SAFETY RISKS AND MITIGATION MEASURES ASSOCIATED WITH THE COVID-19 GLOBAL PANDEMIC

1.0 PURPOSE

Following the outbreak of the COVID-19 global pandemic, a number of travel directives relating to restrictions and advisories on air transport were issued at State, Regional and Global level. It is therefore necessary for CAAs and operators to take measures to support business and continued civil aviation and safety and security. This can be achieved by conducting an initial analysis of the effects of the COVID-19 global pandemic and its impact on civil aviation. It is important that high safety performance is maintained in all operations.

The purpose of this Advisory Circular is to provide guidance to the industry in the identification of aviation safety risks and mitigation measures associated with the COVID-19 global pandemic. It outlines safety related considerations to support safety and operational personnel navigate the pandemic’s impact and to help inform decision-making.

2.0 REFERENCE


2.2 Civil Aviation (Safety Management) regulations as amended.

2.3 Flight Safety Foundation document ‘Pandemic: Non-medical operational safety aspects and supplemental materials’. 
3.0 INFORMATION AND GUIDANCE

Based on the prevailing circumstances relating to the COVID 19 global pandemic it is necessary to implement actions in line with the following guidelines:

a) Adopt flexible measures on compliance issues such as certifications, licensing, approvals and authorizations without adversely impacting aviation safety and security; and

b) Implement safety management principles for the management of operational risks.

The application of safety management principles considers identification of safety hazards and the related mitigation measures. Following this methodology, examples of hazards and mitigation measures are provided as a guide.

3.1 Safety Hazard Identification

The following were identified as some of the potential and existing safety hazards arising from COVID-19 pandemic:

a) Prolonged parking of aircraft and equipment;
   b) Redundancy of aviation personnel;
   c) Redundancy of airport & ANS infrastructure/system; and
   d) Reduced Aviation Safety Oversight activities.

3.2 Consequences

The following are examples of possible consequences that could arise from the COVID-19 pandemic:

a) Effects of prolonged parking of aircraft and equipment
   i) Degradation of aircraft systems and equipment;
   ii) System and Instruments malfunctioning;
   iii) Expired calibration of aircraft instruments;
   iv) External and internal structural damage caused by corrosion; and
   v) Unserviceability of aircraft systems.

b) Redundancy of aviation personnel;
   i. Staff layoffs
   ii. Loss of currency and competence
   iii. High turnover of experienced and qualified personnel.
   iv. Psychological factors demotivation and stress

c) Effect of redundancy of airport & ANS infrastructure/system
i) Degradation of airport infrastructure and CNS equipment and systems;
ii) Malfunctioning of equipment and systems;
iii) Expired calibration of navigation systems;
iv) Unserviceability of equipment and systems; and
v) Loss of revenue from inoperative businesses at the Airport.

d) Effects of ineffective aviation Safety and Security Oversight activities
i) Increased non-compliances with rules and procedures;
ii) Slow rule making processes and promulgation thereof;
iii) Reduced surveillance and resolution of safety concerns; and
iv) Lack of implementation of Critical Elements.

3.3 Mitigation Measures

The following are proposed mitigation measures may be adopted for minimizing the effects of the possible consequences highlighted in 3.2 above;

a) Consider issuance of exemptions and extensions on licences/certificates/approvals/permit/authorizations;
b) Enhanced Screening Protocols for passengers at airports;
c) Enhance and amend Airport Emergency Response Plans with particular emphasis on handling of Public Health Emergencies;
d) Enhance and amend operators and service providers Emergency Response Plans with particular emphasis on handling of Public Health Emergencies;
e) Training of staff at airports on national and airport emergency preparedness and response plans, public health capacities and prevention and surveillance of the spread of COVID-19;
f) Renewal of and exemptions and extensions on personnel licences/certificates/approvals/permissions/authorizations;
g) Support recurrence training aviation personnel as applicable;
h) Support proficiency and skill checks for flight crew;
i) Provide guidelines and requirements for corrective maintenance and recalibration of equipment;
j) Renewals, extensions and exemptions for Aircraft Certificates of Airworthiness;
k) Provide guidelines for compliance with storage and de-storage of aircraft requirements and procedures;
l) Provide guidelines and requirements for corrective maintenance and recalibration of equipment;
m) Encourage airport equipment Insurance renewals;
n) Carry out renewal of airport certificates, permits and Licences;
o) Seek and support financial waivers for service providers & other businesses at airports;
p) Establish and implement of robust contingency plans for ANS and aerodrome operators; 
q) Establish and implement remote and desktop surveillance activities to review documents, procedures and evidence of activities such as operational and audit records, risk registers and Safety Performance Indicators; 
r) Distribution of checklists to operators and service providers to provide evidence of compliance with and procedures; 
s) Provide guidelines for the conduct of audits via teleconference and adjusted to the operations of the operators or service providers; 
t) Hazard identification by service providers; 
u) Promote the exchange and sharing of lessons learned from the COVID-19 relating to aviation operations; 
v) Establish and maintain adequate safety reporting systems to collect data; 
w) Encourage CAAs to share these with other States and RSOO the useful information gathered and lessons learnt; and 
x) Encourage CAAs record key meetings and decisions taken when applying the safety management principles. 

4.0 CATEGORIZATION OF MITIGATION MEASURES

In order for the industry to identify new and emerging aviation risks resulting from the COVID-19 global pandemic, and have guided decision-making, it is advisable to categorize safety risks and mitigation measures into three broad sections namely; continuing, reducing/cessation, and re-establishing aviation operations.

The following areas are considered for each of the broad sections:

a) General considerations; 
b) Human factors; 
c) Flight operations; 
d) Regulators; 
e) Air traffic services; 
f) Aerodromes and Ground Aids; 
g) Airworthiness of Aircraft; and 
h) Ground operations.

The foregoing provides a systematic guide to consideration of the safety risks and mitigation measures due to reduced passenger numbers, grounded fleets of aircraft and several redundant personnel. Despite the disruption, the aviation system is still functioning; there is continued air traffic services; airports remain open and operating; albeit at reduced capacity; and aviation personnel are still engaged. The Safety aspects for the areas have been tabulated below in order to provide guidance on the considerations to be made under the three categories.