



CAAN Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) Requirements

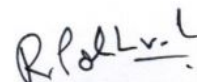
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FOREWORD

CAAN Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) Requirements is issued under the Civil Aviation Regulations 2002 A.D. (2058B.S.) Rule No. 78 Paragraph 4 entitled “Not to pollute Environment” which states that “For the purpose of minimization of pollution to cultural heritage, air and environment, no one shall fly or operate the aircraft as to cross the pollution tolerance limit fixed by the Authority.”

This CORSA Requirement stipulates the general requirements, procedures, and practices to be adhered to by all stakeholders/organizations that are engaged in international operations which directly or indirectly impact climate change. The objective of this requirement is to manage the adverse impact of aviation activities on the atmosphere leading to sustainable growth of the industry by offsetting the carbon emissions generated due to international operations of their flights. Requirements contained in this document are based on the first edition of ICAO Annex 16, Volume IV “Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)”.

This requirement may be amended from time to time and the amendments will be reflected with the vertical line on the right side of the text. The requirements contained herein are inline with the requirements as mentioned in ICAO Annex 16, Volume IV. It prescribes applicability, monitoring, reporting and verification (MRV) of aeroplane operator annual CO₂ emissions, CO₂ offsetting requirements from international flights, emissions reductions from the use of sustainable aviation fuels, requirements for verification and verification bodies, purchase and cancellation of emissions units, and compliance procedure to the above requirements.



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CHAPTER 1. DEFINITIONS

Administrative partnership. Delegation of administering tasks in this Volume from one State to another State(s).

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome pair. A group of two aerodromes composed of a departing aerodrome and an arrival aerodrome.

Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Aeroplane owner. Person(s), organization(s) or enterprise(s) identified via Item 4 (Name of owner) and Item 5 (Address of owner) on the certificate of registration of an aeroplane.

Air Operator Certificate (AOC). A certificate authorizing an operator to carry out specified commercial air transport operations.

Conversion process. A type of technology used to convert a feedstock into aviation fuel.

CORSIA eligible fuel. A CORSIA sustainable aviation fuel or a CORSIA lower carbon aviation fuel, which an operator may use to reduce their offsetting requirements.

CORSIA lower carbon aviation fuel. A fossil-based aviation fuel that meets the CORSIA Sustainability Criteria under this Volume.

CORSIA sustainable aviation fuel. A renewable or waste-derived aviation fuel that meets the CORSIA Sustainability Criteria under this Volume.

Feedstock. A type of unprocessed raw material used for the production of aviation fuel.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Fuel uplift. Measurement of fuel provided by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight (in litre).

Great Circle Distance. The shortest distance, rounded to the nearest kilometre, between the origin and the destination aerodromes, measured over the earth's surface modelled according to the World Geodetic System 1984 (WGS84).

(Note— Latitude and longitude coordinates of aerodromes can be obtained from the ICAO Location Indicators database.)

National accreditation body. A body authorized by a State which attests that a verification body is competent to provide specific verification services.

New entrant. Any aeroplane operator that commences an aviation activity falling within the scope of this Volume on or after its entry into force and whose activity is not in whole or in part a continuation of an aviation activity previously performed by another aeroplane operator.

Notifying State. The State that has submitted to ICAO the request for the registration of or change in the three-letter designator of an aeroplane operator over which it has jurisdiction.

Operator. The person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Pathway. A specific combination of feedstock and conversion process used for the production of aviation fuel.

Reporting period. A period which commences on 1 January and finishes on 31 December in a given year for which an aeroplane operator or State reports required information. The flight departure time (UTC) determines which reporting period a flight belongs to.

State pair. A group of two States composed of a departing State or its territories and an arrival State or its territories.

Verification body. A legal entity that performs the verification of an Emissions Report and, when required, an Emissions Unit Cancellation Report, as an accredited independent third party.

Verification of report. An independent, systematic and sufficiently documented evaluation process of an emissions report and, when required, a cancellation of eligible emissions units report.

Verification report. A document, drafted by the verification body, containing the verification statement and required supporting information.

Verification team. A group of verifiers, or a single verifier that also qualifies as a team leader, belonging to a verification body conducting the verification of an Emissions Report and, when required, an Emissions Unit Cancellation Report. The team can be supported by technical experts.

CHAPTER 2. ABBREVIATIONS AND UNITS

Abbreviations and Units

ACARS	Aircraft Communications Addressing and Reporting System
AOC	Air Operator Certificate
CAAN	Civil Aviation Authority of Nepal
CERT	CO ₂ Estimation and Reporting Tool
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
GHG	Greenhouse gases
IAF	International Accreditation Forum
ICAO	International Civil Aviation Organization
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MRV	Monitoring, Reporting and Verification
MJ	Megajoule
RTK	Revenue Tonne Kilometres

Non-SI units

The non-SI units listed in the table below shall be used either in lieu of, or in addition to, SI units as primary units of measurement under this requirement.

Specific quantity	Unit	Symbol	Definition (in terms of SI units)
mass	tonne	t	1 t = 10 ³ kg
time	hour	h	1 h = 60 min = 3600 s
volume	Litre	L	1 L = 1 dm ³ = 10 ⁻³ m ³

CHAPTER 3. INTRODUCTION

1. Introduction to Carbon Offsetting and Reduction Scheme for International Aviation:

- 1.1 The 39th ICAO General Assembly, held in October 2016, concluded with the adoption of a global market-based measure scheme to address CO₂ emissions from international aviation, known as “Carbon Offsetting & Reduction Scheme for International Aviation (CORSIA)” which was approved by ICAO Council on 27th June, 2018. This market-based measure was adopted based on ICAO’s aspirational goal of Carbon Neutral Growth beyond 2020.

CHAPTER 4. ADMINISTRATION

1. Attribution of international flights to an aeroplane operator

- 1.1. An aeroplane operator shall identify international flights that are attributed to it according to the approach. An international flight is defined as the operation of an aircraft from take-off at an aerodrome of a State or its territories and landing at an aerodrome of another State or its territories whilst a domestic flight is defined as the operation of an aircraft from take-off at an aerodrome of a State or its territories, and landing at an aerodrome of the same State or its territories.

Note.— Two or more consecutive flights operated under the same flight number are considered as separate flights for the purposes of this requirement.

- 1.2. The attribution of a specific international flight to an aeroplane operator shall be determined as follows.

a) *ICAO Designator:*

When Item 7 (aircraft identification) of the flight plan contains the ICAO Designator, that flight shall be attributed to the aeroplane operator that has been assigned this Designator.

b) *Registration marks:*

When Item 7 (aircraft identification) of the flight plan contains the nationality or common mark, and registration mark of an aeroplane that is explicitly listed in an AOC (or equivalent) issued by a State, that flight shall be attributed to the aeroplane operator that holds the AOC (or equivalent); and

c) *Other:*

When Aeroplane Operator of a flight has not been identified under paragraph 1.2 (a) or 1.2 (b), that flight shall be attributed to the aeroplane owner who shall then be considered Aeroplane Operator.

2. CORSIA Focal Point

- 2.1. The aeroplane operator shall designate a Focal Point(s) in their respective organizations duly approved by their management. Names and Contact details of such Focal Points shall be submitted to CAAN.
- 2.2. The Focal Point(s) should possess sound knowledge of CORSIA and related environmental protection matters.
- 2.3. The Focal Point(s) shall act as the contact person for CAAN for all CORSIA related issues and shall be responsible for submission of all data, information, reports as and when required

under CORSIA. The Focal Point(s) shall be also responsible for demonstrating compliance to this requirement.

3. Record Keeping

- 3.1. The aeroplane operator, responsible for demonstrating compliance to the requirements contained in this requirement, shall maintain all relevant records pertaining to their fuel consumption and corresponding emissions data for at least 10 years.
- 3.2. The aeroplane operator should also maintain and keep all records relevant to its CO₂ emissions per State pair during the 2019-2020 period for the purpose of calculating its offsetting requirements during the 2030-2035 compliance periods.
- 3.3. CAAN shall keep records relevant to the aeroplane operator's CO₂ emissions per State pair during the 2019-2020 period in order to cross check its offsetting requirements calculated by CAAN during the 2030-2035 compliance periods.

4. Compliance periods and timeline

- 4.1. CAAN must be aware of all their responsibilities and the timelines as laid down in Appendix 1 of this requirement. It summarizes the administrative roles and responsibilities and provides a list of activities and the associated dates, divided into different compliance periods: 2019-2020 (baseline) and consecutive 3 Compliance Periods (three years each).
- 4.2. The aeroplane operators shall comply with the requirements as contained in this requirement and shall adhere strictly with the timeline provided by CAAN from time to time.

5. Equivalent Procedures: Intentionally Left Blank.

CHAPTER 5. MONITORING, REPORTING AND VERIFICATION (MRV) OF AEROPLANE OPERATOR ANNUAL CO₂ EMISSIONS

MRV is a key component of CORSIA implementation. It is essential for a robust and effective implementation of CORSIA and has a key role to ensure environmental integrity, transparency and a level playing field among all as well as trust and confidence in the scheme. MRV is needed to determine the CORSIA baseline and to collect information on CO₂ emissions from international aviation on an annual basis to compare against the baseline.

1. Applicability of MRV requirements

1.1 The requirements of this chapter shall be applicable to an aeroplane operator that produces annual CO₂ emissions greater than 10,000 tonnes from the use of an aeroplane(s) with a maximum certificated takeoff mass greater than 5,700 kg conducting international flights on or after 1 January 2019, with the exception of humanitarian, medical and firefighting flights.

It should also be noted that the requirements of this chapter shall not apply to the Head of State flights and flights used by military, customs and police.

The requirements of this chapter shall be applicable to an aeroplane operator which starts its international operations after 1 January 2019 (i.e., a New Entrant). However, a new entrant will be liable for monitoring, reporting and verification requirements from 1 January of the next year after its annual CO₂ emissions from international operations exceeds 10,000 tonnes in the preceding year. However, in order to be considered as a new entrant, the aeroplane operator has to satisfy other criteria meant for a new entrant.

1.2 When considering whether a flight is international or domestic, an aeroplane operator and CAAN should use, for the purpose of this requirement, Doc 7910 — Location Indicators, which contains a list of aerodromes and the State they are attributed to.

1.3 The requirements of this chapter shall not be applicable to international flights preceding or following a humanitarian, medical or firefighting flight provided such flights were conducted with the same aeroplane, and were required to accomplish the related humanitarian, medical or firefighting activities or to reposition thereafter the aeroplane for its next activity. The aeroplane operator shall provide supporting evidence of such activities to the verification body or, upon request, to CAAN.

1.4 If the aeroplane operator is close to the threshold of annual CO₂ emissions from international flights, it should consider engaging with CAAN to which it is attributed for guidance. Likewise, CAAN should carry out oversight of the aeroplane operators attributed to it and engage with any that it considers may be close to or above the threshold. The aeroplane operator with annual CO₂ emissions below the threshold may choose to voluntarily engage with CAAN to which it is attributed.

2. Monitoring of CO₂ emissions

2.1 The aeroplane operator shall monitor and record its fuel use from international flights in accordance with an eligible monitoring method and approved by CAAN to which it is attributed. Following approval of the Emissions Monitoring Plan, the aeroplane operator shall use the same eligible monitoring method for the entire compliance period.

Note.— Further guidance material on eligibility of monitoring methods, as well as on associated thresholds and related metrics, is provided in the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

2.2 All aeroplane operators shall monitor their annual fuel consumption and emissions data from international operations from 1 January 2019 onwards. For the monitoring purposes, the aeroplane operator has to establish a monitoring procedure and shall properly document it in their Emissions Monitoring Plan (EMP) with cross reference to their internal documents. The Emissions Monitoring Plan (EMP) containing necessary information about the monitoring and reporting about the fuel used from all international flights shall be submitted to CAAN for approval.

2.3 For preparing the Emission Monitoring Plan, all aeroplane operators shall use the template and the guidance material provided by CAAN. The EMP shall be approved by CAAN and the aeroplane operators shall strictly follow the monitoring procedure as mentioned in their approved EMP.

2.4 The aeroplane operators whose annual carbon emissions is less than 10,000 tonnes, shall establish a simplified procedure to monitor their fuel consumption data from international operations and shall report the same to CAAN on annual basis. They shall use a simplified EMP provided by CAAN and shall continue using the same template till their CO₂ emissions exceeds the threshold value of 10,000 tonnes annually.

2.5 2019-2020 period

2.5.1 The aeroplane operator with annual CO₂ emissions from international flights greater than or equal to 500,000 tonnes shall use a Fuel Use Monitoring Method as described in Appendix 2.

2.5.2 The aeroplane operator with annual CO₂ emissions from international flights of less than 500,000 tonnes shall use either a Fuel Use Monitoring Method or the ICAO CORSA CO₂ Estimation and Reporting Tool (CERT), as described in Appendices 2 and 3 respectively.

2.5.3 If the aeroplane operator's annual CO₂ emissions from international flights increases above the threshold of 500,000 tonnes in 2019, CAAN shall permit, at its discretion, the aeroplane operator to continue to use the monitoring method i.e. CERT during the 2020 period based on the written request from the operator.

2.5.4 The aeroplane operator should use the same monitoring method during the 2019-2020 period that it expects to use during the 2021-2023 period, taking into account its expected annual CO₂ emissions during the 2021-2023 period. If the

aeroplane operator needs to change monitoring method, it will submit a revised Emissions Monitoring Plan to CAAN by 30 September 2020 in order to implement the new monitoring method from 1 January 2021.

- 2.5.5** If the aeroplane operator does not have an approved Emissions Monitoring Plan as of 1 January 2019, it shall monitor and record its CO₂ emissions in accordance with the eligible monitoring method outlined in the Emissions Monitoring Plan that it will submit, or has submitted, to CAAN to which it is attributed.
- 2.5.6** If the aeroplane operator's Emissions Monitoring Plan is determined to be incomplete and/or inconsistent with the eligible Fuel Use Monitoring Method in Appendix 2, then CAAN shall, at its discretion, approve a different eligible Fuel Use Monitoring Method within the Emissions Monitoring Plan for a period lasting no later than 30 June 2019.
- 2.5.7** If the aeroplane operator does not have sufficient information to use a Fuel Use Monitoring Method, as defined in Appendix 2, CAAN shall, at its discretion, approve the use of the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) for a period lasting no later than 30 June 2019.

2.6 2021-2035 period

- 2.6.1** The aeroplane operator, with annual CO₂ emissions from international flights subject to offsetting requirements of greater than or equal to 50,000 tonnes, shall use a Fuel Use Monitoring Method as described in Appendix 2 for these flights. For international flights not subject to offsetting requirements, the aeroplane operator shall use either a Fuel Use Monitoring Method, as described in Appendix 2, or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), as described in Appendix 3.

However, if the aeroplane operator's annual CO₂ emissions from international flights subject to offsetting requirements, increases above the threshold of 50,000 tonnes in two consecutive years, the aeroplane operator shall submit a revised Emissions Monitoring Plan to CAAN by 30 September of the third year by indicating an appropriate Fuel Use Monitoring Method to be used from 1st January of the fourth year onwards.

- 2.6.2** The aeroplane operator, with annual CO₂ emissions from international flights subject to offsetting requirements of less than 50,000 tonnes, shall use either a Fuel Use Monitoring Method or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) as described in Appendices 2 and 3 respectively.
- 2.6.3** The aeroplane operator, with annual CO₂ emissions from international flights subject to offsetting requirements, less than 50,000 tonnes, shall either use a Fuel Use Monitoring Method or CERT.
- 2.6.4** If the aeroplane operator's annual CO₂ emissions from international flights subject to offsetting requirements, decreases below the threshold of 50,000 tonnes in two consecutive years, the aeroplane operator may opt to change its monitoring method on 1 January of the fourth year. However, if the aeroplane operator

chooses to change its monitoring method, an updated Emissions Monitoring Plan will be required to be submitted to CAAN by 30 September of the third year.

3. Emissions Monitoring Plan (EMP)

- 3.1** The aeroplane operator shall submit an Emissions Monitoring Plan (EMP) to CAAN for approval to be applicable from 01 January 2020 onwards. The EMP should be approved by CAAN by 30 June 2020.
- 3.2** The Emissions Monitoring Plan shall contain all the information as defined in Appendix 4.
- 3.3** A new entrant aeroplane operator shall submit an Emissions Monitoring Plan to CAAN within three months of falling within the scope of applicability.
- 3.4** The aeroplane operator shall resubmit the Emissions Monitoring Plan to CAAN for approval if a material change is made to the information contained within the Emissions Monitoring Plan (i.e., a change to the information presented in the plan that would affect the status or eligibility of the aeroplane operator for an option under the emissions monitoring requirements, or that would otherwise affect the decision by CAAN with regard to whether the aeroplane operator's approach to monitoring conforms with the requirements).
- 3.5** The aeroplane operator shall also inform CAAN of changes that would affect CAAN's oversight (e.g., change in corporate name or address); even if the changes do not fall within the definition of a material change.
- 3.6** If the aeroplane operator's Emissions Monitoring Plan is determined to be incomplete and/or inconsistent with the Emissions Monitoring Plan requirements in Appendix 4, CAAN shall engage with the aeroplane operator to resolve outstanding issues. This may involve returning the Emissions Monitoring Plan to the aeroplane operator along with an explanation as to why the plan was found deficient, or a request for further information.

4. Calculation of CO₂ emissions from aeroplane fuel use

- 4.1** The aeroplane operator shall apply a fuel density value to calculate fuel mass where the amount of fuel uplift is determined in units of volume.
- 4.2** The aeroplane operator shall record the fuel density (which may be an actual or a standard value of 0.8 kg per litre) that is used for operational and safety reasons (e.g., in an operational, flight or technical log). The procedure for informing the use of actual or standard density shall be detailed in the Emissions Monitoring Plan along with a reference to the relevant aeroplane operator documentation.
- 4.3** The aeroplane operator using a Fuel Use Monitoring Method, as defined in Appendix 2, shall determine the CO₂ emissions from international flights using the following equation:

$$CO_2 = \sum_f M_f * FCF_f$$

where:

CO_2 = CO₂ emissions (in tonnes);

M_f = Mass of fuel f used (in tonnes); and

FCF_f = Fuel conversion factor of given fuel f, equal to 3.16 (in kg CO₂/kg fuel) for Jet-A fuel / Jet-A1 fuel and 3.10 (in kg CO₂/kg fuel) for AvGas or Jet-B fuel.

4.4 The aeroplane operator shall convert the volume (if the fuel uplift is measured in units of volume) of the fuel into mass by applying a fuel density value before using the aforesaid formula.

5. Monitoring of CORSIA eligible fuels claims

5.1 The aeroplane operator that intends to claim for emissions reductions from the use of CORSIA eligible fuels shall use a CORSIA eligible fuel that meets the CORSIA Sustainability Criteria as defined within the ICAO document entitled “CORSIA Sustainability Criteria for CORSIA Eligible Fuels” that is available on the ICAO CORSIA website.

5.2 The aeroplane operator that intends to claim for emissions reductions from the use of CORSIA eligible fuels shall only use CORSIA eligible fuels from fuel producers that are certified by an approved Sustainability Certification Scheme included in the ICAO document entitled “CORSIA Approved Sustainability Certification Schemes”, that is available on the ICAO CORSIA website. Such certification schemes meet the requirements included in the ICAO document entitled “CORSIA Eligibility Framework and requirements for Sustainability Certification Schemes”, that is available on the ICAO CORSIA website.

5.3 If the aeroplane operator cannot demonstrate the compliance of the CORSIA eligible fuel with the CORSIA Sustainability Criteria, then it shall not be accounted for as CORSIA eligible fuel.

5.4 Further, the aeroplane operator shall only use CORSIA eligible fuels from fuel producers that are certified by an approved Sustainable Certification Scheme and meet the requirements of CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes as prescribed at ICAO CORSIA website.

5.5 However, the aeroplane operator has to provide evidences in respect of the CORSIA eligible fuels purchased that meet ICAO’s sustainability criteria and certification scheme. In case, the aeroplane operator cannot demonstrate the compliance of the CORSIA eligible fuels with the sustainability criteria, then it shall be considered as conventional aviation fuel and no emissions reduction benefits shall be provided to the aeroplane operator.

- 5.6** The claims of emissions reductions from the use of CORSIA eligible fuels by an aeroplane operator shall be based on mass of CORSIA eligible fuels according to the available purchasing and blending invoices/records.
- 5.7** The emissions reductions from the use of a CORSIA eligible fuels are calculated based on the approved Life Cycle Emissions value (LSf) of the CORSIA eligible fuels used by the operator. The aeroplane operator shall provide necessary information on emissions reductions from using CORSIA eligible fuel in their Emissions Report whenever such emissions reductions are availed.

6. Reporting of CO₂ emissions

6.1 Aeroplane operator reporting

- 6.1.1** The aeroplane operator shall submit to CAAN a copy of the verified Emissions Report for approval and a copy of the associated Verification Report by 31st May of every year for the preceding year.
- 6.1.2** CAA Nepal shall decide on the level of aggregation (i.e., State pair or aerodrome pair) for which an aeroplane operator attributed to it shall report the number of international flights and CO₂ emissions. CAAN shall inform an aeroplane operator whether Field 7 and 8 in the Emissions Report shall be reported at the level of State pair or aerodrome pair during the approval process for the Emissions Monitoring Plan.
- 6.1.3** The Emissions Report shall contain the information as defined in Appendix 5 Table A5-1. An aeroplane operator that uses the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) is not required to report Field 5.
- 6.1.4** The aeroplane operator should use the standardised Emissions Report template provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), or a template approved by CAAN for submission of information to CAAN.
- 6.1.5** When the aeroplane operator reports its consolidated CO₂ emissions from international flights during the 2019-2020 period, including subsidiary aeroplane operators, disaggregated data relating to each subsidiary aeroplane operator shall be appended to the main Emissions Report.
- 6.1.6** In specific circumstances where the aeroplane operator operates a very limited number of State pairs that are subject to offsetting requirements, and/or a very limited number of State pairs that are not subject to offsetting requirements, it may request in writing to CAAN that such data not be published at the aeroplane operator level, as defined in Appendix 5, 3.2, explaining the reasons why disclosure would harm its commercial interests. Based on this request, CAAN shall determine whether this data is confidential.

Note.— In the application of 6.1.5 and/or 6.1.6, the annual CO₂ emissions of an aeroplane operator on a given State pair are considered as commercially sensitive if they are determined using a Fuel Use Monitoring Method as described in Appendix 2.

6.1.7 In specific circumstances where aggregated State pair data may be attributed to an identified aeroplane operator as a result of a very limited number of aeroplane operators conducting flights on a State pair, that aeroplane operator may request in writing to CAAN that such data not be published at State pair level, explaining the reasons why disclosure would harm their commercial interests. Based on this request, CAAN shall determine whether this data is confidential.

6.2 CAAN Reporting

- 6.2.1** CAAN shall calculate and inform each of the aeroplane operators under its jurisdiction of their average total annual CO₂ emissions during the 2019 and 2020 period, in accordance with the timeline as defined in Appendix 1.
- 6.2.2** CAAN shall submit a report to ICAO in accordance with the timeline as defined in Appendix 1. This report shall contain the information as defined in Appendix 5, Tables A5-4, A5-5 and A5-6, when applicable.
- 6.2.3** CAAN shall inform ICAO of any reported data deemed confidential in accordance with 6.1.6 and 6.1.7.
- 6.2.4** All aeroplane operator data which is deemed confidential in accordance with 6.1.6 and 6.1.7 shall be aggregated without attribution to the specific aeroplane operator, and included within the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available on the ICAO CORSIA website.

6.3 Reporting of CORSIA eligible fuels

- 6.3.1** The aeroplane operator shall subtract CORSIA eligible fuels traded or sold to a third party from its total reported quantity of CORSIA eligible fuels.
- 6.3.2** The aeroplane operator shall provide a declaration of all other GHG schemes it participates in where the emissions reductions from the use of CORSIA eligible fuels may be claimed, and a declaration that it has not made claims for the same batches of CORSIA eligible fuel under these other schemes.
- 6.3.3** To claim emissions reductions from the use of CORSIA eligible fuels in the Emissions Report, the aeroplane operator shall provide the information as described in Appendix 5 Table A5-2 within a given compliance period for all CORSIA eligible fuel received by a blender by the end of that compliance period. The information provided is through to the blend point, and includes information received from both the neat (unblended) fuel producer and the fuel blender.
- 6.3.4** The aeroplane operator should make CORSIA eligible fuel claims on an annual basis in order to ensure all documentation is dealt with in a timely manner. However, the aeroplane operator has the option to decide when to make a CORSIA eligible fuel claim within a given compliance period for all CORSIA eligible fuel received by a blender within that compliance period. For blending

that occurs in the second half of the final year of a compliance period, the aeroplane operator and CAAN should determine what, if any, flexibility is needed in terms of submitting reports.

- 6.3.5** If the aeroplane operator purchases fuel from a supplier downstream from the fuel blender (e.g., from a distributor, another aeroplane operator, or an aerodrome-based fuel distributor), this fuel supplier shall provide all of the requisite documentation in order for the emissions reductions from the use of CORSIA eligible fuels to be claimed by the aeroplane operator in accordance with Chapter 3.

6.4 Verification of CO₂ emissions

- 6.4.1** For the annual verification of an aeroplane operator's Emission Report, the aeroplane operator shall engage a verification body for the verification of its annual Emissions Report.

Note.— The verification body is one of the verification bodies included in the list of verification bodies accredited in States, included within the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available on the ICAO CORSIA website.

- 6.4.2** The aeroplane operator should perform an internal pre-verification of its Emissions Report prior to the verification by a verification body.
- 6.4.3** A verification body shall conduct the verification according to ISO 14064-3:20061, and the relevant requirements in Appendix 6 Section 3.
- 6.4.4** Following the verification of the Emissions Report by the verification body, the aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, a copy of the Emissions Report and associated Verification Report to CAAN to which the aeroplane operator is attributed, in accordance with the timeline as defined in Appendix 1.
- 6.4.5** CAAN shall perform an order of magnitude check of the Emissions Report in accordance with the timeline, as defined in Appendix 1.
- 6.4.6** To facilitate order of magnitude checks and ensure the completeness of reported data, and where necessary to support the implementation of the requirements, CAAN shall share, upon agreement with another State, specific data and information contained in the aeroplane operator's Emissions Report for aeroplane operators performing flights to and from the requesting State.
- 6.4.7** CAAN shall inform concerned aeroplane operators on the requests for data sharing. In the absence of an agreement between the two States, this information shall not be disclosed to third parties.
- 6.4.8** CAAN should share, upon a justified request from another State, data on aeroplane operators which are attributed to it, where the request relates to the

correct attribution of flights to aeroplane operators. This includes leased aeroplanes where there is a risk of incorrect attribution of flights due to the complexity of leasing and Parent/Subsidiary arrangements between aeroplane operators. In addition, CAAN should support other States on reciprocity basis and provide flight information (e.g., from ATM systems), especially in cases where the flight is between two States which does not include the State to which the aeroplane operator is attributed. Such data includes origin and destination aerodromes, flight date and time, aircraft type.

Note.— As an example of leasing complexities, Operator A may lease its aeroplane to Operator B, with both operators using the same aeroplane during the year but Operator B not operating to the State making the request for information. The State regulating Operator A may want to confirm that the leased aeroplane is identified in the Emissions Report from Operator B to be confident that Operator A has not under reported.

6.4.9 CAAN shall provide the name of the verification body used to verify each Emissions Report upon a request for information disclosure.

6.4.10 CAAN should inform concerned aeroplane operators of any request for information disclosure.

6.5 Verification body and national accreditation body

6.5.1 A verification body shall be accredited to ISO 14065:2013² and the relevant requirements in Appendix 6 Section 2 by a national accreditation body, in order to be eligible to verify the Emissions Report of the aeroplane operator.

Note.— An aeroplane operator may engage a verification body accredited in another State, subject to rules and regulations affecting the provision of verification services in the State to which the aeroplane operator is attributed.

6.5.2 A national accreditation body shall be working in accordance with ISO/IEC 17011:2004³.

2. ISO 14065:2013 entitled “Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition, Document published on: 2013-04.”
3. ISO/IEC 17011:2004 entitled “Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies”.

7. Verification of CORSIA eligible fuels

7.1 Fuel purchases, transaction reports, fuel blending records and sustainability credentials shall constitute the documentary proof for the purpose of verification and approval of emissions reductions from the use of CORSIA eligible fuels.

7.2 The aeroplane operator shall ensure that it, or its designated representative, has audit rights of the production records for the CORSIA eligible fuels that it purchases.

- 7.3 When an audit provision is triggered, and an audit of the fuel producer is undertaken, the aeroplane operator should share the results of the audit with the fuel producer so that the producer may then make it available to other aeroplane operators seeking assurance on the fuel producer's internal processes for the purpose of this requirement.

Note.— The quality control assurances of CORSIA eligible fuel producers include declarations and/or process certifications, with periodic audits by verifiers, purchasers, or trusted entities. The process certifications, including the sustainability credentials, provide assurance that the CORSIA eligible fuel producer has established business processes to prevent double counting, and the periodic audits verify that the producer is following their established procedures. Purchasers and States may elect to independently audit the production records of the CORSIA eligible fuel producer in order to provide further assurance.

- 7.4 In order to ensure this capability exists, CORSIA eligible fuel procurement controls should seek to enable audit rights for fuel purchasers, aeroplane operators, or their designated representatives.

8. Data Gaps

Data gaps occur when an aeroplane operator is missing data relevant for the determination of its fuel use for one or more international flights. Gaps in emissions-related data can occur due to various reasons, including irregular operations, data feed issues or critical system failures. Procedures to prevent data gaps are to be detailed in the Emissions Monitoring Plan of the aeroplane operator in accordance with Appendix 4, 2.4.1. When data gaps are identified by the verification body, it may be unable to obtain sufficient evidence to determine compliance with the requirements, which for severe data gaps, could result in the verification body concluding that the Emissions Report is unsatisfactory. A data gap could also be identified by CAAN in its review of the verified Emissions Report.

8.1 Aeroplane operator

- 8.1.1 The aeroplane operator using a Fuel Use Monitoring Method, as described in Appendix 2, shall fill data gaps using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), as described in Appendix 3, provided that the data gaps during a compliance period do not exceed the following thresholds:

- a. 2019-2020 period: 5 per cent of international flights.
- b. 2021-2035 period: 5 per cent of international flights subject to offsetting requirements

- 8.1.2 The aeroplane operator shall correct issues identified with the data and information management system in a timely manner to mitigate ongoing data gaps and system weaknesses.

8.1.3 If the aeroplane operator realizes it has data gaps and system weaknesses that exceed the threshold then it shall engage with CAAN to take remedial action to address this.

8.1.4 When the threshold is exceeded, the aeroplane operator shall state the percentage of international flights for the 2019-2020 period, or flights subject to offsetting requirements for the 2021-2035 period, that had data gaps, and provide an explanation to CAAN in their annual Emissions Report.

8.1.5 The aeroplane operator shall fill all data gaps and correct systematic errors and misstatements prior to the submission of the Emissions Report.

8.2 Responsibility of CAAN

8.2.1 If the aeroplane operator does not provide its annual Emissions Report in accordance with the timeline as defined in Appendix 1, then CAAN shall engage with the aeroplane operator to obtain the necessary information. If this proves unsuccessful, then CAAN shall estimate the aeroplane operator's annual emissions using the best available information and tools, such as the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) as described in Appendix 3.

8.2.2 If CAAN does not provide its annual aggregated Emissions Report to ICAO in accordance with the timeline as defined in Appendix 1, then the data provided by ICAO shall be used to fill these gaps and calculate the total sectoral CO₂ emissions in a given year and the Sectoral Growth Factor.

8.3 Error correction to Emissions Reports

8.3.1 If an error in the aeroplane operator's reported emissions is identified by CAAN, the verification body, or the aeroplane operator after the reported CO₂ emissions have been submitted to ICAO in accordance with the timeline as defined in Appendix 1, CAAN shall update the reported CO₂ emissions to address the error. CAAN shall assess any implications with respect to the aeroplane operator's offsetting requirements in previous years and, if necessary, make an adjustment to compensate for the error during the compliance period in which the error has been identified.

8.3.2 CAAN shall report an error in the aeroplane operator's CO₂ emissions and the follow-up result of the related adjustment to ICAO.

Note.— No adjustments will be made to the total sectoral CO₂ emissions or the Sector's Growth Factor (SGF) as a result of error correction to Emissions Reports.

CHAPTER 6. CO₂ OFFSETTING REQUIREMENTS FROM INTERNATIONAL FLIGHTS AND EMISSIONS REDUCTIONS FROM THE USE OF CORSIA ELIGIBLE FUELS

1. Applicability of CO₂ offsetting requirements

- 1.1** From 1 January 2021 to 31 December 2035, the offsetting requirements of this Chapter shall be applicable to an aeroplane operator with international flights. However, for Nepalese aeroplane operators with international flights (i) between Nepal and other States, the offsetting requirements of this Chapter shall be applicable from 1 January 2027 onwards, and (ii) between two other States, the offsetting requirements of this Chapter shall be applicable for the offsetting years, if the States are listed in ICAO document entitled “CORSIA States for Chapter 3 State Pairs” for that offsetting year.
- 1.2** The requirements of this Chapter shall not be applicable to a new entrant aeroplane operator for the first three years starting in the year when its annual CO₂ emissions from international operations exceeds 10,000 tonnes or until its annual emissions level exceeds 0.1 % of 2019 emissions level, whichever occurs earlier. The requirements shall then be applicable from 1 January of the subsequent year to the new entrant.
- 1.3** CAAN shall notify ICAO of their decision to voluntarily participate, or to discontinue the voluntary participation in CORSIA, for the purpose of the inclusion of Nepal in the ICAO document entitled “CORSIA States for Chapter 3 State Pairs”, according to the timeline described in Appendix 1.

Note.— The ICAO document entitled “CORSIA States for Chapter 3 State Pairs” that is available on the ICAO CORSIA website includes:

- a) States that have volunteered to participate during the compliance periods from 1 January 2021 to 31 December 2026;*
- b) States, with the exception of Least Developed Countries (LDCs), Small Island Developing States (SIDS) and Landlocked Developing Countries (LLDCs), which meet the following criteria during the compliance periods from 1 January 2027 to 31 December 2035:*
 - (i) an individual share of international aviation activities in RTKs in the year 2018 above 0.5 per cent of total RTKs; or*
 - (ii) whose cumulative share in the list of States from the highest to the lowest amount of RTKs reaches 90 per cent of total RTKs in the year 2018.*
- c) States which are not within the applicability scope of (b), but which have volunteered to participate.*

This document is updated on an annual basis according to the timeline as defined in Appendix 1.

2. CO₂ offsetting requirements

2.1 The amount of CO₂ emissions of an aeroplane operator, required to be offset in a given year from 1 January 2021 to 31 December 2023, prior to consideration of the sustainable aviation fuels, shall be calculated as follows:

Operator's Offsetting Requirements in a given year = Operator's CO₂ emissions in that year * Sector's Growth Factor.

Only an aeroplane operator's emissions on state-pairs subject to offsetting requirements will be taken into account in the calculation of offsetting requirements.

2.2 The Sector's Growth Factor applicable for a given year, will be published by ICAO and is defined as

SGF = [(Total sectoral CO₂ emissions in year Y - Average total annual sectoral CO₂ emissions during 2019 and 2020 in the given year) / Total sectoral CO₂ emissions in year Y]. Sectoral emissions in a given year do not include the CO₂ emissions from new entrants during their exception period.

2.3 As the participation of States in CORSIA change over time, the average of total sectoral CO₂ emissions during 2019 and 2020 covered by these State pairs in the given year Y will be recalculated by ICAO.

2.4 CAAN will calculate, for each of the aeroplane operators, the amount of CO₂ emissions required to be offset in a given year from 1 January 2024 to 31 December 2035 (without emissions reduction from use of CORSIA eligible fuels), every year as follows:

Aeroplane operator's offsetting requirements in the given year Y = Percent Sectoral in the given year Y * (Aeroplane operator's CO₂ emissions in the given year Y * Sector's Growth Factor) + Percent Individual in the given year Y *(Aeroplane operator's CO₂ emissions in the given year Y * Aeroplane operator's Growth Factor).

Where percent individual in the given year y = (100% - Percent Sectoral in the given year y). For the period 2021 to 2029, the values of Percent Sectoral and Percent Individual are 100% and 0% respectively and hence the last term in the above formula shall not be considered. However, from 2030 onwards, ICAO will specify exact values of Percent Sectoral and Percent Individual to be used.

The table below gives an overview of CO₂ offsetting requirements on a sectoral and individual basis during different compliance periods. However, the final value of percent individual in a given year (%Oy) will be determined by the ICAO in its future Assemblies. The tentative values are as shown below:

Year of applicability	%Sy	%Oy
1 January 2024 to 31 December 2029	100%	0%
1 January 2030 to 31 December 2032	(100% - %Oy)	A specified percentage of at least 20%
1 January 2033 to 31 December 2035	(100% - %Oy)	A specified percentage of at least 70%

Note.— The specified percentage (i.e., %Oy) will be determined by the ICAO Assembly in 2028.

2.5 CAAN will calculate the aeroplane operator’s Growth Factor for a given year in accordance with the CO₂ emissions from the verified Emissions Reports submitted by aeroplane operators which is calculated as:

[Total aeroplane operator’s CO₂ emissions in the given year Y - Average total annual aeroplane operator’s CO₂ emissions during 2019 and 2020 in the given year Y]/ Total aeroplane operator’s CO₂ emissions in the given year Y].

2.6 CAAN will inform the aeroplane operator of its final offsetting requirements within the stipulated timeline, upon calculating the final offsetting requirements for a given compliance period of each of the aeroplane operators.

3. Emissions reductions from the use of CORSIA eligible fuels

3.1 The aeroplane operator that intends to claim for emissions reductions from the use of CORSIA eligible fuels in a given year shall compute emissions reductions as follows:

$$ER_y = FCF * \left[\sum_f MS_{f,y} * \left(1 - \frac{LS_f}{LC} \right) \right]$$

where:

ER_y = Emissions reductions from the use of CORSIA eligible fuels in the given year y (in tonnes);

FCF = Fuel conversion factor, equal to 3.16 kg CO₂/kg fuel for Jet-A fuel / Jet-A1 fuel and 3.10 kg CO₂/kg fuel for AvGas or Jet-B fuel;

MS_{f,y} = Total mass of a neat CORSIA eligible fuel claimed in the given year y (in tonnes), as described and reported in Field 12.b in Table A5-1 from Appendix 5;

LS_f = Life cycle emissions value for a CORSIA eligible fuel (in gCO₂e/MJ); and

LC = Baseline life cycle emissions values for aviation fuel, equal to 89 gCO₂e/MJ for jet fuel and equal to 95 gCO₂e/MJ for AvGas.

Note 1.— The ratio (1- LS_f/LC) is also referred to as the emissions reduction factor (ERF_f) of a CORSIA eligible fuel.

Note 2.— For each of the CORSIA eligible fuels claimed, the total mass of the neat CORSIA eligible fuel claimed in the given year y needs to be multiplied by its emissions reduction factor (ERF_f). Then the quantities are summed for all CORSIA eligible fuels.

- 3.2** If a Default Life Cycle Emissions value is used, then the aeroplane operator shall use the ICAO document entitled “CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels” that is available on the ICAO CORSIA website for the calculation.
- 3.3** If an Actual Life Cycle Emissions value is used, then an approved Sustainability Certification Scheme shall ensure that the methodology, as defined in the ICAO document entitled “CORSIA Methodology for Calculating Actual Life Cycle Emissions Values” that is available on the ICAO CORSIA website, has been applied correctly.

4. Total final CO₂ offsetting requirements for a given compliance period with emissions reductions from the use of CORSIA eligible fuels

- 4.1** The amount of CO₂ emissions required to be offset by the aeroplane operator, after taking into account emissions reductions from the use of CORSIA eligible fuels in a given compliance period from 1 January 2021 to 31 December 2035, shall be calculated by CAAN as follows:

$$FOR_c = (OR_{1,c} + OR_{2,c} + OR_{3,c}) - (ER_{1,c} + ER_{2,c} + ER_{3,c})$$

where:

- FOR_c = Aeroplane operator’s total final offsetting requirements in the given compliance period c;
- OR_{y,c} = Aeroplane operator’s offsetting requirements in the given year y (where y = 1, 2 or 3) of the compliance period c; and
- ER_{y,c} = Emissions reductions from the use of CORSIA eligible fuels in the given year y (where y = 1, 2 or 3) of the compliance period c.

- 4.2** If the aeroplane operator’s total final offsetting requirements during a compliance period (i.e., FOR_c) is negative, then the aeroplane operator has no offsetting requirements for the compliance period. These negative offsetting requirements shall not be carried forward to subsequent compliance periods.
- 4.3** The aeroplane operator’s total final offsetting requirements during a compliance period (i.e., FOR_c) shall be rounded up to the nearest tonne of CO₂.
- 4.4** CAAN shall, upon calculating the total final offsetting requirements for a given compliance period of each of the aeroplane operators attributed to it, inform the aeroplane operator of its total final offsetting requirements according to the timeline as defined in Appendix 1.

Note.— Information on CORSIA Eligible Emissions Units, which can be used to meet CO₂ offsetting requirements, are contained in Chapter 7.

CHAPTER 7- EMISSIONS UNITS

Note.— An emissions unit represents one metric tonne of carbon dioxide equivalent.

1. Applicability of emissions units

The requirements of this Chapter shall be applicable to an aeroplane operator who is subject to offsetting requirements.

2. Cancelling CORSIA Eligible Emissions Units

The aeroplane operator shall meet its offsetting requirements as calculated by CAAN, by cancelling CORSIA Eligible Emissions Units in a quantity equal to its total final offsetting requirements for a given compliance period (i.e., FOR_c). The CORSIA Eligible Emissions Units are only those units described in the ICAO document entitled “CORSIA Eligible Emissions Units”, which meet the CORSIA Emissions Unit Eligibility Criteria contained in the ICAO document entitled “CORSIA Emissions Unit Eligibility Criteria”. These ICAO documents are available on the ICAO CORSIA website.

Note.— The CORSIA Eligible Emissions Units are determined by the Council, upon recommendation of a technical advisory body established by the Council, and meet the CORSIA Emissions Unit Eligibility Criteria. The CORSIA Emissions Unit Eligibility Criteria are approved and may only be amended by the Council, with the technical contribution of CAEP, taking into account relevant developments in the UNFCCC and the Paris Agreement. The emissions units generated from mechanisms established under the UNFCCC and the Paris Agreement are eligible for use in CORSIA, provided that they align with decisions by the Council with the technical contribution of CAEP, including on avoiding double counting and on eligible vintage and timeframe.

3. To fulfill the provisions in 7.2, the aeroplane operator shall:

- a) Cancel such CORSIA Eligible Emissions Units within a registry designated by a CORSIA Eligible Emissions Unit Programme within the stipulated timeline, and
- b) Request each CORSIA Eligible Emissions Unit Programme registry to make visible on the registry’s public website, information regarding cancelled CORSIA Eligible Emissions Units for a given compliance period of each aeroplane operator. Such information for each cancelled CORSIA Eligible Emissions Unit shall include the consolidated identifying information such as Quantity of emissions units cancelled, Start of serial numbers, End of serial numbers, Date of cancellation, Eligible emissions unit programme, Unit type, Host country, Methodology, Demonstration of unit date eligibility and aeroplane operator in whose name the units were cancelled.

Note.— “Cancel” means the permanent removal and single use of a CORSIA Eligible Emissions Unit within a CORSIA Eligible Emissions Unit Programme designated registry such that the same emissions unit may not be used more than once. This is sometimes also referred to as “retirement”, “cancelled”, “cancelling” or “cancellation”.

4. Reporting emissions unit cancellation

- 4.1** The aeroplane operator shall report to CAAN the cancellation of CORSIA Eligible Emissions Units carried out to meet its total final offsetting requirements for a given compliance period, by submitting to CAAN a copy of the verified Emissions Unit Cancellation Report for approval and a copy of the associated Verification Report. The Emissions Unit Cancellation Report shall contain information using the required fields defined in Appendix 5 Table A5-7 and shall be submitted to CAAN according to the timeline as defined in Appendix 1.
- 4.2** CAAN shall report to ICAO in accordance with the timeline as defined in Appendix 1. This report shall contain the information as defined in Appendix 5 Table A5-8, using an ICAO approved form.
- 4.3** CAAN should publish the following information, once submitted to ICAO, for a given compliance period:
- a) Total final offsetting requirements over the compliance period for each aeroplane operators attributed to CAAN; and
 - b) Total quantity of emissions units cancelled over the compliance period by each aeroplane operator to reconcile the total final offsetting requirements, as reported by each aeroplane operator attributed to CAAN.

5. Verification of Emissions Unit Cancellation Report

- 5.1** The aeroplane operator shall engage a verification body for the verification of its Emissions Unit Cancellation Report.
- Note.— The aeroplane operator may choose to use the same verification body engaged for the verification of its Emissions Report, although it is not obligated to do so.*
- 5.2** A verification body shall conduct the verification according to ISO 14064-3:2006, and the relevant requirements in Appendix 6, Section 3.
- 5.3** If required by the verification body, the aeroplane operator shall provide access to relevant information on the cancellation of emissions units.
- 5.4** Following the verification of the Emissions Unit Cancellation Report by the verification body, the aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, a copy of the Emissions Unit Cancellation Report and associated Verification Report to CAAN in accordance with the timeline in Appendix 1.
- 5.5** CAAN shall perform an order of magnitude check of the Emissions Unit Cancellation Report in accordance with the timeline, as defined in Appendix 1.

5.6 A verification body shall be accredited to ISO 14065:2013¹ and the relevant requirements in Appendix 6, Section 2 by a national accreditation body, in order to be eligible to verify the Emissions Unit Cancellation Report of an aeroplane operator.

Note.— An aeroplane operator may engage a verification body accredited in another State, subject to rules and regulations affecting the provision of verification services in the State to which the aeroplane operator is attributed.

5.7 A national accreditation body shall be working in accordance with ISO/IEC 17011:2004².

¹ ISO 14065:2013 entitled "Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition, Document published on: 2013-04."

² ISO/IEC 17011:2004 entitled "Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies".

APPENDIX 1. ADMINISTRATION PROCEDURES

1. INTRODUCTION

The procedures specified in this Appendix summarise administrative roles and responsibilities of the stakeholders involved in implementing this requirement.

2. COMPLIANCE PERIODS AND TIMELINE

Note.— Further information and guidance on timeline prior to 1 January 2019, is provided in the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

2.1 2019-2020 period

During the period of 2019-2020, aeroplane operators and CAAN shall comply with the requirements according to the following timeline, where applicable:

Table A1-1. Details of compliance timeline for 2019-2020 period

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2019 to 31 December 2019	The aeroplane operator shall monitor, in accordance with CO ₂ emissions for 2019 from international flights.
2.	28 February 2019	The aeroplane operator shall submit Emissions Monitoring Plan to CAAN (only once unless there is a need to review).
3.	30 April 2019	CAAN shall approve Emissions Monitoring Plans (only once unless there is a review).
4.	30 April 2019	CAAN shall submit a list of aeroplane operators that are attributed to it to ICAO as well as a list of verification bodies accredited in Nepal.
5.	31 May 2019	CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and CAAN to which they have been attributed. The document is available on the ICAO CORSIA website.
6.	1 January 2020 to 31 December 2020	Aeroplane Operator shall monitor CO ₂ emissions for 2020 from international flights.
7.	1 January 2020 to 31 May 2020	Aeroplane Operator shall compile 2019 CO ₂ emissions data to be verified by a verification body. <i>Aeroplane Operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>

8.	31 May 2020	Aeroplane Operator and the verification body shall both independently submit, upon authorization by Aeroplane Operator, the verified Emissions Report and associated Verification Report for 2019 to CAAN.
9.	1 June 2020 to 31 August 2020	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2019, including any filling in of data gaps in case of non-reporting by aeroplane operators.
10.	30 June 2020	CAAN shall notify ICAO of its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2021.
		CAAN shall also notify ICAO which option it has selected for calculating Aeroplane Operator's CO ₂ emissions during the 2021-2023 period.
11.	1 August 2020	CAAN shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2021 compliance year.
12.	31 August 2020	CAAN shall submit required information regarding CO ₂ emissions for 2019 to ICAO.
13.	30 November 2020	CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO in accordance, as well as updates to the list of verification bodies accredited in CAAN.
14.	31 December 2020	CAAN should obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and CAAN to which they have been attributed. The document is available on the ICAO CORSIA website.

Note.— The time for verification of the aeroplane operator's Emissions Report is longer during the 2019-2020 period than subsequent periods.

2.2 2021-2023 period

During the period of 2021-2023, aeroplane operators and CAAN shall comply with the requirements according to the following timeline, where applicable:

Table A1-2. Details of compliance timeline for 2021-2023 period

S. No.	Timeline	Activity
1.	1 January 2021 to 31 December 2021	The aeroplane operator shall monitor CO ₂ emissions for 2021 from international flights.
2.	1 January 2021 to 31 May 2021	The aeroplane operator shall compile 2020 CO ₂ emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
3.	31 May 2021	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2020 to CAAN.
4.	1 June 2021 to 31 August 2021	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2020, including any filling in of data gaps in case of non-reporting by aeroplane operators.
5.	30 June 2021	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2022.
6.	1 August 2021	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2022 compliance year.
7.	31 August 2021	CAAN shall submit required information regarding CO ₂ emissions for 2020 to ICAO.
8.	30 September 2021	CAAN shall calculate and inform aeroplane operators attributed to it of their average total CO ₂ emissions during 2019 and 2020.
9.	30 November 2021	CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
10.	31 December 2021	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>
11.	1 January 2022 to 31 December 2022	The aeroplane operator shall monitor CO ₂ emissions for 2022 from international flights.
12.	1 January 2022 to 30 April 2022	The aeroplane operator shall compile 2021 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as</i>

		<i>possible after completing its Emissions Report.</i>
13.	30 April 2022	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2021 to CAAN.
14.	1 May 2022 to 31 July 2022	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2021, including any filling in of data gaps in case of non-reporting by aeroplane operators.
15.	30 June 2022	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2023.
16.	31 July 2022	CAAN shall submit required information regarding CO ₂ emissions for 2021 to ICAO.
17.	1 August 2022	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2023 compliance year.
18.	31 October 2022	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2021 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)” that can be found on the ICAO CORSIA website.
19.	30 November 2022	CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
		CAAN shall calculate and inform aeroplane operators of offsetting requirements for 2021 based on a chosen formula.
20.	31 December 2022	CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.
21.	1 January 2023 to 31 December 2023	The aeroplane operator shall monitor CO ₂ emissions for 2023 from international flights.
22.	1 January 2023 to 30 April 2023	The aeroplane operator shall compile 2022 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
23.	30 April 2023	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2022 to CAAN.
24.	1 May 2023 to 31 July 2023	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2022,

		including any filling in of data gaps in case of non-reporting by aeroplane operators.
25.	30 June 2023	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2024.
26.	31 July 2023	CAAN shall submit required information regarding CO ₂ emissions for 2022 to ICAO.
27.	1 August 2023	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2024 compliance year.
28.	31 October 2023	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2022 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)” that is available on the ICAO CORSIA website.
29.	30 November 2023	CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal. <i>CAAN shall calculate and inform aeroplane operators of offsetting requirements for 2022 based on a chosen formula.</i>
30.	31 December 2023	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>

Note 1. — The time for verification of the aeroplane operator’s Emissions Report is shorter during the 2021-2023 period than the 2019-2020 period.

Note 2.— During the 2021-2023 period, CAAN may determine the basis of the aeroplane operator offsetting requirements.

2.3 2024-2026 period

During the period of 2024-2026, aeroplane operators and CAAN shall comply with the requirements according to the following timeline, where applicable:

Table A1-3. Details of compliance timeline for 2024-2026 period

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2024 to 31 December 2024	The aeroplane operator shall monitor CO ₂ emissions for 2024 from international flights.
2.	1 January 2024 to 30 April 2024	The aeroplane operator shall compile 2023 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
3.	30 April 2024	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2023 to CAAN.
4.	1 May 2024 to 31 July 2024	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2023, including any filling in of data gaps in case of non-reporting by aeroplane operators.
5.	30 June 2024	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2025.
6.	31 July 2024	CAAN shall submit required information regarding CO ₂ emissions for 2023 to ICAO.
7.	1 August 2024	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2025 compliance year.
8.	31 October 2024	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2023 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
9.	30 November 2024	CAAN shall calculate and inform aeroplane operators of offsetting requirements for 2023 based on a chosen formula.
		CAAN shall calculate and inform aeroplane operators of their total final offsetting requirements for the 2021 to 2023 period.
		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
10.	31 December 2024	<i>CAAN should obtain and use the ICAO document</i>

		<i>entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>
11.	1 January 2025 to 31 December 2025	The aeroplane operator shall monitor CO ₂ emissions for 2025 from international flights.
12.	31 January 2025 or 60 days after CAAN informs aeroplane operators of their total final offsetting requirements for the 2021-2023 period, whichever date comes later	The aeroplane operator shall cancel emissions units for compliance during the 2021 to 2023 period.
13.	7 February 2025	The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2021-2023 period is communicated on the respective Eligible Emissions Units Programme registry (or registries) public website(s).
14.	1 December 2024 to 30 April 2025	The aeroplane operator shall compile their Emissions Unit Cancellation Report covering the 2021-2023 period to be verified by a verification body.
15.	1 January 2025 to 30 April 2025	The aeroplane operator shall compile 2024 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
16.	30 April 2025	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2024 to CAAN. The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Unit Cancellation Report and associated Verification Report for the 2021-2023 period to CAAN.
17.	1 May 2025 to 31 July 2025	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2024, including any filling in of data gaps in case of non-reporting by aeroplane operators. CAAN shall undertake an order of magnitude check of the verified Emissions Unit Cancellation Report for the 2021-2023 period.
18.	30 June 2025	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2026.
19.	31 July 2025	CAAN shall submit required information regarding CO ₂ emissions for 2024 to ICAO. CAAN shall report to ICAO the required information regarding emissions unit cancellation for the 2021-2023 period.

20.	1 August 2025	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2026 compliance year.
21.	31 October 2025	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2024 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
22.	30 November 2025	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2024.
		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
23.	31 December 2025	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>
24.	1 January 2026 to 31 December 2026	The aeroplane operator shall monitor CO ₂ emissions for 2026 from international flights.
25.	1 January 2026 to 30 April 2026	The aeroplane operator shall compile 2025 emissions data to be verified by a verification body.
		<i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
26.	30 April 2026	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2025 to CAAN.
27.	1 May 2026 to 31 July 2026	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2025, including any filling in of data gaps in case of non-reporting by aeroplane operators.
28.	30 June 2026	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2027.
29.	31 July 2026	CAAN shall submit required information regarding CO ₂ emissions for 2025 to ICAO.
30.	1 August 2026	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2027 compliance year.
31.	31 October 2026	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2025 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
32.	30 November 2026	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2025.

		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO in accordance as well as updates to the list of verification bodies accredited in Nepal.
33.	31 December 2026	<i>CAAN should obtain and use the ICAO document entitled “CORSlA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSlA website.</i>

Note.— If the Sector’s Growth Factor (SGF) for 2023 is not available by 31 October 2024 and States are delayed in their ability to inform operators of their total final offsetting requirements for the 2021 to 2023 period, ICAO will publish updated deadlines related to the cancellation of emissions units for compliance during the 2021 to 2023 period, including:

- no sooner than 90 days after the SGF for 2023 is made available for the aeroplane operator to cancel emissions units for compliance during the 2021 to 2023 period;*
- no sooner than 180 days after the SGF for 2023 is made available for the aeroplane operator and the verification body to both submit the verified Emissions Unit Cancellation Report and associated Verification Report for the 2021-2023 period to CAAN; and*
- no sooner than 270 days after the SGF for 2023 is made available for CAAN to report to ICAO the required information regarding emissions unit cancellation for the 2021-2023 period.*

2.4 2027-2029 period

During the period of 2027-2029, aeroplane operators and CAAN shall comply with the requirements according to the following timeline, where applicable:

Table A1-4. Details of compliance timeline for 2027-2029 period

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2027 to 31 December 2027	The aeroplane operator shall monitor CO ₂ emissions for 2027 from international flights.
2.	1 January 2027 to 30 April 2027	The aeroplane operator shall compile 2026 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
3.	30 April 2027	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2026 to CAAN.
4.	1 May 2027 to 31 July 2027	The State shall conduct an order of magnitude check of the verified Emissions Report for 2026, including any filling in of data gaps in case of non-reporting by aeroplane operators.
5.	30 June 2027	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2028.
6.	31 July 2027	CAAN shall submit required information regarding CO ₂ emissions for 2026 to ICAO.
7.	1 August 2027	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2028 compliance year.
8.	31 October 2027	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2026 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
9.	30 November 2027	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2026.
		CAAN shall calculate and inform aeroplane operators of their total final offsetting requirements for the 2024 to 2026 period.

		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
10.	31 December 2027	CAAN should obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.
11.	1 January 2028 to 31 December 2028	The aeroplane operator shall monitor CO ₂ emissions for 2028 from international flights.
12.	31 January 2028 or 60 days after CAAN informs aeroplane operators of their total final offsetting requirements for the 2024-2026 period, whichever date comes later	The aeroplane operator shall cancel emissions units for compliance during the 2024 to 2026 period.
13.	7 February 2028	The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2024-2026 period is communicated on the respective Eligible Emissions Units Programme registry (or registries) public website(s).
14.	1 December 2027 to 30 April 2028	The aeroplane operator shall compile their Emissions Unit Cancellation Report covering the 2024-2026 period to be verified by a verification body.
15.	1 January 2028 to 30 April 2028	The aeroplane operator shall compile 2027 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
16.	30 April 2028	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2027 to CAAN.
		The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Unit Cancellation Report and associated Verification Report for the 2024-2026 compliance period to CAAN.
17.	1 May 2028 to 31 July 2028	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2027, including any filling in of data gaps in case of non-reporting by aeroplane operators.
		CAAN shall undertake an order of magnitude check of the verified Emissions Unit Cancellation Report for the 2024-2026 period.
18.	30 June 2028	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to

		discontinue the voluntary participation in the applicability from 1 January 2028.
19.	31 July 2028	CAAN shall submit required information regarding CO ₂ emissions for 2027 to ICAO. CAAN shall report to ICAO the required information regarding emissions unit cancellation for the 2024-2026 period.
20.	1 August 2028	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2029 compliance year.
21.	31 October 2028	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2027 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
22.	30 November 2028	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2027. CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
23.	31 December 2028	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>
24.	1 January 2029 to 31 December 2029	The aeroplane operator shall monitor CO ₂ emissions for 2029 from international flights.
25.	1 January 2029 to 30 April 2029	The aeroplane operator shall compile 2028 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
26.	30 April 2029	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2028 to CAAN.
27.	1 May 2029 to 31 July 2029	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2028, including any filling in of data gaps in case of non-reporting by aeroplane operators.
28.	30 June 2029	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation in the applicability from 1 January 2030.
29.	31 July 2029	CAAN shall submit required information

		regarding CO ₂ emissions for 2028 to ICAO.
30.	1 August 2029	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2030 compliance year.
31.	31 October 2029	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2028 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
32.	30 November 2029	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2028.
		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
33.	31 December 2029	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed.</i>

Note.— If the Sector’s Growth Factor (SGF) for 2026 is not available by 31 October 2027 and States are delayed in their ability to inform operators of their total final offsetting requirements for the 2024 to 2026 period, ICAO will publish updated deadlines related to the cancellation of emissions units for compliance during the 2024 to 2026 period, including:

- no sooner than 90 days after the SGF for 2026 is made available for the aeroplane operator to cancel emissions units for compliance during the 2024 to 2026 period;*
- no sooner than 180 days after the SGF for 2026 is made available for the aeroplane operator and the verification body to both submit the verified Emissions Unit Cancellation Report and associated Verification Report for the 2024-2026 period to the State; and*
- no sooner than 270 days after the SGF for 2026 is made available for the State to report to ICAO the required information regarding emissions unit cancellation for the 2024-2026 period.*

2.5 2030-2032 period

During the period of 2030-2032, aeroplane operators and CAAN shall comply with the requirements according to the following timeline, where applicable:

Table A1-5. Details of compliance timeline for 2030-2032 period

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2030 to 31 December 2030	The aeroplane operator shall monitor CO ₂ emissions for 2030 from international flights.
2.	1 January 2030 to 30 April 2030	The aeroplane operator shall compile 2029 CO ₂ emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report</i>
3.	30 April 2030	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2029 to CAAN.
4.	1 May 2030 to 31 July 2030	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2029, including any filling in of data gaps in case of non-reporting by aeroplane operators.
5.	30 June 2030	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation in the applicability from 1 January 2031.
6.	31 July 2030	CAAN shall submit required information regarding CO ₂ emissions for 2029 to ICAO.
7.	1 August 2030	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2031 compliance year.
8.	31 October 2030	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2029 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
9.	30 November 2030	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2029.

		CAAN shall calculate and inform aeroplane operators of their total final offsetting requirements for the 2027 to 2029 period.
		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
10.	31 December 2030	CAAN should obtain and use the ICAO document entitled "CORSA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSA website.
11.	1 January 2031 to 31 December 2031	The aeroplane operator shall monitor CO ₂ emissions for 2031 from international flights.
12.	31 January 2031 or 60 days after CAAN informs aeroplane operators of their total final offsetting requirements for the 2027-2029 period, whichever date comes later	The aeroplane operator shall cancel emissions units for compliance during the 2027 to 2029 period.
13.	7 February 2031	The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2027-2029 period is communicated on the respective Eligible Emissions Units Programme registry (or registries) public website(s).
14.	1 December 2030 to 30 April 2031	The aeroplane operator shall compile their Emissions Unit Cancellation Report covering the 2027-2029 period to be verified by a verification body.
15.	1 January 2031 to 30 April 2031	The aeroplane operator shall compile 2030 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
16.	30 April 2031	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2030 to CAAN. The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Unit Cancellation Report and associated Verification Report for the 2027-2029 period to CAAN.
17.	1 May 2031 to 31 July 2031	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2030, including any filling in of data gaps in case of non-reporting by aeroplane operators. CAAN shall undertake an order of magnitude

		check of the verified Emissions Unit Cancellation Report for the 2027-2029 period.
18.	30 June 2031	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation in the applicability from 1 January 2032.
19.	31 July 2031	CAAN shall submit required information regarding CO ₂ emissions for 2030 to ICAO. CAAN shall report to ICAO the required information regarding emissions unit cancellation for the 2027-2029 period.
20.	1 August 2031	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2032 compliance year.
21.	31 October 2031	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2030 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
22.	30 November 2031	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2030. CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
23.	31 December 2031	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed.</i>
24.	1 January 2032 to 31 December 2032	The aeroplane operator shall monitor CO ₂ emissions for 2032 from international flights.
25.	1 January 2032 to 30 April 2032	The aeroplane operator shall compile 2031 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
26.	30 April 2032	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2031 to CAAN.
27.	1 May 2032 to 31 July 2032	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2031, including any filling in of data gaps in case of non-reporting by aeroplane operators.
28.	30 June 2032	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to

		discontinue the voluntary participation in the applicability from 1 January 2033.
29.	31 July 2032	CAAN shall submit required information regarding CO ₂ emissions for 2031 to ICAO.
30.	1 August 2032	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2033 compliance year.
31.	31 October 2032	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2031 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
32.	30 November 2032	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2031. CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
33.	31 December 2032	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>

Note.— If the Sector’s Growth Factor (SGF) for 2029 is not available by 31 October 2030 and States are delayed in their ability to inform operators of their total final offsetting requirements for the 2027 to 2029 period, ICAO will publish updated deadlines related to the cancellation of emissions units for compliance during the 2027 to 2029 period, including:

- *no sooner than 90 days after the SGF for 2029 is made available for the aeroplane operator to cancel emissions units for compliance during the 2027 to 2029 period.*
- *no sooner than 180 days after the SGF for 2029 is made available for the aeroplane operator and the verification body to both submit the verified Emissions Unit Cancellation Report and associated Verification Report for the 2027-2029 period to the State; and*
- *no sooner than 270 days after the SGF for 2029 is made available for the State to report to ICAO the required information regarding emissions unit cancellation for the 2027-2029 period.*

2.6 2033-2035 period

During the period of 2033-2035, aeroplane operators and States shall comply with the requirements according to the following timeline, where applicable:

Table A1-6. Details of compliance timeline for 2033-2035 period

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2033 to 31 December 2033	The aeroplane operator shall monitor CO ₂ emissions for 2033 from international flights.
2.	1 January 2033 to 30 April 2033	The aeroplane operator shall compile 2032 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
3.	30 April 2033	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2032 to CAAN.
4.	1 May 2033 to 31 July 2033	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2032 to CAAN.
5.	30 June 2033	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation in the applicability from 1 January 2034.
6.	31 July 2033	CAAN shall submit required information regarding CO ₂ emissions for 2032 to ICAO.
7.	1 August 2033	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2034 compliance year.
8.	31 October 2033	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2032 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
9.	30 November 2033	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2032.
		CAAN shall calculate and inform aeroplane operators of their total final offsetting requirements for the 2030 to 2032 period.
		CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in

		Nepal.
10.	31 December 2033	CAAN should obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.
11.	1 January 2034 to 31 December 2034	The aeroplane operator shall monitor CO ₂ emissions for 2034 from international flights.
12.	31 January 2034 or 60 days after CAAN informs aeroplane operators of their total final offsetting requirements for the 2030-2032 period, whichever date comes later	The aeroplane operator shall cancel emissions units for compliance during the 2030 to 2032 period.
13.	7 February 2034	The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2030-2032 period is communicated on the respective Eligible Emissions Units Programme registry (or registries) public website(s).
14.	1 December 2033 to 30 April 2034	The aeroplane operator shall compile their Emissions Unit Cancellation Report covering the 2030-2032 period to be verified by a verification body.
15.	1 January 2034 to 30 April 2034	The aeroplane operator shall compile 2033 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
16.	30 April 2034	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2033 to CAAN.
		The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Unit Cancellation Report and associated Verification Report for the 2030-2032 compliance period to CAAN.
17.	1 May 2034 to 31 July 2034	CAAN shall conduct an order of magnitude check of the verified Emissions Report for, including any filling in of data gaps in case of non-reporting by aeroplane operators.
		CAAN shall undertake an order of magnitude check of the verified Emissions Unit Cancellation Report for the 2030-2032 period.
18.	30 June 2034	CAAN shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2035.
19.	31 July 2034	CAAN shall submit required information regarding CO ₂ emissions for 2033 to ICAO.

		CAAN shall report to ICAO the required information regarding emissions unit cancellation for the 2030-2032 period.
20.	1 August 2034	CAAN shall obtain and use the ICAO document entitled “CORSIA States for Chapter 3 State Pairs” applicable for the 2035 compliance.
21.	31 October 2034	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2033 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
22.	30 November 2034	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2033. CAAN shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in Nepal.
23.	1 December 2034	<i>CAAN should obtain and use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions” summarising a list of aeroplane operators and the State to which they have been attributed. The document is available on the ICAO CORSIA website.</i>
24.	1 January 2035 to 31 December 2035	The aeroplane operator shall monitor CO ₂ emissions for 2035 for international flights.
25.	1 January 2035 to 30 April 2035	The aeroplane operator shall compile 2034 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
26.	30 April 2035	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2034 to CAAN.
27.	1 May 2035 to 31 July 2035	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2034, including any filling in of data gaps in case of non-reporting by aeroplane operators.
28.	31 July 2035	CAAN shall submit required information regarding CO ₂ emissions for 2034 to ICAO.
29.	31 October 2035	CAAN shall obtain and use the Sector’s Growth Factor (SGF) for 2034 from the ICAO document entitled “CORSIA Annual Sector’s Growth Factor (SGF)”.
30.	30 November 2035	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2034.

Note.— If the Sector’s Growth Factor (SGF) for 2032 is not available by 31 October 2033 and States are delayed in their ability to inform operators of their total final offsetting requirements for the 2030 to 2032 period, ICAO will publish updated deadlines related to the cancellation of emissions units for compliance during the 2030 to 2032 period, including:

- no sooner than 90 days after the SGF for 2032 is made available for the aeroplane operator to cancel emissions units for compliance during the 2030 to 2032 period;
- no sooner than 180 days after the SGF for 2032 is made available for the aeroplane operator and the verification body to both submit the verified Emissions Unit Cancellation Report and associated Verification Report for the 2030-2032 period to the; and
- no sooner than 270 days after the SGF for 2032 is made available for the State to report to ICAO the required information regarding emissions unit cancellation for the 2030-2032 period.

To complete the period of 2033-2035, aeroplane operators and States shall comply with the requirements according to the following timeline, where applicable:

<i>S. No.</i>	<i>Timeline</i>	<i>Activity</i>
1.	1 January 2036 to 30 April 2036	The aeroplane operator shall compile 2035 emissions data to be verified by a verification body. <i>The aeroplane operator should submit its Emissions Report for verification as soon as possible after completing its Emissions Report.</i>
2.	30 April 2036	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Report and associated Verification Report for 2035 to CAAN.
3.	1 May 2036 to 31 July 2036	CAAN shall conduct an order of magnitude check of the verified Emissions Report for 2035, including any filling in of data gaps in case of non-reporting by aeroplane operators.
4.	31 July 2036	CAAN shall submit required information regarding CO ₂ emissions for 2035 to ICAO.
5.	31 October 2036	CAAN shall obtain and use the Sector's Growth Factor (SGF) for 2035 from the ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF)".
6.	30 November 2036	CAAN shall calculate and inform aeroplane operators of their offsetting requirements for 2035. CAAN shall calculate and inform aeroplane operators of their total final offsetting requirements for the 2033 to 2035 period.
7.	31 January 2037 or 60 days after CAAN informs aeroplane operators of their total final offsetting requirements for the 2033-2035 period, whichever date comes later	The aeroplane operator shall cancel emissions units for compliance during the 2033-2035 period.
8.	7 February 2037	The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2033-2035 period is communicated on the respective Eligible Emissions Units Programme

		registry (or registries) public website(s).
9.	1 December 2036 to 30 April 2037	The aeroplane operator shall compile their Emissions Unit Cancellation Report covering the 2033-2035 period to be verified by a verification body.
10.	30 April 2037	The aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, the verified Emissions Unit Cancellation Report and associated Verification Report for the 2033-2035 compliance period to CAAN.
11.	1 May 2037 to 31 July 2037	CAAN shall undertake an order of magnitude check of the verified Emissions Unit Cancellation Report for the 2033-2035 period.
12.	31 July 2037	CAAN shall report to ICAO the required information regarding emissions unit cancellation for the 2033-2035 period.

Note.— If the Sector's Growth Factor (SGF) for 2035 is not available by 31 October 2036 and States are delayed in their ability to inform operators of their total final offsetting requirements for the 2033 to 2035 period, ICAO will publish updated deadlines related to the cancellation of emissions units for compliance during the 2033 to 2035 period, including:

- *no sooner than 90 days after the SGF for 2035 is made available for the aeroplane operator to cancel emissions units for compliance during the 2033 to 2035 period;*
- *no sooner than 180 days after the SGF for 2035 is made available for the aeroplane operator and the verification body to both submit the verified Emissions Unit Cancellation Report and associated Verification Report for the 2033-2035 period to the State; and*
- *no sooner than 270 days after the SGF for 2035 is made available for the State to report to ICAO the required information regarding emissions unit cancellation for the 2033-2035 period.*

APPENDIX 2. FUEL USE MONITORING METHODS

1. INTRODUCTION

Note.— The procedures specified in this Appendix are concerned with the monitoring of fuel use by aeroplane operators. The methods proposed are representative of the most accurate established practices.

Any equivalent procedures to those contained in this Appendix shall only be allowed after prior application to and approval by CAAN.

2. FUEL USE MONITORING METHODS

2.1 The aeroplane operator, with the exception of an aeroplane operator eligible to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), shall choose from the following fuel use monitoring methods:

- a) Method A;
- b) Method B;
- c) Block-off / Block-on;
- d) Fuel Uplift; or
- e) Fuel Allocation with Block Hour

2.2 Method A

Note.— See Attachment C-1 of Annex 16 Volume IV for process diagram for monitoring fuel use by flight using Method A.

2.2.1 The aeroplane operator shall use the following formula to compute fuel use according to Method A:

$$F_N = T_N - T_{N+1} + U_{N+1}$$

where

- F_N = Fuel used for the flight under consideration (=flight_N) determined using Method A (in tonnes);
- T_N = Amount of fuel contained in aeroplane tanks once fuel uplifts for the flight under consideration (i.e., flight_N) are complete (in tonnes);
- T_{N+1} = Amount of fuel contained in aeroplane tanks once fuel uplifts for the subsequent flight (i.e., flight_{N+1}) are complete (in tonnes); and
- U_{N+1} = Sum of fuel uplifts for the subsequent flight (i.e., flight_{N+1}) measured in volume and multiplied with a density value (in tonnes).

Note 1.— See Chapter 5, Paragraph 4 for requirements on fuel density values.

Note 2.— Fuel uplift U_{N+1} is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight; see Attachment C-2 of Annex 16, Volume 4 for process diagram for collecting the required data to implement Method A.

Note 3.— For ensuring completeness of the data, it is important to note that not only data generated during the flight under consideration (i.e., flight_N) is needed, but also data generated from the subsequent flight (i.e., flight_{N+1}). This is of particular importance when a domestic flight is followed by an international flight or vice versa. In order to avoid data gaps it is therefore recommended that the Block-on fuel or the amount of fuel in the tank after all fuel uplifts for a flight is always recorded on flights of aeroplanes which are used for international flights. For the same reasons, fuel uplift data for all flights of those aeroplanes should be collected, before deciding which flights are international.

- 2.2.2** The aeroplane operator performing on an ad-hoc basis flights attributed to another aeroplane operator shall provide to the latter the fuel measurement values according to the Block-off / Block-on method.
- 2.2.3** Where no fuel uplift for the flight or subsequent flight takes place, the amount of fuel contained in aeroplane tanks (T_N or T_{N+1}) shall be determined at block-off for the flight or subsequent flight. In exceptional cases the variable T_{N+1} cannot be determined. This is the case when an aeroplane performs activities other than a flight, including undergoing major maintenance involving the emptying of the tanks, after the flight to be monitored. In such case the aeroplane operator may substitute the quantity " $T_{N+1} + U_{N+1}$ " with the amount of fuel remaining in tanks at the start of the subsequent activity of the aeroplane or fuel in tanks at Block-on, as recorded by technical logs.

2.3 Method B

Note.— See Attachment C-3 of Annex 16, Volume 4 for process diagram for monitoring fuel use by flight using Method B.

2.3.1 The aeroplane operator shall use the following formula to compute fuel use according to Method B:

$$F_N = R_{N-1} - R_N + U_N$$

where:

F_N = Fuel used for the flight under consideration (i.e., flight N) determined using Method B (in tonnes);

R_{N-1} = Amount of fuel remaining in aeroplane tanks at the end of the previous flight (i.e., flight $N-1$) at Block-on before the flight under consideration, (in tonnes);

R_N = Amount of fuel remaining in aeroplane tanks at the end of the flight under consideration (i.e., flight N) at Block-on after the flight, (in tonnes); and

U_N = Fuel uplift for the flight considered measured in volume and multiplied with a density value (in tonnes).

Note 1.— See Chapter 5, Paragraph 4 for requirements on fuel density values.

Note 2.— Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight; see Attachment C-4 of Annex 16, Volume 4 for process diagram for collecting the required data to implement Method B.

Note 3.— For ensuring completeness of the data, it is important to note that not only data generated during the flight under consideration (i.e., flight N) is needed, but also data generated from the previous flight (i.e., flight $N-1$). This is in particular important when a domestic flight is followed by an international, or vice versa. For avoiding data gaps it is therefore recommended that, the amount of fuel remaining in the tank after the flight or the amount of fuel in the tank after fuel uplift is always recorded on flights of aeroplane which are used for international flights. For the same reasons, fuel uplift data for all flights of those aeroplanes should be collected, before deciding which flights are international.

2.3.2 The aeroplane operator performing on an ad-hoc basis flights attributed to another aeroplane operator shall provide to the latter the fuel measurement values according to the Block-off / Block-on method.

2.3.3 Where an aeroplane does not perform a flight previous to the flight for which fuel consumption is being monitored (e.g., if the flight follows a major revision or maintenance), the aeroplane operator may substitute the quantity R_{N-1} with the amount of fuel remaining in aeroplane tanks at the end of the previous activity of the aeroplane, as recorded by technical logs.

2.4 Block-off / Block-on

Note.— See Attachment C-5 of Annex 16, Volume 4 for process diagram for monitoring fuel use by flight using Method Block-off / Block-on, and Attachment C-6 for the process for collecting the required data to implement Method Block-off / Block-on.

2.4.1 The aeroplane operator shall use the following formula to compute fuel use according to the Block-off / Block-on Method:

$$F_N = T_N - R_N$$

where:

F_N = Fuel used for the flight under consideration (=flight N) determined using Block-off / Block-on Method (in tonnes);

T_N = Amount of fuel contained in aeroplane tanks at Block-off for the flight under consideration i.e., flight N (in tonnes);

and R_N = Amount of fuel remaining in aeroplane tanks at Block-on of the flight under consideration i.e., flight N (in tonnes).

2.5 Fuel uplift

Note.— See Attachment C-7 of Annex 16, Volume 4 for process diagram for monitoring fuel use by flight using the Fuel Uplift Method.

2.5.1 For flights with a fuel uplift unless the subsequent flight has no uplift, the aeroplane operator shall use the following formula to compute fuel use according to the Fuel Uplift Method:

$$F_N = U_N$$

where:

F_N = Fuel used for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes); and
 U_N = Fuel uplift for the flight considered, measured in volume and multiplied with a density value (in tonnes).

Note 1.— See Chapter 5, Paragraph 4 for requirements on fuel density values.

2.5.2 For flight(s) without a fuel uplift (i.e., flight $N+1$, ..., flight $N+n$), the aeroplane operator shall use the following formula to allocate fuel use from the prior fuel uplift (i.e., from flight N) proportionally to block hour:

$$F_N = U_N * \left[\frac{BH_N}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

$$F_{N+1} = U_N * \left[\frac{BH_{N+1}}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

...

$$F_{N+n} = U_N * \left[\frac{BH_{N+n}}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

where:

F_N = Fuel used for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes);

F_{N+1} = Fuel used for the subsequent flight (i.e., flight $N+1$) determined using fuel uplift (in tonnes);

...

F_{N+n} = Fuel used for the follow-on flight (i.e., flight $N+n$) determined using fuel uplift (in tonnes);

U_N = Fuel uplift for the flight under consideration (i.e., flight N) (in tonnes);

BH_N = Block hour for the flight under consideration (i.e., flight N) (in hours);

BH_{N+1} = Block hour for the subsequent flight (i.e., flight $N+1$) (in hours); and

...

BH_{N+n} = Block hour for the follow-on flight (i.e., flight $N+n$) (in hours).

Note.— Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

2.6 Fuel Allocation with Block Hour

Note.— See Attachment C-8 of Annex 16, Volume 4 for process diagram for monitoring fuel use by flight using Fuel Allocation with Block Hour method.

2.6.1 Computation of average fuel burn ratio

2.6.1.1 For an aeroplane operator which can clearly distinguish between international and domestic fuel uplifts, the aeroplane operator shall compute, for each aeroplane type, the average fuel burn ratios by

summing up all actual fuel uplifts from international flights divided by the sum of all actual block hours from international flights for a given year according to the following formula:

$$AFBR_{AO,AT} = \frac{\sum_N U_{AO,AT,N}}{\sum_N BH_{AO,AT,N}}$$

where:

$AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour);

$U_{AO,AT,N}$ = Fuel uplifted for the international flight N for aeroplane operator (AO) and aeroplane type (AT) determined using monitoring method Fuel Uplift (in tonnes); and

$BH_{AO,AT,N}$ = Block hour for the international flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

2.6.1.2 For an aeroplane operator which cannot clearly distinguish between international and domestic fuel uplifts, the aeroplane operator shall compute, for each aeroplane type, the average fuel burn ratios by summing up all actual fuel uplifts from international and domestic flights divided by the sum of all actual block hours from these flights for a given year, according to the following formula:

$$AFBR_{AO,AT} = \frac{\sum_N U_{AO,AT,N}}{\sum_N BH_{AO,AT,N}}$$

where:

$AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour);

$U_{AO,AT,N}$ = Fuel uplifted for the international or a domestic flight N for aeroplane operator (AO) and aeroplane type (AT) measured in volume and multiplied with a specific density value (in tonnes); and

$BH_{AO,AT,N}$ = Block hour for the international and domestic flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

2.6.1.3 An aeroplane operator specific average fuel burn ratios shall be calculated on a yearly basis by using the yearly data from the actual reporting year. The average fuel burn ratios shall be reported, for each aeroplane type, in the aeroplane operator's Emissions Report.

Note 1.— See Chapter 5, Paragraph 4 for requirements on fuel density values.

Note 2.— Aeroplane types are contained in Doc 8643 — Aircraft Type Designators.

2.6.2 Computation of fuel use for individual flights

2.6.2.1 The aeroplane operator shall compute the fuel consumption for each international flight by multiplying the aeroplane operator specific average fuel burn ratios with the flight's block hour according to the following formula:

$$F_N = AFBR_{AO, AT} * BH_{AO, AT, N}$$

where:

F_N = Fuel allocated to the international flight under consideration (i.e., flight N) using the Fuel Allocation Block Hour method (in tonnes);

$AFBR_{AO, AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour); and

$BH_{AO, AT, N}$ = Block hour for the international flight under consideration (=flight N) for aeroplane operator (AO) and aeroplane type (AT) (in hours).

Note 1.— Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

Note 2.— The Verification Report of the external verification body includes an assessment of the aeroplane operator specific average fuel burn ratio per ICAO aircraft type designator used.

Note 3.— Average fuel burn ratio (AFBR) based on all flights for a reporting year and rounded to at least three decimal places.

2.6.2.2 A verification body shall cross-check whether the emissions reported are reasonable in comparison to other fuel related data of the aeroplane operator.

APPENDIX 3. CO₂ EMISSIONS ESTIMATION AND REPORTING METHODS AND TOOLS

1. INTRODUCTION

Note 1.— The procedures specified in this Appendix are concerned with the estimation of CO₂ emissions by an aeroplane operator for the purposes of monitoring CO₂ emissions and filling data gaps. The methods and tools proposed are representative of most accurate established practices.

Note 2.— The ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) can be obtained from the ICAO document entitled “ICAO CORSIA CO₂ Estimation and Reporting Tool” for use in a given year. The CERT can be found on the ICAO CORSIA website.

2. ICAO CORSIA CO₂ ESTIMATION AND REPORTING TOOL (CERT)

2.1 Use of the ICAO CORSIA CERT for complying with monitoring and reporting requirements

Note 1. — The ICAO CORSIA CERT is developed for and made available to aeroplane operators to support the monitoring and reporting of their CO₂ emissions. The CERT supports aeroplane operators in fulfilling their monitoring and reporting requirements by populating the standardized Emissions Monitoring Plan and Emissions Report templates provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). This support includes:

- a. assessing its eligibility to use the CERT, as defined in Appendix 3, in support of their Emissions Monitoring Plan (e.g., CO₂ emissions threshold requirements);*
- b. assessing whether or not it is within the applicability scope of Part II, Chapter 2 MRV requirements; and*
- c. filling any CO₂ emissions data gaps.*

Note 2.— The ICAO CORSIA CERT is also made available to States to support order of magnitude checks and fill any CO₂ emissions data gaps as described in Annex 16, Volume 4, Part II, Chapter 2, 2.5.2.1.

- 2.1.1** The aeroplane operator shall use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) according to the eligibility criteria and upon approval by CAAN.
- 2.1.2** The aeroplane operator shall use either the (1) Block Time input method or (2) the Great Circle Distance input method to enter the necessary information into the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT).

2.1.3 The aeroplane operator approved to use the Block Time input method shall collect the following data and shall enter it into the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) to estimate its CO₂ emissions during the compliance year:

- a. ICAO aircraft type — model designator;
- b. Origin aerodrome ICAO Designator;
- c. Destination aerodrome ICAO Designator;
- d. Block time (in hours);
- e. Number of flights;
- f. Date (optional); and
- g. Flight ID (optional).

2.1.4 The aeroplane operator approved to use the Great Circle Distance input method shall collect the following data and shall enter it into the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) to estimate its CO₂ emissions during the compliance year:

- a. ICAO aircraft model - type designator;
- b. Origin aerodrome;
- c. Destination aerodrome;
- d. Number of flights;
- e. Date (optional); and
- f. Flight ID (optional).

Note 1.— The ICAO aircraft type — model designators are contained in Doc 8643 — Aircraft Type Designators.

Note 2.— The origin aerodrome and destination aerodrome designators are contained in Doc 7910 — Location Indicators.

Note 3.— The ICAO CORSIA CERT will automatically compute Great Circle Distance based on the origin aerodrome and destination aerodrome.

2.2 Collection of data to develop and maintain the ICAO CO₂ estimation module used within the ICAO CORSIA CERT

2.2.1 CAAN should contribute to improving the ICAO CO₂ estimation module used within the ICAO CORSIA CERT by collecting flight level fuel burn data from aeroplane operators who are willing to share this information. Aeroplane operator data should include:

- a. Date and time (in Universal Time Coordinated);
- b. ICAO aircraft type — model designator;
- c. Origin aerodrome ICAO Designator;
- d. Destination aerodrome ICAO Designator;
- e. Block hour (in hours to 2 decimal places);
- f. Fuel used (in tonnes to at least 1 decimal place) based on a Fuel Use Monitoring Method as described in Appendix 2;
- g. Type of Fuel Use Monitoring Method used;

- h. Aircraft maximum certificated take-off mass (in kg); and
- i. Flight Great Circle Distance (in km).

2.2.2 CAAN should share data with ICAO for continuous improvement of the ICAO CO₂ estimation module used within the ICAO CORSIA CERT. If CAAN shares data, then this will include:

- a. Date and time (in Universal Time Coordinated);
- b. Generic code to de-identify aeroplane operator information and allow integration of information;
- c. ICAO aircraft type — model designator;
- d. Flight Great Circle Distance (in km);
- e. Block hour (in hours to 2 decimal places);
- f. Fuel used (in tonnes to at least 1 decimal place based on a fuel use monitoring method as described in Appendix 2; and
- g. Type of Fuel Use Monitoring Method used

2.2.3 CAAN shall anonymize the aeroplane operator data shared with ICAO under 2.2.2, if data is shared as per 2.2.2.

APPENDIX 4. EMISSIONS MONITORING PLANS

1. INTRODUCTION

The Emissions Monitoring Plan of an aeroplane operator shall contain the information listed in Section 2 of this Appendix.

2. CONTENT OF EMISSIONS MONITORING PLANS

Note.— The template of an Emissions Monitoring Plan (from aeroplane operator to State) is provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

2.1 Aeroplane operator identification

2.1.1 Name and address of the aeroplane operator with legal responsibility.

2.1.2 Information for attributing the aeroplane operator to a State:

- a) **ICAO Designator:** ICAO Designator(s) used for air traffic control purposes, as listed in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.
- b) **Air operator certificate:** If the aeroplane operator does not have an ICAO Designator, then a copy of the air operator certificate.
- c) **Place of juridical registration:** If the aeroplane operator does not have an ICAO Designator or an air operator certificate, then the aeroplane operator's place of juridical registration.

2.1.3 Details of ownership structure relative to any other aeroplane operators with international flights, including identification of whether the aeroplane operator is a parent company to other aeroplane operators with international flights, a subsidiary of another aeroplane operator(s) with international flights and/or has a parent and or subsidiaries that are aeroplane operators with international flights.

2.1.4 If the aeroplane operator in a parent-subsidiary relationship seeks to be considered a single aeroplane operator for purposes of this Requirement, then confirmation shall be provided that the parent and subsidiary(ies) are attributed to the same State and that the subsidiary(ies) are wholly-owned by the parent.

2.1.5 Contact information for the person within the aeroplane operator's company who is responsible for the Emissions Monitoring Plan.

2.1.6 Description of the aeroplane operator's activities (e.g. scheduled/non-scheduled, passenger/cargo/executive, and geographic scope of operations).

2.2 Fleet and operations data

2.2.1 List of the aeroplane types and type of fuel (e.g. Jet-A, Jet-A1, Jet-B, AvGas) used in aeroplanes operated for international flights at the time of submission of the Emissions Monitoring Plan, recognizing that there may be changes over time. The list shall include:

- a. Aeroplane types with a maximum certificated take-off mass of 5 700 kg or greater and the number of aeroplane per type, including owned and leased aeroplanes; and

Note 1.— Aeroplane types are contained in Doc 8643 — Aircraft Type Designators.

Note 2.— The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify applicable aeroplane types.

- b. Type of fuel(s) used by the aeroplanes (e.g., Jet-A, Jet-A1, Jet-B, AvGas).

Note.— The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) does not need to specify the type of fuel used by aeroplanes.

2.2.2 Information used for attributing international flights to the aeroplane operator:

- a. **ICAO Designator:** List of the ICAO Designator(s) used in Item 7 of the aeroplane operator's flight plans.
- b. **Registration marks:** If the aeroplane operator does not have an ICAO Designator, then a list of the nationality or common mark, and registration mark of aeroplanes that are explicitly stated in the air operator certificate (or equivalent) and used in Item 7 of the aeroplane operator's flight plans.

2.2.3 Procedures on how changes in the aeroplane fleet and fuel used will be tracked, and subsequently integrated in the Emissions Monitoring Plan.

2.2.4 Procedures on how the specific flights of an aeroplane will be tracked to ensure completeness of monitoring.

2.2.5 Procedures for determining which aeroplane flights meet the definition of international flights and are therefore subject to the requirements laid down in Chapter 5.

Note.— The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify international flights, as long as all flights (i.e., domestic and international) conducted during the reporting year are entered as input into the tool.

2.2.6 List of States to where the aeroplane operator operates international flights at the time of initial submission of the Emissions Monitoring Plan.

Note.— The aeroplane operator using the estimation functionality of the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) to assess its eligibility to use the CERT could use the output of the tool (i.e., list of States) as input to the Emissions Monitoring Plan submission.

- 2.2.7 Procedures for determining which international aeroplane flights are subject to the requirements laid down in Chapter 6.

Note.— The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify flights subject to offsetting requirements in a given year of compliance as long as the aeroplane operator uses the correct version (i.e., year of compliance) of the CERT.

- 2.2.8 Procedures for identifying domestic flights and/or humanitarian, medical or firefighting international flights that would not be subject to Chapter 5 requirements.

2.3 Methods and means of calculating emissions from international flights

2.3.1 Methods and means for establishing the average emissions during the 2019-2020 period

- 2.3.1.1 If the aeroplane operator meets the eligibility criteria of Chapter 5 requirements and chooses to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) as described in Appendix 3, then the following information shall be provided:

- a. An estimate of CO₂ emissions for all international flights for 2019 with supporting information on how the estimation was calculated.
- b. The type of input method used in the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT):
 - Great Circle Distance input method; or
 - Block Time input method.

Note.— Guidance on estimating CO₂ emissions for 2019 is provided in the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

- 2.3.1.2 If the aeroplane operator meets the eligibility criteria of Chapter 5 requirements or chooses to use a Fuel Use Monitoring method as described in Appendix 2, then the following information shall be provided:

- a. The Fuel Use Monitoring Method that will be used:
 - Method A;
 - Method B;
 - Block-off / Block-on;
 - Fuel Uplift; or
 - Fuel Allocation with Block Hour.
- b. If different Fuel Use Monitoring Methods are to be used for different aeroplane types, then the aeroplane operator shall specify which method applies to which aeroplane type;

- c. Information on the procedures for determining and recording fuel density values (standard or actual) as used for operational and safety reasons and a reference to the relevant aeroplane operator documentation; and
- d. The systems and procedures to monitor fuel consumption in both owned and leased aeroplane. If the aeroplane operator has chosen the Fuel Allocation with Block Hour method, information shall be provided on the systems and procedures used to establish the average fuel burn ratios as described in Appendix 2.

2.3.1.3 If the aeroplane operator is in a parent-subsidary relationship and seeks to be considered as a single aeroplane operator for purposes of this Requirement, then it shall provide the procedures that will be used for maintaining records of fuel used and emissions monitored during the 2019-2020 period of the various corporate entities. This shall be used to establish individual average emissions during the 2019-2020 period for the parent and subsidiary (or subsidiaries).

2.3.2 Methods and means for emissions monitoring and compliance on or after 1 January 2021

2.3.2.1 If the aeroplane operator has international flights but these are not subject to offsetting requirements then it shall confirm whether it plans to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) as described in Appendix 3 or the Fuel Use Monitoring Methods as described in Appendix 2.

2.3.2.2 If the aeroplane operator meets the eligibility criteria of Chapter 5 requirements, and it chooses to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) as described in Appendix 3, then the following information shall be provided:

- a. An estimate of CO₂ emissions for all international flights subject to offsetting requirements for the year before the emissions monitoring is to occur (for example, an estimate of such emissions for 2020 for monitoring in 2021), as well as information on how the fuel use and CO₂ estimation was calculated.
- b. The type of input method used in the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT):
 - Great Circle Distance input method; or
 - Block Time input method

2.3.2.3 If the aeroplane operator meets the eligibility criteria of Chapter 5 requirements or chooses to use a Fuel Use Monitoring method as described in Appendix 2, then the following information shall be provided:

- a. The Fuel Use Monitoring Method that will be used:
 - Method A;
 - Method B;
 - Block-off / Block-on;
 - Fuel Uplift; or
 - Fuel Allocation with Block Hour.

- b. If different Fuel Use Monitoring Methods are to be used for different aeroplane types, then the aeroplane operator shall specify which method applies to which aeroplane type;
- c. Information on the procedures for determining and recording fuel density values (standard or actual) as used for operational and safety reasons and a reference to the relevant aeroplane operator documentation; and
- d. The systems and procedures to monitor fuel consumption in both owned and leased aeroplane. If the aeroplane operator has chosen the Fuel Allocation with Block Hour method, information shall be provided on the systems and procedures used to establish the average fuel burn ratios as described in Appendix 2.

2.3.2.4 If the aeroplane operator is using a Fuel Use Monitoring Method, as defined in Appendix 2, it shall state whether it plans to use the ICAO CORSIA CERT for international flights, that are subject to emissions monitoring but not offsetting requirements. If so, the aeroplane operators shall also state which input method into the ICAO CORSIA CERT is being used (i.e., Great Circle Distance input method, or Block Time input method).

2.4 Data management, data flow and control

2.4.1 The aeroplane operator shall provide the following information:

- a. roles, responsibilities and procedures on data management;
- b. procedures to handle data gaps and erroneous data values, including:
 - Secondary data reference sources which would be used as an alternative;
 - Alternative method in case the secondary data reference source is not available; and
 - For those aeroplane operators using a Fuel Use Monitoring Method, information on systems and procedures for identifying data gaps and for assessing whether the 5 per cent threshold for significant data gaps has been reached.
- c. documentation and record keeping plan;
- d. assessment of the risks associated with the data management processes and means for addressing significant risks;
- e. procedures for making revisions to the Emissions Monitoring Plan and resubmitting relevant portions to CAAN when there are material changes;
- f. procedures for providing notice in the Emissions Report of non-material changes that require the attention of CAAN; and
- g. a data flow diagram summarizing the systems used to record and store data associated with the monitoring and reporting of CO₂ emissions.

APPENDIX 5. REPORTING

1. INTRODUCTION

Note.— The procedures specified in this Appendix are concerned with the reporting requirements under Chapter 5 of this Requirement.

1.1 Unless otherwise stated, fuel use and CO₂ emissions shall be reported to the nearest tonne.

2. CONTENT OF EMISSIONS REPORT FROM AEROPLANE OPERATOR TO STATE

Table A5-1. Content of aeroplane operator Emissions Report

Note.— The template of an Emissions Report (from aeroplane operator to State) is provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

Field#	Data Field	Details
Field 1	Aeroplane operator information	1.a Name of aeroplane operator 1.b Detailed contact information of aeroplane operator 1.c Name of a point of contact 1.d Method and identifier used to attribute an aeroplane operator to a State 1.e State
Field 2	Reference details of aeroplane operator Emissions Monitoring Plan	2. Reference to the Emissions Monitoring Plan that is the basis for emissions monitoring that year Note. - State may require providing reference to updated Emissions Monitoring Plan, if applicable.
Field 3	Information to identify the verification body and Verification Report	3.a Name and contact information of the verification body 3.b Verification Report to be a separate report from aeroplane operator's Emissions Report
Field 4	Reporting year	4. Year during which emissions were monitored
Field 5	Type and mass of fuel(s) used	5.a Total fuel mass per type of fuel: • Jet-A (in tonnes) • Jet-A1 (in tonnes) • Jet-B (in tonnes)

		<ul style="list-style-type: none"> • AvGas (in tonnes) <p><i>Note 1. – Above totals to include CORSIA eligible fuels.</i></p> <p><i>Note 2.- The aeroplane operator using the ICAO CORSIA CERT, as described in Appendix 3, does not need to report Field 5</i></p>
Field 6	Total number of international flights during the reporting period	<p>6.a Total number of international flights during the reporting period</p> <p><i>Note. - Total (sum of values from Field 7)</i></p>
Field 7	Number of international flights per State pair or aerodrome pair	<p>7.a Number of international flights and per State pair (no rounding); or</p> <p>7.b Number of international flights per aerodrome pair (no rounding).</p>
Field 8	CO ₂ emissions per aerodrome pair or State pair	<p>8.a CO₂ emissions from international flights and per State pair (in tonnes); or</p> <p>8.b CO₂ emissions from international flights and per aerodrome pair (in tonnes).</p>
Field 9	Scale of data gaps	<p>9.a Per cent of data gaps (according to criteria and rounded to the nearest 0.1%)</p> <p>9.b Reason for data gaps if per cent of data gaps exceeds the threshold.</p>
Field 10	Aeroplane information	<p>10.a List of aeroplane types</p> <p>10.b Aeroplane identifiers used in flight plans' Item 7 during the year for all international flights where the identifier is based on an ICAO Designator, only the ICAO Designator is to be reported</p> <p>10.c Information on leased aeroplanes</p> <p>10.d Average fuel burn ratio (AFBR) for each aeroplane type under 10.a in line with Doc 8643 — Aircraft Type Designator (in tonnes per hour to 3 decimal places)</p> <p><i>Note: - 10.d is only required if the aeroplane operator is using the Fuel Allocation with Block Hour method, as defined in Appendix 2.</i></p>
Field 11	Eligibility for and use of the ICAO CORSIA CO ₂ Estimation and Reporting Tool (CERT).	<p>11.a Version of the ICAO CORSIA CERT used</p> <p>11.b Scope of use of the ICAO CORSIA CERT i.e., on all flights or only on the international flights not subject to offsetting requirements.</p>

<p>Field 12</p> <p><i>Note.- If emissions reductions from the use of CORSIA eligible fuel are claimed, see Table A52 for supplementary information that is to be provided with the aeroplane operator's Emissions Report</i></p>	<p>Emissions reductions (total)</p>	<p>12.e Total emissions reductions claimed from the use of all CORSIA eligible fuels (in tonnes)</p> <p><i>Note. – During the 2019-2020 period, fields 12.a to 12.e are not required as the applicability of Chapter 6 starts on 1 January 2021 i.e., there are no offsetting requirements and no emissions reductions from the use of CORSIA eligible fuels during the 2019-2020 period.</i></p>
<p>Field 13</p>	<p>Total CO₂ emissions</p>	<p>13.a Total CO₂ emissions (based on total mass of fuel in tonnes from Field 5 and reported in tonnes)</p> <p>13.b Total CO₂ emissions from flights subject to offsetting requirements (in tonnes)</p> <p>13.c Total CO₂ emissions from international flights and that are not subject to offsetting requirements (in tonnes)</p> <p><i>Note. – During the 2019-2020 period, only fields 13.a is required as the applicability of Chapter 5 starts on 1 January 2021 i.e., there are no State pairs subject to offsetting requirements during the 2019-2020 period.</i></p>

Note. — The State may expand on this list to include additional or more detailed data from aeroplane operators registered in their State.

Table A5-2. Supplementary information to an aeroplane operator’s Emissions Report if emissions reductions from the use of each CORSIA eligible fuel being claimed

Note.— The template of a CORSIA eligible fuels supplementary information to the Emissions Report (from aeroplane operator to State) is provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV — Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Purchase date of the neat CORSIA eligible fuel	
Field 2	Identification of the producer of the neat CORSIA eligible fuel	2.a Name of producer of the neat CORSIA eligible fuel 2.b. Contact information of the producer of the neat CORSIA eligible fuel
Field 3	Fuel Production	3.a Production date of the neat CORSIA eligible fuel 3.b Production location of the neat CORSIA eligible fuel 3.c. Batch number of each batch of neat CORSIA eligible fuel 3.d Mass of each batch of neat CORSIA eligible fuel produced
Field 4	Fuel type	4.a Type of fuel (i.e., Jet-A, Jet-A1, Jet-B, AvGas) 4.b Feedstock used to create the neat CORSIA eligible fuel 4.c Conversion process used to create the neat CORSIA eligible fuel
Field 5	Fuel Purchased	5.a Proportion of neat CORSIA eligible fuel batch purchased (rounded to the nearest %) <i>Note. - If less than an entire batch of CORSIA eligible fuel is purchased.</i> 5.b Total mass of each batch of neat CORSIA eligible fuel purchased (in tonnes) 5.c Mass of neat CORSIA eligible fuel purchased (in tonnes) <i>Note. — Field 5.c is equal to the total for all</i>

		<i>batches of CORSIA eligible fuels reported in Field 5.b.</i>
Field 6	Evidence that fuel satisfies the CORSIA Sustainability Criteria	i.e. valid sustainability certification document
Field 7	Life cycle emissions values of the CORSIA eligible fuel	7.a Default or Actual Life Cycle Emissions Value (LSf) for given CORSIA eligible fuel f, which is equal to the sum of 7.b and 7.c (in gCO ₂ e/MJ rounded to the nearest whole number) 7.b Default or Actual Core Life Cycle Assessment (LCA) value for given CORSIA eligible fuel f (in gCO ₂ e/MJ rounded to the nearest whole number) 7.c Default Induced Land Use Change (ILUC) value for given CORSIA eligible fuel f (in gCO ₂ e/MJ rounded to the nearest whole number)
Field 8	Intermediate Purchaser	8.a Name of the intermediate purchaser 8.b Contact information of the intermediate purchaser <i>Note.— This information would be included in the event that the aeroplane operator claiming emissions reductions from the use of CORSIA eligible fuels was not the original purchaser of the fuel from the producer (e.g., the aeroplane operator purchased fuel from a broker or a distributor). In those cases, this information is needed to demonstrate the complete chain of custody from production to blend point.</i>
Field 9	Party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender	9.a Name of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender 9.b Contact information of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender
Field 10	Fuel Blender	10.a Name of the party responsible for blending neat CORSIA eligible fuel with aviation fuel 10.b Contact information of the party responsible for blending neat CORSIA eligible fuel with aviation fuel
Field 11	Location where neat CORSIA eligible fuel is blended with aviation fuel	

Field 12	Date the neat CORSIA eligible fuel was received by blender	
Field 13	Mass of neat CORSIA eligible fuel received (in tonnes)	<i>Note. - This number may differ from the number in Field 5.c in cases where only a portion of a batch or batches are received by the blender (i.e. due to sale to intermediate purchaser).</i>
Field 14	Blend ratio of neat CORSIA eligible fuel and aviation fuel (rounded to the nearest %)	
Field 15	Documentation demonstrating that the batch or batches of neat CORSIA eligible fuel were blended into aviation fuel (e.g., the subsequent Certificate of Analysis of the blended fuel)	
Field 16	Mass of neat CORSIA eligible fuel claimed (in tonnes)	<i>Note.— This number may differ from the number in Field 5.c in cases where only a portion of a batch or batches are claimed by the aeroplane operator</i>

3. CONTENT OF EMISSIONS REPORT FROM STATE TO ICAO

3.1 List of aeroplane operators attributed to the State and verification bodies accredited in a State

Table A5-3. State Report of aeroplane operators attributed to the State and verification bodies accredited in the State

Field #	Data Field	Details
Field 1	List of aeroplane operators attributed to the State	1.a Name and contact information of aeroplane operator 1.b Aeroplane operator Code 1.c Method and identifier used to attribute aeroplane operator to a State
Field 2	List of verification bodies accredited in the State (for a given year of compliance)	2.a State 2.b Name of verification body

Note.— Information on the following fields can be found in the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available from the ICAO CORSIA website:

- *List of aeroplane operator attributed to the State; and*
- *List of verification bodies accredited in each State.*

3.2 Emissions Report from a State to ICAO

Table A5-4. Emissions Report from a State to ICAO for 2019 and 2020

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Total annual CO ₂ emissions per State pair aggregated for all aeroplane operators attributed to the State (in tonnes)	<i>Note. – Include emissions from CORSIA eligible fuels, calculated using fuel conversion factor(s) from corresponding aviation fuels</i>

Table A5-5. Emissions Report from a State to ICAO annually after 2021

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Total annual CO ₂ emissions on each State pair aggregated for all aeroplane operators attributed to the State	1.a Total annual CO ₂ emissions on each State pair subject to offsetting requirement aggregated for all aeroplane operators attributed to the State (in tonnes) 1.b Total annual CO ₂ emissions on each State pair not subject to offsetting requirements aggregated for all aeroplane operators attributed to the State (in tonnes)
Field 2	Total annual CO ₂ emissions for each aeroplane operator attributed to the State	2.a Total annual CO ₂ emissions for each aeroplane operator attributed to the State (in tonnes) 2.b Indicate whether the ICAO CORSIA CO ₂ Estimation and Reporting Tool (CERT), as defined in Appendix 3 is used
Field 3	Total aggregated annual CO ₂ emissions for all State pairs subject to offsetting requirements for each aeroplane operator attributed to the State (in tonnes)	
Field 4	Total aggregated annual CO ₂ emissions for all State pairs not subject to offsetting requirements for each aeroplane operator attributed to the State (in tonnes)	

Note 1.— Information on the following fields can be found in the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available from the ICAO CORSIA website:

- a. Total average CO₂ emissions for 2019 and 2020 aggregated for all aeroplane operators on each State pair;
- b. Total annual CO₂ emissions aggregated for all aeroplane operators on each State pair (with identification of State pairs subject to offsetting requirements in a given year) (Field 1); and
- c. For each aeroplane operator:
 - Aeroplane operator name;
 - State in which aeroplane operator is attributed;
 - Reporting year;
 - Total annual CO₂ emissions (Field 2);
 - Total aggregated annual CO₂ emissions for all State pairs subject to offsetting requirement; and
 - Total aggregated annual CO₂ emissions for all State pairs not subject to offsetting requirements

Note 2.— Where CO₂ emissions are based on the ICAO CORSIA CO₂ Estimation and Reporting Tool as described in Appendix 3, this will be indicated.

Note 3.— All data recognized as confidential in accordance with Chapter 5, 6.1.6 will be aggregated and published by ICAO without attribution to a specific aeroplane operator. All data recognized as confidential in accordance with Chapter 5, 6.1.7 will be aggregated and published by ICAO without attribution to specific State pair, but with distinction between State pairs subject to offsetting requirements and those not subject to offsetting requirements.

3.3 Use of CORSIA eligible fuels in a State

Table A5-6. CORSIA eligible fuels supplementary information to the Emissions Report from a State to ICAO

Field #	Data Field	Details	Notes
Field 1	Production	1.a Production year of CORSIA eligible fuel claimed 1.b Producer of CORSIA eligible fuel	
Field 2	Batch of CORSIA eligible fuel	2.a Batch number(s) of each CORSIA eligible fuel claimed 2.b Total mass of each batch of CORSIA eligible fuel claimed (in tonnes)	
Field 3	CORSIA eligible fuel claimed	3.a Fuel types (i.e., type of fuel, feedstock and conversion process)	<i>This would provide a total mass for each fuel type being claimed by all aeroplane operators</i>

		3.b Total mass of the neat CORSIA eligible fuel (in tonnes) per fuel type being claimed by all the aeroplane operators attributed to the State	<i>attributed to the State</i>
Field 4	Emissions information (per fuel type)	4. Total emissions reductions claimed from the use of a CORSIA eligible fuel (in tonnes)	
Field 5	Emissions reductions (total)	5. Total emissions reductions claimed by all aeroplane operators attributed to the State from the use of all CORSIA eligible fuel use (in tonnes)	

Note.— In order to avoid double claiming of CORSIA eligible fuels, information on the following fields can be found in the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available from the ICAO CORSIA website:

- a. Production year of the CORSIA eligible fuel claimed;*
- b. Producer of the CORSIA eligible fuel claimed;*
- c. Type of fuel, feedstock and conversion process for each CORSIA eligible fuel claimed;*
- d. Batch number(s) of each CORSIA eligible fuel claimed; and*
- e. Total mass of each batch of CORSIA eligible fuel claimed.*

4. CONTENT OF EMISSIONS UNIT CANCELLATION REPORT FROM AEROPLANE OPERATOR TO STATE

Table A5-7. Emissions Unit Cancellation Report from aeroplane operator to State

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Aeroplane operator information	1.a Name of aeroplane operator 1.b Detailed contact information of aeroplane operator 1.c Name of a point of contact 1.d Unique identifier by which an aeroplane operator is attributed to a State
Field 2	Compliance period years reported	2. Year(s) in the reported compliance period for which offsetting requirements are reconciled in this report
Field 3	Aeroplane operator’s total final offsetting requirements	3. Aeroplane operator’s total final offsetting requirements (in tonnes), as informed by the

		State
Field 4	Total quantity of emissions units cancelled	4. Total quantity of emissions units cancelled to reconcile the total final offsetting requirements in Field 3
Field 5	Consolidated identifying information for cancelled emissions units	<p>For each batch of cancelled emissions units (batch defined as a contiguous quantity of serialized emissions units), identify the following:</p> <p>5.a Quantity of emissions units cancelled;</p> <p>5.b Start of serial numbers;</p> <p>5.c End of serial numbers;</p> <p>5.d Date of cancellation;</p> <p>5.e Eligible emissions unit programme;</p> <p>5.f Unit type;</p> <p>5.g Host country;</p> <p>5.h Methodology¹;</p> <p>5.i Demonstration of unit date eligibility;</p> <p>5.j Programme-designated registry name;</p> <p>5.k Unique identifier for registry account to which the batch was cancelled;</p> <p>5.l Aeroplane operator in whose name the unit was cancelled; and</p> <p>5.m The unique identifier for the registry account from which the cancellation was initiated.</p>

Note.— CAAN may expand on this list to include additional or more detailed data from aeroplane operators registered in its State.

1. Methodology may also be described as a ‘protocol’ or ‘framework’.

5. CONTENT OF EMISSIONS UNIT CANCELLATION REPORT FROM STATE TO ICAO

Table A5-8. Content of Emissions Unit Cancellation Report from State to ICAO

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Aeroplane operators attributed to the State	1.a Aeroplane operators attributed to the State with offsetting requirements in the reported compliance period
Field 2	Compliance period years reported	2. Year(s) in the reported compliance period for which offsetting requirements are reconciled in the report
Field 3	Total final offsetting requirements	3. Total aggregated aeroplane operators' final offsetting requirements (in tonnes), as informed by the State
Field 4	Total quantity of emissions units cancelled	4. Total aggregated quantity of emissions units cancelled to reconcile the total final offsetting requirements in Field 3
Field 5	Consolidated identifying information for cancelled emissions units	For each batch of cancelled emissions units (batch defined as a contiguous quantity of serialized emissions units), identify the following: 5.a Quantity of emissions units cancelled; 5.b Start of serial numbers; 5.c End of serial numbers; 5.d Date of cancellation; 5.e Eligible emissions unit programme; 5.f Unit type; 5.g Host country; 5.h Methodology; 5.i Demonstration of unit date eligibility; and 5.j Programme-designated registry name.

Note 1.— The information in Field 5 will be required for ensuring critical CORSIA registry functions, including ICAO monitoring, periodic review, and statistical analysis of CORSIA.

Note 2.— The information on the following fields can be found in the ICAO document entitled “CORSLA Central Registry (CCR): Information and Data for Transparency” that is available on the ICAO CORSLA website:

a) Information at a State and global aggregate level for a specific compliance period:

- 1. Total final offsetting requirements over the compliance period;*
- 2. Total quantity of emissions units cancelled over the compliance period to reconcile the total final offsetting requirements; and*
- 3. Consolidated identifying information for cancelled emissions units included in Field 5 of Table A5-8.*

APPENDIX 6. VERIFICATION

1. INTRODUCTION

Note.— The procedures specified in this Appendix are concerned with the verification requirements in Chapter 5 of this Requirement.

2. VERIFICATION BODY

- 2.1 The verification body shall be accredited to ISO 14065:2013², and meet the following additional requirements in order to be eligible to verify the Emissions Report, and the Emissions Unit Cancellation Report where applicable, of an aeroplane operator.

Note — The following documents should be used as normative references that provide guidance for the application of this Volume:

- a. *Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSLA);*
- b. *The International Accreditation Forum (IAF) document entitled, “IAF Mandatory Document for the Application of ISO 14065:2013 (IAF MD 6:2014)”;* and
- c. *The International Organization for Standardization (ISO) document entitled, “ISO 14066:2011 Greenhouse gases – Competence requirements for greenhouse gas validation team and verification teams”.*

2.2 Avoidance of conflict of interest (ISO 14065:2013 section 5.4.2)

- 2.2.1 If the leader of the verification team undertakes six annual verifications for one aeroplane operator, then the leader of the verification team shall take a three consecutive year break from providing verification services to that same aeroplane operator. The six year maximum period includes any greenhouse gas verifications performed for the aeroplane operator prior to it requiring verification services under this requirement.
- 2.2.2 The verification body, and any part of the same legal entity, shall not be an aeroplane operator, the owner of an aeroplane operator or owned by an aeroplane operator.
- 2.2.3 The verification body, and any part of the same legal entity, shall not be a body that trades emissions units, the owner of a body that trades emissions units or owned by a body that trades emissions units.
- 2.2.4 The relationship between the verification body and the aeroplane operator shall not be based on common ownership, common governance, common management or personnel, shared resources, common finances and common contracts or marketing.

² ISO 14065:2013 entitled “Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition, Document published on: 2013-04.”

2.2.5 The verification body shall not take over any delegated activities from the aeroplane operator with regard to the preparation of the Emissions Monitoring Plan, the Emissions Report (including monitoring of fuel use and calculation of CO₂ emissions) and the Emissions Unit Cancellation Report.

2.2.6 To enable an assessment of impartiality and independence by the national accreditation body, the verification body shall document how it relates to other parts of the same legal entity.

2.3 Management and personnel (ISO 14065:2013 section 6.1)

2.3.1 The verification body shall establish, implement and document a method for evaluating the competence of the verification team personnel against the competence requirements outlined in ISO 14065:2013, ISO 14066:2011 and paragraphs 2.4, 2.5 and 2.6 of this Appendix.

2.3.2 The verification body shall maintain records to demonstrate the competency of the verification team and personnel in accordance with paragraph 2.4 of this Appendix.

2.4 Competencies of personnel (ISO 14065:2013 section 6.2)

The verification body shall:

- a. identify and select competent team personnel for each engagement;
- b. ensure appropriate verification team composition for the aviation engagement;
- c. ensure the verification team, at a minimum, includes a team leader who is responsible for the engagement planning and management of the team;
- d. ensure continued competence of all personnel conducting verification activities, including continual professional development and training for verifiers to maintain and/or develop competencies; and
- e. conduct regular evaluations of the competence assessment process to ensure that it continues to be relevant for this requirement.

2.5 Validation or verification team knowledge (ISO 14065:2013 section 6.3.2)

2.5.1 The verification team as a whole, and the independent reviewer, shall demonstrate knowledge of:

- a. the requirements as outlined in this Requirement, the Assembly Resolution A39-3, the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), and any public ICAO explanatory material;
- b. the verification requirements as outlined in this Requirement, and Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), including materiality threshold, verification criteria, verification scope and objectives and the Verification Report preparation and submission requirements;
- c. the eligibility criteria for technical exemptions, scope of applicability, State pair phase-in rules, and State pair coverage as outlined in this Requirement and the Assembly Resolution A39-3;

- d. the monitoring requirements as outlined in this requirement; and
 - e. the national requirements in addition to the provisions set out in this Requirement.
- 2.5.2 When conducting the verification of an Emissions Unit Cancellation Report, only 2.5.1 (a), (b) and (e) shall be applicable.

2.6 Validation or verification team technical expertise (ISO 14065:2013 section 6.3.3)

- 2.6.1 The verification team as a whole, and the independent reviewer, shall demonstrate knowledge in the following technical competencies:
- a. general technical processes in the field of civil aviation;
 - b. aviation fuels and their characteristics, including CORSIA eligible fuel;
 - c. fuel related processes including flight planning and fuel calculation;
 - d. relevant aviation sector trends or situations that may impact the CO₂ emissions estimate;
 - e. CO₂ emissions quantification methodologies as outlined in this Requirement, including assessment of Emissions Monitoring Plans;
 - f. fuel use monitoring and measurement devices, and related procedures for monitoring of fuel use related to greenhouse gas emissions, including procedures and practices for operation, maintenance and calibration of such measurement devices;
 - g. greenhouse gas information and data management systems and controls, including quality management systems and quality assurance / quality control techniques;
 - h. aviation related IT systems such as flight planning software or operational management systems;
 - i. knowledge of approved CORSIA Sustainability Certification Schemes relevant for CORSIA eligible fuels under this Requirement, including certification scopes; and
 - j. basic knowledge of greenhouse gas markets and emissions units programme registries.
- 2.6.2 Evidence of the above competencies shall include proof of relevant professional experience, complemented by appropriate training and education credentials.
- 2.6.3 When conducting the verification of an Emissions Report, 2.6.1 (a) to (i) shall be applicable.
- 2.6.4 When conducting the verification of an Emissions Unit Cancellation Report, only 2.6.1 (g) and (j) shall be applicable.

2.7 Validation or verification team data and information auditing (ISO 14065:2013 section 6.3.4)

- 2.7.1 The verification team as a whole shall demonstrate detailed knowledge of ISO 14064-3:2006, including demonstrated ability to develop a risk-based verification approach, perform

verification procedures including assessing data and information systems and controls, collect sufficient and appropriate evidence and draw conclusions based on that evidence.

- 2.7.2 Evidence of data and information auditing expertise and competencies shall include previous professional experience in auditing and assurance activities, complemented by appropriate training and education credentials.

2.8 Use of contracted validators and verifiers (ISO 14065:2013 section 6.4)

The verification body shall document roles and responsibilities of the verification personnel, including contracted persons involved in the verification activity.

2.9 Outsourcing (ISO 14065:2013 section 6.6)

- 2.9.1 The verification body shall not outsource the final decision on the verification and the issuance of the verification statement.
- 2.9.2 The independent review shall only be outsourced as long as the outsourced service is appropriate, competent, and covered by the accreditation.

2.10 Confidentiality (ISO 14065:2013 section 7.3)

The verification body shall ensure it has the express consent of the aeroplane operator prior to submission of the verified Emissions Report, the Emissions Unit Cancellation Report where applicable, and the Verification Report to the State. The mechanism for authorizing this consent shall be specified in the contract between the verification body and aeroplane operator.

2.11 Records (ISO 14065:2013 section 7.5)

The verification body shall keep records on the verification process for a minimum of ten years, including:

- a. client's Emissions Monitoring Plan, Emissions Report and Emissions Unit Cancellation Report where applicable;
- b. Verification Report and related internal documentation;
- c. identification of team members and criteria for selection of team; and
- d. working papers with data and information reviewed by the team in order to allow for an independent party to assess the quality of the verification activities and conformance with verification requirements.

2.12 Agreement (ISO 14065:2013 section 8.2.3)

The contract between verification body and aeroplane operator shall specify the conditions for verification by stating:

- a. scope of verification, verification objectives, level of assurance, materiality threshold and relevant verification standards (ISO 14065, ISO 14064-3, this Volume and the Environmental Technical Manual, Volume IV);
- b. amount of time allocated for verification;
- c. flexibility to change time allocation if this proves necessary because of findings during the verification;
- d. conditions which have to be fulfilled to conduct the verification such as access to all relevant documentation, personnel and premises;
- e. requirement of the aeroplane operator to accept the audit as a potential witness audit by national accreditation body's assessors;
- f. requirement of the aeroplane operator to authorize the release of the Emissions Report, the Emissions Unit Cancellation Report, where applicable, and the Verification Report by the verification body to the State; and
- g. liability coverage.

3. VERIFICATION OF EMISSIONS REPORT AND EMISSIONS UNIT CANCELLATION REPORT

The verification team shall conduct the verification according to ISO 14064-3:2006, and the following additional requirements.

3.1 Level of assurance (ISO 14064-3:2006 section 4.3.1)

A reasonable level of assurance shall be required for all verifications under this Requirement.

3.2 Objectives (ISO 14064-3:2006 section 4.3.2)

- 3.2.1 When conducting the verification of an Emissions Report, the verification body shall perform sufficient procedures to conclude whether:
 - a. the greenhouse gas assertion is materially fair and an accurate representation of emissions over the period of the Emissions Report and is supported by sufficient and appropriate evidence;
 - b. the aeroplane operator has monitored, quantified and reported its emissions over the period of the Emissions Report in accordance with this Requirement and the approved Emissions Monitoring Plan;
 - c. the aeroplane operator has correctly applied the method of flight attribution documented in the approved Emissions Monitoring Plan to ensure a correct attribution of leased aeroplane and international flights operated by other aeroplane operators under the same corporate structure;
 - d. the stated amount of emissions reductions from the use of CORSIA eligible fuels is materially fair and an accurate representation of emissions reductions over the reporting period, and is supported by sufficient and appropriate internal and external evidence;

- e. the claimed batches of CORSIA eligible fuels have not also been claimed by the aeroplane operator under any other voluntary or mandatory schemes it has participated in (where the emissions reductions from CORSIA eligible fuels may be claimed), during the current compliance period, as well as the compliance period immediately preceding it; and
- f. the aeroplane operator has monitored, calculated and reported its emissions reductions associated from the use of CORSIA eligible fuels over the period of the reporting period in accordance with this Requirement.

3.2.2 When conducting the verification of an Emissions Unit Cancellation Report, the verification body shall perform sufficient procedures to conclude whether:

- a) the aeroplane operator has accurately reported cancellations of its CORSIA Eligible Emissions Units in accordance with this requirement;
- b) the stated number of cancelled CORSIA Eligible Emissions Units is sufficient for meeting the aeroplane operator's total final offsetting requirements associated with the relevant compliance period, after accounting for any claimed emissions reductions from the use of CORSIA eligible fuels, and the aeroplane operator can demonstrate sole right of use to such cancelled CORSIA Eligible Emissions Units; and
- c) the eligible emissions units cancelled by the aeroplane operator to meet its offsetting requirements under this requirement have not been used by the aeroplane operator to offset any other emissions.

3.3 Scope (ISO 14064-3:2006 section 4.3.4)

3.3.1 When conducting the verification of an Emissions Report, the scope of the verification shall reflect the period of time and information covered by the report and the CORSIA eligible fuels claim(s) where applicable. This includes:

- a) CO₂ emissions from aeroplane fuel monitoring methods calculated; and
- b) Emissions reductions from the use of CORSIA eligible fuel(s).

3.3.2 The scope of the verification of the CORSIA eligible fuel claim(s) in the Emissions Report shall include the following:

- a. Any internal aeroplane operator procedures for CORSIA eligible fuels, including aeroplane operator controls to ensure the claimed CORSIA eligible fuels satisfies the CORSIA Sustainability Criteria;
- b. Checks for double claiming are limited to the specific aeroplane operator. Any findings outside of this scope are not relevant for the verification statement, however they should still be included in the Verification Report for further consideration by the State;
- c. Assessment of verification risk with appropriate changes to the verification plan; and

- d. Assessment of whether there is sufficient access to relevant internal and external information to obtain sufficient confidence in each CORSIA eligible fuel claim. Where evidence of the sustainability or the size of the CORSIA eligible fuels claim is considered either inappropriate or insufficient, further information should be sought directly from the fuel producer with direct access facilitated through the aeroplane operator.

3.3.3 When conducting the verification of an Emissions Unit Cancellation Report, the scope of the verification shall reflect the period of time and information covered by the report and the verification body shall confirm that the cancelled eligible emissions units used to meet the aeroplane operator's offsetting requirements under this requirement have not been used to offset any other emissions.

3.4 Materiality (ISO 14064-3:2006 section 4.3.5)

3.4.1 When conducting the verification of an Emissions Report, the verification body shall apply the following materiality thresholds:

- a. of 2 per cent for aeroplane operators with annual emissions on international flights above 500,000 tonnes; and
- b. of 5 per cent for aeroplane operators with annual emissions on international flights equal or less than 500,000 tonnes of CO₂.

3.4.2 When conducting the verification of an Emissions Report, the over and understatements in 3.4.1 shall be allowed to balance out in both cases,

3.5 General (ISO 14064-3:2006 section 4.4.1)

Prior to the development of the verification approach, the verification body shall assess the risk of misstatements and nonconformities and their likelihood of a material effect on the basis of a strategic analysis of the aeroplane operator's greenhouse gas emissions information¹. Depending on the information obtained during the verification, the verification body shall revise the risk assessment and modify or repeat the verification activities to be performed.

3.6 Validation or verification plan (ISO 14064-3:2006 section 4.4.2)

3.6.1 The verification team shall prepare the verification plan on the basis of the strategic analysis and assessment of risks. The verification plan shall include a description of the verification activities for each variable that has a potential impact on the reported emissions. The verification team shall consider the assessment of risk, and the requirement to deliver a verification opinion with reasonable assurance, when determining sample size.

3.6.2 The verification plan shall include the following:

- a. verification team members, roles, responsibilities and qualifications;
- b. any external resources required;
- c. schedule of verification activities; and

- d. sampling plan, including the processes, controls and information to be verified and details of the risk assessment conducted to identify these.

3.7 Sampling plan (ISO 14064-3:2006 section 4.4.3)

3.7.1 The Emissions Report sampling plan shall include the following:

- a. number and type of records and evidence to be examined;
- b. methodology used to determine a representative sample; and
- c. justification for the selected methodology.

3.7.2 When conducting the verification of an Emissions Unit Cancellation Report, the verification body shall not rely on sampling.

3.8 Assessment of GHG data and information (ISO 14064-3:2006 section 4.6)

3.8.1 The verification team shall confirm that the Emissions Report data has been collected in accordance with the approved Emissions Monitoring Plan and monitoring requirements specified in this requirement.

3.8.2 In accordance with the Emissions Report sampling plan, the verification body shall carry out substantive data testing consisting of analytical procedures and data verification to assess the plausibility and completeness of data. The verification team shall, as a minimum, assess the plausibility of fluctuations and trends over time or between comparable data items as well as identify and assess immediate outliers, unexpected data, anomalies, and data gaps.

3.8.3 Depending on the outcome of Emissions Report data testing and assessment, the assessment of risk, verification and sampling plans shall be amended, where necessary.

3.9 Evaluation of the GHG assertion (ISO 14064-3:2006 section 4.8)

3.9.1 The verification body shall use an independent reviewer not involved in the verification activities to assess the internal verification documentation, and the Verification Report, prior to its submission to the aeroplane operator and State.

3.9.2 The independent review, whose scope includes the complete verification process, shall be recorded in the internal verification documentation.

3.9.3 The independent review shall be performed to ensure that the verification process has been conducted in accordance with ISO 14065:2013, ISO 14064-3:2006 and this requirement, and that the evidence gathered is appropriate and sufficient to enable the verification body to issue a Verification Report with reasonable assurance.

1. Definitions of strategic analysis and the assessment of risks are contained in the IAF Mandatory Document for the Application of ISO 14065: 2013, Issue 2 (IAF MD 6:2014).

3.10 Validation and verification statement (ISO 14064-3:2006 section 4.9)

3.10.1 The verification body shall submit a copy of the Verification Report to the aeroplane operator. Upon authorization by the aeroplane operator, the verification body shall forward a copy of the Verification Report together with the Emissions Report, the Emissions Unit Cancellation Report, or both, to CAAN. The Verification Report shall include:

- a. names of the verification body and verification team members;
- b. time allocation (including any revisions and dates);
- c. scope of the verification;
- d. main results of impartiality and avoidance of conflict of interest assessment;
- e. criteria against which the Emissions Report was verified;
- f. aeroplane operator information and data used by the verification body to cross-check data and carry out other verification activities;
- g. main results of the strategic analysis and assessment of risk;
- h. description of verification activities undertaken, where each was undertaken (on-site vs off-site) and results of checks made on the CO₂ emissions information system and controls;
- i. description of data sampling and testing conducted, including records or evidence sampled, sample size, and sampling method(s) used;
- j. the results of all data sampling and testing, including cross-checks;
- k. compliance with the Emissions Monitoring Plan;
- l. any non-compliances of the Emissions Monitoring Plan with this requirement;
- m. non-conformities and misstatements identified (including a description of how these have been resolved);
- n. conclusions on data quality and materiality;
- o. conclusions on the verification of the Emissions Report;
- p. conclusions on the verification of the Emissions Unit Cancellation Report;
- q. justifications for the verification opinion made by the verification body;
- r. results of the independent review and the name of the independent reviewer; and
- s. concluding verification statement.

- 3.10.2 When conducting the verification of an Emissions Unit Cancellation Report, only 3.10.1 (a), (b), (c), (d), (f), (g), (h), (m), (p), (q), (r) and (s) shall be applicable.
- 3.10.3 The verification body shall provide a conclusion on each of the verification objectives listed in 3.2, as applicable, in the concluding verification statement.
- 3.10.4 When conducting the verification of an Emissions Report or an Emissions Unit Cancellation Report, the verification body shall choose between two types of verification opinion statements, either 'verified as satisfactory' or 'verified as not satisfactory'. If the report includes non-material misstatements and / or non-material non-conformities, the report shall be 'verified as satisfactory with comments', specifying the misstatements and non-conformities. If the report contains material misstatements and / or material non-conformities, or if the scope of the verification is too limited or the verification body is not able to obtain sufficient confidence in the data, then the report shall be 'verified as not satisfactory'.

3.10 Validation or verification records (ISO 14064-3:2006 section 4.10)

- 3.11.1 On request of CAAN, the verification body shall disclose the internal verification documentation on a confidential basis to CAAN.
- 3.11.2 Where issues that may render a previously issued verification statement invalid or inaccurate are brought to the attention of the verification body, then it shall notify CAAN.