to aviation, Tom brings to CAAF an extensive and varied work experience having held positions as an executive and senior manager, flight operations manager, a senior airline pilot, flight examiner and instructor on aircraft, simulator and ground school. He

served for many years as President and other executive roles with the Fiji Airline Pilots Association.

Tom's professional pilot career includes 25 years with Air Pacific on HS748, BN2A-III Trislander, E110-P1 Bandeirante, BAC1-11 (Check and Training). Also held the position of Check & Training and Fleet Manager on B737 and B747. he was with Saudi Arabian Airlines for 9 years as a B747 Supervisor and Captain, FAA Check Airman, Simulator Instructor and System Ground School Instructor.

He has also served as a Board Director of Air Pacific Ltd, and briefly with CAAF. For 11 years to 2023, Tom was the Deputy Director of Civil Aviation in the Civil Aviation Safety Authority of Papua New Guinea (CASA PNG). Tom holds a Master of Business Administration (MBA) degree from the University of Liverpool (UK).

To help improve aviation safety operational standards, Tom aims to drive increased effectiveness and efficiencies through a collaborative and partnership approach between CAAF's regulatory safety oversight and surveillance obligations and the air operators' performance. This can be achieved by all parties in the aviation ball park working together as a team and striving towards the common goal of safer air operations that produce operational and economic benefits for the participants and the aviation community. ■

CAAF Fiji is keen to hear from you regarding our levels of service. If you believe you have constructive ideas on how we can improve our services, or would like to report instances where we have failed to meet your expectations, please send your feedback to CAAF, preferably using the QA 108 form that can be accessed from our website. This can be sent to CAAF via email or dropping it in the feedback box in the foyer of CAAF

HQ, or

**emailing to :**

**[info@caaf.org.fj](mailto:info@caaf.org.fj)**

## FCAIR

**FIJI CONFIDENTIAL  
AVIATION INCIDENT**

**REPORTING**

**FORMS AVAILABLE**

**ON WEBSITE**

**[www.caaf.org.fj](http://www.caaf.org.fj)**

**OR FRONT DESK,  
CAAF HQ.**



# Breaking Barriers:



*Harieta Tudreu*

# First Female Aerodrome Inspector

As the aviation industry propels forward, its commitments to collaboration and inclusivity remains paramount. In line with this commitment, the ICAO has passed a resolution *A41-26: ICAO Gender Equality Programme* promoting the participation of women in the global aviation sector. The resolution reaffirms ICAO's commitment to enhancing gender equality and the advancement of women's development aiming to achieve an aspirational goal of 50-50 (women -men) by 2030 at all professional levels of employment in the global aviation sector.

Gender equality in aviation is not just a concept, it is a driver for sustainable development for the whole international civil aviation sector.

In September 2023, the Civil Aviation Authority of Fiji was proud to appoint Fiji's First Female Aerodrome Inspector. This is a breakthrough by **Harieta Rosarine Noele Niurou Tudreu** who has over 6 years of experience in a civil aviation sub-discipline, in airport planning/design, construction, maintenance, and aerodrome operation. Ms Harieta graduated from the Fiji National University with a Degree in Civil Engineering before joining the aviation industry.

She began her aviation journey as a graduate trainee engineering with Fiji Aerodrome Operator and Air Navigation Service Provider – Airports Fiji Limited at the age of 25 and moved up the rank to be one of the project officers before joining the Civil Aviation Authority of Fiji as an Aerodrome Inspector Cadet on August 16, 2022 and underwent intensive training locally and abroad including On the Job Training before her promotion to Aerodrome Inspector. Ms Harieta works in the Aerodrome and Ground Aids (AGA) Section which forms part of the Ground Safety Department at CAAF. In this role, she is responsible for ensuring the safety of aerodrome operations, Ground Handling Service Providers (GHSP), and helicopter landing sites (heliport and helipads), in compliance with applicable ICAO Standards and Recommended Practices (SARPs) as well as Fiji Legislation and Standards.

Ms Harieta is passionate about Aviation Safety and giving back to Fiji and the Pacific through her role as an Aerodrome Inspector.

As she settles the score for gender equality for the organisation, she also creates a safety, welcoming and supporting environment that is essential for a robust workforce and tackling the existing challenges. The realization of growing in this sector relies on the resolute commitment of industry leaders. Leaders serve as a role model as they strongly promote diversity at all levels ■





**NEVER AIM  
LASER  
POINTERS AT  
AIRCRAFT!**



CIVIL AVIATION AUTHORITY OF FIJI  
ISO 9001: CERTIFIED

The public is warned that pointing **laser lights** at aircraft could blind pilots and endanger the aircraft and passengers on board.



- \*Temporary Flash Blindness**
- \*Distract and Startle**
- \*Glare and Disruption**

**Any person who is caught pointing laser lights at aircraft is liable to a fine of upto "\$1,000 and/or "imprisonment for a term of upto 6 months.**

*If you see anyone pointing a beam of light towards an "aircraft, report it immediately" to the nearest Police Station.*

**DON'T RISK THE LIVES OF OTHER PEOPLE**

# Mandatory Occurrence Reporting & Investigation

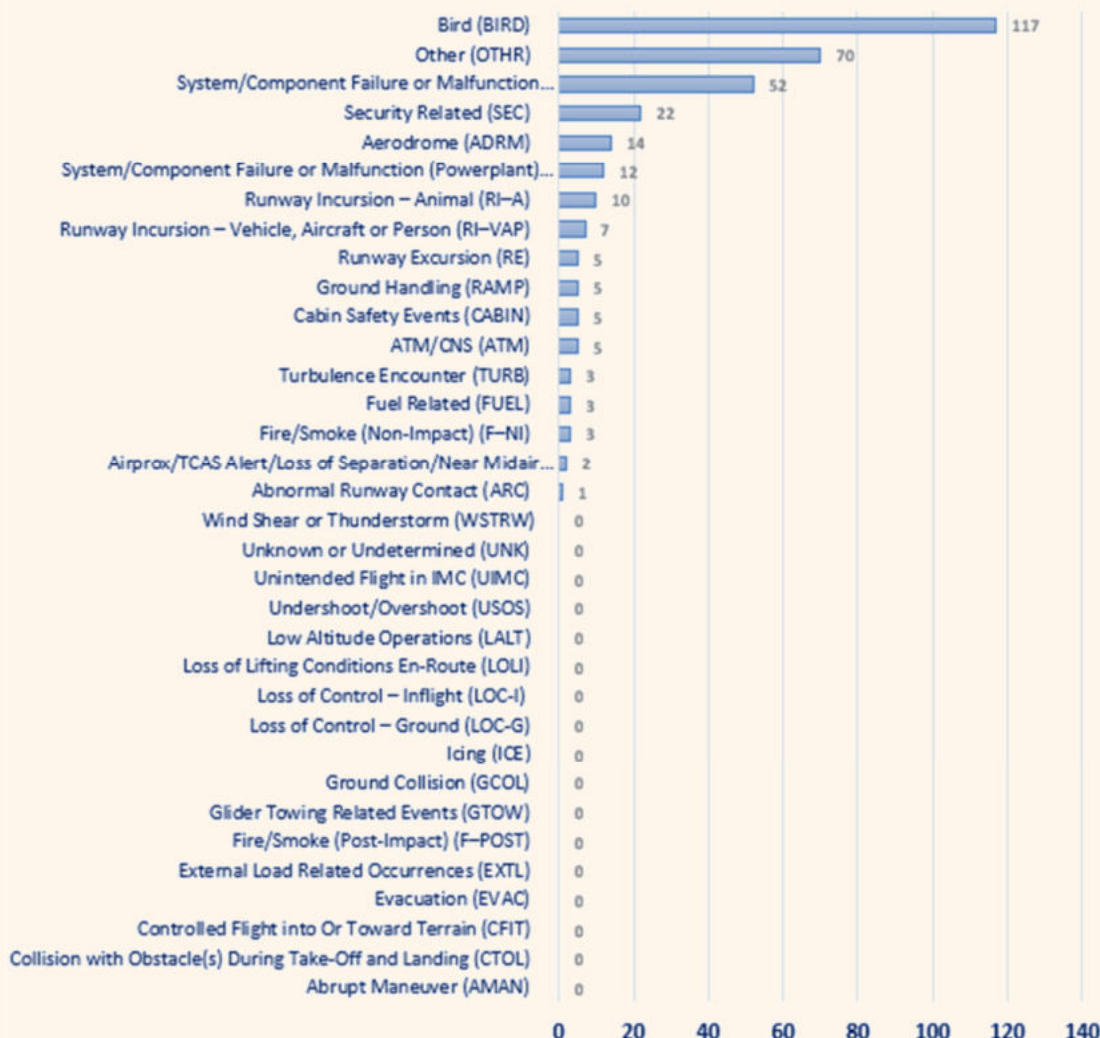
A Mandatory Occurrence Report (MOR) is a report filed, under section 71 of the Air Navigation Regulations (ANR) 1981, following the occurrence of an incident type listed in the ANR.

An important aspect of the risk-based approach methodology of safety and security oversight is correctly classifying occurrences. It enables identification of high-risk areas to enable better safety and security oversight assignment.

The top four reported incident categories over the past 12 months were:

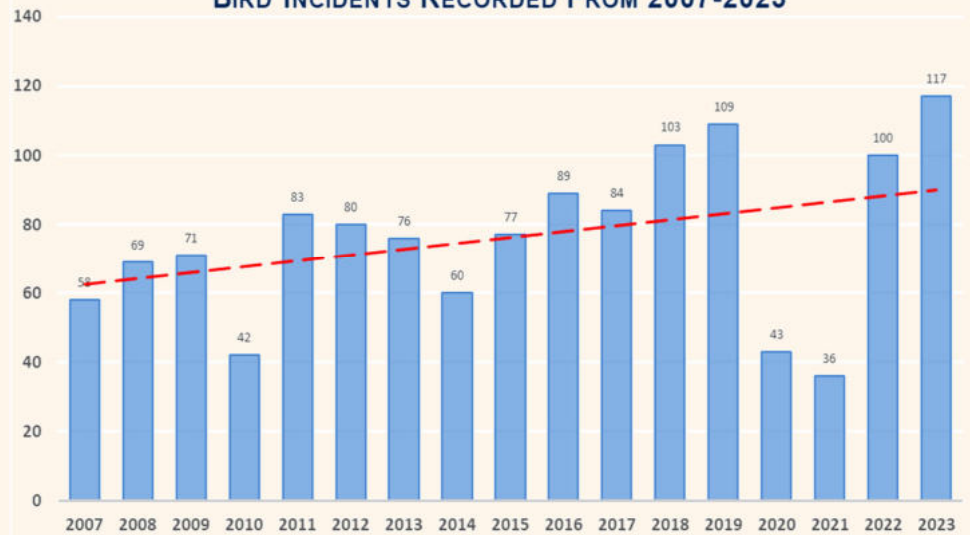
1. Bird Incidents (BRD) 35%
2. Other (OTHR) 21%
3. System/Component Failure or Malfunction Non-Power plant (SCF-NP) 15%
4. Security (SEC) 7%.

**CLASSIFICATION OF MORs OVER THE LAST 12 MONTHS**





### BIRD INCIDENTS RECORDED FROM 2007-2023



The highest reported number of MORs received over the last 12 months were associated with bird incidents; bird strikes or near misses.

The following graph depicts the number of bird incidents reported from 2007 to 2023.

*\* The graph illustrates an upward drift of the bird incident rate over the past 16 years.*

Over the past decade, there has been a change in the number and the composition of the bird population as well as in the habitat of some of the species. With the development around the airports, bird’s habitats are being disrupted which has resulted in migration of the birds to the airport area where there is more open space.

Work is ongoing with aerodrome operators to ensure the implementation of wildlife prevention programs. Guidance Material on Wildlife Hazard Management has been published by CAAF and available for download from the CAAF website.

Bird Incidents are classified as:

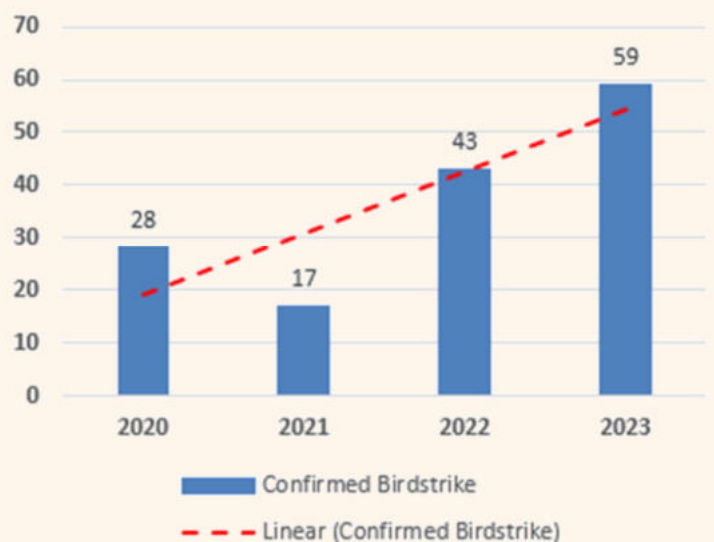
**Confirmed strikes:** Any reported collision between a bird or other wildlife and an aircraft for which evidence in the form of a carcass, remains or damage to the aircraft is found.

**Unconfirmed strikes:** Any reported collision between a bird or other wildlife and an aircraft for which no physical evidence is found or any bird/wildlife found dead on an airfield where there is no other obvious cause of death (e.g. struck by a car, flew into a window, etc.).

**Serious incidents:** Incidents where the presence of birds/wildlife on or around the airfield has any effect on a flight whether or not evidence of a strike can be found.

The graph shows confirmed birds strike since 2020.

### CONFIRMED BIRDSTRIKE



*Common Birds confirmed to have been struck varies from large sized (Belo), Medium sized (Pacific Golden Plover – PGP) and small sized (Mynah).*

The second highest reported category of MORs was OTHER. This is associated with MORs which do not fall in any other categories. Common MORs reported under the OTHER category include Dog sightings on the airside, Laser lights pointed at aircraft in flight, Not maintaining listening watch on assigned frequency, Loss of communications, Missed Approach and Go-Around manoeuvres, Flight & Duty time exceedance, Reduced crew operations, Parking Regulations not followed, Boarding issues, PAN call, Non-adherence to ATC instructions, TCAS Alerts.

Reporting aviation occurrences to CAAF is of paramount importance as it plays a crucial role in ensuring the safety, security, and integrity of the aviation system. These reports serve as a vital source of information for CAAF and assists us in identifying potential safety hazards, analyzing trends, and implementing preventive measures. By fostering a culture of transparency and accountability, reporting occurrences helps in mitigating risks and preventing the recurrence of incidents.

Timely and accurate reporting allows CAAF to address systemic issues, enhance safety protocols, and continually improve aviation standards. Additionally, this information is invaluable for the development of comprehensive safety and security programs, training modules, and regulatory guidelines.

Ultimately, the collaborative effort between aviation stakeholders and CAAF in reporting occurrences serves to uphold the highest standards of safety and security, ensuring the well-being of passengers, crew, and the industry as a whole ■

# Cataracts Surgery And Best IOL Implant Options

**A**lmost everybody will develop Cataracts if you live long enough. We are born with clear crystalline lenses in our eyes that functions to focus light onto the retina for perfect vision. As we age the lenses become cloudy and the quality of vision deteriorates.

## Symptoms Of Cataracts:

- Glare - both veiling and disabling
- Degraded visual acuity
- Degraded contrast sensitivity
- Degraded stereopsis or binocular vision capacity
- Degraded colour vision

Generally, one has difficulty seeing in dim light and suffer glare from oncoming traffic when driving at night.

## Types of Cataract Surgery - 2 types

### 1. Traditional

A small incision, usually 2, is made to the cornea to allow insertion of instruments. Another incision is made to the anterior lens capsule that allows an instrument to be inserted into the lens substance and using ultrasound shatters and emulsifies the lens tissue. This is called Phacoemulsification, and the tissues are then suctioned out, leaving the lens capsule intact to serve as the bed that will hold the Intra Ocular Implant (IOL) in place.

The procedure takes 10 -20 minutes to complete.

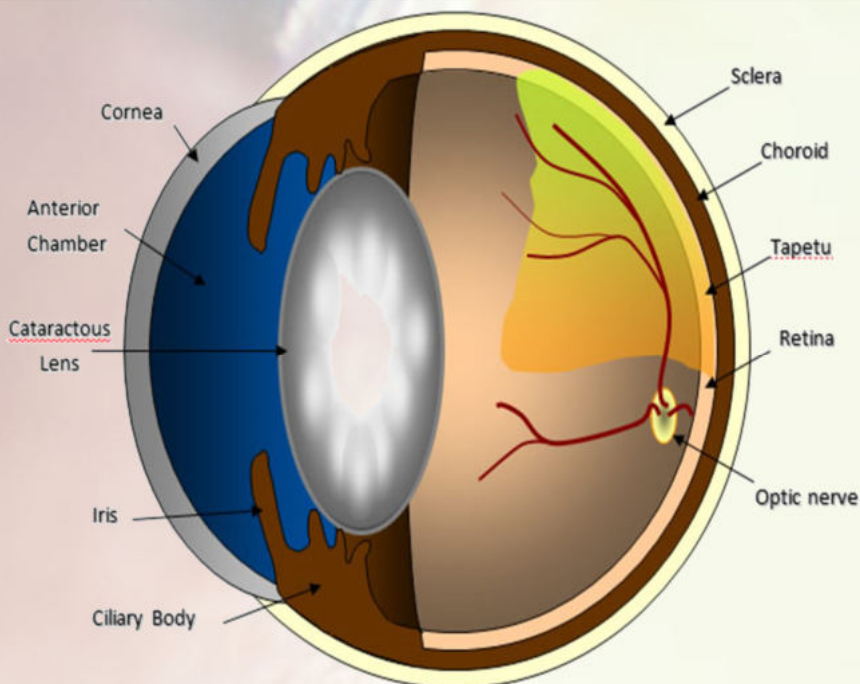
### 2. Femtosecond Laser Assisted Cataract Surgery (FLACS)

This was introduced in 2011 and is more expensive. The incisions, shattering of lens substance done in traditional method is done by laser, and touted to be very precise and cause less inflammation.

But is it better?

A 2022 study found that both techniques give the same outcomes and complication rates.

A 2023 article in the Journal Of American Medical Association (JAMA) found laser cataract surgery to be less cost-effective.





## Intra Ocular Lens Implant Options:

### 1. Monofocal Lenses

Excellent for 1 distance. It usually is set for Distance vision correction and near vision correcting glasses is further needed.

### 2. Mono Vision Option

One eye implant set to distance vision and the second eye implant set to near vision. Both eyes implants could also be set to near vision and extra glasses for distance vision correction provided.

### 3. Toric lenses

- a) Astigmatism correcting lenses.
- b) Presbyopia correcting lenses.

Further divided into;

- i) Accommodating lenses
- ii) Extended Depth of Focus lenses (EDOF)
- iii) Multifocal/Trifocal lenses

#### i) Accommodating Lenses

These are flexible or fluid filled lenses that allow the eye muscles to flex the lenses to accommodate for distance and near vision. It is not so popular now due to the availability of newer technology.

#### ii) EDOF lenses

These lenses have rings or grooves to improve depth of focus, that will cover for distance, intermediate and some near vision. However, some people will still need reading glasses to see fine print. Because of the concentric rings etched onto the lens EDOF share a common side-effect with multifocal lenses (see below).

#### iii) Multifocal /Trifocal Lenses

Also have concentric rings like EDOF but have improved significantly in technology in the last decade to become a much-preferred choice by patients and ophthalmologists.

It gives clear distance vision, clear intermediate vision and clear fine print reading up close. The challenge is that it allows one to see all these depths of vision all the time and the brain has to adapt to this reality over some time. Extra glasses will not be needed. The down side is that most patients suffer ghosting, glares, halos and reduced contrast in vision. There might be challenges to see clearly in dim light and at night. Driving at night will result in more glares and halos from headlights.

A newer technology in the last 5-6 years is the **Light Adjustable Lens (LAL)**. This lens is customisable after surgery. It avoids the doctor pre-calculating the powers of the eye-ball and intraocular lens. After the surgery the doctor can use a special light to tweak and adjust the power of the lens. This allows the most accurate vision to be achieved after the procedure.

The lens is made of a special type of plastic that allows a special type of light to change its shape and thus its power. Once the perfect vision is achieved after a couple of visits then UV light is used to set and harden the lens into its final shape.

The perfect candidates for this lens are:

Post – LASIK/PRK surgery, where the physiology of the cornea has been altered as a side effect and clear vision is a challenge.

Or in elite shooting sports or military where precise vision is required. And also, in those who want to avoid multi ocular lens side-effects like glares, halos and starbursts.

## Complications of Cataract Surgery

Thanks to the advance in technology the common immediate complications of surgery ie. Bleeding, infection, pain is now rare.

The most common complication is called **Posterior Capsule Opacification (PCO)**

This occurs in 20-50% of cases where after months to years' post-surgery the posterior side of the lens capsule that was left behind to hold the Intraocular lens becomes cloudy and worsens vision once again.

The good news is there is a quick simple office procedure, called Nd-YAG Laser Capsulotomy that cures the problem, permanently and there is no recurrence.

## Return To Flying in Aviators Post Cataract Surgery

- Review for return to aviation activities after surgery at least 2 weeks after mono-focal IOL and 12 weeks after multifocal or EDOF IOL in case of recovery after uncomplicated surgery.
- Clearance by DAME to recommence flying or controlling requires a post-operative report from the Ophthalmologist and satisfactory Eye Report.
- Post-Nd: YAG laser capsulotomy is at risk of raised intraocular pressure and necessitates grounding for 30 days ■



ISO 9001:2015 CERTIFIED  
Civil Aviation Authority of Fiji

**“Guardians  
of the  
Runway: Where  
Ideas Take Flight,  
Safety Lands  
First.”**

More info @ [www.caaf.org.fj](http://www.caaf.org.fj)