ARRANGEMENT OF REGULATIONS

GRENADA

STATUTORY RULES AND ORDERS NO. 19 OF 2025

IN EXERCISE OF THE POWERS CONFERRED UNDER SECTION 49 (1) OF THE CIVIL AVIATION ACT CAP. 54A, THE DIRECTOR GENERAL HEREBY MAKES THE FOLLOWING REGULATIONS–

(Gazetted 14th March, 2025).

PART I

PRELIMINARY

1. Citation. These Regulations may be cited as the

CIVIL AVIATION (ANS FATIGUE MANAGEMENT) REGULATIONS, 2025.

2. Application. These Regulations apply to Air Navigation Services Providers.

3. Interpretation. In these Regulations, unless the context otherwise requires–

"Air Navigation Services Provider" or "ANSP" means the designated authority for the purposes of operating and managing air navigation services;

"air traffic controller schedule" means a plan for allocating air traffic controller duty period and non-duty periods over a period of time;

"Air Traffic Service Provider" means a person certificated, authorised or otherwise designated by the authority for the purpose of operating and managing air traffic services;

"bio-mathematical model" means a computer program designed to predict aspects of a schedule that might generate an increased fatigue risk for the average person, based on scientific understanding or the factor contributing to fatigue and is an optional tool (not a requirement) for predictive fatigue hazard identification within an Fatigue Risk Management System (FRMS) with limitation that needs to be understood for their appropriate use;

"break" means a period of time within a shift, counting as duty, and during which personnel are free of all tasks;

"circadian body clock" means a neural pace marker in the brain that monitors the day and night cycle (via a special light input pathway from the eyes) and which determines a person's preference for sleeping at night;

"consecutive" means a continuous, unbroken period of time for the duration of the hours or days mentioned;

"counter measures" means personal mitigation strategies that a person may use to reduce his or her fatigue risk such as good sleep habits, napping before night duty and operational counter measures, such as controlled napping and strategic use of caffeine;

"cumulative fatigue" means fatigue that occurs after incomplete recovery from transient fatigue over a period of time;

"cumulative sleep debt" means a sleep loss accumulated when sleep is insufficient for multiple nights or 24-hour days in a row and which as it builds up, impairs performance and which when it increases, progressively makes a person less reliable at assessing his or her level of impairment;

"cycle" means a series of consecutive shifts followed by the required days off;

"deviation" means a mechanism to vary from prescriptive regulations under flexibility provisions;

"duty period" means the period during the cycle where the personnel is engaged in active duties;

"fatigue" means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase or workload, including a mental or physical activity that may impair a person's alertness and ability to perform safety-related operational duties;

"fatigue risk management" or "FRM" means a data driven means of continuously monitoring and managing fatigue- related safety risks based upon scientific principles, knowledge and operational experience that are aimed to ensure relevant personnel are performing at adequate levels of alertness;

"local night" means an 8-hour period falling between 22:00 and 08:00;

"night" means the hours between the end of evening civil twilight and the beginning of morning civil twilight or the time between 15 minutes after sunset and 15 minutes before sunrise, sunrise and sunset being determined at surface level, and includes anytime between sunset and sunrise when an unlighted aircraft or other unlighted prominent object cannot be clearly seen at a distance of 4,572 metres;

"non-duty period" means the period during the cycle where the personnel are not engaged in active duty (i.e., days off);

"on-call" means personnel shall be ready to go to work at any time if they are needed, especially if there is an emergency;

"operations manual" means a manual containing procedures, instructions and guidance for use by operational personnel in the execution of his or her duties;

"reporting time" means the time at which personnel are required by an ANSP to report for duty;

"rest period" means a continuous and defined period of time, subsequent to or prior to duty (i.e., between shifts), during which personnel are free of all duties;

"roster" means a list provided by an ANSP of the times when personnel are required to undertake duties;

"transient fatigue" means fatigue that is dispelled by a single sufficient period of rest or sleep;

"unforeseen operational circumstance" means an unplanned event, such as un forecast weather, equipment malfunction, or air traffic delay that is beyond the control of the ANSP.

Part II

PRESCRIPTIVE TIME LIMITATIONS

4. Prescriptive fatigue management approach.—(1) An Air Navigation Service Provider shall adopt the prescriptive fatigue management approach prescribed under these Regulations.

(2) Subject to sub-regulation (1), the implementation of prescriptive fatigue management system does not relieve the Air Navigation Service Provider of the responsibility to manage fatigue related risks under the safety management system.

(3) The Authority may, in exceptional circumstances, approve variations to the requirements in these Regulations on the basis of a risk assessment provided by the Air Navigation Service Provider, as may be applicable.

(4) The Authority shall grant the approval referred to in sub-regulation (3), where the proposed variations provide a level of safety equivalent to or better than that achieved through the prescriptive fatigue management approach.

5. Fatigue management programme.—(1) The ANSP shall establish a prescriptive fatigue management programme which shall ensure that all the personnel of the Air Navigation Services Provider do not carry out their duties when fatigued.

(2) The prescriptive fatigue management programme shall be approved by the Authority.

(3) The prescriptive fatigue management programme shall address duty times and be included in the operations manual or fatigue management manual.

6. Record keeping.—(1) The ANSP shall maintain the records for tracking duty times and rest periods for at least twenty four months unless a longer period has been prescribed for the purpose of investigation.

(2) All the relevant information shall be readily available before a person begins their duty of the day to ensure their compliance with these Regulations.

(3) The records shall be maintained within the provisions for these Regulations and the Civil Aviation (Safety Management) Regulations, 20XX.

7. General responsibilities.—(1) An Air Navigation Services Provider shall–

(a) publish, in advance, duty rosters that sufficiently provide personnel opportunity to plan for adequate rest;

(b) ensure that duty periods are planned in a way that enables personnel to remain sufficiently free from fatigue so that they can operate to a satisfactory level of safety under all circumstances;

(c) specify reporting times that allow sufficient time for hand over / takeover of duties;

(d) take into account the relationship between the frequency and pattern of duty periods and rest periods and give consideration to the cumulative effects of undertaking long duty hours combined with minimum rest periods;

(e) allocate duty patterns which avoid practices that cause a serious disruption of an established sleep or work pattern, such as alternating day and night duties;

(f) provide rest periods of sufficient time to enable personnel to overcome the effects of the previous duties and to be rested by the start of the following duty period;

(2) An ANSP shall ensure that the personnel make optimum use of the opportunities and facilities provided for rest and that the personnel plan and use their rest periods properly.

(3) For the purposes of this regulation, "personnel" means air traffic controllers, aeronautical information services personnel, communication, navigation, & surveillance personnel, meteorological personnel, search and rescue personnel, cartography, and procedure design personnel.

Part III

AIR TRAFFIC CONTROLLERS PRESCRIPTIVE DUTY TIME LIMITATIONS

8. Fatigue management in air traffic control service.—(1) An Air Traffic Service Provider shall establish procedures for the purpose of managing fatigue in the provision of air traffic services.

(2) The Air Traffic Service Provider shall, subject to sub-regulation (1), base the procedures upon scientific principles, knowledge and operational experience, with the aim of ensuring that air traffic controllers perform at an adequate level of alertness.

(3) For purposes of managing fatigue-related safety risks, the Air Traffic Service Provider shall establish one of the following–

(a) air traffic controller schedules commensurate with the services provided in compliance with prescriptive limitations specified in these Regulations;

(b) a FRMS, in compliance with these Regulations; and

(c) a FRMS, which shall be in compliance with these Regulations, with regard to the defined part of its air traffic control services and with regard to the prescriptive limitation.

(4) The Air Traffic Service Provider shall–

(a) provide evidence that the prescribed limitations are not exceeded and that the non-duty period requirements are met;

(b) familiarize air traffic control personnel with the principles of fatigue management and policies with regard to fatigue management;

(c) apply for variations from the prescriptive limitation regulations to address any additional risks associated with sudden, unforeseen operational circumstances; and

(d) subject to paragraph (c), demonstrate that any associated risk is being managed to a level of safety equivalent to, or better than that achieved under the provisions on prescriptive fatigue management.

(5) In the course of provision of air traffic control services, an Air Navigation Services Provider shall ensure that the following are established–

(a) a duty roster system that addresses duty period time and adopted rest period shall be established; and

(b) the duty roster system procedure shall specify–

(i) the maximum consecutive working days of duty;

(ii) the maximum hours per shift;

(iii) the maximum time for providing air traffic control service without breaks;

(iv) the ratio of duty periods to breaks when providing air traffic control service;

(v) the minimum rest periods;

(vi) the maximum consecutive duty periods that encroach on the night time, where applicable, depending upon the operating hours of the air traffic control unit concerned;

(vii) the minimum rest period after a duty period encroaching the night time; and

(viii) minimum number of rest periods within a roster cycle, and how these shall be implemented and monitored.

(c) Late changes to the duty roster should be minimized except in emergencies or unusual occurrences.

(d) When the ANSP provides for the ATCO to swap/exchange shifts, procedures should be established to ensure that the scheduling limits prescribed under these regulations are not compromised.

(6) An air traffic controller shall not perform any safety relevant tasks when he or she knows that he or she is fatigued or feels unfit to the extent that safety may be adversely affected.

(7) Subject to sub-regulation (6), where an air traffic controller or the employer of the air traffic controller knows or suspects that the air traffic controller is suffering from or, having regard to the circumstances of the period of duty to be undertaken is likely to suffer from fatigue in a way that may endanger the safety of any aircraft to which an air traffic control service may be provided–

(a) the air traffic controller shall not accept to act as an air traffic controller; and

(b) the employer of the air traffic controller shall not allow the air traffic controller to act as such.

9. Maximum working hours for air traffic controllers. Except in an emergency, an air traffic controller shall not serve or be required to serve–

(a) for more than ten hours in any duty period;

(b) for more than ten hours during a period of twenty four consecutive hours, unless the air traffic controller has had a rest period of at least 8 hours at the end of or before the end of, ten hours of duty;

(c) for more than 4 consecutive work days;

(d) for more than fifty hours within 7 days; or

(e) for time-in-position of 4 consecutive hours, depending on traffic level.

10. Minimum rest periods for air traffic controllers. An Air Traffic Services Provider shall ensure that–

(a) the duration of non-duty periods for an air traffic controller between duty periods is not less than fifty four hours between the end of one consecutive period of duty and another period of duty;

(b) the number of non-duty days for air traffic controllers within a period of twenty eight days is not less than 8 days;

(c) in determining the minimum rest period, consideration is made of time for travelling and handover; and

(d) no operational duty exceeds a period of 4 continuous hours without periods of breaks, totalling not less than thirty minutes, being taken during the period or at the end of the period and that during the periods of break an air traffic controller does not exercise the privileges of his or her licence.

11. Unscheduled duties for air traffic controllers. For unscheduled duties to be performed by an air traffic controller, the Air Traffic Service Provider shall when assigning such duties, establish a process that ensures that the air traffic controller is not awake for extended periods of time.

12. Variations to scheduling limits for air traffic controllers.—(1) An Air Traffic Service Provider shall, subject to regulation 8 (4)(c), provide for approval by the Authority, any variations to the scheduling limits.

(2) The variations to the scheduling limits shall include–

(a) the reason for the need for the variation;

(b) the extent of the deviation;

(c) the date and time of enactment of the deviation; and

(d) a safety case, outlining mitigations to support the deviation.

(3) The process for variation shall be as specified in the applicable technical guidance material issued by the Authority.

13. Fatigue Risk Management System (FRMS).—(1) Where an Air Traffic Service Provider implements a FRMS to manage the fatigue-related safety risks in

accordance with this Part of the Regulations, the Air Traffic Service Provider shall establish a process to integrate the functions of the FRMS with the other safety management functions of the Air Traffic Service Provider.

(2) The FRMS established by the Air Traffic Service Provider shall provide a level of safety acceptable to the authority.

(3) The FRMS established by the Air Traffic Service Provider shall be approved by the Authority.

Part IV

FATIGUE RISK MANAGEMENT SYSTEMS

14. Approval of FRMS.—(1) An ANSP may, in lieu of any or all of the prescriptive fatigue management requirements prescribed under these Regulations, adopt a FRMS prescribed under this Part, for the purposes of managing fatigue related safety risks.

(2) The Authority shall approve the FRMS adopted by an ANSP under sub-regulation (1).

(3) The Authority shall for the purposes of approving the FRMS under this regulation, determine that the FRMS of an ANSP, provides a level of safety equivalent to, or better than, the prescriptive fatigue management requirements prescribed under these Regulations.

(4) The ANSP shall ensure that the FRMS includes a process that provides a level of safety equivalent to, or better than, the prescriptive fatigue management approach prescribed under these Regulations.

(5) Where an ANSP, adopts fatigue risk management approaches in accordance with the requirements of this Part, for all of its operations or parts of its operations, the Authority may approve, variations to these Regulations on the basis of a risk assessment provided by the ANSP.

(6) For the purposes of sub-regulation (5), the proposed variations shall provide a level of safety equivalent to or better than that achieved using the fatigue management approach.

(7) For purposes of sub-regulation (4), an ANSP shall–

(a) establish maximum values for duty periods, and minimum values for rest periods based upon scientific principles and knowledge and subject to safety assurance processes;

(b) cater for a decrease in the maximum values and an increase in minimum values, in the event that the data indicates that the values are too high or too low, respectively; and

(c) provide a justification for the changes, based on accumulated FRMS experience and fatigue- related data.

(8) A FRMS shall be eligible for approval, where, as a minimum, the FRMS meets the requirements specified in Schedule 1 to these Regulations and—

(a) incorporates scientific principles and knowledge;

(b) has mechanisms to identify fatigue-related safety hazards and the resulting risks on an ongoing basis;

(c) has mechanisms to ensure that remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly;

(d) has mechanisms for continuous monitoring and regular assessment of the mitigation of fatigue related risks; and

(e) provides for performance evaluation and continuous improvement to the overall performance of the FRMS.

(9) An ANSP shall establish a FRMS policy as provided for in Schedule 1 to these Regulations.

15. Implementation of FRMS. An Air Navigation Services Provider that adopts the FRMS prescribed under this Part shall–

(a) comply with requirements of this Part;

(b) establish processes to integrate the FRMS functions with its other safety management functions; and

(c) submit to the authority for approval, a FRMS manual containing the processes to be adopted to provide a level of safety acceptable to the authority as required under regulation 17.

16. Integration of FRMS and SMS. An ANSP that has established a FRMS shall ensure that the system is integrated with the Safety Management System of the ANSP.

17. FRMS manual. An Air Navigation Services Provider shall maintain fatigue risk management documentation that shall–

(a) describe the fatigue risk management policy and objectives of the Air Navigation Services Provider;

(b) describe the fatigue risk management processes and procedures of the ANSP;

(c) describe the accountabilities, responsibilities and authorities for these processes and procedures of the ANSP;

(d) describe the mechanisms for on-going involvement of management, and all personnel of the ANSP;

(e) describe the fatigue risk management training programmes, training requirements and attendance records of the ANSP;

(f) record the scheduled and actual duty periods and rest periods with deviations and reasons for deviations; and

(g) record the fatigue risk management outputs including findings from collected data, recommendations, and actions taken.

18. Identification of fatigue hazards.—(1) An Air Navigation Services Provider shall establish records of the process for the identification of fatigue hazards.

(2) The process for the identification of fatigue hazards shall be–

(a) predictive, for which purpose the process shall identify fatigue hazards by examining scheduling, taking into account factors known to affect sleep and fatigue and their effects on performance and the scheduling to be examined shall include–

(i) the operational experience of the industry and data collected on similar types of operations;

(ii) evidence-based scheduling practices; and

(iii) bio-mathematical models.

(b) proactive, for which purpose the process shall identify fatigue hazards within the current operations, including–

(i) self-reporting of fatigue risks;

(ii) personnel fatigue surveys;

(iii) relevant personnel performance data;

(iv) available safety databases and scientific studies; and

(v) analysis of planned versus actual time worked.

(c) reactive, for which purpose the process shall identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine the impact of fatigue and how it may have been minimised, and the reports and events shall include–

(i) fatigue reports;

(ii) confidential reports;

(iii) audit reports;

(iv) incidents; and

(v) flight data analysis events.

19. Risk assessment.—(1) An Air Navigation Services Provider shall–

(a) develop risk assessment procedures that determine the probability and potential severity of fatigue related events and shall implement these procedures; and

(b) identify when the associated risks require mitigation.

(2) The risk assessment procedures referred to in sub-regulation (1) shall include a review of identified hazards and linkage of the identified hazards to—

(a) the operational processes;

(b) their probability;

(c) the possible consequences; and

(d) the effectiveness of existing safety barriers and controls.

20. Risk mitigation. An ANSP shall develop and implement risk mitigation procedures which shall be used to–

(a) select the appropriate mitigation strategies;

(b) implement the mitigation strategies; and

(c) monitor the effectiveness of strategies implementation.

21. FRM safety assurance processes.—(1) An Air Navigation Services Provider shall maintain FRM safety assurance processes to provide for continuous performance monitoring, analysis of trends, and measurement to validate the effectiveness of the fatigue safety risk controls.

(2) For the purposes of sub-regulation (1), an Air Navigation Services Provider may source information from the following–

(a) hazard investigations and reporting;

(b) audits and surveys; and

(c) reviews and fatigue studies.

(3) The process for management of change shall include–

(a) identification of changes in the operational environment that may affect fatigue risk management;

(b) identification of changes within the organisation that may affect fatigue risk management; and

(c) consideration of available tools which may be used to maintain or improve fatigue risk management performance prior to implementing changes.

(4) The safety assurance processes shall provide for the continuous improvement of fatigue risk management and this shall include–

(a) the elimination or modification of risk controls that have had unintended consequences or that are no longer needed due to changes in the operational or organisational environment;

(b) routine evaluations of facilities, equipment, documentation and procedures; and

(c) the determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks.

22. FRM promotion process.—(1) An Air Navigation Services Provider shall conduct fatigue risk management promotion process to support the development of FRMS, the continuous improvement of its overall performance, and attainment of optimum safety levels.

(2) An Air Navigation Services Provider shall, as part of the fatigue risk management promotion process implement–

(a) training programmes to ensure competency commensurate with the roles and responsibilities of management, and all other concerned personnel under the fatigue risk management; and

(b) an effective fatigue risk management communication plan that—

(i) explains fatigue risk management policies, procedures and responsibilities to all relevant stakeholders; and

(ii) describes communication channels used to gather and disseminate fatigue risk management related information.

23. Rationale for variation.—(1) An Air Navigation Services Provider may apply in writing to the Authority requesting for variation of fatigue risk management in case of–

(a) unexpected circumstances beyond the control of the service provider; and

(b) expected but exceptional circumstances.

(2) The Authority may, upon satisfactory assessment of circumstances, grant the applicant, variations on the prescribed limits to meet operational needs and risks.

(3) For the purposes of sub-regulation (1) (a), the Authority may–

(a) approve variations extending beyond prescribed limits to enable such on-the-day extensions;

(b) determine outer limits and the circumstances in which variations may be used to grant flexibility; and

(c) permit the applicant flexibility to manage on-the-day disruptions by requiring the applicant to develop on-the- day response protocol.

(4) The ANSP shall retain records of work and non-work periods including planned and actual work and non-work periods, with significant deviations from prescribed limits and minima.

24. Analysis and audit on flexibility records.—(1) The Authority shall–

(a) conduct analysis of work and non-work records, including the use of any flexibility provisions by the ANSP for purposes of monitoring compliance; and

(b) conduct further analysis of the records referred to in paragraph (a), coupled with fatigue reports, to identify fatigue risk associated with ANSPs rostering practices.

(2) The Authority shall retain the records for audit purposes for a period of time as may be determined by regulatory requirements.

PART V

GENERAL

25. Application for exemptions.—(1) A person may apply to the Authority for an exemption from any provision of these Regulations.

(2) A request for exemption shall be made in accordance with the requirements of these Regulations.

(3) An application for exemption shall be submitted and processed in a manner prescribed in the applicable technical guidance material.

(4) A request for an exemption shall contain–

(a) the name of the applicant;

(b) the physical address and mailing address of the applicant;

(c) the telephone number of the applicant;

(d) where available, the fax number of the applicant; and

(e) where available the email address of the applicant.

26. Exemptions.—(1) The Authority may, upon consideration of the circumstances of a particular person issue an exemption providing relief from specified provisions of these Regulations, provided that–

(a) the Authority finds that the circumstances presented warrant the exemption; and

(b) a level of safety shall be maintained at a standard equal to the standard provided by the Regulations from which the exemption is sought.

(2) The exemption issued under sub-regulation (1) may, at any time, be terminated or amended by the authority.

(3) A person who is granted an exemption shall notify the management and the personnel who are to perform the function which is subject to the exemption.

27. Reports of violation.—(1) A person who knows of a violation of the Act, these Regulations, or any technical decisions, decrees, orders, circulars or directives made under the Act shall report it to the authority.

(2) The authority shall determine the nature and type of any additional investigation or enforcement action that shall be taken.

28. Enforcement of directives.—(1) A person who fails to comply with any technical decisions, decrees, orders, circulars or directives given by the Authority or by any authorised person shall be deemed for the purposes of these Regulations to have contravened that provision.

(2) The Authority shall take enforcement action on any person regulated under these Regulations, that fails to comply with any provisions of these Regulations.

(3) The inspectors of the Authority holding valid credentials shall take necessary actions to preserve safety where an undesirable condition has been detected.

(4) The action referred to in sub-regulation (2) may include–

(a) in the case of an ANSP, imposition of operating restrictions until such a time when the existing undesirable condition has been resolved; or

(b) in case of an individual, require that the individual does not exercise the privileges of the approval or authorisation until such a time that the undesirable condition has been resolved.

(5) In carrying out enforcement actions under this regulation, the inspectors shall act with due care and in good faith, in the interest of preserving safety.

29. Contravention of Regulations. A person who contravenes any provision of these Regulations may have his or her approval, authorisation, exemption or other document revoked or suspended.

30. Penalties. A person who contravenes any provision of these Regulations commits an offence and is on conviction liable to a fine not exceeding Five Thousand Eastern Caribbean Dollars ($5000.00)or imprisonment not exceeding six months or both, and in the case of a continuing contravention, each day of the contravention shall constitute a separate offence.

SCHEDULE 1

(regulation 14 (8) and (9))

FATIGUE RISK MANAGEMENT SYSTEM

A FRMS established in accordance with Part VI of the Regulations, shall contain, at a minimum—

1. **FRMS POLICY AND DOCUMENTATION**

1.1 **FRMS POLICY**

1.1.1 An ANSP shall define its FRMS policy, with all elements of the FRMS clearly identified.

1.1.2 The policy shall require that the scope of FRMS operations be clearly defined in the operations manual and MANSOPs.

1.1.3 The policy shall—

(a) reflect the shared responsibility of management, air traffic controllers and other involved personnel;

(b) clearly state the safety objectives of the FRMS;

(c) be signed by the accountable executive of the organisation;

(d) be communicated, with visible endorsement, to all the relevant areas and levels of the organisation;

(e) declare management commitment to effective safety reporting;

(f) declare management commitment to the provision of adequate resources for the FRMS;

(g) declare management commitment to continuous improvement of the FRMS;

(h) require that clear lines of accountability for management, air traffic controllers and all other involved personnel are identified; and

(i) require periodic reviews to ensure it remains relevant and appropriate.

1.2 **FRMS DOCUMENTATION**

An ANSP shall develop and keep current FRMS documentation that describes and records—

(a) FRMS policy and objectives;

(b) FRMS processes and procedures;

(c) accountabilities, responsibilities and authorities for these processes and procedures;

(d) mechanisms for ongoing involvement of management, air traffic controllers, and all other involved personnel;

(e) FRMS training programmes, training requirements and attendance records;

(f) duty periods and rest periods with significant deviations and reasons for deviations noted; and

(g) FRMS outputs including findings from collected data, recommendations, and actions taken.

2. **FATIGUE RISK MANAGEMENT PROCESSES**

2.1 **IDENTIFICATION OF HAZARDS**

An ANSP shall develop and maintain three fundamental and documented processes for fatigue hazard identification—

2.1.1 Predictive
The predictive process shall identify fatigue hazards by examining personnel scheduling and taking into account factors known to affect sleep and fatigue and their effects on performance. Methods of examination may include but are not limited to—

(a) industry operational experience and data collected on similar types of operations;

(b) evidence-based scheduling practices; and

(c) bio- mathematical models.

2.1.2 Proactive
The proactive process shall identify fatigue hazards within current operations. Methods of examination may include but are not limited to—

(a) self-reporting of fatigue risks;

(b) Personnel fatigue surveys;

(c) relevant personnel performance data;

(d) available safety databases and scientific studies; and (e) analysis of planned versus actual time worked.

2.1.3 Reactive
The reactive process shall identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine how the impact of fatigue could have been minimized. At a minimum, the process may be triggered by any of the following—

(a) fatigue reports;

(b) confidential reports;

(c) audit reports;

(d) incidents; and

(e) flight data analysis events.

2.2 Risk assessment

2.2.1 An ANSP shall develop and implement risk assessment procedures that determine the probability and potential severity of fatigue-related events and identify when the associated risks require mitigation.

2.2.2 The risk assessment procedures shall review identified hazards and link them to—

(a) operational processes;

(b) their probability;

(c) possible consequences; and

(d) the effectiveness of existing safety barriers and controls.

2.3 Risk mitigation

An ANSP shall develop and implement risk mitigation procedures that:

(a) select the appropriate mitigation strategies;

(b) implement the mitigation strategies; and

(c) monitor the strategies' implementation and effectiveness.

3. **FRMS SAFETY ASSURANCE PROCESSES**

The ANSP shall develop and maintain FRMS safety assurance processes to—

(a) provide for continuous FRMS performance monitoring, analysis of trends, and measurement to validate the effectiveness of the fatigue safety risk controls. The sources of data may include, but are not limited to—

(i) hazard reporting and investigations;

(ii) audits and surveys; and

(iii) reviews and fatigue studies;

(b) provide a formal process for the management of change which shall include but is not limited to—

(i) identification of changes in the operational environment that may affect FRMS;

(ii) identification of changes within the organisation that may affect FRMS; and

(iii) consideration of available tools which could be used to maintain or improve FRMS performance prior to implementing changes; and

(c) provide for the continuous improvement of the FRMS. This shall include—

(i) the elimination and/or modification of risk controls that have had unintended consequences or that are no longer

(ii) needed due to changes in the operational or organisational environment;

(iii) routine evaluations of facilities, equipment, documentation and procedures; and

(iv) the determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks.

4. **FRMS PROMOTION PROCESSES**

FRMS promotion processes support the ongoing development of the FRMS, the continuous improvement of its overall performance, and attainment of optimum safety levels. The following shall be established and implemented by the ANSP as part of its FRMS—

(a) training programmes to ensure competency commensurate with the roles and responsibilities of management, air traffic controllers, and all other involved personnel under the planned FRMS; and

(b) an effective FRMS communication plan that—

(i) explains FRMS policies, procedures and responsibilities to all relevant stakeholders; and

(ii) describes communication channels used to gather and disseminate FRMS related information.

Made by the Director General this 30th day of August, 2024.

MR. ANTHONY WHITTIER
Director General,
Eastern Caribbean Civil Aviation Authority.

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