

REPUBLIQUE DU CAMEROUN

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Le Directeur Général



REPUBLIC OF CAMEROON

Peace – Work – Fatherland

CAMEROON CIVIL AVIATION AUTHORITY

The Director General

CIRCULAR N° ⁰⁰⁰⁰⁰⁷ /C/CCAA/DG of 24 MAY 2021

relating to the preparation of air traffic service providers to resume normal operations following the outbreak of COVID-19

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1. INTRODUCTION

1.1. Subject

- (1) This circular provides safety recommendations for the preparation of air traffic service providers to resume normal operations following the outbreak of COVID-19.
- (2) It also identifies potential hazards related to the resume of normal operations and provides some guidelines for the mitigation of their implied risk.
- (3) It covers aspects related to personnel, processes, and installations.

1.2. Scope of application

This circular applies to air traffic service providers.

1.3. Description of changes

This circular replaces the circular N°000011/C/CCAA/DG of 19th August 2020 relating to the same subject. It incorporates a register of potential hazards resulting from the impact of the COVID-19 pandemic and associated mitigation means.

2. REQUIREMENTS AND REFERENCES

2.1. Requirements

- (a) Loi N°2013/010 du 24 juillet 2013 portant régime de l'aviation civile au Cameroun
- (b) Arrêté N°0000711/MINT du 08 juin 2006 portant organisation des services de la circulation aérienne au Cameroun
- (c) Instruction N°0000714/MINT du 08 juin 2006 relative aux procédures pour les services de la navigation aérienne de gestion de trafic aérien

2.2. Reference documents

- (a) Simplified procedure for air traffic management collaborative decision making and sharing of information, Edition 1.0, May 2020 – ICAO;
- (b) Air traffic services guidance material for operation in a covid-19 context, Version 1.2, June 2020, ICAO NACC Regional Office;
- (c) Guidance Material on dealing with COVID-19 in Air Navigation Facilities, Version 2.0, May 2020, IFATCA;
- (d) Pandemic - Aviation Safety Roadmap, Version 2, May 2020, FSF;
- (e) Potential hazards to normal air traffic services following pandemic disruptions, ICAO, 2021;

- (f) European Network Operations Plan 2020 Recovery Plan, Edition 1.4, May 2020 – Eurocontrol.

3. DEFINITIONS AND ABBREVIATIONS

- (1) The following abbreviations are used in this circular:
- (a) ANSP: Air Navigation Service Provider;
 - (b) ATC: Air Traffic Control;
 - (c) ATCO: Air Traffic Control Officer;
 - (d) ATS: Air Traffic Services;
 - (e) ATSEP: Air Traffic Safety Electronics Personnel;
 - (f) LOA: Letter of Agreement.

4. CONTEXT

- (1) Following the outbreak of COVID-19 and due to restrictive measures issued by the Government, air operations significantly decreased. Due to that, air traffic controllers were mainly impacted by a lack of training and were not confronted with dense traffic situations over a long period of time.
- (2) Although it is not yet defined when normal operations will resume, it is important for air traffic service providers to be prepared in order to operate safely when the time comes. For this reason, they should establish a plan under their safety management system and implement it prior to resuming normal activities.

5. RECOMMENDATIONS

- (1) The following recommendations aim to support the safe provision of air traffic services and should be considered along with any other instructions related to health and security issues.
- (2) Preventive health measures should continue to be applied within ATS facilities as prescribed by health authorities.
- (3) Air traffic service providers, when preparing to resume normal operations, are recommended to consider in their plan at least the following:
- (a) Increased risk due to the potential lack of currency:
 - Controllers should practice and perfect phraseology and application of the ruleset through self-directed learning or through more formal means such as classroom and computer-based training;
 - Work in extended teams (an extra pair of eyes) as traffic levels increase;

- Reducing non-operational distractions;
 - Threat of increased runway incursions due to procedural drift for returning staff;
 - Pilot competency challenges causing ATC issues and/or increased workload;
 - Potential aeronautical information inadequacies due to crisis-related changes or staff shortages;
 - Lack of recency/currency of airport ground personnel in local procedures;
- (b) Proficiency and sufficient number of operational (ATCO) and technical (ATSEP) staff for safe ATS, CNS and information service provision during the transition period:
- ensuring and extending the validity of licenses and certificates as applicable;
 - ensuring the medical fitness of operational staff on roster;
 - ATCO knowledge and skills provide for safe handling of increased traffic;
 - the technical staff competence check plans reviewed and updated, if needed;
 - rostering system is back to normal set up;
 - the number of licensed and validated ATCOs is adequate to the ATC sector configurations to be used during the transition period;
 - the number of technical staff is adequate to the technical services support duty hours;
 - training plans reviewed and revised as appropriate to ensure sufficient number of licensed and certified personnel in the long run;
- (c) ATCO recency/currency and competency areas:
- ATCO (both experienced and recently qualified) difficulties to maintain skills which would be needed in increased traffic scenarios, while they are working a longer period of reduced traffic levels;
 - Encourage controllers to offer more support to each other and be more mindful of potential proficiency gaps;
 - Transitioning from issuing shortened and direct clearances to those used in busy periods;
 - Planning revalidation, continuation training and simulator training, whilst also respecting social distancing rules;
 - ensuring competency rules and medical certificate validity;
 - Use simulators, where available, to ensure controllers' proficiency remains at levels that will best equip them to deal with a return to pre-pandemic traffic;

- Skills, experience, knowledge, and qualification distribution across shifts;
- (d) Preparation of a service recovery plan:
- Capacity imbalance and unusual traffic patterns caused by uncoordinated different pace of capacity recovery by ANSPs;
 - Reduced working positions open in the ATC unit due to rules for physical separation of staff (room layout not adequate for this);
 - Coordination with other States, ANSPs, airspace users and airports
 - Shortfall in the number of operational staff to meet the increasing demand in the transition period;
 - Scarcity of ATCOs in OPS room, due to COVID-19 infection;
 - identification of any temporary and modified procedure related to restrictive measures;
 - establishment of a potential plan for gradual phasing out of temporary and temporary modified procedures;
 - familiarization of operational staff with the potential plan and changes to procedures;
 - notification of aircraft operators and flight crews of any planned changes to procedures and airspace via appropriate AIS publications;
- (e) The transition planning and arrangements support safe return to normal operations:
- ATCO rostering plan for transition period established and maintained (updated as necessary);
 - crisis related AIS publications and NOTAMs reviewed and plan for update/cancelation in place;
 - facilities access restrictions reviewed and modified as appropriate
 - transition hazards identified and associated risk sufficiently mitigated;
 - adequate transition management arrangement exists;
 - Maintain Air Navigation services and infrastructure in a state of response to traffic requirements during recovery;
- (f) Redefinition, if necessary, of the coordination and communication between stakeholders to permit a unified and effective response both internally (within the ANSP) and externally (with national and international stakeholders);
- (g) Ensuring that all equipment (ATM/CNS hardware and software) are up to date and ready for operational use:
- Potential increase in aircraft/airport/ATC System defects through lack of use;
 - the equipment configuration is appropriate for normal operations;

- equipment maintenance plans and schedules reviewed and revised as appropriate;
 - equipment spare parts stock reviewed, and delivery plans amended;
 - ATM/CNS equipment has valid certificates for use;
- (h) Consider flight plan inconsistencies due to multiple AIRAC changes;
- (i) Ensure accuracy, currency, and timely transmission of NOTAMs;
- (j) Use of data to assess the need for additional/adequate resources:
- Operational data to be used: airlines schedules, status of neighbouring FIRs that will impact the in/out flow of traffic in our airspace and aerodrome capacity;
 - critical maintenance to ATM systems/infrastructure that should be considered;
 - additional data required to support recovery planning: health of operational staff, number of staff to employ at operational positions, the need for continued COVID-19 physical distancing between staff and medical/operational licensing or currency issues that need immediate attention;
- (k) Review, if necessary, the current civil-military coordination LOA for applicability and efficiency.

6. IDENTIFICATION OF POTENTIAL HAZARDS AND MITIGATION MEANS

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
hz-01	Insufficient number of operational and technical staff to meet the increasing demand in the transition period and beyond it	<ul style="list-style-type: none"> • Disproportionate demand due to cancellation of COVID19 pandemic-related restrictions and significant number of staff locally still under quarantine • Number of staff reduced to alleviate financial impact • Underlying controller medical condition goes unchecked/unnoticed for extended period • Controller medical checks by Aviation Medical Examiner (AME) postponed or delayed and medical certificate expires • No physical separation possible during position handover/takeover at the same controller working position • Increased risk of affecting others could provoke absenteeism • Pending validation of controller skills (language proficiency, OJT refresher, ...) • Staff training postponed or delayed • Prolonged OJT because, for a long time, the traffic will be too low and not easy to train/assess the trainee's skills 	<ul style="list-style-type: none"> • Regular health checks • General hygienic measures constantly promoted • Availability of hands-cleaning points in the buildings and staff rooms • If feasible, ensure physical separation in the recreation rooms • Set clear priorities for training ramp-up to fulfil training demand according to operational priority needs • Assess feasibility of remote training alternatives • Temporarily reduce or eliminate facilities where staff might regularly congregate, to minimise danger of infection • If possible, increase ventilation and air filtering in ops room or other facilities where staff spend longer periods of time and air tends to be stagnant or recirculated
hz-02	ATCO unable to maintain full situational awareness for timely conflict detection and resolution in the entire area of responsibility, in traffic spike periods	<ul style="list-style-type: none"> • Controllers unable to maintain their operational skills during the disruption due to reduced traffic • Controllers exposed to different traffic patterns and methods of operation • Limited number of controller duty shifts and hours in position during the disruption • Extension of temporary solutions, applied during the disruption, into the transition period without proper safety risk assessment 	<ul style="list-style-type: none"> • Special training (e.g., simulator training), which can emulate the medium-high traffic levels, and new/changed tools/system functions • Dedicated measures for recently qualified controllers, or controllers returning from prolonged absence from operational duties • Lower the maximum sector load until skills recover

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		<ul style="list-style-type: none"> • Big difference in accumulated hours on duty for different controllers, due to preferring to roster controllers with multiple endorsements (who can cover more than one position) during the disruption • Situation may be aggravated by implementation of changes to the controller tools or of new tools and system functions that controllers are not yet sufficiently skilled to use due to lack of operational experience caused by limited number of flights during the disruption • Controllers unable to concentrate during traffic peaks or rise of workload, or when confronted with unexpected situation, possibly due to domestic concerns or emotional state 	<ul style="list-style-type: none"> • Remain vigilant for, and recognise, new behaviour and habits that might have emerged during the low traffic period, in order that appropriate actions can be taken • Extend operational evaluation and acceptance period for new equipment • Monitor submitted flight plans and ensure that controllers are well briefed on unusual flights and their performance characteristics and required procedures • Ensure rosters are as complete as possible to have extra staff available for splitting sectors in peak demand • Availability of controllers for covering shortfalls in staffing should be coordinated in advance
hz-03	Controller overload and fatigue	<ul style="list-style-type: none"> • Extended interval of working at sector position, less breaks even with very low traffic • Not enough standby personnel to cover a temporary lack of staff • Extension of temporary solutions, applied during the disruption (e.g., single person operation), into the transition period without proper safety risk assessment • Increased operational pressures to generate minimum delays to avoid negative economic impact on airlines • Social distancing measures impact availability and efficiency of the rest facilities 	<ul style="list-style-type: none"> • Lower the maximum sector loads until skills' recovery • Consider setting up outdoor resting facilities, where fresh air and open spaces have a much-reduced infection spreading potential, if weather permits
hz-04	Significant increase in controller workload to handle flights suffering technical issues and VFR flights	<ul style="list-style-type: none"> • After a period of long stay on the ground and with only a brief aircraft technical check, an increase of technical issues inflight may be seen 	<ul style="list-style-type: none"> • Coordinate restrictions for VFR flights (e.g., restrict those to times of low demand, airspaces/sectors with less demand)

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		<ul style="list-style-type: none"> Increased number of VFR flights (e.g., GA pilots attempting to accumulate their necessary flight hours) 	
hz-05	Impeded intra-ATC sector team collaboration	<ul style="list-style-type: none"> Implementation of social distancing rules 	<ul style="list-style-type: none"> Trialling and safety risk assessment of the measures to identify potential issues and appropriate mitigations Provide targeted team resource management sessions
hz-06	Controller/OPS supervisors' confusion about applicable airspace organisation and/or rules and procedures during the transition period	<ul style="list-style-type: none"> Changes implemented during the disruption are not settled in the controllers' minds, because they had no opportunity to get used to them Incomplete briefing on controller return to work after extended period of absence (operational and personal) 	<ul style="list-style-type: none"> Find ways to communicate with controllers while they are at home – the briefing overload on return to work can be overwhelming If time and effort permits, create online briefing modules Mandatory pre-shift briefing to absorb any recent and on-going changes Postpone implementation of planned significant changes to airspace organisation and/or procedures (e.g., new PBN procedures) Earlier commencement of shift to ensure time for thorough briefing
hz-07	Inadequate on-the-job training for controllers	<ul style="list-style-type: none"> Ineffective OJT because, for a long time, the traffic will be too low and not easy to train/assess the trainee's skills OJT competence/skills reduced due to long period of training interruption Reduced capacity to provide OJT due to low number of valid OJT endorsements Inefficient training process due to pandemic-related social distancing measures Postponed controller training due to lack of resources 	<ul style="list-style-type: none"> Agree with the appropriate ATS authority on the extension of OJT endorsements Plan for the trainee controllers, whose qualifications have been postponed or training suspended

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
hz-08	Increased stress for operational and technical staff	<ul style="list-style-type: none"> • ANSP cash flow problems impact on salaries and social security – dissatisfaction, uncertainty, pessimism, etc. • Potential changes to social agreements in place • Fear of infection following reports of new positive cases of COVID-19 in the local community • Dramatic individual perception and anxiety about COVID-19 infection risk • Loss of colleague, relative or friend • Severe depression (feeling of uselessness) • Over-enthusiasm (being exhilarated by the return to work and not taking sufficient margins) • Concerns that enforced sanitary measures are not adequate • Safety considerations not prioritised above political and economic factors • Delayed or partial maintenance of equipment due to lack of technical staff, spare parts, or financial constraints 	<ul style="list-style-type: none"> • Provide psychological help • Provide materials and information to promote mental and physical wellbeing • Stress management programme • Peer-to-peer platforms • Mentoring • Promote awareness of stress precursors and notification of stress related conditions or safety events as soon as possible • Position handovers made on different controller working positions at least one meter apart • Regular decontamination of the operations room, including of the controller working positions before next operational use.
hz-09	Lower quality or delay of safety deliverables (investigation reports, safety risk assessments, safety analysis, safety reports, etc.)	<ul style="list-style-type: none"> • Significant reduction in safety investigators' activity and decrease in their investigation skills • Insufficient number of specialist staff • Flaws in safety deliverables due to the remote working method (e.g., functional hazard assessment by teleconference) 	<ul style="list-style-type: none"> • Implement group investigations for all significant occurrences irrespective of the investigators' allocation to ATS units • Independent review of the safety deliverables by increased number of specialists from all the relevant domains: ATS, OPS, CNS, IT systems, etc. • Postpone implementation of planned changes to the functional system • Prioritise change implementation according to the risk to operations, if non-implemented
hz-10	Increased equipment failure rates and compromised equipment maintenance	<ul style="list-style-type: none"> • Lack of preventive maintenance during the disruption • Postponement of corrective maintenance for some equipment 	<ul style="list-style-type: none"> • Verify the requirements for cleaning materials for sensitive equipment and other surfaces

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
		<ul style="list-style-type: none"> • Spare parts for equipment maintenance not available • Current maintenance contract may expire and may not be extended, or new contracts put in place due to suspension of all public procurements • No possibility for on-site technical assistance and equipment health check by a third party • Potential damage to operational equipment when carrying out cleaning protocols to restrict virus transmission • Planned system changes/improvements not implemented • Changes implemented during the disruption, to take advantage of reduced traffic, reveal undetected bugs when load increases leading to equipment failure or suboptimal configurations • Insufficient number of technical and support staff • Diminished ATSEP system knowledge and maintenance skills • Return to "normal" loads of some sensitive equipment can lead to defect, due to long time of operation in underload conditions • Increase in the number of interventions on the network by suppliers after cancellation of COVID-19 related restrictions, could cause network failures • Operational tests of new equipment/system features conducted during the disruption could have been compromised due to the lean traffic • A significant rise in the traffic level could help reveal issues not identified before. 	<ul style="list-style-type: none"> • Coordination of system maintenance activities (back to lower traffic demand periods) • Deploy safe and efficient cleaning methods and ensure cleaning material availability • Properly instruct cleaning staff (in-house/external) • Postpone planned changes to the equipment and implementation of new equipment, where feasible • Ensure proper availability of technical experts with the needed competence
hz-11	Insufficient operational equipment resources (e.g., controller working positions) at ATS unit	<ul style="list-style-type: none"> • Potential conflict between new cleaning policies and the need for access to the operational resources. (Flight strips as well as other tools and equipment could be considered as a transmission vector.) 	<ul style="list-style-type: none"> • Move operations to the back-up ATC facility during main ATC facility disinfection works. • Simulator room/training centre configured as a contingency operations room.

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
		<ul style="list-style-type: none"> • Cleaning materials run out or cleaning cannot "keep up" with operational use, such that the resources have to be temporarily "quarantined". • Need to maintain the ATC back-up facility in operational readiness. 	<ul style="list-style-type: none"> • Accurate study in new controller working position ergonomics/requirements. • Deploy safe and efficient cleaning methods for cleaning of working positions and tools. • ATFM measures. • Update company contingency plan regarding pandemic conditions to ensure sufficient operational equipment and human resources.
hz-12	Lack of or reduced contracted services and maintenance/ supplier support. For example, MET services (such as lack of timely reception of meteorological information), facility maintenance services, network services, communication services, system support arrangements	<ul style="list-style-type: none"> • The contractor may not return to the same operational levels as needed, e.g., not providing H24 service or providing partial or lower quality service. In the extreme case, service provision may be interrupted. 	<ul style="list-style-type: none"> • Consider delay on project deliveries in case of a supply contract. • Establish urgent coordination with the service provider to ensure service is restored as soon as possible.
hz-13	Operational performance/ parameters of navigation aids (e.g., ILS) and MET instruments and equipment not meeting the required standard, which is not detected in a timely manner	<ul style="list-style-type: none"> • While flight inspection checks should generally be feasible even during the disruption, under certain circumstances (e.g., cross-border operations), postponement of flight inspection checks may occur and may lead to exceeding the nominal flight inspection intervals, and in some cases even to unserviceability of some navigation aids. • Improper maintenance of air navigation aids (e.g., due to reduced numbers of aerodrome personnel.) Calibration of MET instruments (and indicators) and equipment for measuring and assessment not possible. 	<ul style="list-style-type: none"> • Establish a health and safety protocol to protect ground and on-board staff. • Prioritize flight inspection missions. For example, prioritize regular missions over new implementation projects (new facilities and procedures); among regular missions, prioritize those addressing facilities that are approaching the flight inspection due date; among those, prioritize facilities of primary importance; etc. Consider temporary extension of the nominal

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
			<p>inspection intervals, after engineering evaluation and/or ground maintenance reinforcement.</p> <ul style="list-style-type: none"> • Request the urgent inspection and, if needed, the calibration and/or maintenance of MET instruments and equipment.
hz-14	Delayed certification of particular services or equipment and delayed implementation of changes that need prior approval by appropriate ATS authority	<ul style="list-style-type: none"> • Increased workload of the appropriate ATS authorities that had to limit their operations and postpone some work due to the COVID-19 pandemic 	<ul style="list-style-type: none"> • Timely communication to appropriate ATS authorities about planned changes, including equipment and new services, and prioritisation of work
hz-15	Increased wildlife presence on/near runway or taxiway	<ul style="list-style-type: none"> • Wildlife prevention programme not followed in full during the confinement period • Bird Control Unit plan and effort might not be adequate for increased wildlife risk 	<ul style="list-style-type: none"> • Detailed visual inspection of the manoeuvring area and surrounds before resuming operations • Notification to ATC for warning to flight crews of possible increased presence of birds
hz-16	Increased number of runway incursions	<ul style="list-style-type: none"> • Lack of training or "rusty" skills of aerodrome personnel returning to work after unemployment. 	<ul style="list-style-type: none"> • Refresher training for aerodrome personnel working airside on the prevention of runway incursions.
hz-17	Improper handling of emergencies by all involved parties	<ul style="list-style-type: none"> • Lack of full scale or partial emergency response plan exercises during the disruption. • Reduced availability of firefighting services at airports due to reduction of airport personnel or material supply caused by the financial impact of COVID-19-related restrictions (could result in change of airport categorisation). 	<ul style="list-style-type: none"> • Coordinate plan for emergency response plan exercises. • Controller briefings.

#	Hazard description	Possible causes (Covid-19 related) and contributory factors	Examples of mitigation
hz-18	Inadequate alerting service	<ul style="list-style-type: none"> • Reduced capability and skills during the crisis period • The occasional use of the service may mean that it drops out of focus and priority during return to normal operations 	<ul style="list-style-type: none"> • Review the capabilities, processes, procedures, and skills required to provide alerting service
hz-19	Flight plan inconsistent with applicable airspace, route or airport availability and conditions	<ul style="list-style-type: none"> • Multiple AIRAC changes since the period of COVID-19 disruption began result in loss of route restriction awareness by aircraft operators and flight planning services. • Flight planning tools not updated to the latest AIP amendments and COVID-19-related NOTAMS about airspace, route, and airport availability. 	<ul style="list-style-type: none"> • Close co-ordination between FMS data providers, aircraft operators, ANSPs and flight planning services during the transition period and safety risk assessments of AIRAC changes. • Postpone implementation of planned significant changes to airspace organisation and/or procedures (e.g., new PBN procedures).
hz-20	Incorrect aircraft navigation	<ul style="list-style-type: none"> • Aircraft FMS database not updated according to the last AIP amendment (missing or incorrect ATS routes or waypoints, missing or not up-to-date standard instrument departures and arrivals, etc.). • Multiple AIRAC changes since disruption began result in loss of route-restriction awareness by flight operations officers and pilots. • Similarly to ATC, diminished pilot skills after a period of no flying, or due to recruitment of new pilots from overseas with lower familiarity of airspace, etc. 	<ul style="list-style-type: none"> • Close co-ordination between FMS data providers, aircraft operators and ANSPs during the transition period, and safety risk assessments of AIRAC changes. • Only allow limited use of RNAV approach procedures during the initial phase of the transition period. • If feasible, postpone implementation of planned significant changes to airspace organisation and/or procedures (e.g., new PBN procedures).
hz-21	Partial loss of air-ground communication	<ul style="list-style-type: none"> • Diminished English language skills and phraseology discipline • Reduced pilot familiarity with radio frequency Changeover-Points (CoPs) in the operational environment due to low hours of flying 	<ul style="list-style-type: none"> • Online English language courses for non-native speakers.

7. CONTACT

(1) For more information, please contact:

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(2) Any suggestion to modify this circular will be highly appreciated and can be submitted via the above-mentioned email address.

