AVIATION SAFETY BULLETIN

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An official publication of the Civil Aviation Authority of Fiji

PERFORMANCE & RISK BASED SURVEILLANCE

FIRST A350 XWBS

PEL OFFICE

07th December

International Civil Aviation Day

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

FIRST A350 XWB'S IN THE PACIFIC

07TH DECEMBER—INTERNATIONAL CIVIL AVIATION DAY

HURRICANE CONSIDERATION

PEL OFFICE

Cover Photo : Zac George

In this issue...

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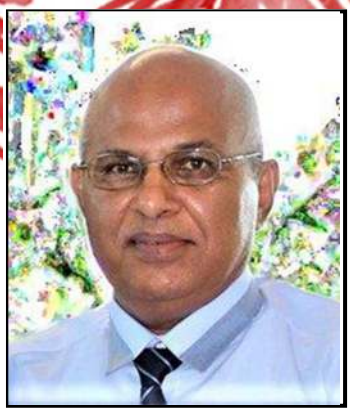


From the Acting Chief Executive

Welcome to the fourth and final edition of the CAAF ASB for 2019.

As we wrap up the year, we take this time to reflect on the activities and events, both planned and unplanned, of 2019 which the Authority has been engaged in and look ahead to the challenges 2020 will bring.

The first quarter of 2019 saw the grounding of the Boeing 737 Max aircraft following two fatal accidents within five months of each other; Ethiopian Airlines flight 302 and Lion Air flight 610. Whilst initial investigations were being conducted, all other B737 Max aircraft around the world were progressively grounded as a proactive safety measure. To this end, the Authority was heavily involved in discussions both pre and post grounding with the manufacturer Boeing, other aviation regulators and of course the local operator Fiji Airways. This culminated in the mutual grounding of the B737 Max aircraft.

The second and third quarter of 2019 saw preparations for Fiji's ICAO Coordinated Validation Mission (ICVM) pick up the pace. A substantial amount of time and resources were allocated to this activity and it was a learning curve for most of the Authority's staff as this was their first encounter with an ICAO audit team. Dedicated staff headed by Fiji's National Continuous Monitoring Coordinator (NCMC) and Controller of CAAF's Air Safety Department, Captain George Tudreu, put in the hard yards resulting in a very positive outcome whereby Fiji's effective implementation of ICAO Standards, previously rated at 63% moved up to 78.31%, third behind Australia and New Zealand in the South Pacific region.

The completion of the ICVM audit does not bring the end of this activity, in fact, it will now feature prominently in the Authority's work plan to ensure that the ICAO Protocol Questions and Fiji's Corrective Action Plan are progressed and kept up to date.

During the ICVM, one of the areas found to have shortcomings was the various aviation legislation and corresponding regulations considered to be outdated or insufficient. The Authority is thankful for Government's support to review the existing primary and secondary legislation in the New Year which, when completed, will provide a uniform legal platform for aviation activities and be in harmony with other neighboring aviation legislation.

The Authority congratulates Fiji Airways on the introduction of its A350 XWB aircraft in November, a first of its type in this region. The Authority worked in partnership with Fiji Airways to ensure the successful and timely introduction of the aircraft onto the Fiji register, another area where much time, effort and additional resources were allocated.

As the aviation industry continues to grow, so has the reporting of incidents and accidents. The Authority continues to advocate the importance of safety initiatives such as the launching of the new look Aviation Safety Bulletin in the 1st quarter of the year and public awareness campaigns on emerging technologies such as Unmanned Aerial Vehicles (UAVs) and dangers to flying such as laser lights were conducted throughout the year.

At this juncture, I take this opportunity to acknowledge and thank our aviation partners for their contribution towards a safe and secure aviation system. The Authority plans to review the State Safety Program (SSP) in 2020 and this will see more engagement with operators on the implementation of their safety management systems (SMS).

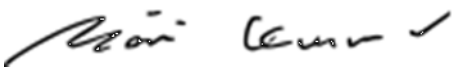
Globally, there is a shortage of qualified aviation professionals, and the Authority has not been immune to this. Staff recruitment has been a challenge, and although the Authority continues to advertise in an effort to recruit those qualified and willing to come on board and make a difference, it is also looking inwards and continues to provide its staff with training and exposure to ICAO meetings and workshops to ensure that they are better able to conduct their safety oversight duties in a professional and diligent manner.

Whilst it is true that air transport is still the safest mode of transport we cannot be complacent and assume that all is well in any aspect of the aviation business. The travelling public has made the choice to use air travel and accordingly pay for the service to keep the wheels of the aviation business turning.

The challenge is for the Authority is to reciprocate and support and/or provide the confidence through all our efforts, a safe, secure, timely and seamless gate to gate journey by air to all destinations within and outside our shores.

On behalf of the Authority, I once again thank all our industry stakeholders and partners for your positive contribution towards

Merry Christmas to you all.■



AJAI KUMAR,
ACTING CHIEF EXECUTIVE

Performance & Risk Based Surveillance

Introduction

The pilot project on **Performance and Risk Based Surveillance (PBS/RBS/PRBS)** shall provide a decision-making platform that assists the Authority in terms of adequately provisioning resources to AMO's and operators based on their performance, risks and to also give an incentive to operators who perform better with longer certificate renewal periods and provide the basis for shorter renewal periods with restrictions, increased intervention/oversight and associated terms and conditions.

Objective

The objectives of a **Performance and Risk Based Surveillance** system is to ensure that there is a robust procedure in place that is able to keep the Regulating Authority accurately apprised of the industry's performance in regards to its requirements as well as having the means to highlight inherent risks that may arise within the scope of their authorisations/operating limitations.

Why do we need to use PRBS?

Annex 19 requires States to:

- Establish a safety data collection and processing system (SDCPS) to **capture, store, and aggregate and enable the analysis** of safety data and safety information.
- Establish and maintain a process to analyse the safety data and safety information from the SDCPS and associated safety databases.
- Establish procedures to **prioritise** inspections, audits and surveys towards those **areas of greater safety concern or need;**
- Ensure that **safety performance indicators and** targets established by service providers and operators **are acceptable to the State;** and
- **Periodically review the safety performance** of an individual service provider.

Note: - Organisational risk profiles, outcomes of hazard identification, risk assessment and surveillance outcomes may provide information for the prioritisation of inspections, audits and surveys.

Annex 19 Defines the following:

Safety Data. *A defined set of facts or set of safety values collected from various aviation-related sources, which is used to maintain or improve safety. Note – Such safety Data is collected from proactive or reactive safety-related activities, including but not limited to:*

a) *accident or incident investigations;*

b) *safety reporting;*

c) *continuing airworthiness reporting;*

d) *operational performance monitoring;*

e) *inspections, audits, surveys; or*

f) *safety studies and reviews.*

Safety Information*. Safety data processed, organized or analysed in a given context so as to make it useful for safety management purposes.*

Benefits of a PRBS

- Meet the Authority objectives and commitment, thus meeting the ICAO annexe 19 surveillance requirements.
- Enable the Authority to have a qualitative and quantitative review of AMO's and operators as compared to an ad-hoc approach.
- Provides better planning and allocation of resources.
- Allows the Authority to provide an accurate feedback to the industry.
- Provides operators with a benchmark to be able to measure their performances and provide an incentive to work smarter and safer.

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Implementation Methodology

The current program is based on a ***Compliance-Based Approach***, with no established processes or procedures on measuring performance and associated risk as indicated in the table below:

Service Provider	AMO 1	AMO 2	AMO 3	AMO 4	AMO 5	AMO 6	AMO 7	AMO 8
Risk	Not Measured	Not Measured	Not Measured	Not Measured	Not Measured	Not Measured	Not Measured	Not Measured
Audit Frequency	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months
Monitoring	Low	Low	Low	Low	Low	Low	Low	Low

Fig. 1 - Safety Data Analysis – Existing Situation

The proposed implementation methodology intends to show the different AMOs in a more accurate assessment as described in the table below:

Service Provider	AMO 3	AMO 8	AMO 1	AMO 2	AMO 7	AMO 4	AMO 5	AMO 6
Risk	HIGH	HIGH	AVERAGE	AVERAGE	AVERAGE	LOW	LOW	LOW
Audit Frequency	6 Months	6 Months	12 Months	12 Months	12 Months	18 Months	18 Months	18 Months
Monitoring	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium

Fig. 2 - Safety Data Analysis – Proposed Implementation

To support the PBRS grading and risk apportioning process, the key assessment methodologies are:

- Quantitative Analysis – using Authority & Operator databases to define the risk grading.
- Qualitative Analysis – Using the internal discussions with the Authority and related Stakeholders in order to objectively analyse and bring the risk grading to an acceptable one.

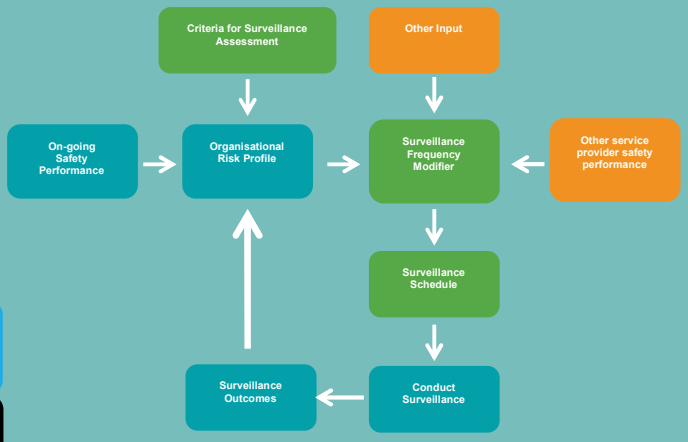

Fig. 3 - Safety Data and Risk-based Surveillance Concept

Safety Data Analysis – GETTING STARTED

The Organisational Risk Profile aims to capture and aggregate information that should already be available and include factors such as:

i. The financial health of the organisation;
ii. Number of years in operation;
iii. Turnover rate of the key personnel such as the Accountable Manager, Safety Manager and other nominated positions;
iv. Competence and performance of the Accountable Executive;
v. Competence and performance of the Safety Manager and other nominated positions;
vi. Results of previous audits;
vii. Timely and effective resolution of previous findings;
viii. Measures of relative level of activity (exposure to safety risk);
ix. Indicators of the relative scope and complexities of the activities being performed;
x. Maturity of the hazard identification and safety risk assessment process; and
xi. Measures of safety performance from State safety data analysis and performance monitoring.

Industry Consultation

Prior to its implementation, an industry-wide consultation will be carried as it is prudent and necessary that all stakeholders are aware of the changes and its benefits in building a better aviation safety culture in Fiji.

- The plan is to begin discussions with the industry so that both, the Authority and the Industry can agree on the methodology.
- Audit reports and organisation risk profiles are to be submitted to the operator after each audit / assessment opportunity. ■

07th December

International Civil Aviation Day

"75 Years of Connecting the World"

7 December marks the anniversary of the signing of the Convention on International Civil Aviation in 1944, also known as the Chicago Convention, which created the International Civil Aviation Organization (ICAO). Since the 50th anniversary in 1994, the aviation world has celebrated International Civil Aviation Day.

The theme for 2019 is ***"75 Years of Connecting the World".***

To know more about this theme one can visit this link :

ICAO75 video

The purpose of International Civil Aviation Day is to help generate global awareness and reinforce the importance of international civil aviation to the social and economic development of States, and of the unique role of ICAO in helping States to cooperate and realize a truly global rapid transit network at the service of all mankind.

The theme celebrates ICAO's 75th Anniversary this year, and it was selected to help draw attention to the fact that safe, secure and rapid connectivity is the core capability of aviation's worldwide network, and the key value offering from which all other international aviation benefits derive – whether commercial, cultural or personal.

The theme was chosen to focus the air transport sector's attention during this historic anniversary much more directly on the future of flight than on its past. This prioritization acknowledged the rapidly expanding capacity of the incredible new aircraft now being conceptualized, designed, and produced to fulfil exciting new services and roles for civil societies.

2019

During the ICAO's 75th Anniversary celebration at the UN General Assembly in Montreal in August 2019, discussion were shared innovation be a guiding priority for civil aviation regulators. It was tremendously encouraging how engaged young people are today in the exciting future now being realized in powered flight, and to share in the excitement they felt at being acknowledged by the global aviation community.

Innovation will be key to how aviation addresses some of its most pressing priorities, today and tomorrow. These challenges include how to keep pace with traffic growth and manage more and more aircraft in a finite operational airspace, as well as how to accommodate steady traffic growth while continuously limiting and ultimately decreasing sectorial emissions.

As we grow more excited and enthusiastic together with each new aircraft and operational capability which moves from the drawing board to our skies, let us not forget as well that aviation safety, security, and efficiency remain our most fundamental value offerings in international civil aviation, providing a core foundation which connects the world.

It is therefore of paramount importance that we realize together an effective and balanced approach to new aviation innovations, accelerating regulatory processes while safeguarding traditional needs relating to regulatory and policy enforcement, consumer protection, and fair and sustainable economic and social development.

The Civil Aviation Authority of Fiji is pleased to join ICAO in celebrating the International Civil Aviation Day on the 7th December 2019.

Enhancing the passengers' experience by having a balanced and standardized security and facilitation arrangement across national borders and, having a seamless, interoperable and harmonized aviation systems between gates and through territorial boundaries is the ultimate goal that will harness the full benefits of aviation for our people and our economic development.

The Civil Aviation Authority of Fiji takes this opportunity to thank all Industry partners for their contribution to civil aviation and their continued commitment to ensuring a safe and secure civil aviation system■

First A350 XWBs In the South Pacific

The CAAF Flight Operations and Airworthiness team were involved with the inspection, acceptance and certification process for two new Fiji Airways A350-900 aircraft. The first aircraft was delivered 23rd November and the second is due on 21st December 2019. The Flight Operations and Airworthiness certification team for the first aircraft were Capt. Tuisue, Jim Samson and Joseph Konrote. The Flight Operations and Airworthiness team for the second aircraft are Capt. Bill Gardner, Anare Ravulo and Joseph Konrote.

The leased Airbus A350-900 aircraft carries 334 passengers with the cabin configuration of 31 Collins Aerospace Super Diamond Business class seats with each offering direct aisle access. While Economy Class will feature 301 Recaro CL3710 seats, which are ranked among the most comfortable long-haul economy class seats on the market.

The aircraft has been named the "***Island of Viti Levu***".

The aircraft will service flights to New Zealand, Australia and the United States. The aircraft went into first commercial service to Sydney on 1st December 2019.

The A350 XWB is the world's most modern and eco-efficient aircraft family shaping the future of air travel. It is the long-range leader in the large wide body market (300 to 400+ seats). The A350 XWB offers unrivalled operational flexibility and efficiency for all market segments up to ultra-long haul (15,000 km).

The A350 XWB is an all new family of mid-size wide-body long-haul airliners shaping the future of air travel. The A350 XWB the latest aerodynamic design, carbon fiber fuselage and wings, plus new fuel-efficient Rolls-Royce engines. Together, these latest technologies translate into unrivalled levels of operational efficiency, with a 25 per cent reduction in fuel consumption and emissions, and significantly lower maintenance costs.

The aircraft is certified under ETOPs rules of up to 370 minutes. The aircraft is currently approved for 180 minutes by CAA Fiji.

The aircraft's innovative design delivers a feeling of spaciousness wherever you look, with wider seats, high ceilings and alluring ambient lighting. Airbus has produced the perfect environment in which to enjoy flying to any long-haul destination. The A350 XWB's cabin also is the quietest on a twin-aisle aircraft, and its advanced technology delivers the highest possible air quality with optimized cabin altitude (6000 ft.), temperature and humidity, with the air being renewed every two-to-three minutes. Passengers can relax knowing that Airbus has thought of everything to ensure that they can arrive feeling fresh.

Designed with passengers and airlines at heart, the A350 XWB benefits from being built with over 70% advanced materials; combining carbon composites (53%), titanium and modern aluminum alloys, to create a lighter and more cost-efficient aircraft while also reducing maintenance requirements. The latest-generation Rolls-Royce Trent XWB engines are quieter and more efficient.

The aircraft marks one of two new A350 XWB which will complement Fiji Airways' existing wide body fleet of six Airbus A330s, with the second delivery set for December 2019.

The combination of these advantages result in 25% lower operating costs, fuel burn and CO2 emissions when compared with previous-generation aircraft.

There are 257 Airbus A350s in the skies around the world today, flown by 24 operators. These include Fiji Airways' partner one world airlines: Cathay Pacific, Finnair, Iberia, Malaysia Airlines and Qatar Airways. Other A350 operators include Hong Kong Airlines, Lufthansa and Singapore Airlines. ■

Picture Source: Boeing

Will 737 Max Return To Service in 2020 ?

Boeing has stated on 2nd Dec 19, that It is possible that the resumption of the 737 Max deliveries to airline customers could begin in December 2019 when the FAA rescinds the airworthiness directive.

Boeing hopes the 737 Max will return to service in January 2020, which will be after the final validation of the Pilots updated training requirements.

There's a five step process Boeing and the 737 MAX must complete, before the FAA will allow the plane back into service. First – and already completed this past week, Boeing says – is an FAA eCab Simulator Certification Session. Run across the course of several days, it's an eCab simulator evaluation designed to test the software updates both in normal and system failure situations.

After that will come a pilots crew workload evaluation, another multi-day simulator session that takes place with actual airline pilots. It's intended to assess human factor and crew workloads, across a variety of test conditions. Assuming that goes to plan, the 737 MAX will make an actual flight with the new software, with FAA pilots at the controls.

Then there's a final submittal to the FAA of the "deliverables and artifacts" which the FAA will use to decide software certification. Finally, a Joint Operational Evaluation Board (JOEB) Simulator Training Evaluation will take place, a new multi-day simulator session involving global regulatory pilots testing out the training requirements. A public comment period will follow and then the training will be given final approval. Boeing says that it's currently working with the FAA on arrangements for the line pilot's evaluation and the certification flight test.

If the FAA is convinced by the 737 MAX update, will passengers be?

Aircraft safety is only part of Boeing's struggle. After it convinces the FAA and other regulators, it'll also need to persuade airlines – and their passengers – that any lingering fears about the 737 MAX are now unfounded. That's a PR challenge few would envy. Working in the aircraft manufacturer's favor is the eagerness of airlines to get the updated plane back into service, given how expensive a grounded fleet can be. Even before this latest timeline was announced, several US airlines separately announced their intent to resume 737 MAX operations in 2020. Southwest and American Airlines, the two largest US operators of the plane, have previously said they expect their fleets to begin flights early in the near year.■

HURRICANE CONSIDERATIONS

The following are some Safety Reminders for Summer:

- **Relocating aircraft to another airport.** This is probably one of the easier considerations when a timely hurricane warning has been issued by the Meteorological organization. The further the distance that aircraft can be removed from the "eye" of the hurricane then the safer they will be. Fiji, with its topographical features provides a number of havens that will offer a measure of safety. For example, airports to the East of Nadi should be considered if a hurricane is expected to pass Nadi from the North.

- **Securing aircraft inside a hangar.** This consideration has merit but operators should determine from a structural engineer what wind velocity their hangar(s) can with- stand. Most modern hangars constructed with a frame of steel beams can withstand a wind velocity of 130 knots. The problem with this consideration is the strength of the hangar doors. Due to the wind velocity on the exterior surface of the hangar doors, they will bend inwards or "concave" with the result that they may detach from the hangar floor or upper railing and be blown into the hangar which will damage aircraft that have been placed inside. Thought should also be given to the wisdom of placing all the aircraft into a hangar. It may be prudent to place some aircraft in a hangar and some elsewhere thereby reducing the risk of losing the fleet should the hangar collapse.

- **Securing aircraft to the ground.** If this consideration is implemented operators should first of all determine the expected wind direction for the arrival and passage of the hurricane to assist with the directional positioning of their aircraft and in this regard, Buys Ballot's Law maybe of some help. This Law states that in the Southern Hemisphere, if you stand with your back to the wind the associated low pressure area will be to your right-hand side.

- Therefore, if a hurricane tracks to the West of Nadi from the North initially the wind will blow from the Southeast and moving anticlockwise, or backing, to the North when the hurricane passes to the West.

Additional safety measures, apart from securing the aircraft to the ground, could include placing chokes around the wheels, applying the parking brake, filling the fuel tanks and placing objects on top of the wings to reduce the lift generated by the airflow.

Although hurricanes may occur around the South Pacific at any time of the year the most likely time that they will occur is during the months from November to April. Prior to November Management and Safety Officers should carry out a review/update of company hurricane procedures to ensure the safe securing of their aircraft, inspect the area surrounding their hangar facilities and dispose of any rubbish/unwanted items which may be found. For example, sheets of unused tin or aluminum, pieces of wood or boarding, empty fuel drums etc.

These items may become airborne in high winds associated with convective clouds and are a hazard as they can cause considerable damage to buildings, parked aircraft and of course, cause injuries/fatalities if persons are struck by them Operators may also consider compiling a hurricane procedures manual which will provide ideas and assistance to staff on the necessary safety actions they can take to secure company aircraft following the issuing of a hurricane alert. This will also provide some historical information and lessons learnt from previous events which remains with the operator irrespective of staff changes that occur over time.

Summer and the hurricane season (November – April) will soon be upon us and all domestic operators are encouraged to issue a reminder notice to company pilots that constant vigilance should be exercised with regard to the sudden changes in weather that take place during this season.

Information on the CAAF Mandatory Occurrence Reporting (MOR) data base shows that during the previous years, this is the most likely time that aircraft accidents/ serious incidents occur in Fiji.

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Key points that pilots should be reminded of include but are not limited to:

- The dangers of taking off and landing when CB activity is in close proximity to the airport.
- The meaning of a micro-burst and the dangers associated with it.
- When flying in IMC conditions monitor the onboard GNSS navigational aid to ensure that it is receiving continuous rain.
- Taking off and landing in marginal weather conditions at airports that do not have letdown aids i.e., low visibility and cloud base.
- Early decision making when executing a visual approach into an airport where a go-around is not possible immediately prior to landing due to rising terrain.
- Teamwork among crew members to ensure a safe outcome.
- Identifying possible safety hazards when assessing weather reports.
- Crew members be vigilant that they are not placed into a situation that is beyond their or the aircraft's capability.
- The importance of having a back-up plan or escape route in the event of a sudden mechanical failure at a critical time or when operating in marginal weather conditions.
- The probability of soft or slippery grass surfaces at airports following heavy or prolonged rainfall. These conditions may also have a detrimental effect on aircraft performance, especially during takeoff.

Company Safety Officers should be encouraged by management to adopt a higher visible profile during this period by actively carrying out their duties as stated in the company Operations Manual.

In addition, Safety Officers should also ensure that safety material is readily available to pilots in areas where they relax between flights.

This is also the appropriate time for Management and Safety Officers to review/update company hurricane procedures to ensure the safe securing of their aircraft and to carry out an inspection of the area surrounding their hangar facilities and disposing of any rubbish/unwanted items which may be found. For example, sheets of unused tin or aluminum, pieces of wood or boarding, empty fuel drums etc.

These items may become airborne in high winds associated with convective clouds and are a hazard as they can cause considerable damage to buildings, parked aircraft and of course, cause injuries/fatalities if persons are struck by them.

DAYLIGHT SAVING TIME

Associated with the start of the summer season is the introduction of daylight saving time whereby clocks are advanced by one hour.

The longer days will provide the public with more time to engage in activities outside of working hours.

Domestic operators, especially those who conduct VFR services, will probably take advantage of the longer days and offer flights to the travelling public later than what is normally done during the rest of the year however, the extended hours of business may come into conflict with the operator's CAAF approved flight and duty time scheme.

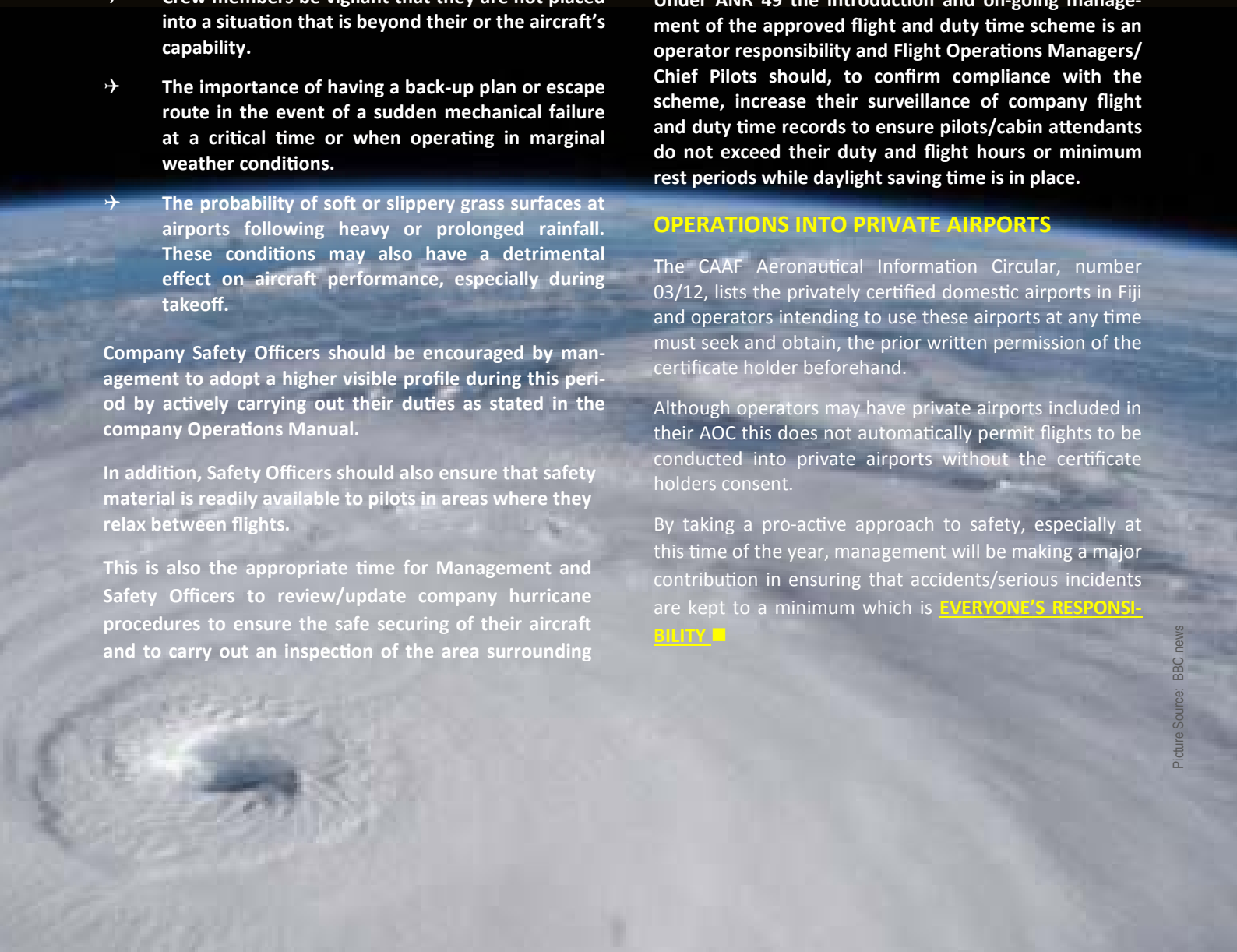
Under ANR 49 the introduction and on-going management of the approved flight and duty time scheme is an operator responsibility and Flight Operations Managers/Chief Pilots should, to confirm compliance with the scheme, increase their surveillance of company flight and duty time records to ensure pilots/cabin attendants do not exceed their duty and flight hours or minimum rest periods while daylight saving time is in place.

OPERATIONS INTO PRIVATE AIRPORTS

The CAAF Aeronautical Information Circular, number 03/12, lists the privately certified domestic airports in Fiji and operators intending to use these airports at any time must seek and obtain, the prior written permission of the certificate holder beforehand.

Although operators may have private airports included in their AOC this does not automatically permit flights to be conducted into private airports without the certificate holders consent.

By taking a pro-active approach to safety, especially at this time of the year, management will be making a major contribution in ensuring that accidents/serious incidents are kept to a minimum which is **EVERYONE'S RESPONSIBILITY** ■



Picture Source: BBC news

PEL

Personnel Licensing Office

Annex 1 contains Standards and Recommended Practices adopted by the International Civil Aviation Organisation as the minimum standards for personnel licensing.

The Annex is applicable to all applicants for and, on renewal, to all holders of the licenses and ratings specified herein.

The ICAO Council has decided that , in principle , amendments affecting existing licensing specifications are applicable to all applicants for, and holders of, but, in considering their application to existing holders of licenses, the assessment, if necessary, by re- examination of the knowledge, experience and proficiency of individual license holders is left to the discretion of Contracting State.

Personnel Licensing (PEL)

A system of standards, processes and procedures aimed to ensure that personnel undertaking safety related tasks in civil aviation (pilots, air traffic controllers, aircraft maintenance engineers, etc.) are competent to perform their tasks to the prescribed standard.

PEL is a department within the Civil Aviation Authority of Fiji which was established this year May 2019 in accordance with ICAO Doc 9379, Part 1 – Manual of Procedures for Establishing and Management of a State's PEL System.

The CAA Fiji PEL office is suitably organised and headed by the **Senior Personnel Licensing Inspector** (SPELI) who reports directly to the Chief Executive Civil Aviation Authority of Fiji. The office is responsible for the oversight of ICAO Annex 1 requirements and is staffed with two Licensing Officers and two Administrative officers .To discharge its responsibilities, the PEL Office has to carry out many functions/tasks which are normally organised around five major functional areas: examinations (flight crew, aircraft maintenance personnel, air traffic controller, etc.), licensing, training, regulatory and administration.

The PEL office rely on the flight operations inspectors, air worthiness inspectors and air traffic management inspectors to carry out examination tasks.

Medical assessments is outsourced to designated medical examiners, with oversight being provided by a medical assessor in the CAA.

1. Examination Tasks

Examination tasks are complex and require a high level of experience and expertise in the various areas of licensing (typically flight crew, aircraft maintenance personnel and air traffic controller). Executing the function also requires the highest degree of technical and ethical integrity as well as good judgement. The examination tasks include:

- designing written examinations for flight crew members, aircraft maintenance personnel, air traffic controllers and ground operations personnel who intend to apply for the issue or renewal of license's or to add new aircraft types, ratings or authorizations to their licence;
- administering oral and written examinations of different specialties to support issued license types;
- administering flight and simulator tests conducted by CAA examiners or designated examiners;
- Prepare medical certificate from medical assessments performed by designated medical examiners.

2. Licensing Tasks

Licensing tasks cover the routine tasks associated with the physical issuance and maintenance of personnel licenses and include:

- drafting detailed procedures for licensing issuance, conversion or validation required;
- evaluating foreign licences and certificates, and military pilot qualifications, and taking appropriate action, including consultation with the State of licence issue as necessary;
- reviewing the limitations and recent experience of flight crew members, maintenance personnel, air traffic controllers and ground operators and taking the necessary action;
- issuing and renewing licences, adding ratings and issuing temporary approvals or special authorizations.
- administer system of appointment and supervision of designated examiners.

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3. Training Tasks

Training tasks cover the activities related to the certification, approval and surveillance of training organizations (or schools) and training programmes. These tasks include:

- studying the PEL training standards and making the necessary recommendations for improvement of domestic and foreign training programmes and oversight;
- developing and executing plans for the surveillance of different aviation training activities;
- reviewing training curricula and programmes submitted for approval;
- approving training organizations and training sections at operational and maintenance organizations, air traffic control units;
- qualifying flight simulation training devices, conducting their recurrent evaluations and authorizing their use for defined training tasks;
- exercising continued surveillance of approved training organizations, in cooperation with other Contracting States as necessary;
- Initial and re-current training of CAA personnel with related records.

4. Regulatory Tasks

Regulatory tasks cover the development and maintenance of the regulatory support of personnel licensing and include:

- drafting and amending regulations and rules (or specific operating regulations) related to the training and licensing of aviation personnel;
- enforcing licensing laws and regulations; and
- developing procedures, taking into account best practices and applicable quality standards.

5. Administrative Tasks

Administrative tasks include:

- maintaining an up-to-date, efficient and secure record system for licensing, certification, designation, approval and authorization actions;
- maintaining lists of CAA and designated examiners;
- maintaining currency of all regulatory material and PEL documents in use by staff;
- drafting and promulgating examination schedules;
- printing and collating examination papers and distributing them in order to meet the published scheduled times;
- handling routine correspondence in respect of requests for matters such as study guidance material, dates of examinations, application forms and examination fees;
- dealing with the public when necessary on matters related to:
- scheduled examinations;
- licence, rating, approval or examination applications; and
- requests for regulatory interpretation;
- handling routine correspondence with respect to applications for licences or ratings, flight tests or other routine clerical matters;
- processing all licence applications and preparing the material for review and action by technical licensing officers;
- completing licence forms and preparing licences for official signature; and
- Managing the PEL Department computer database.
- Fiji Aeronautical Information Circular published by CAAF has relevant AICs concerning Licensing process and procedures within Fiji.
- **CAAF – PEL** office having issued a license, will ensure that the privileges granted by it , or by attached ratings, are not exercised unless the holder maintains competency and meets the requirements for recent experience established by CAA Fiji. To renew a license, the holder must have exercised the privileges to a specified minima during the period prior to intended renewal and /or pass appropriate proficiency examinations conducted by the authority. ■

FOR ALL AVIATION LICENCE HOLDERS:

Applications for renewals will be accepted and processed until the 13th of December 2019 and can be collected from PEL Office no later than 4pm on 20th December 2019.

MERCY FLIGHT

Decision Making and Personal Minimums

Note: *A flight shall not be declared a Mercy Flight when all the requirements of the applicable regulations can be complied with and the patient is transported as an ordinary passenger or when the aircraft is undertaking a Search and Rescue (SAR) operation and receives the appropriate special consideration or priority from air traffic services. A mercy flight shall not be undertaken unless the pilot-in-command holds a valid professional pilot license (Commercial Pilot License or higher).: SD Mercy Flight Chapter 4.1 - 4.2.■*

GOAL: *Analyze capabilities of the Pilot / Aircraft "team" in terms of expected weather conditions.*	 NIGHT / DAY	 CEILING & VISIBILITY	 "PERFORMANCE SAPPERS"
 Pilot	▪ Can I safely and competently fly at night? ▪ Do I have limitations on my night vision? ▪ Is my instrument rating current with night approaches? ▪ Have I been there before?	▪ Instrument rated? ▪ Proficient & Legally current? ▪ What are the lowest conditions I've comfortably handled? ▪ What pressures do I face?	▪ Fuel required and contingencies? ▪ Have I calculated the required performance for these conditions? ▪ Am I proficient in the techniques and procedures needed to get the required level of performance from the aircraft? ▪ Fatigue; had a long day?
 AIRCRAFT	▪ What is the capability of the aircraft to safely operate at night? ▪ Are there sufficient instruments to safely and legally operate at night? ▪ ANR 42 refers ▪ Are they legally installed on the aircraft?	▪ Is the aircraft legally equipped for IFR flight? ANR 42 refers. ▪ Do all required instruments work properly? ▪ Is there any unfamiliar equipment?	▪ Do the performance calculations show that the aircraft can perform as required for these conditions? ▪ Can it still perform when I add a safety margin? ▪ SD - Aircraft weight and performance refers.

Consider Your Footwear

Spanish cave drawings from more than 15,000 years ago show humans with animal skins or furs wrapped around their feet. The body of a well preserved "ice man" nearly 5,000 years old wears leather foot coverings stuffed with straw. Shoes in some form or another, have been around for a very long time. The evolution of foot coverings, from the sandal to present day athletic shoes that are marvels engineering, continues even today as we find new materials with which to cover our feet.

Most airlines today, whether large or small, display their individual branding by way of a uniform that is worn by the "frontline" staff, pilots and cabin attendants. Associated with the uniform is the foot wear which is typically closed shoes. While most air travellers may consider shoes as in part enhancing the appearance of the person wearing them, there is also another sound reason why pilots in particular should wear them and this is to ensure the safety of the aircraft. Directional control of the aircraft on the ground and yawing in flight is dependent on the rudder pedals which are moved by the pilot's feet.

Over the years aviation safety magazines have included articles about aircraft mishaps which have been attributed to pilots wearing unsuitable foot wear, for example loose fitting thongs, flip flops or no foot wear at all!!! The problem with thongs and flip flops is that the soles are not secured to a person's foot as would be the case with a closed shoe. The soles of this type of foot wear are usually made of rubber or similar soft material and are only secured to the toes with the remainder of the sole being unattached to the foot and this can impede the movement of feet should the sole heel become obstructed during movement of the rudder pedals.

This is an important consideration for pilots who fly multi-engine aircraft because should an engine failure occur during any phase of the flight unimpeded feet movement is critical to arrest the resulting yaw and maintain control of the aircraft.

This consideration also applies to maneuvering the aircraft on the ground and brake application which requires the use of feet. Instances have occurred in the past where aircraft have deviated from the runway during the takeoff or landing roll due to the impeded movement of the pilot's feet.

These considerations also apply to pilots of single engine aircraft however, pilots flying float equipped aircraft have the additional challenge of using foot wear that can be adapted for use both on land and in the water.

Carpeting is installed on the cockpit floors of most modern aircraft and manufacturers are playing their part in improving safety by attaching a small aluminum plate or similar devices to the carpet surface aft of the rudder pedals to provide a flat, smooth surface and ensure that the movement of the pilot's feet is not impeded.

For safety's sake when flying, consider your foot wear■

Picture Source: Pacific Island AIR

BIRD STRIKE DATA

Bird strike is common and can be a significant threat to aircraft safety. It is important for airport operator to make continual efforts for wildlife management in cooperation with all stakeholders inside and outside airports.

INTRODUCTION

Bird Strike management continues to be a big challenge for airport operators to ensure aircraft operation safety. CAA Fiji requires airport operators to establish airport wildlife management committee, to conduct a wildlife risk assessment, examine appropriate prevention measures and evaluate the results continually.

Several measures are taken at airport level, such as repelling birds (bird patrol, propane cannons, distress call, shot -gun, and pyrotechnics etc.), habitat management (grass management, removal of water/shelter etc.) as a form of control /or to minimize the occurrence of bird strike.

BIRD STRIKE DATA COLLECTION AND ANALYSIS

CAA Fiji has developed a bird strike website "Bird Strike Information site" to collect bird strike occurrence, analyze the data, and assess the bird hazard in order to develop further mitigation measures. Bird strike reporting is mandated for aircraft operator and the reporting procedures are announced through Aeronautical Information Circular.

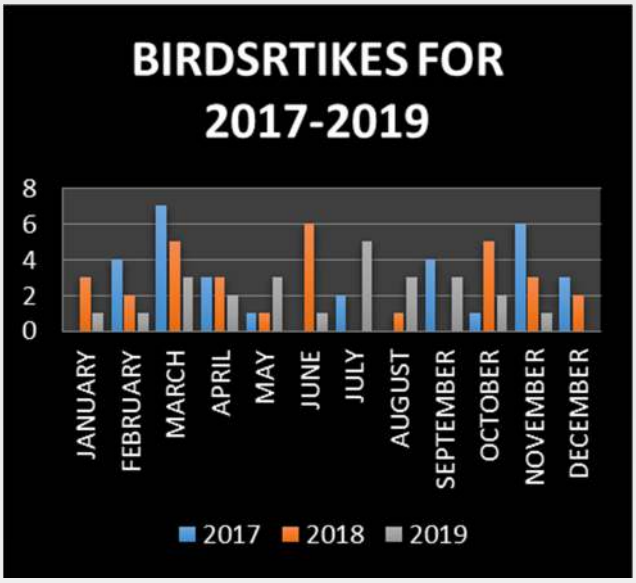
The reporting items are consistent with "Manual on the ICAO Bird Strike Information System (IBIS)(Doc9332)"; operator, aircraft model, engine model, registration number, date and time (dawn/day/dusk/night), aerodrome name, runway used, height, IAS, phase of flight, parts of aircraft struck/damaged, effect on flight, sky condition, bird species, number of birds, size of bird, etc.

Bird strike data is analyzed statistically and assessed by the members of wildlife management committee consisting of major airport operator, airlines, other stakeholders and CAA Fiji. Statistical data on total number of bird strikes (monthly, per airport), bird strike occurrence rate per movements at each airport, effects on flight, part of aircraft struck, bird species, effects on flight, and flight phase comparison, etc. are developed.

The following are some of the data.

Total number of bird strikes from 2017 to 2019:

MONTH	2017	2018	2019
JANUARY	0	3	1
FEBRUARY	4	2	1
MARCH	7	5	3
APRIL	3	3	2
MAY	1	1	3
JUNE	0	6	1
JULY	2	0	5
AUGUST	0	1	3
SEPTEMBER	4	0	3
OCTOBER	1	5	2
NOVEMBER	6	3	1
DECEMBER	3	2	N/A Yet



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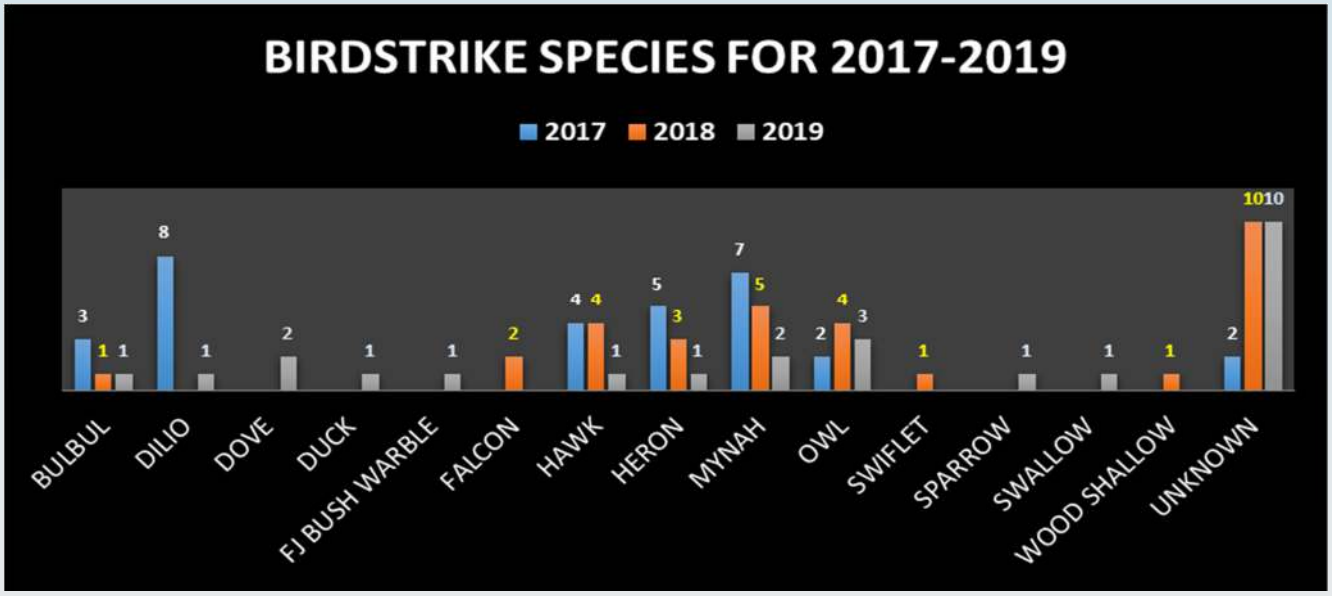
Total number of bird strikes and the rate of occurrence are declining



Bird Species struck from 2017-2019

The most common struck birds are mynah and hawk. Unidentified species account for most of the bird strike in 2018-2019. Identification of species is generally said to be effective for airport operator to take measures appropriate to the bird species.

CONCLUSION

An important component of the wildlife hazard management plan is the prevention of habitats and land uses on or in the vicinity of the airport that are attractive to hazardous wildlife. Wildlife hazard management at airports is a complex, public-sensitive, endeavor involving many species of wildlife and their habitats governed by various state regulations. Airports need to employ professional biologists trained in wildlife damage control to assist in the development, implementation, and evaluation of wildlife hazard management plans. Such professionally developed and implemented management plans will minimize the likelihood of catastrophic or major-damage wildlife strikes on an airport and provide crucial support during litigation in the aftermath of any significant strike event that might occur.

CAA-Fiji has been submitting monthly Bird Strike report to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database as per requirement by Annex 14.■

Fit or Not Fit

To Fly

Pilot careers are lasting much longer, and pilots are retiring later than they retired in the past. Annual flying hours and work-related demands are constantly increasing. It is crucial, now more than ever, those professional pilots maintain not only their Medical Certificates, but also optimal physical and mental health both during, and after their flying careers. ICAO`s historic approach to Medical Fitness in licence holders has been based on detecting increased medical incapacitation risk (from ill health) once it has occurred, and by taking action to reduce the impact on aviation safety, such as restricting a licence or removing the licence holder from operations.

"Use it or lose it!" That old saying not only relates to certain flying skills but also to the human body. Muscles that aren't used tend to waste and weaken. To keep muscles and the cardiovascular system working at their optimum levels, they must be stimulated and utilised. Being more physically fit will generally make you look and feel better. Additionally, people that carry too much weight or are bordering on obesity often encounter many health-related problems, ranging from chronic backaches to advanced cardiovascular disease. A high level of personal fitness can help to cope with the various emotional and physical stressors that are encountered in the flight environment.

It should also be recognised that fitness for duty in aviation also relates directly to flight attendants, air traffic controllers, maintenance technicians, dispatchers and ground handlers.

Defining '*Pilot Fitness to Fly*'

A pilot must be able to perform essential job functions and not be limited because of any health and fitness risks relating to: Physiological, Cognitive, Psychological and/or Psychiatric conditions.

Effects

The effects of a reduced physical and/or mental state of fitness in a pilot can be minimal to far reaching, with potential and real Risk to Life situations. In the modern world of aviation there are several factors to consider which alone or together can significantly affect the outcome of a flight;

- Use of certain over-the-counter drugs (e.g., Benadryl);
- Use of illicit or recreational drugs;
- Impairing conditions associated with aging;
- Use of prescription of impairing prescription medications;
- Pilots without regular medicals have higher rates incidences;
- Lack of proper medication information; and,
- Lack of education.

The effect of some, or all of these factors can present themselves onboard as;

- Flight management system programming errors;
- Checklist omissions;
- Altitude deviations;
- Standard operating procedure non-compliance;
- Missed radio calls;
- Clearances; and,
- Requests for physical assistance.

Defences

A healthy lifestyle helps to ensure that professional pilots pose a minimal risk to safety from the beginning of their careers until they retire. In short, this can be accomplished by:

- Maintaining a healthy heart;
- Developing mental health resilience;
- Adopting a low-risk strategy toward alcohol;
- Avoiding illicit drugs;
- Adopting cancer avoidance habits;
- Managing diet and weight;
- Managing risks associated with accidental injury;
- Getting sufficient sleep;
- Understanding and reducing travel-related risks;
- Use of hearing and vision protection.

ICAO`s medical guide for pilots *Fitness to Fly* focuses on prevention by providing guidance to pilots on how to stay healthy, thereby minimising the need for interventions involving licence restrictions. Recent research in the science of preventive medicine has demonstrated that following appropriate recommendations on health maintenance can be expected to significantly reduce the number of medical problems experienced during a career.

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Picture Source: HD Wallpaper

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The guide also recognises that background knowledge and interest in the subject of maintaining and improving health varies considerably among individuals. It is structured so that those who wish to quickly learn how to avoid the main causes of ill-health, can read the summary at the end of the guide for a brief overview. Those who want more detail will find that reading the entire guide provides a comprehensive look at all the major issues affecting fitness to fly. Each chapter ends with a section on the relevance to aviation of the condition under consideration. Chapters are written for pilots, in their language, giving proper guidance without judgement.

Are you Fit to Fly

Your doctor and flight surgeon do not see you daily. They depend on you to seek them out when you think you have a health condition. However, on a day-to-day basis, you have the responsibility to determine if you are Fit to Fly or possibly should seek medical attention. If you think of the following Q&As, it will help you make a safe decision.

Am I fit to fly?" Yes, I'M SAFE!

I	Illness	Am I ill? Do I feel sick in any way?
M	Medication	I take drugs: will they impair my thinking, judgement or performance?
S	Stress	Am I mentally fit? Can I devote my full attention to flying?
A	Alcohol	When did I take the last drink? Am I suffering handover effects?
F	Fatigue	Am I physically fatigued? Am I too tired to give 100%?
E	Eating	Am I hungry? Did I eat too much? Do I have indigestion?

This simple mnemonic, I'M SAFE, is a checklist to help you remember the main lifestyle risk factors that might impair your performance during flight.

Symptoms

Divided into three main areas symptoms that could support a lack of fitness to fly;

Medical:

- **Sleep apnea/sleep disorders/fatigue.**
- **Medication side effects.**
- **Heart/lung disease.**
- **Endocrine – Diabetes, thyroid.**
- **Hearing/vision deterioration.**
- **Acute medical conditions.**
- Neurological disease.
- Anemia/heavy metal poisoning.

Psychological:

- **Life events (family, legal, financial, work).**
- **Post-traumatic stress disorder (PTSD).**
- **Depression.**
- **Substance abuse.**
- **Anxiety disorders.**
- **Personality traits.**
- **Loss of desire to fly/work.**

***Cognitive*:**

- **Mild cognitive impairment – reversible.**
- **Impairing medications.**
- **Alzheimers/dementia.**
- **Substance dependence.**
- **After effects of surgery.**
- **Brain injury/bleed /tumour (many are treatable with cognitive rehabilitation).**

(Source: Article uplifted from SkyBrary)

CAA 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 by faxing it to the Executive Office on 672 1500, or dropping it in the feedback box in the foyer of CAAF HQ, or emailing to :

info@caaf.org.fj

FCAIR

FIJI CONFIDENTIAL AVIATION INCIDENT REPORTING FORMS AVAILABLE ON WEBSITE

www.caaf.org.fj

***OR* FRONT DESK, CAAF HQ.**

Picture Source: HD Wallpaper

Recruitment, Selection And Refresher Training

Aviation or air transport is a fantastic means to travel, send or receive parcels to the preferred destination in a much shorter duration. It has become a great way to physically connect with friends, family living aboard or reaching a destination where other means of transport take more time. With the increase in passenger travel, the aviation industry continues to employ new staff to assist in the security and facilitation of the travelling public.

With the current turnover rate in the aviation security industry and the emerging threat of an insider, the process for selection and recruitment of personnel is vital. It is essential for the industry to understand the importance of this process as recruiting a person without proper verification can become a fall back for some operators.

In ICAO Annex 17 has stipulated in standard 4.2.4 that:

> *"Each Contracting State shall ensure that background checks are conducted on persons other than passengers granted unescorted access to security restricted areas of the airport prior to granting access to security restricted areas".*

ICAO has further defined background check as:

> "Check of a person's identity and previous experience, including where legally permissible, any criminal history, as part of the assessment of an individual's suitability to implement a security control and/or for unescorted access to a security restricted area".

Under the Chicago convention (1944), it is important for Fiji as a contracting state to comply with the standards and recommended practices as stipulated in the Annexes and amendment to the Annexes that follows.

A proper background check before recruiting will not only assist the employer in making decisions but also any convictions for violent crimes becomes an obvious red flag and dealing with this will help reduce the risk of workplace violence.

Without some periodic refresher to the constant hazards that exist in the workplace, apathy increases and the odds of an incident happening also increase. Workers may not always understand the significance of security training or might even think that it is not required as they have "been doing it for years". Therefore, it is vital for all workers to understand the purpose of training sessions, why it will be useful to them and what can happen when security rules and procedures are not followed.

The Aviation Security and Facilitation Department has established the Civil Aviation Security Training Programme.

Aviation security organisations within Fiji shall ensure that initial training is conducted by CAA Fiji and followed through by a refresher training .

The refresher training is also important to ensure staffs are kept fully up to date in terms of knowledge, skills, abilities and preparedness. It is also very important to ensure that the refresher training is current and suitable for present needs and also capable of covering increased threat levels. The refresher training should be reviewed on a frequent basis and supervisors and managers should receive timely training to keep abreast of developments in the field while broadening their knowledge base.

In scientia fortitude. In knowledge lies strength■

STOP MEASLES ALERT!

ATTENTION TO ALL THE TRAVELLING PUBLIC!
THIS IS FOR YOUR PROTECTION .

The Ministry of health and medical Services urges anyone travelling international to please get vaccinated against measles if you have not been vaccinated, or are unsure of your vaccination status.

All relevant agencies should also ensure that international visitors to events organized in Fiji are strongly encouraged to get vaccinated against measles at least 2 weeks in advance of travel.

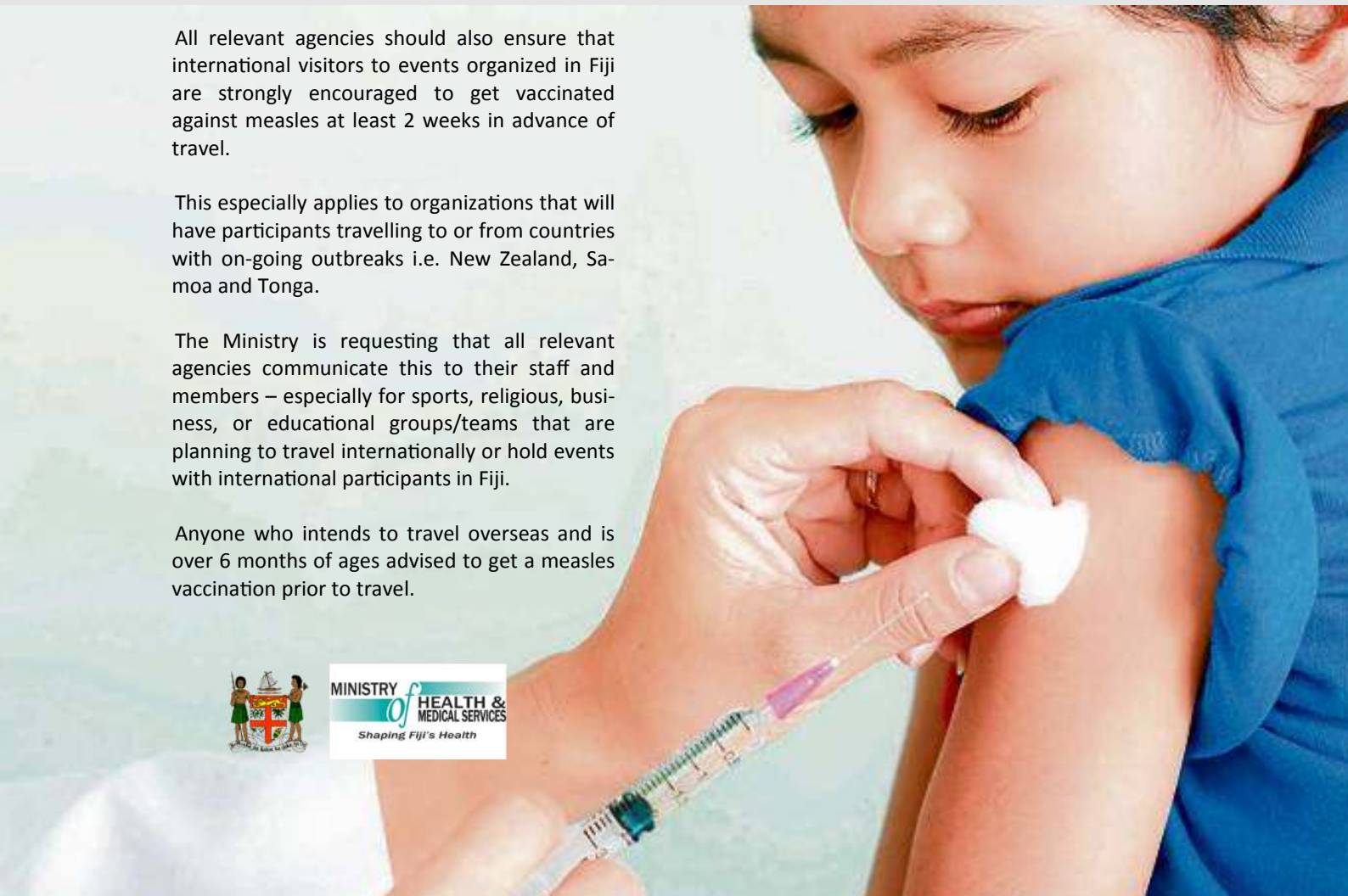
This especially applies to organizations that will have participants travelling to or from countries with on-going outbreaks i.e. New Zealand, Samoa and Tonga.

The Ministry is requesting that all relevant agencies communicate this to their staff and members – especially for sports, religious, business, or educational groups/teams that are planning to travel internationally or hold events with international participants in Fiji.

Anyone who intends to travel overseas and is over 6 months of ages advised to get a measles vaccination prior to travel.

The only exceptions to those in the above groups are pregnant women, those with compromised immune systems, and those with a known allergy to the vaccine. These people should not be vaccinated. ■

(Source: Ministry of Health and medical Services)



Heart Attack

(Myocardial Infarction)

Heart attack is lay term used generally.

Myocardial infarction is medical term used in medical field.

In Fiji, heart attack is one of the commonest condition as a cause of death.

What is heart attack

A part of the heart is affected due reduced oxygen supply from blocked artery ie coronary artery, that supplies blood to the heat muscle. The affected heart muscle will die and can be fatal. Due to advancement of medical technology and scientific knowledge. the affected muscle can survive if medical intervention is at the earliest.

How does artery get blocked?

The blockage is often a build up of fat, cholesterol and other substances and subsequently a plaque develops, which blocks the artery.

Signs and Symptoms of heart attack

- Pressure, tightness, pain or a squeezing or aching sensation in one's chest or arms that may spread to neck, jaw, or back.
- Nausea (feeling wanting to vomit), heart burn or abdominal pain (particularly in the epigastrium - some people think it as gastritis).
- Shortness of breath.
- Fatigue (tiredness).
- Light-headedness or sudden dizziness.

Sign and symptoms vary from person to person. Some present with severe signs and symptoms and some with mild pain. First sign may be sudden heart arrest.

Sometime signs will be there in mild form for days and weeks and for some it is sudden and very severe

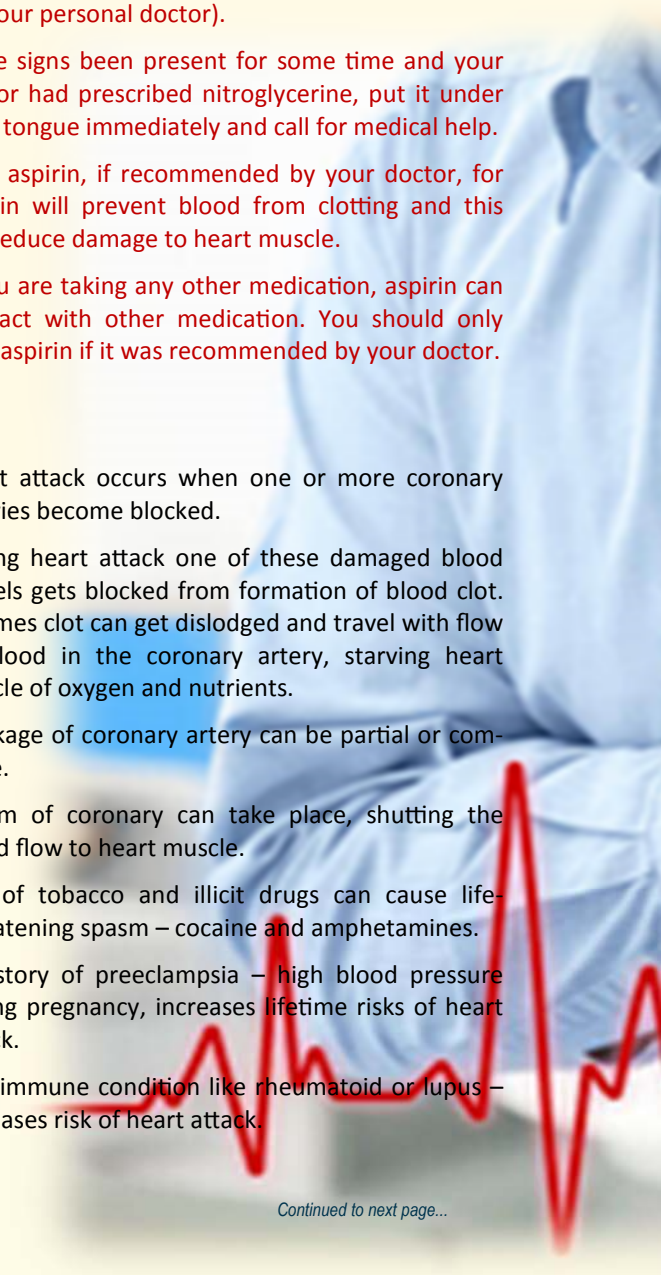
When to call for help

It is very important to call for medical help immediately whenever the signs are present.

- You may have to rush to the emergency department in the hospital or call your general practitioner (your personal doctor).
- If the signs been present for some time and your doctor had prescribed nitroglycerine, put it under your tongue immediately and call for medical help.
- Take aspirin, if recommended by your doctor, for aspirin will prevent blood from clotting and this will reduce damage to heart muscle.
- If you are taking any other medication, aspirin can interact with other medication. You should only take aspirin if it was recommended by your doctor.

Causes

- Heart attack occurs when one or more coronary arteries become blocked.
- During heart attack one of these damaged blood vessels gets blocked from formation of blood clot. At times clot can get dislodged and travel with flow of blood in the coronary artery, starving heart muscle of oxygen and nutrients.
- Blockage of coronary artery can be partial or complete.
- Spasm of coronary can take place, shutting the blood flow to heart muscle.
- Use of tobacco and illicit drugs can cause life-threatening spasm – cocaine and amphetamines.
- A history of preeclampsia – high blood pressure during pregnancy, increases lifetime risks of heart attack.
- Autoimmune condition like rheumatoid or lupus – increases risk of heart attack.



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Risk factors

There are certain factors that contribute to build-up of fatty deposits in the blood vessels that leads to narrowing of blood vessels throughout the body. The damage to the blood vessels by fatty deposit is known as atherosclerosis.

- **Age** – Men 45 or older and women 55 or older are at greater risk. In Fiji the younger generation are affected particularly in men.
- **Tobacco** – smoking or inhaling second smoke (this means one is in a room with smokers).
- **High blood pressure** - this can damage the arteries that supply blood to heart muscle. High blood pressure that occurs with diabetes, high cholesterol or obesity increases the risk even more.
- **High blood cholesterol** or triglyceride levels –
  - **Low-density lipoprotein** (bad cholesterol) ; and
  - **Triglyceride** – a type of fat – these can increase the risk of heart attack.
  - **High density lipoprotein** – a type of fat (good cholesterol – lowers the risk .
- **Obesity** – associated with high cholesterol, high triglyceride, high blood pressure and diabetes. Losing 10% of body weight can reduce the risk.
- **Family history of heart attack** – siblings, parents, grandparents had heart attack by age 55 for male and 65 for female increases the risk.
- **Diabetes** – poorly controlled diabetes increases the risk.
- **Lack of physical activity** – leads to obesity and high cholesterol. Regular physical activity lowers the risk.
- **Stress** – in ways that can increase the risk.

Prevention

It is never too late to prevent – even if one had heart attack - to prevent recurrence.

- **Regular exercise** – maintain healthy weight.
- **Change of life-style** – Stop smoking.
  Eating healthy food.
- **Medication** – to take medication regularly as per doctor's instruction i.e. better control of diabetes and high blood pressure.
- **Regular check**-up by your doctor and to follow the doctor's instructions.

Complications

Complications are related to damage to heart during heart attack.

- Abnormal heart rhythms due to electrical "short circuits" – some can be very serious and fatal.
- Heart failure – damage to heart muscle leads to enough blood can not be pumped. This can be temporary or a chronic condition.
- Sudden heart arrest - this can be without warning due to electrical disturbance.
- This can be fatal without treatment.

Diagnosis

- Abnormal ECG tracing. .At times ECG can be n mal at the time of heart attack.
- Coronary angiogram.
- Treadmill test – this exercise ECG test.

Treatment

- Stenting.
- Coronary by-pass surgery. ■

(Article by Dr R Ponnu S Goundar
Source: Mayo Clinic)

Picture Source: Dr Bill Sukala.com


ISO 9001:2015 CERTIFIED
Civil Aviation Authority of Fiji
TO ALL OF OUR
INDUSTRY PARTNERS
Merry
Christmas
AND A SAFE & HAPPY NEW YEAR
We would like to thank you for your continued support towards aviation safety this year.
CAA Fiji
Closure of office hours during Christmas
20th December 2019 (04:00pm)
to 06th January 2020 (08:00am)