



РАБОЧИЙ ДОКУМЕНТ

АССАМБЛЕЯ – 42-Я СЕССИЯ

ИСПОЛНИТЕЛЬНЫЙ КОМИТЕТ

Пункт 17 повестки дня. Охрана окружающей среды. Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)

СВОДНОЕ ЗАЯВЛЕНИЕ О ПОСТОЯННОЙ ПОЛИТИКЕ И ПРАКТИКЕ ИКАО В ОБЛАСТИ ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ. СИСТЕМА КОМПЕНСАЦИИ И СОКРАЩЕНИЯ ВЫБРОСОВ УГЛЕРОДА ДЛЯ МЕЖДУНАРОДНОЙ АВИАЦИИ (CORSIA)

(Представлено Советом ИКАО)

КРАТКАЯ СПРАВКА

Для принятия представлено предложение о внесении изменений в резолюцию A41-22 Ассамблеи "Сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды. Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)", пересмотренную с учетом событий в области внедрения CORSIA, произошедших со времени 41-й сессии Ассамблеи.

После принятия Ассамблеей пересмотренная резолюция A41-22 совместно с пересмотренной резолюцией A41-20 и пересмотренной резолюцией A41-21 заменят резолюции A41-20, A41-21 и A41-22 и будут представлять собой сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды.

Действия: Ассамблее предлагается:

а) признать существенный прогресс, достигнутый со времени 41-й сессии Ассамблеи, включая активное внедрение CORSIA и предусмотренных в ней требований по мониторингу, отчетности и верификации (MRV) эмиссии CO₂ государствами и эксплуатантами воздушных судов в соответствии с положениями тома IV Приложения 16;

б) приветствовать своевременную разработку и обновление Советом элементов внедрения CORSIA, включая отвечающие условиям CORSIA виды топлива, отвечающие критериям CORSIA единицы эмиссии и Центральный реестр CORSIA;

в) рекомендовать государствам и другим соответствующим заинтересованным сторонам оперативно расширить производство и сертификацию отвечающих условиям CORSIA видов топлива и настоятельно призвать Совет при техническом содействии со стороны CAEP ускорить процессы сертификации и утверждения устойчивости сырья и технологий производства в целях максимального расширения и наращивания возможностей государств во всех регионах для всеобщей декарбонизации международного авиационного сектора;

г) признать особую важность письменных разрешений для упрощения доступа к отвечающим критериям CORSIA единицам эмиссии и обеспечения их наличия для эксплуатантов самолетов, а также призвать правительства стран, в которых осуществляется деятельность, в результате которой генерируются отвечающие критериям CORSIA единицы эмиссии, выдавать такие письменные разрешения;

д) просить Совет при техническом содействии со стороны CAEP и впредь регулярно проводить оценку и мониторинг спроса и предложения в отношении отвечающих условиям CORSIA видов топлива и отвечающих критериям CORSIA единиц эмиссии с целью предоставления эксплуатантам самолетов возможности выполнять свои компенсационные

обязательства в рамках CORSIA, обеспечивая при этом качество и устойчивость отвечающих условиям CORSIA видов топлива и отвечающих критериям CORSIA единиц эмиссии; f) приветствовать продолжающуюся благодаря взносам и участию государств-членов успешную реализацию программы ИКАО по оказанию помощи, наращиванию потенциала и подготовке персонала для CORSIA (ACT-CORSIA) и обратиться к государствам с просьбой продолжать участвовать в программе ACT-CORSIA и содействовать ее реализации; g) способствовать добровольному присоединению к CORSIA новых государств; h) рассмотреть представленную в добавлении В к настоящему документу информацию о работе Совета по проведению периодического обзора CORSIA в 2025 году; i) принять пересмотренную резолюцию Ассамблеи <i>"Сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды. Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)"</i>, представленную в добавлении С.	
<i>Стратегические цели</i>	Данный рабочий документ связан со стратегической целью <i>"Авиация экологически устойчива"</i>
<i>Финансовые последствия</i>	Упомянутая в прилагаемом рабочем документе Ассамблеи деятельность будет осуществляться при наличии ресурсов в бюджете Регулярной программы на 2026–2028 гг. и/или за счет внебюджетных взносов в соответствии с бизнес-планом ИКАО на 2026–2028 гг.
<i>Справочный материал</i>	Дос 10184, <i>Действующие резолюции Ассамблеи</i> (по состоянию на 7 октября 2022 года)

1. ВВЕДЕНИЕ

1.1 На 41-й сессии Ассамблеи ИКАО была принята резолюция A41-22 по CORSIA, предусматривающая внесение коррективов в структурные элементы CORSIA в соответствии с рекомендациями Совета ИКАО по итогам периодического обзора CORSIA, проведенного в 2022 году, а именно: в отношении базового уровня эмиссии в рамках CORSIA – использование уровня эмиссии 2019 года на экспериментальном этапе (2021–2023 гг.) и показателя в 85 % от уровня эмиссии 2019 года по завершении экспериментального этапа (2024–2035 гг.); в отношении расчета компенсационных обязательств в рамках CORSIA – изменение используемых процентных показателей секторального и индивидуального роста эксплуатантов на 100 % и 0 % соответственно (на период 2030–2032 гг.) и 85 % и 15 % соответственно (на период 2033–2035 гг.); в отношении порогового значения для новых участников воздушного движения – изменение базисного года для расчета компенсационных обязательств по эмиссии с 2020 на 2019 год.

1.2 В резолюции A41-22 Совету было поручено продолжать следить за состоянием концептуальной основы внедрения CORSIA и обновлять эту основу, как это делалось со времени разработки этой системы в 2016 году, при поддержке Комитета по климату и окружающей среде, Технического консультативного органа (ТАВ) и Комитета по охране окружающей среды от воздействия авиации (САЕР) (см. п. 19 резолюции A41-22). Прделанная со времени 41-й сессии Ассамблеи ИКАО работа по поддержанию в актуальном состоянии концептуальной основы внедрения CORSIA (см. п. 2), а также достигнутый за этот период прогресс во внедрении CORSIA (см. п. 3) и результаты проводившегося в 2025 году периодического обзора CORSIA (см. п. 5 и добавление В) свидетельствуют о том, что процесс внедрения CORSIA идет по графику и продолжает осуществляться в соответствии с ожиданиями, существовавшими на момент ее принятия в 2016 году.

2. ПОДДЕРЖАНИЕ В АКТУАЛЬНОМ СОСТОЯНИИ КОНЦЕПТУАЛЬНОЙ ОСНОВЫ ВНЕДРЕНИЯ CORSIA

2.1 Концептуальная основа внедрения CORSIA состоит из трех элементов: Стандарты и Рекомендуемая практика (SARPS) тома IV *"Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)"* Приложения 16 *"Охрана окружающей среды"*; инструктивный материал тома IV документа Дос 9501 *"Техническое руководство по окружающей среде"* (ETM); пять элементов внедрения CORSIA: добровольное участие в CORSIA; инструмент оценки и представления отчетности в отношении CO₂ (CERT) в рамках системы CORSIA ИКАО; отвечающие условиям CORSIA виды топлива; отвечающие критериям CORSIA единицы эмиссии; Центральный реестр CORSIA (CCR).

Том IV Приложения 16

2.2 В марте 2023 года Совет принял поправку 1 к тому IV Приложения 16 с учетом положений резолюции A41-22 о внесении коррективов в структурные элементы CORSIA и технических рекомендаций совещания CAEP/12, состоявшегося в феврале 2022 года. Поправка 1 к тому IV Приложения 16 начала применяться в качестве второго издания тома IV Приложения 16 с 1 января 2024 года одновременно с началом первого этапа внедрения CORSIA (2024–2026 гг.).

2.3 На совещании CAEP/13, состоявшемся в феврале 2025 года, было рекомендовано внести незначительные изменения в том IV Приложения 16 для уточнения вопросов, связанных с мониторингом, отчетностью и верификацией (MRV) в отношении эмиссии CO₂, которые в настоящее время находятся на рассмотрении Совета и начнут применяться с 1 января 2027 года.

Том IV документа Дос 9501

2.4 В октябре 2023 года ИКАО опубликовала третье издание тома IV документа Дос 9501, в котором содержится технический инструктивный материал по внедрению CORSIA, обновленный CAEP для оказания поддержки соответствующим заинтересованным сторонам во внедрении SARPS второго издания тома IV Приложения 16.

2.5 На совещании CAEP/13, состоявшемся в феврале 2025 года, было рекомендовано внести изменения в том IV документа Дос 9501, включая дополнительные указания по вопросам, связанным с отвечающими условиям CORSIA видами топлива; публикация четвертого издания тома IV документа Дос 9501 запланирована на последний квартал 2025 года.

Элементы внедрения CORSIA

2.6 Пять элементов внедрения CORSIA изложены в 14 документах ИКАО, на которые приводятся прямые ссылки в томе IV Приложения 16 и в которых содержатся необходимые для внедрения CORSIA материалы, утвержденные Советом для публикации на веб-сайте ИКАО. Со времени 41-й сессии Ассамблеи ИКАО Совет продолжал рассматривать и утверждать изменения к 14 документам ИКАО в соответствии со сроками, указанными в добавлении А к настоящему документу.

3. ПРОГРЕСС ВО ВНЕДРЕНИИ CORSIA

Добровольное участие в CORSIA

3.1 Ассамблея ИКАО настоятельно рекомендовала всем государствам добровольно принять участие в экспериментальном и первом этапе внедрения CORSIA, поскольку более широкое участие государств будет способствовать повышению экологической целостности этой системы (см. п. 9 с) резолюции A41-22). Документ ИКАО "*CORSIA. Государства, входящие в пары государств для целей главы 3*" ежегодно обновляется для уточнения перечня государств, входящих в пары государств, на которые распространяются компенсационные обязательства в рамках CORSIA в тот или иной год, начиная с 2021 года¹. Со времени проведения Ассамблеи число добровольно участвующих государств продолжало расти и составило 126 в 2024 году, 129 в 2025 году и 130 в 2026 году.

Мониторинг, отчетность и верификация (MRV) в отношении эмиссии CO₂

3.2 Основополагающими элементами эффективного внедрения CORSIA являются последовательный мониторинг, отчетность и верификация (MRV) в отношении годовой эмиссии CO₂ всех выполняющих международные рейсы эксплуатантов самолетов. В соответствии с положениями тома IV Приложения 16, многие эксплуатанты вправе применять упрощенные процедуры мониторинга и отчетности в отношении эмиссии CO₂ с использованием ежегодно обновляемого САЕР и утверждаемого Советом CERT² CORSIA ИКАО.

3.3 На основе данных, предоставленных эксплуатантами, государства обязаны представлять в ИКАО через CCR ежегодные данные об эмиссии CO₂, а также информацию по таким пунктам, как: список эксплуатантов; аккредитованные органы по верификации; показатели сокращения эмиссии благодаря использованию топлива, отвечающего условиям CORSIA, погашение единиц эмиссии, отвечающих критериям CORSIA. Эта информация служит основой для подготовки документов ИКАО, связанных с CCR, которые размещаются на веб-сайте ИКАО³. В марте 2024 года ИКАО выпустила обновленную версию CCR в соответствии с обновленными требованиями к отчетности, содержащимися во втором издании тома IV Приложения 16.

3.4 Со времени 41-й сессии Ассамблеи ИКАО государства представили через CCR указанные ниже данные об эмиссии CO₂ за трехлетний период проведения экспериментального этапа внедрения CORSIA (т. е. 2021, 2022 и 2023 гг.):

- в 2022 году 107 государств представили данные об эмиссии CO₂ за 2021 год, при этом ИКАО применила методику восполнения пробелов в данных в отношении еще 23 государств; общий объем эмиссии CO₂ в 2021 году составил 290 Мт, при этом охват данных об эмиссии, представленных через CCR, составил 96,5 %;
- в 2023 году 115 государств представили данные об эмиссии CO₂ за 2022 год, при этом ИКАО применила методику восполнения пробелов в данных в отношении еще 21 государства; общий объем эмиссии CO₂ в 2022 году составил 429 Мт, при этом охват данных об эмиссии, представленных через CCR, составил 97,7 %;

¹ Перечень государств, добровольно участвующих в CORSIA, размещен на веб-сайте: <https://www.icao.int/environmental-protection/CORSIA/Pages/state-pairs.aspx>.

² Веб-сайт CERT CORSIA: <https://www.icao.int/environmental-protection/CORSIA/Pages/CERT.aspx>.

³ Веб-сайт Центрального реестра CORSIA: <https://www.icao.int/environmental-protection/CORSIA/Pages/CCR.aspx>

- в 2024 году 121 государство представило данные об эмиссии CO₂ за 2023 год, при этом ИКАО применила методику восполнения пробелов в данных в отношении еще 15 государств; общий объем эмиссии CO₂ в 2023 году составил 530 Мт, при этом охват данных об эмиссии, представленных через CCR, составил 99,0 %.

Годовой коэффициент роста сектора и расчет компенсационных обязательств в рамках CORSIA

3.5 На основе представленной государствами информации, дополненной с использованием процедуры восполнения пробелов в данных, ИКАО опубликовала ежегодные издания документа ИКАО *"CORSIA. Годовой коэффициент роста в секторе (SGF)"*, в которых указаны значения SGF за 2021, 2022 и 2023 гг. Поскольку эти значения SGF равны нулю, на экспериментальном этапе внедрения CORSIA не было начислено никаких компенсационных обязательств.

3.6 Наметившаяся тенденция в области изменения годовых объемов эмиссии CO₂ свидетельствует о том, что с 2024 года SGF может иметь положительное значение, что, в свою очередь, приведет к возникновению компенсационных обязательств, распространяющихся на эксплуатантов самолетов. Такая возможность является дополнительным подтверждением важности дальнейшего эффективного внедрения системы MRV CORSIA, поскольку производимый ИКАО расчет ежегодных значений SGF основывается на регулярном представлении данных о ежегодных объемах эмиссии CO₂ в соответствии с требованиями тома IV Приложения 16.

Отвечающие критериям CORSIA единицы эмиссии (CEU)

3.7 Соответствие критериям единиц эмиссии, используемых эксплуатантами самолетов для выполнения компенсационных обязательств в рамках CORSIA, определяется в соответствии с документом ИКАО *"CORSIA. Отвечающие критериям единицы эмиссии"*⁴, регулярно обновляемом Советом с учетом технических рекомендаций TAB. Выводы TAB по итогам проводимой им ежегодно оценки потенциальных программ единиц эмиссии на предмет соответствия предъявляемым к таким программам критериям основаны на критериях приемлемости единиц эмиссии в рамках CORSIA.

3.8 По итогам недавней оценки, проведенной TAB в 2024 году, 11 программ единиц эмиссии были признаны отвечающими критериям, предъявляемым к поставщикам CEU на экспериментальном этапе внедрения CORSIA; поскольку на этом этапе не возникло никаких компенсационных обязательств, эксплуатантам не требуется приобретать и погашать соответствующие CEU в рамках CORSIA.

3.9 В настоящее время шесть программ единиц эмиссии отвечают критериям, предъявляемым к поставщикам CEU на первом этапе внедрения CORSIA. TAB регулярно предоставляет Совету обновленную информацию о потенциальных поставщиках CEU, отмечая, что предложение CEU на рынке зависит от получения аттестации принимающей страны (также известной как разрешение принимающей страны в соответствии со статьей 6 Парижского соглашения РКИК ООН), что является ключевой мерой, позволяющей избежать двойного учета единиц эмиссии, используемых в рамках CORSIA.

⁴ Веб-сайт CEU: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx>

3.10 В этой связи Совет поручил Секретариату активизировать информационно-разъяснительную работу по этому вопросу; после этого ИКАО разослала письма государствам, в которых правительствам стран, в которых проводятся мероприятия, в результате которых генерируются CEU, предлагается выдавать соответствующие письменные разрешения, что позволит упростить доступ к таким единицам эмиссии для эксплуатантов самолетов (см. A42-WP/26).

Отвечающие условиям CORSIA виды топлива (CEF)

3.11 В ходе внедрения CORSIA эксплуатанты самолетов могут уменьшить свои компенсационные обязательства в рамках CORSIA в тот или иной конкретный год, заявив о сокращении эмиссии в результате использования CEF. Со времени 41-й сессии Ассамблеи ИКАО пять документов ИКАО, касающихся CEF⁵, регулярно обновлялись, что привело к следующим основным изменениям:

- в ноябре 2022 года Совет утвердил критерии устойчивости для низкоуглеродного авиационного топлива (LCAF), произведенного 1 января 2024 года или после этой даты, помимо утвержденных ранее критериев устойчивости для устойчиво производимых видов авиационного топлива (SAF);
- в июне 2023 года Совет принял решение о том, что две системы сертификации устойчивости (SCS), утвержденные ранее для сертификации SAF на экспериментальном этапе внедрения CORSIA, также подлежат утверждению для проведения сертификации с 1 января 2024 года, при этом третья SCS была утверждена в октябре 2024 года;
- Совет утвердил внесение регулярных изменений в документы ИКАО "CORSIA. Установленные по умолчанию значения эмиссии в течение жизненного цикла для видов авиационного топлива, отвечающего условиям CORSIA" и "CORSIA. Методика расчета фактических значений эмиссии в течение жизненного цикла", в которых содержится актуальная информация для расчета значений сокращения эмиссии в результате использования CEF.

3.12 В июне 2024 года Совет утвердил дорожную карту ИКАО по реализации Глобальной рамочной программы ИКАО в области SAF, LCAF и других более чистых источников энергии для авиации и осуществлению LTAG. В Глобальной рамочной программе предусмотрено ускорение разработки и утверждения новых SCS, а также анализа и утверждения значений эмиссии в течение жизненного цикла для новых источников и процессов получения топлива (см. A42-WP/25).

3.13 На совещании CAEP/13, состоявшемся в феврале 2025 года, был утвержден дополнительный инструктивный материал для содействия органам по верификации в проведении проверки заявлений о сокращении эмиссии в результате использования CEF. Этот инструктивный материал, который будет включен в четвертое издание тома IV документа Doc 9501, был размещен на веб-сайте ИКАО в марте 2025 года⁶ в целях содействия проведению мероприятий по верификации в рамках CORSIA.

⁵ Веб-сайт CEF: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Eligible-Fuels.aspx>

⁶ <https://www.icao.int/environmental-protection/CORSIA/Documents/Guidance%20on%20verification%20of%20CEF%20claims.pdf>

4. НАРАЩИВАНИЕ ПОТЕНЦИАЛА И ОКАЗАНИЕ ПОМОЩИ ДЛЯ CORSIA

4.1 Программа ИКАО по оказанию помощи, наращиванию потенциала и подготовке персонала для CORSIA (АСТ-CORSIA)⁷, осуществляемая с июля 2018 года в рамках инициативы *"Ни одна страна не остается без внимания"*, направлена на оказание помощи всем государствам в реализации CORSIA в рамках "скоординированного подхода" под эгидой ИКАО; важность этой программы была отмечена на последних сессиях Ассамблеи (см. п. 21 резолюции А41-22).

4.2 Основополагающим элементом программы АСТ-CORSIA являются товарищеские партнерства, в которых в настоящее время принимают участие 136 государств (16 оказывающих и 120 запрашивающих поддержку государств). Организованная в рамках партнерства подготовка способствовала высокому уровню внедрения CORSIA, о чем свидетельствует постоянный рост числа государств, участвующих в CORSIA на добровольной основе, а также широкий охват данных об эмиссии CO₂, представляемых государствами через CCR. Для обеспечения необходимого скоординированного подхода Секретариат ИКАО проводит ежегодные мероприятия по подготовке инструкторов.

4.3 В 2019 году в рамках учебной программы ИКАО был проведен курс по верификации в рамках CORSIA для сотрудников органов по верификации; в сентябре 2023 года этот курс был обновлен для приведения его содержания в соответствие со вторым изданием тома IV Приложения 16. В 2025 году в рамках учебной программы ИКАО разрабатываются еще три курса по CORSIA, два из которых посвящены растущей потребности в обучении по вопросам CEF и CEU, а третий является вводным курсом по CORSIA. Эти новые курсы будут проводиться в последнем квартале 2025 года.

4.4 Секретариат ИКАО продолжает разрабатывать и обновлять информационно-просветительские материалы по CORSIA, а именно: обновляемые на ежегодной основе ответы на часто задаваемые вопросы (FAQ) по CORSIA; ежемесячные издания информационного бюллетеня по CORSIA; регулярно обновляемый документ *"Как ориентироваться в CORSIA. Справочник по построению и внедрению системы"*, состоящий из комплекта заранее записанных презентаций по особенностям построения и внедрения системы.

5. ПРОВЕДЕНИЕ ПЕРИОДИЧЕСКОГО ОБЗОРА CORSIA В 2025 ГОДУ

5.1 В марте 2023 года Совет приступил к работе по подготовке к проведению периодического обзора CORSIA в 2025 году, поручив САЕР провести эту работу с учетом опыта проведения обзора CORSIA в 2022 году, уделив при этом особое внимание оценке последствий выполнения принятых в рамках CORSIA компенсационных обязательств с точки зрения предложения, спроса, цены и затрат.

5.2 С марта 2024 года САЕР регулярно представляет Совету обновленную информацию о результатах проводимого им технического анализа. При необходимости Совет дает САЕР дополнительные указания относительно областей, которым следует уделить особое внимание в ходе

⁷ См. более подробную информацию о мероприятиях, проводимых в рамках программы АСТ-CORSIA, на главной странице веб-сайта CORSIA: www.icao.int/corsia

последующего технического анализа. Подготовленные САЕР для представления Совету материалы были размещены (после рассмотрения Советом) на общедоступном веб-сайте ИКАО⁸.

5.3 Работа по подготовке к проведению периодического обзора CORSIA в 2025 году проходила в условиях стабильного внедрения CORSIA в отличие от подвергшегося негативному воздействию пандемии COVID-19 процесса проведения периодического обзора CORSIA в 2022 году. Благодаря достигнутому прогрессу во внедрении CORSIA, при проведении периодического обзора CORSIA в 2025 году прогнозы в отношении первого и последующих этапов могут быть дополнены оценкой результатов уже завершенного экспериментального этапа внедрения CORSIA.

5.4 После рассмотрения последнего варианта технических предложений САЕР в июне 2025 года Совет согласовал свой доклад для 42-й сессии Ассамблеи ИКАО о проведении периодического обзора CORSIA в 2025 году, представленный в добавлении В к настоящему документу.

6. ИЗМЕНЕНИЯ К НЫНЕШНЕМУ ТЕКСТУ СВОДНОГО ЗАЯВЛЕНИЯ

6.1 В добавлении С к настоящему документу представлено предложение о внесении изменений в резолюцию A41-22 Ассамблеи по CORSIA с учетом событий, произошедших со времени 41-й сессии Ассамблеи, включая:

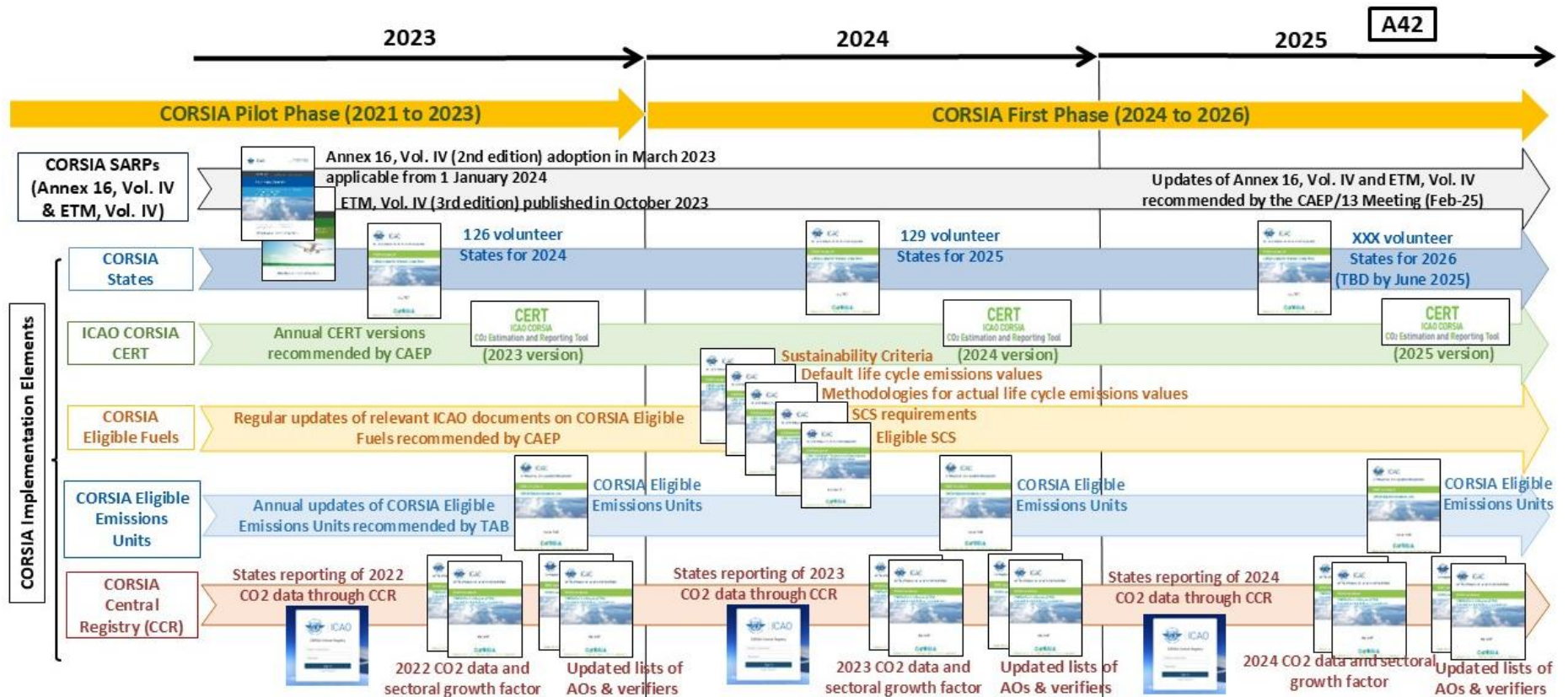
- а) внесение изменений в пункты преамбулы с учетом обновления соответствующих документов, представляющих собой концептуальную основу внедрения CORSIA, результатов периодического обзора CORSIA, проведенного в 2022 году, а также приведения терминологии в соответствие с Рамочной конвенцией ООН об изменении климата (РКИК ООН);
- б) внесение изменений в пп. 11 и 12 постановляющей части с учетом решений, принятых на 41-сессии Ассамблеи по итогам периодического обзора CORSIA, проведенного в 2022 году;
- с) внесение изменений в п. 20 постановляющей части с целью приведения терминологии в соответствие с РКИК ООН.

— — — — —

⁸ См. раздел "Периодический обзор CORSIA" на главной странице веб-сайта CORSIA (www.icao.int/CORSIA).

APPENDIX A

OVERVIEW OF THE MAINTENANCE OF THE CORSIA IMPLEMENTATION FRAMEWORK (2023 – 2025)



A42-WP/28
EX/15
Appendix B
English only

APPENDIX B

COUNCIL REPORT TO THE 42ND SESSION OF THE ICAO ASSEMBLY ON THE 2025 CORSIA PERIODIC REVIEW



ICAO | CAEP



Technical Assessments
in Support of the
2025 Periodic Review

May 2025



Page intentionally left blank



EXECUTIVE SUMMARY

Background

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is the first global market-based scheme that applies to a sector. It complements other aviation in-sector emissions reductions efforts such as technological innovations, operational improvements and sustainable aviation fuels to meet the ICAO aspirational goal of carbon neutral growth.

Every 3 years, in accordance with the ICAO Assembly Resolution on CORSIA, the Council conducts a Periodic Review of CORSIA. The Committee on Aviation Environmental Protection (CAEP) WG4 CORSIA Tools and Analysis Group (CTAG) conducts technical assessments in support of the CORSIA Periodic Review as requested by the Council.

At its 228th session in March 2023, the Council requested CAEP to undertake work in order to support the Council on the 2025 CORSIA periodic review building upon the 2022 CORSIA review process, with a focus on the assessment of supply, demand, price and cost impact of the CORSIA offsetting requirements; and perform technical analyses to facilitate the development of a methodology for the periodic review. Following the consideration of interim technical assessments, the Council also made specific requests to CAEP from its 231st through 234th Sessions.

This document presents a comprehensive summary of the assessments in support of the 2025 CORSIA Periodic Review by CAEP provided to the 235th Session of the Council.

The 2025 CORSIA Periodic Review comprises two key components:

- *backward-looking assessment*: The 2025 CORSIA Periodic Review provided a unique opportunity to look back in time and assess how CORSIA worked during the Pilot Phase (2021-2023) in context of forward-looking projections anticipated during the 2022 CORSIA Periodic Review, and
- *updated forward-looking assessments*: Estimates of offsetting requirements (i.e., demand), supply and price of CORSIA Eligible Emissions Units (CEEU) and emissions reductions from CORSIA Eligible Fuels (CEF) were updated using the latest traffic forecasts and other relevant assumptions on the expected implementation of CORSIA.

Review of CORSIA's Pilot Phase (2021-2023)

Leveraging data reported to ICAO through the CORSIA Monitoring, Reporting and Verification (MRV), the CAEP collected data and tracked actual/historical CO₂ emissions from international aviation from 2019 to 2023. The actual historical CO₂ emissions were placed in context of projections of CO₂ emissions that were presented to the Council as part of the 2022 CORSIA Periodic Review prior to the 41st Assembly. It was observed that actual CO₂ emissions followed a low forecast scenario in 2021, but the international aviation sector exhibited a stronger recovery in CO₂ emissions in 2022 and 2023.

Given the effects of the COVID-19 global pandemic on international aviation and despite the recovery since 2020, CO₂ emissions from international aviation subject to offsetting requirements remained below the 2019 CORSIA sector baseline in 2021, 2022 and 2023. As a result, the Sector Growth Factors (SGFs) were 0% for all three years of the CORSIA Pilot Phase meaning that there was no offsetting required during the Pilot Phase of CORSIA.

Despite the absence of offsetting requirements, markets started to develop and prepare to meet the expected future demand for emissions reductions from CEF and CEEU.

Updated forward looking CORSIA analyses

The CAEP has updated its forward-looking assessments of CO₂ emissions based on the latest (CAEP/13) ICAO/CAEP Traffic Forecasts. CO₂ emissions from international aviation are expected to return to 2019 level by 2026, 2027 and 2029 respectively under the high, mid and low CAEP/13 traffic scenarios.



Given updated CO₂ emissions projections and the 85% of 2019 CORSIA baseline starting in 2024, offsetting requirements are expected to start in 2024 under all CAEP/13 traffic scenarios.

Cumulative offsetting requirements could range from ≈950 to ≈1500 MtCO₂ from 2024 to 2035 and ≈105 to ≈150 MtCO₂ during the First Phase (2024-2026). The range of offsetting requirements from 2021 to 2035 is within the range of estimates of offsetting requirements from the 2022 CORSIA Periodic Review analyses presented to the Council in June 2022 where, under an 85% of 2019 baseline for 2024-2035, offsetting requirements were estimated to range from 600 to 2100 MtCO₂.

To understand and assess how future offsetting requirements (focusing on the First Phase of CORSIA from 2024 to 2026) may be addressed, the CAEP developed updated scenarios for emissions reductions from CEFs. The CAEP considered the latest short term CEF production data through 2030. In 2024, the global production of Sustainable Aviation Fuel (SAF) reached 1 million tonnes, representing ≈0.6% of international aviation jet fuel consumption and ≈0.3% of global aviation fuel consumption. For the First Phase of CORSIA (2024-2026), global SAF production may reach levels up to the “moderate” scenario. Estimates of production provide an upper bound on the potential contribution of emissions reductions from CEF.

Given the uncertainty in how aeroplane operators may choose to address offsetting requirements (i.e., mix of emissions reductions from CEF and/or cancelled CEEUs), a scenario-based assessment was conducted. Offsetting Requirements may be addressed with:

- (1) CEEUs (only),
- (2) emissions reductions from CEF according to the Moderate CEF short term production scenario with 50% of CEF claimed under CORSIA and the rest is addressed with CEEUs, and
- (3) emissions reductions from CEF according to the Moderate CEF short term production scenario with all CEF claimed under CORSIA and the rest with CEEUs.

The scenario-based analysis suggests that emissions reduction from CEF may address up to ≈ 15 % of offsetting requirements (≈ 130 MtCO₂) during the First Phase of CORSIA. The remainder (i.e., final offsetting requirements) would be addressed using CEEUs.

Absolute quantities of emissions reductions from CEF and/or CEEUs used to meet offsetting requirements were then monetized to estimate the cumulative costs of compliance from 2024 to 2026 using the following assumptions and data:

- a) Unit Prices of Emissions Reductions from CEF: The cost abatement (i.e., CEF Premium / tCO₂ abated) from the emissions reductions from CEF could range from ≈ \$600-800 per tCO₂. The CEF Premium is calculated as the difference between the Unit Price of SAF (≈ \$2.0 per Liter in 2024) and the unit price of Conventional Jet Fuel (≈ \$0.7 per Liter for 2024).
- b) Unit Prices of Emissions Units: The CAEP has updated its estimates of the prices of emissions units for the First Phase of CORSIA. Based on limited price information and data available and for the purpose of CAEP analyses, the average price of emissions units was estimated to range from \$10 to \$40 per tCO₂ during the First Phase of CORSIA.

Combining unit price information with quantities of emissions reductions from CEF and/or CEEUs, the total cumulative costs associated with addressing offsetting requirements from 2024 to 2026 could range from ≈ \$1B to \$5B using CEEUs (only) to ≈ \$10B to \$20B using a mix of CEEUs and emissions reductions from CEF assuming that all the available CEF, according to the latest CAEP Moderate scenario, are claimed towards CORSIA.



TABLE OF CONTENTS

Executive Summary	3
Background	3
Review of CORSIA's Pilot Phase (2021-2023)	3
Updated forward looking CORSIA analyses	3
Table of Contents	5
Background	7
High Level Description of CORSIA	7
The CORSIA Periodic Review	7
Background on the First (2022) CORSIA Periodic Review	7
The 2025 CORSIA periodic review	8
Assessment Approach in Support of the 2025 CORSIA Periodic Review	9
High level approach	9
CORSIA Periodic Review Assessment Approach: Summary of Scope, Data, Processes and Outcomes	10
Models and Analyses in Support of the CORSIA periodic review	11
COMPASS	11
AERO-MS CORSIA Module	13
Review of CORSIA's Pilot Phase (2021-2023)	15
Actual CO ₂ emissions from international aviation in context of previously anticipated projections during the 2022 CORSIA Periodic Review	15
Offsetting Requirements during the Pilot Phase of CORSIA	15
Assessment of the Supply of Emissions Reductions from CEF and/or CORSIA Eligible Emissions Units during the Pilot Phase	16
SAF & LCAF: Production	17
SAF & LCAF: Eligible	18
SAF & LCAF: Certified	18
SAF & LCAF: Purchased	18
SAF & LCAF: Claimed under CORSIA	18
Emissions Units: Eligible	18
Emissions Units: Host Country Attestation	18
Emissions Units: Purchased	19
Emissions Units: Claimed under CORSIA	19
Regional Breakdown of the Emissions Reductions from CEF and CEEUs	19
Net CO ₂ Emissions in Context of the ICAO Carbon Neutral Growth goal from 2020 (CNG2020)	20



Updated Forward Looking CORSIA Analyses	21
Potential Evolution of CO ₂ emissions from International Aviation from 2024 to 2035	21
Potential Offsetting Requirements from 2024 to 2035	22
Assessment of offsetting requirements (demand) given the supply of emissions reductions from CEF and CEEUs	25
SAF & LCAF: Production	27
CEF & LCAF: Certified	28
CEF & LCAF: Purchased	28
CEF & LCAF: Claimed under CORSIA	28
Emissions Units: Eligible	37
Emissions Units: Host Country Attestation	37
Emissions Units: Purchased	38
Emissions Units: Cancelled towards CORSIA	38
Potential costs of compliance (focus on the First Phase of CORSIA 2024-2026)	38
Summary of Jet Fuel Unit Prices	39
Summary of Estimates of Price of Emissions Units	40
Summary of Unit Prices	42
Costs of Addressing Offsetting Requirements during the First Phase of CORSIA	42
Potential Offsetting Requirements at Operator Level	44
Potential Evolution of CO ₂ Emissions from International Aviation in Context of Carbon Neutral Growth goal from 2020 (CNG2020)	48
Observations & Conclusions	49
Review of CORSIA's Pilot Phase	49
Updated Forward Looking CORSIA Analyses	49
GLOSSARY OF TERMS	50
APPENDIX A: ADDITIONAL information on CORSIA MODELLING	51
APPENDIX B: SUPPORTING INFORMATION AND DATA	52
Summary of Results from COMPASS	52
Summary of Results from AERO-MS ACM	54
Summary of Results across CORSIA Models	55



BACKGROUND

High Level Description of CORSIA

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is the first global market-based scheme that applies to a sector. It complements other aviation in-sector emissions reduction efforts such as technological innovations, operational improvements and sustainable aviation fuels to meet the ICAO aspirational goal of carbon neutral growth.

The CORSIA Periodic Review

Background on the First (2022) CORSIA Periodic Review

Paragraph 17 of Assembly Resolution A40-19 includes a provision that the ICAO Council will conduct a periodic review of the CORSIA every three years from 2022. In this regard, the Council, in June 2020, highlighted the importance of undertaking the 2022 periodic review, with technical contribution of the CAEP, which will offer an opportunity to examine the impact of COVID-19 on CORSIA on various issues, including the impact on the baseline beyond the pilot phase.

In March 2021, the ICAO Council agreed on the process and methodology for the CORSIA periodic review towards 2022, and on the framework for the consideration of inputs from its subsidiary bodies such as the CAEP and the Technical Advisory Body (TAB).

Following several interim assessments, in March 2022, CAEP provided further inputs to the 225th Session of the ICAO Council regarding the 2022 CORSIA periodic review, including further assessment of COVID-19 impacts on CORSIA (C-WP/15326), including:

- Assessment of COVID-19 impacts on CORSIA and its baseline,
- Assessment of the costs of CORSIA implementation on States and aeroplane operators, and
- Review of the analysis of possible market distortions (in the context of CORSIA design elements).

In June 2022, the 226th Session of the ICAO Council requested CAEP to undertake further analysis on the impacts of COVID-19 on CORSIA and its baseline, building upon the analyses delivered by CAEP during the 225th Council Session in March 2022. The objective of the requested analysis was to estimate the CORSIA offsetting requirements and the regional breakdown, using the average of 2019 and 2020 emissions as the agreed baseline in Assembly Resolution A40-19, as well as the following scenarios for the CORSIA baseline after the pilot phase (2024 to 2035): (1) 2019 emissions only; (2) a percentage of 2019 emissions, which reflects an equivalent level to the average of 2019 and 2020 emissions; and (3) the mid-point between the baseline scenarios (1) and (2) above;

The ICAO Council, following consideration of the additional CAEP analysis and other design elements of CORSIA, agreed on a series of proposals for consideration by the 41st Session of the ICAO Assembly, namely:

- Use of 2019 emissions as the CORSIA baseline for the pilot phase (2021 – 2023);
- Use of 85% of 2019 emissions as the CORSIA baseline after the pilot phase (2024 – 2035); and
- Changes to the percentage use of the sectoral and individual operator's growth factors for the calculation of offsetting requirements under CORSIA, as follows:
 - 2030 - 2032: 100% sectoral and 0 % individual; and
 - 2033 - 2035: 85 % sectoral and 15% individual

The 41st Session of the ICAO Assembly considered the Council proposals and adopted the Resolution A41-22 on CORSIA including the design adjustments above, as reflected in Assembly Working Paper A41-WP/659.



The 2025 CORSIA periodic review

In March 2023, the ICAO Council requested CAEP to undertake work to support the Council on the 2025 CORSIA periodic review, building upon the 2022 CORSIA review process, with a focus on the assessment of supply, demand, price and cost impact of the CORSIA offsetting requirements. The Council also requested CAEP to perform technical analyses to facilitate the development of a methodology for the periodic review.

In March 2024, CAEP presented to the 231st Session of the ICAO Council a status update on CORSIA analyses with a proposed preliminary schedule of further updates to the CORSIA analyses (C-WP/15562). The updated CORSIA analyses included, inter alia, the development of proxy CAEP/13 CO₂ emissions trends; estimations of offsetting requirements through 2035; assessment of regional impacts; estimations of final offsetting requirements after emissions reductions from CEFs; impacts on aeroplane operators; and estimates of costs associated with CORSIA.

The Council reviewed CAEP's inputs and noted that, in order to support the Council in undertaking the 2025 CORSIA periodic review, CAEP would provide the Council with further updated CORSIA analyses, as well as the schedule of subsequent updates, during the 232nd Session, including updated information on the price of CEEUs and CEFs.

In June 2024, CAEP presented to the 232nd Session of the ICAO Council further updates to the CORSIA analyses and to the schedule of subsequent updates (C-WP/15587). The Council reviewed CAEP's inputs and requested CAEP to provide subsequent updates of the CORSIA analyses to support the Council in undertaking the 2025 CORSIA periodic review, as per the schedule presented by CAEP. The Council also emphasized the need for further information to be provided on the supply, regional distribution and price of CEEUs and CEFs, as a key input to the 2025 CORSIA periodic review and to any recommendations that would form part of the report by the Council to the 42nd Session of the Assembly.

In October 2024, CAEP provided the 233rd Session of the ICAO Council with a status report on its technical work to support the Council in undertaking the 2025 CORSIA periodic review (C-WP/15630), noting that updates to the CORSIA analyses had been limited in scope since the previous update. The Council reviewed CAEP's inputs and requested CAEP to provide further updates on the CORSIA analyses to support the Council in undertaking the 2025 CORSIA periodic review during the 234th Session, as per the schedule presented by CAEP, with a particular emphasis on matters related to the overall supply, demand and price of CEFs and CEEUs, as well as the related impacts on the implementation of the scheme.

In March 2025, CAEP presented to the 234th Session of the ICAO Council a comprehensive update to the CORSIA analyses (C-WP/15676). The updated CORSIA analyses follows the structure of the analyses presented at the previous 232nd Session, with a focus on those elements previously identified by the Council as a priority for further CAEP inputs, namely on matters related to the supply, regional distribution and price of CEEUs and CEFs. The Council reviewed CAEP's inputs and recognized the significant amount of analytical work undertaken by CAEP representing important technical contributions in support of the Council's work on the 2025 CORSIA periodic review. The Council also noted that CAEP would provide further updates to the CORSIA analyses during the 235th Session of the Council in June 2025, including on the supply of CEFs and CEEUs and their prices, and subsequent costs of the scheme, bearing in mind that the Council would need to finalize the 2025 CORSIA periodic review during the 235th Session and provide its related recommendations to the 42nd Session of the ICAO Assembly.



ASSESSMENT APPROACH IN SUPPORT OF THE 2025 CORSIA PERIODIC REVIEW

High level approach

The 2025 CORSIA Periodic Review comprises (1) **a backward-looking assessment** of how CORSIA worked during the Pilot Phase in context of projections anticipated during the 2022 Review, and (2) **updated forward-looking assessments** based on the latest historical data and traffic forecasts.

As shown in Figure 1 and as presented in Working Papers submitted up to the 226th Session of the Council (June 2022), the assessments in support of the 2022 CORSIA periodic review were mostly focusing on forward-looking assessments in the context of the ongoing impacts and recovery from the COVID-19 global pandemic on the international aviation sector and its emissions. These assessments included scenario-based estimations of future offsetting requirements under different CORSIA baseline options. The 2022 CORSIA periodic review based on analyses through the first part of 2022, submitted to Council at the 225th and 226th Sessions (March and June 2022, respectively) towards the 41st Session of the ICAO Assembly in Oct. 2022, was also conducted in the middle of the pilot phase of CORSIA. As such there was very limited (relevant) historical data on the functioning of CORSIA given that the pilot phase started on 1 January 2021.

Given the additional time and experience gained since the 2022 CORSIA periodic review, the 2025 CORSIA periodic review provides an opportunity for conducting a more in-depth review of the functioning of CORSIA since the last review, including the pilot phase. As such, the high-level approach for the 2025 CORSIA periodic review comprises two key components:

- a backward-looking review of how CORSIA worked during the pilot phase in context of projections anticipated during the 2022 review, and
- an update of the forward-looking assessments based on the latest historical data and most recent ICAO traffic forecast.

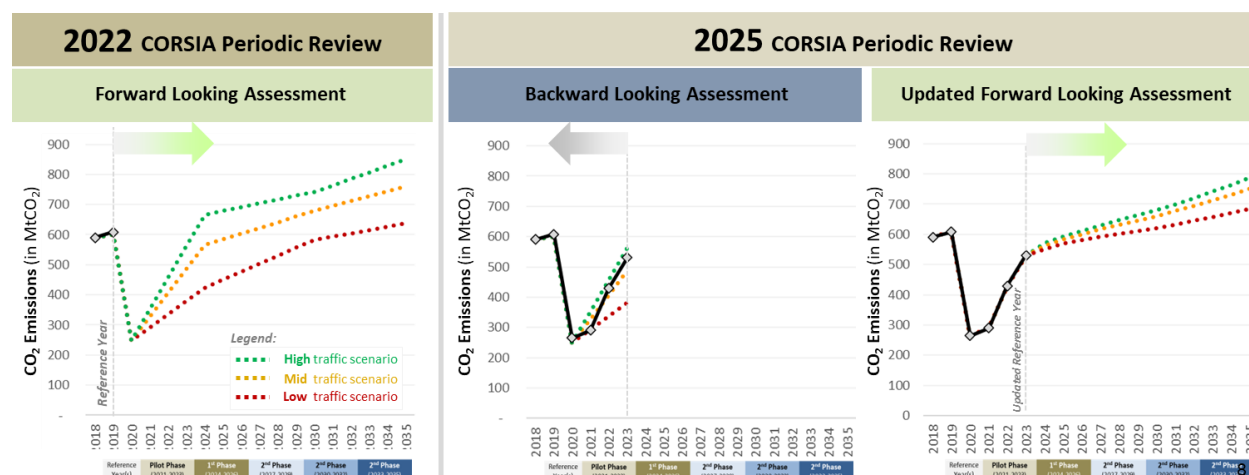


Figure 1 | CORSIA Periodic Reviews: High Level Approach



CORSIA Periodic Review Assessment Approach: Summary of Scope, Data, Processes and Outcomes

Figure 2 shows the details on the two key components of the 2025 CORSIA periodic review: backward-looking review and updated forward-looking assessments. This includes the descriptions of key metrics that are tracked and modelled, data sources, analysis processes and outcomes.

The forward-looking assessment depicts the approach underlying assessments by the CAEP/WG4 and presented to CAEP and Council to date. This includes the estimations of offsetting requirements and how they may be met in the future, at what costs to States and operators as well as considerations on the impacts on operators and international aviation. This process typically starts with the integration of ICAO traffic forecasts (either used directly by WG4 towards the proxy/interim CAEP trends or as input to official CAEP trends generally available at the end of a CAEP cycle). This step results in a set of scenarios for CO₂ emissions from international aviation. Detailed modelling by WG4 and the application of the CORSIA rules (or alternative policy assumptions) allows for the assessment of annual offsetting requirements through 2035. For forward-looking assessments, scenarios of how offsetting requirements may be addressed using emissions reductions from CEF and/or CEEUs are then developed. These estimates are then translated into costs to aeroplane operators under several unit price assumptions and scenarios. The costs of the implementation of MRV requirements are also estimated. Given estimates of future offsetting requirements, net CO₂ emissions through 2035 are assessed and placed in context of the Carbon Neutral Growth 2020 Goal (based on 2019 actual CO₂ emissions as proxy for pre-COVID 2020 emissions level). The forward-looking assessment also analyzes the impact of CORSIA offsetting requirements on aeroplane operators.

The left-hand side of Figure 2 shows details on the approach supporting the backward-looking assessment. A posteriori and by collecting historical data available through the year of the assessment (e.g., 2024), actual CO₂ emissions are tracked to understand how CORSIA has been functioning.

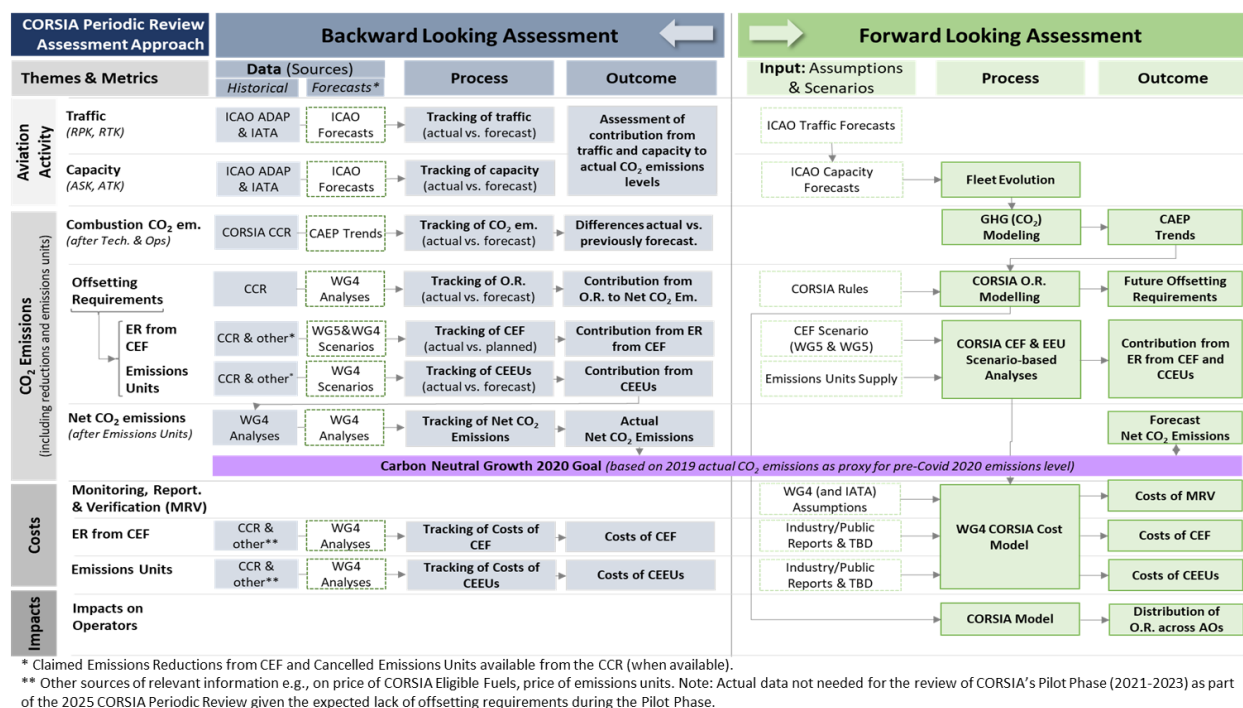


Figure 2 | CORSIA Periodic Review: Assessment Approach

Historical CO₂ emissions are put in context of previous forward-looking assessments (e.g., pre-Assembly 41) to understand differences between actual emissions and previously anticipated. The review of historical versus previously forecast aviation activity (e.g., traffic, capacity) can help explain differences. Based on historical data



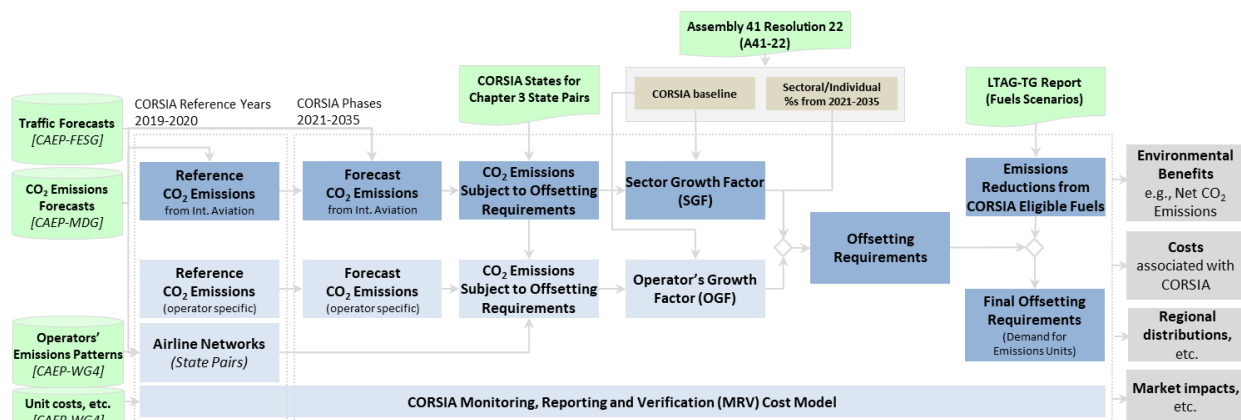
reported through the CORSIA Central Registry (CCR), quantities of emissions reductions from CEF and cancelled emissions units can be tracked to understand how offsetting requirements were met. Such assessment also allows for the tracking of net CO₂ emissions (i.e., emissions reductions from CEF and cancelled emissions units subtracted from combustion emissions) and compared against actual 2019 CO₂ emissions level used as proxy for pre-COVID 2020 emissions level and the Carbon Neutral Growth 2020 Goal. If offsetting requirements result in the claiming of emissions reductions from CEF and cancelled emissions units, the actual costs from those may be estimated and tracked.

Models and Analyses in Support of the CORSIA periodic review

Historically, the CAEP working groups provided technical support towards the development and then implementation of CORSIA. These analyses included assessments of the costs and CO₂ emissions reductions expected to result from CORSIA. To conduct integrated costs and benefits (i.e., emissions reductions), additional modelling steps are required.

COMPASS

The technical assessments and analyses in support of the CORSIA periodic review presented to the Council to date and contained in this document are based on the **CORSIA Model for Parametric Analyses and Stochastics Simulations (COMPASS)**. COMPASS was developed by experts nominated by the United States building on their expertise and experience since 2014 from modeling and assessing options towards the development of CORSIA. As shown on Figure 3, COMPASS integrates a wide array of inputs and assumptions. This tool enables a reconciliation of the various CO₂ emissions forecasts at a level (i.e., Aeroplane Operator-State Pair) required for CORSIA Analyses. The resulting State Pair level emissions forecast is combined with the underlying set of assumptions on the phased implementation of CORSIA (i.e., list of participating States from the pilot phase and first phase and the ICAO 2018 RTK Statistics that define the participation in CORSIA during its second phase). These modelling steps result in the estimation of CO₂ emission reductions from CORSIA (i.e., quantities of offsetting requirements that feed into the CORSIA Cost & Emissions Integration Model along with the output of the COMPASS MRV Cost model). The output to the CORSIA Cost & Emissions Integration Model forms the basis for analyses of offsetting requirements, costs, among other metrics.



* CORSIA Model: Complex stochastic model that captures international aviation level trends and operator specific dynamics ran hundreds of times to support Monte Carlo analyses.

Figure 3 | COMPASS: High Level Architecture

The COMPASS framework integrates CORSIA program parameters, a global capacity growth forecast, historical growth/decline profiles for individual operators, and historical new entrant and subsidiary operator models. The COMPASS framework can be used to evaluate the temporal and integrated impact of parameter and design choices under the CORSIA framework such as baseline definition, operator vs. sectoral growth factor calculation approaches,



and potential offsetting requirements for different categories of operators (e.g., new-entrant and subsidiary operators). The output from COMPASS enables CORSIA impact analyses at several levels of (dis-)aggregation:

- **Operator:** CO₂ from international operations and offsetting requirements by an individual operator,
- **State:** results for operators attributed to a given ICAO member state,
- **Region:** results for operators attributed to States within a particular ICAO region,
- **State-pair:** CO₂ from international operations between two ICAO member states,
- **FESG route group:** CO₂ from international operations between state pairs binned into route groups as defined by the CAEP Forecast and Economic Analysis Support Group (FESG),
- **Operator classification:** CO₂ from international operations attributed to cargo vs. passenger operators, operators that are in the CORSIA scope of applicability during the baseline year(s) and remain in scope through 2035, operators that are in the CORSIA scope of applicability during the baseline year(s) and exit scope prior to 2035, new operators that enter the CORSIA scope of applicability after the baseline year(s) (i.e., new entrant operators), and new operators that enter the CORSIA scope of applicability after the baseline year(s) that are subsidiaries or immediate successors to existing entities (i.e., subsidiary operators), and
- **System:** Aggregate results for international aviation under the various scopes of applicability of CORSIA (e.g., international aviation, international aviation subject to offsetting requirements).

To support these multiple levels of (dis-)aggregation, COMPASS tracks CO₂ emission growth/decline at the operator and state pair levels. Model data (i.e., total emissions, emissions subject to offsetting, and offsetting requirements) may be analyzed at the desired level of aggregation through post-processing of model outputs.

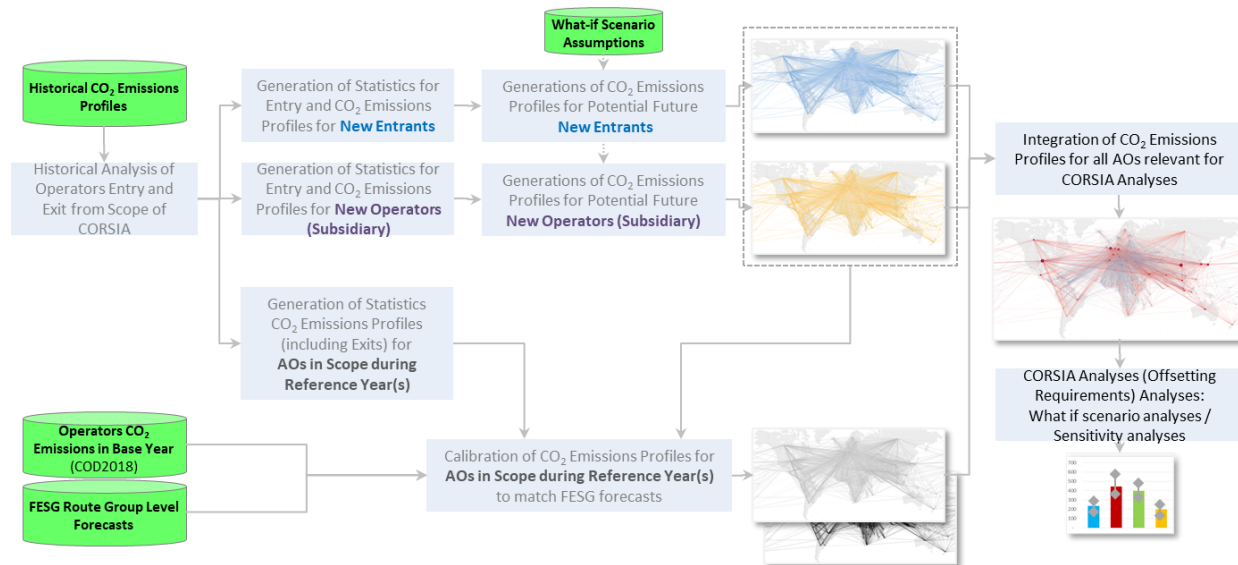


Figure 4 | COMPASS: Approach for integrating aeroplane operators' entries and exits from CORSIA scope

CORSIA's timeline of applicability ranges from 2021-2035, divided into five compliance periods of three years each (2021-2023 i.e., pilot phase, 2024-2026, 2027-2029, 2030-2032, and 2033-2025). ICAO states may elect to participate in CORSIA for the entire period 2021-2035 or to begin participation partway through this period.

COMPASS supports impact assessment for varying state participation, whether an ICAO state elects to begin participating during any year between 2021 and 2035 or not to participate in CORSIA.

Detailed predictions and forecasts for unknown/future operators cannot be developed with a high level of accuracy and confidence due to the fundamental uncertainty associated with such forecasts and level of disaggregation through 2035 (e.g., at the aeroplane operator level). There is uncertainty inherent in both the number of new entrant operators and the ICAO State of attribution expected for those operators. Therefore, a parametric modelling



approach was used to generate scenarios of potential future new entrants' emergence and evolution (calibrated through assumptions and available data) in addition to expected growth/decline in international emissions for operators in scope during the baseline year(s). This parametric modelling approach was combined with fast-time simulation capabilities to enable iterative analyses as new assumptions/data become available, or to enable Monte Carlo analyses. This modelling approach enables analyses to characterize the sensitivity of offsetting requirements across categories of aeroplane operators and the relative magnitude of offsetting requirements across numerous baseline options and/or input assumptions and data. Results may be assessed at the aggregate/stochastic level or for any individual (deterministic) scenario underlying these stochastic results.

AERO-MS CORSIA Module

In 2024, the CAEP WG4 considered the **AERO-MS CORSIA Module (ACM)** developed by experts from the European Union Aviation Safety Agency (es). Below are the main characteristics of the ACM:

- The ACM includes international aviation CO₂ emissions data by State Pairs from the CCR. Currently the CCR contains data for the CORSIA baseline year (2019) and the CORSIA pilot phase years 2021-2023.
- The ACM includes international aviation CO₂ emissions data by State Pairs from the AERO-MS for the remainder of the CORSIA years up to 2035. The data result from the implementation of the CAEP/13 baseline scenarios in the AERO-MS.
- The ACM allows users to specify: i) CORSIA baseline by compliance cycle; ii) sectoral/individual % by compliance cycle; iii) ICAO Member States to join CORSIA by year;
- The ACM takes into account unit costs of CEEUs and CEFs in order to compute the costs for meeting offset requirements.
- The ACM takes into account alternative CEF scenarios in order to compute the contribution of CEFs to meeting offset requirements.
- The ACM uses AERO-MS data on the distribution of CO₂ emissions across operators from 14 world regions considered in the AERO-MS. In the ACM a distribution profile is assigned to each of the State Pairs. The distribution data are used in the ACM to assess the outputs by AERO-MS region, whereby the outputs for each region relate to all aeroplane operators which are based in the region. The results for the 14 AERO-MS regions are aggregated in the ACM at 6 ICAO regions level.

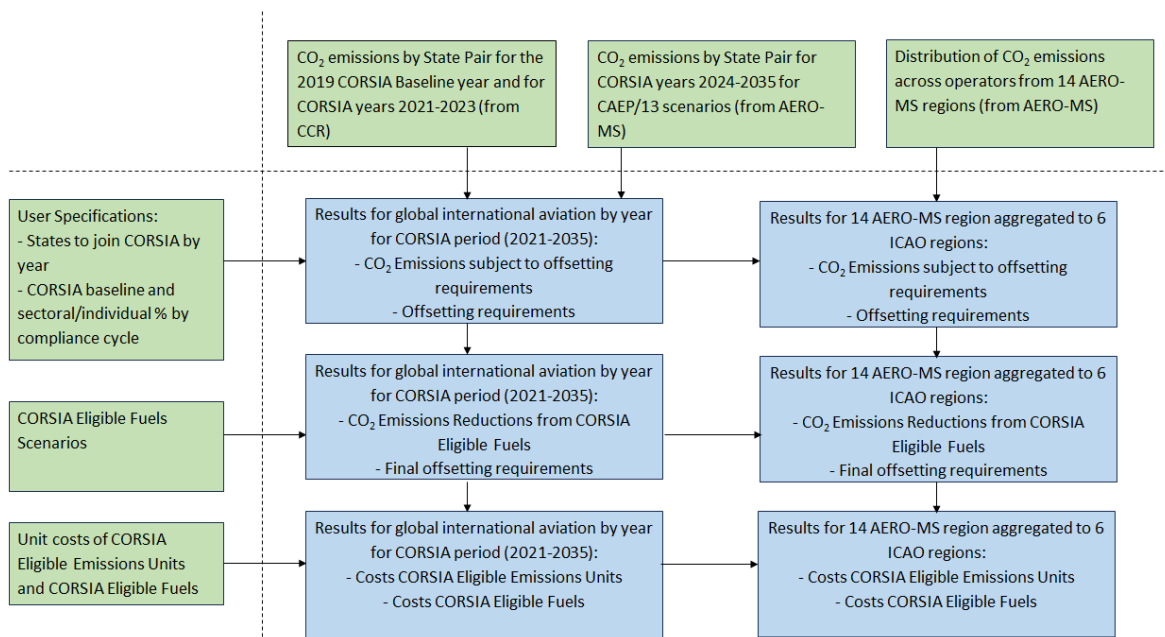


Figure 5 | AERO-MS CORSIA Module: Schematic overview



Figure 5 provides a schematic overview of the ACM including all the inputs to the ACM and the outputs generated in the various computational steps. The outputs are generated per year (2021-2035) and per ICAO region.

Results from both models are based on the latest set of assumptions as described in Appendix B.

The CAEP WG4 CTAG CORSIA Analyses Group has started to conduct a comparison of COMPASS and the ACM. The first comparison conducted as part of the CAEP/13 cycle shows consistency between the results of the two models. The CAEP/14 Work Programme calls for WG4 to continue its comparisons of the models, further document the modelling assumptions and methodologies and to continue the thorough validation of the models.



REVIEW OF CORSIA'S PILOT PHASE (2021-2023)

Actual CO₂ emissions from international aviation in context of previously anticipated projections during the 2022 CORSIA Periodic Review

Actual CO₂ emissions from 2019 to 2023 were collected from the CORSIA Central Registry. Figure 6 shows actual historical CO₂ emissions from international aviation through 2023, in context of previously anticipated CO₂ emissions as of the last (2022) CORSIA periodic review. It was observed that, following the impact of the COVID-19 Global Pandemic on international aviation, actual CO₂ emissions reach levels in 2021 close to the CAEP/12 Low forecast. The international aviation sector exhibited a stronger recovery in 2022 and 2023 where CO₂ emissions reached levels between the Mid and High CAEP/12 trends.



Figure 6 | CO₂ Emissions: Actual/historical versus previously anticipated during the last CORSIA periodic review (in 2022)

Offsetting Requirements during the Pilot Phase of CORSIA

In accordance with the Annex 16 Volume IV on CORSIA, while MRV requirements were applicable from January 1, 2019, the calculation of offsetting requirements was applicable from January 1, 2021 (i.e., start of the pilot phase).

As shown in Figure 7, given the effects of the COVID-19 Global Pandemic on international aviation and despite the recovery since 2020, CO₂ emissions from international aviation subject to offsetting requirements remained below the 2019 CORSIA sector baseline in 2021, 2022 and 2023. As a result, the SGFs were 0% for all three years of the CORSIA Pilot Phase.

Offsetting was therefore not required during the Pilot Phase and there was no demand (triggered by CORSIA) for emissions reductions from CEFs and/or CEEUs.

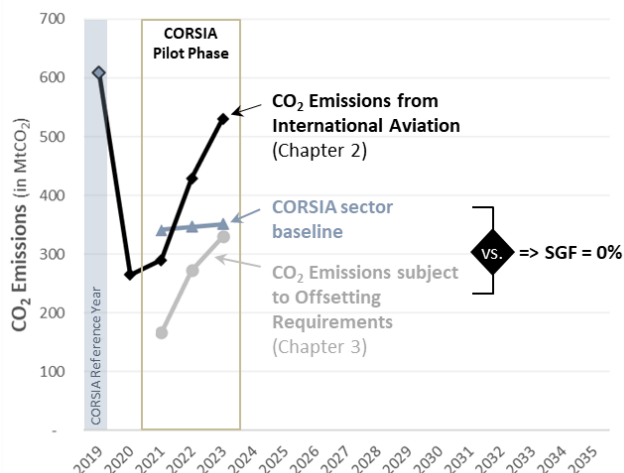


Figure 7 | Offsetting requirements during the pilot phase

Assessment of the Supply of Emissions Reductions from CEF and/or CORSIA Eligible Emissions Units during the Pilot Phase

The absence of demand for emissions reductions from CEF and/or emissions units for CORSIA compliance purposes does not mean that there was no supply, and that the markets did not prepare to meet potential and future demand.

To structure this assessment, the CTAG CORSIA Analyses Group developed a comprehensive framework to assess the potential role of the emissions reductions from CEFs and CEEUs towards meeting offsetting requirements. This part of the CORSIA Analyses is critical to the analyses and observations given the key role of emissions reductions from CEF on demand for CEEUs to meet offsetting requirements in a compliance cycle. Figure 8 shows the key steps from the overall supply of emissions reductions from alternative fuels and emissions units to the subsets that are or could be claimed under CORSIA to address offsetting requirements. As noted on Figure 8, it is conceptual and is not meant to represent actual values or estimations.

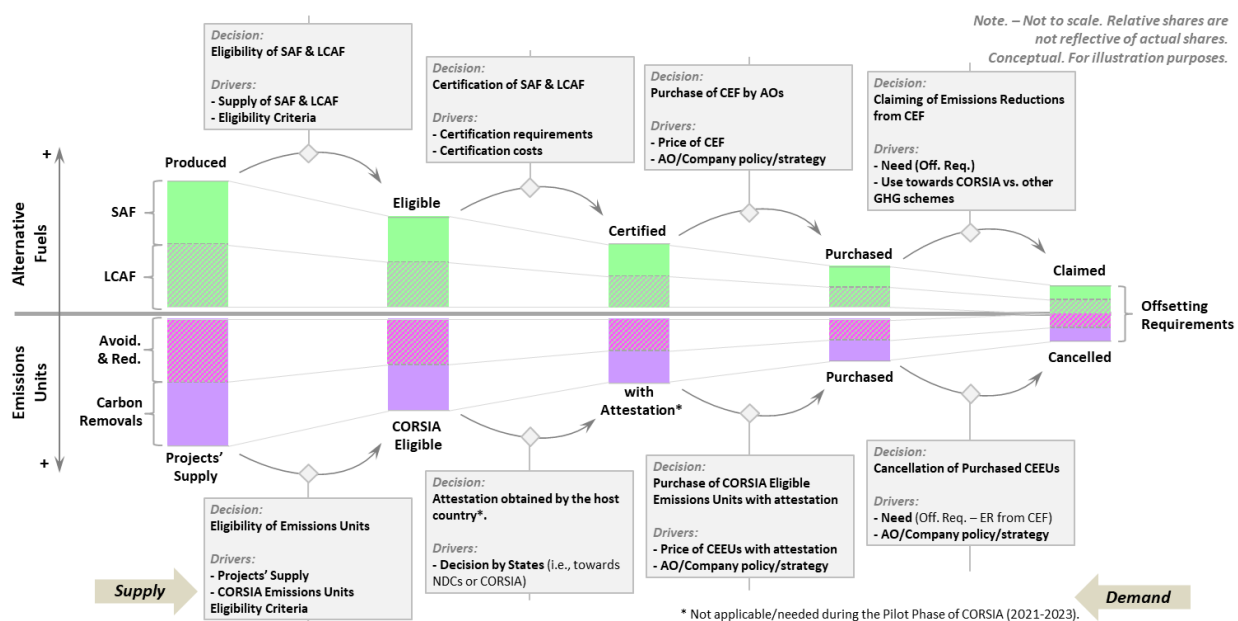


Figure 8 | Framework towards the assessment of the role of emissions reductions from CEF and CEEUs



The upper part of Figure 8 shows the steps for alternative fuels, including SAFs and Lower Carbon Aviation Fuels (LCAF). Starting with the left-hand side, the production of SAF and LCAF bounds the total emissions reductions from SAF that may be claimed by aeroplane operators under CORSIA. A fraction of the total SAF and LCAF produced may meet the “CORSIA Sustainability Criteria for CORSIA Eligible Fuels”. A subset of eligible SAF and LCAF may be certified by a Sustainability Certification Scheme (SCS). A subset may be purchased and used by aeroplane operators. Finally, a fraction may be claimed under CORSIA. Figure 8 also shows the key drivers influencing the relative shares for each step of this process.

Similarly, as depicted on the lower part of Figure 8, there is also a “funnel” for emissions units (i.e., from overall emissions units to cancelled CEEUs). Starting with the left-hand side, the total supply of emissions units based on avoidance, reductions and carbon removals bounds the amount that may be cancelled under CORSIA. A subset may meet the “CORSIA Emissions Unit Eligibility Criteria” i.e., CEEUs as decided by the ICAO Council and valid for a CORSIA compliance cycle. A subset of CEEUs may obtain an attestation by the host country. A subset of CEEUs with attestation may be purchased by aeroplane operators and claimed under CORSIA in a given year or compliance cycle to meet final offsetting requirements (i.e., offsetting requirements reduced by the emissions reductions from the use of CEF).

Such a framework can help improve the understanding (a) a posteriori of the supply of emissions reductions from CEF as well as emissions units and the effects of steps in the process that result in how demand (i.e., offsetting requirements) was met; (b) a priori how future supply may meet future demand (see next section for details).

The CAEP (WG4 CTAG) applied the framework described above for its review of the pilot phase of CORSIA. Based on initial and available information and data, Figure 9 summarizes the role of emissions reductions from CEF and CEEUs during the pilot phase of CORSIA.

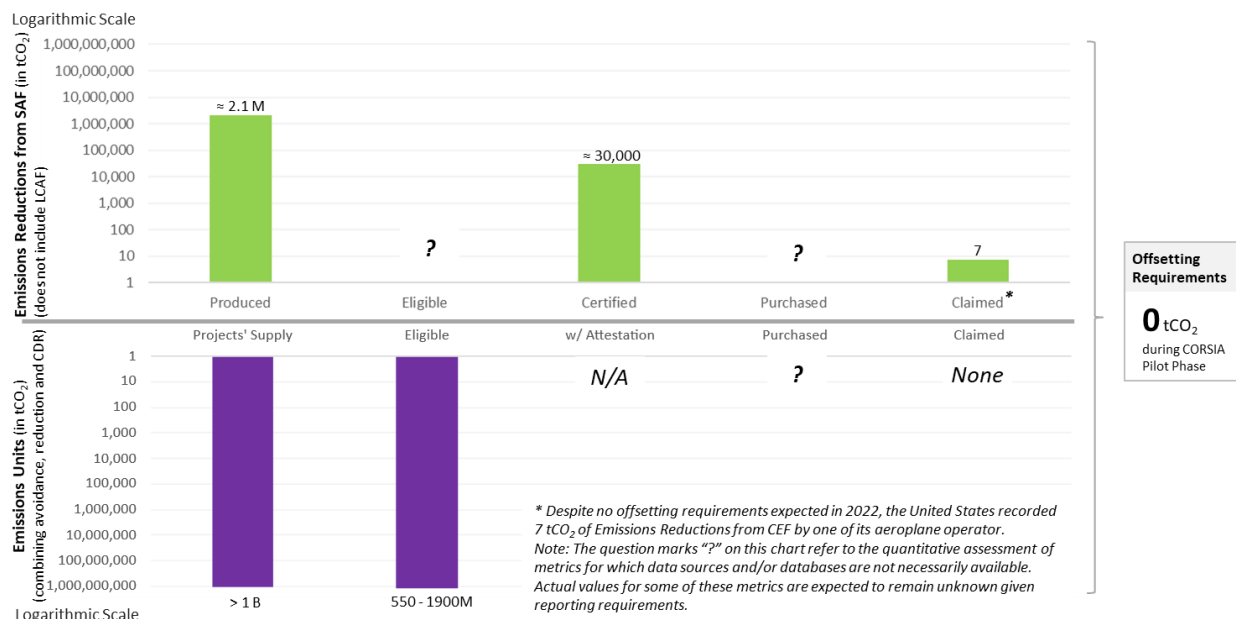


Figure 9 | Assessment of the role of Emissions Reductions from CEF and CEEUs

SAF & LCAF: Production

The production of SAF is tracked at the global aviation level. In other words, it is not segregated for domestic vs. international aviation. In 2023, volumes of produced SAF reached over 600 million liters (0.5 Mt), double the 300 million liters (0.25 Mt) produced in 2022, which tripled compared to the production of 100 million liters in 2021. For the purpose of estimating first order magnitude of emissions reductions associated with the SAF produced in 2021 through 2023, an average Emissions Reductions Factor (ERF) of 80% was used based on CORSIA Default Values for



Tallow and Used Cooking Oil based SAF as 85% of SAF supply over the next five years should be produced from this type of process and feedstock. This assumption is corroborated by the SCS reports described below.

As of April 2025, the CAEP (WG4 CTAG) was not aware of estimates of the production of Low Carbon Aviation Fuels (LCAF) between 2021 and 2023.

SAF & LCAF: Eligible

The CTAG CORSIA Analyses Group noted the absence of comprehensive sources of information or centralized repository where information on SAF produced from 2021 to 2023 that meets the sustainability criteria under CORSIA is available. It should be noted that information is available on the portion of SAF produced that was certified against the CORSIA sustainability criteria (see next section for details).

SAF & LCAF: Certified

The WG4 CORSIA Analyses tracked the portion of SAF produced from 2021 to 2023 that was certified against the CORSIA sustainability and eligibility requirements. Information from the reporting by SCS was leveraged for purposes of historical data collection. The SCSs are responsible every year for reporting the quantities of CEFs that were certified and the associated Greenhouse Gas (GHG) emissions. Reports from the SCSs are available on the ICAO CORSIA SCS webpage. For example, over 1500 and 33 tonnes of SAF that were certified against CORSIA requirements were reported to be produced in 2022 by Roundtable on Sustainable Biomaterials (RSB) and International Sustainability & Carbon Certification (ISCC) respectively. The SCS reports indicate that in 2023 a total of 9740 tonnes of neat SAF was produced and certified towards CORSIA. This corresponds to emissions reductions from CEF of approximately 26000 tCO₂. In total, the emissions reductions from CEF during the Pilot Phase of CORSIA reached approximately 30000 tCO₂. No LCAF production was reported to be certified by the SCSs during the pilot phase of CORSIA (2021-2023).

SAF & LCAF: Purchased

SAF memoranda of understanding (MOU) and purchase contracts are distinct from actual SAF usage by airline operators. To track progress on the use of SAF in a manner that is consistent with the accounting of emissions reductions from SAF, data on SAF volume and CO_{2e} emissions reductions was collected from airlines' Environmental, Social, and Governance (ESG) reports from 2019 to 2023. This data is used for other CORSIA analyses purposes but not reported on Figure 9 as the quantities of SAF reported by operators do not specify the share of CEFs with Certification.

SAF & LCAF: Claimed under CORSIA

Despite the absence of offsetting required in the pilot phase, some emissions reductions from CEFs were reported towards CORSIA. In 2022, the United States has recorded emissions reductions from CEF totaling 7 tCO₂ by one of its aeroplane operators.

In the future, information reported to the CCR would be leveraged to track emissions reductions from CEF claimed under CORSIA.

Emissions Units: Eligible

Historically, information on quantities of CEEUs was provided by the Technical Advisory Body (TAB) to the Council. According to the latest reporting from the TAB to Council (ref. C-WP/15631), the resulting potential total supply of CEEUs for the pilot phase is up to around 550 million – 1.9 billion.

Emissions Units: Host Country Attestation

N/A.



Emissions Units: Purchased

Information and data on emissions units purchased by aeroplane operators may not be easily available as this information is not necessarily reported in a comprehensive manner.

Emissions Units: Claimed under CORSIA

Information reported to the CCR could be leveraged to tracking of CEEUs cancelled under CORSIA. In 2021 through 2023, no CEEUs were cancelled under CORSIA.

Regional Breakdown of the Emissions Reductions from CEF and CEEUs

During its 232nd session, the Council “emphasized the need for further information to be provided on the supply, regional distribution and price of CORSIA Eligible Emissions Units and CORSIA Eligible Fuels, as a key input to the 2025 CORSIA periodic review and to any recommendations that would form part of the report by the Council to the 42nd Session of the Assembly.”

The CAEP (WG4 CTAG) conducted a comprehensive assessment of the regional distribution of key metrics underlying the emissions reductions from CEF as well as emissions units. This assessment is based on the definitions of the ICAO Regions as depicted in Figure 10.

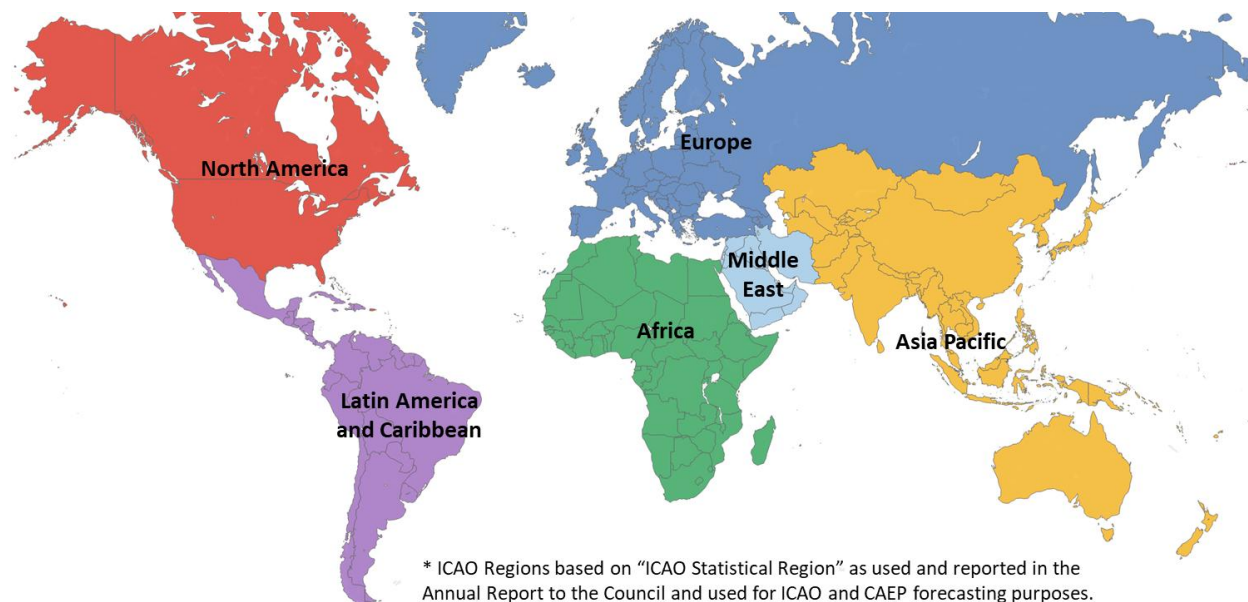


Figure 10 | ICAO Regions Definitions

The CORSIA Analyses task group collected and processed data to break down the estimates of SAF production, certified SAF, and Emissions Reductions from SAF claimed under CORSIA. Similarly, the CEEUs were broken down by ICAO Regions. Figure 11 depicts the regional distributions of emissions reductions from CEF and emissions units.

The regional breakdown of SAF production from 2021 to 2023 is based on the production capacity as reported in the ICAO tracker of SAF Facilities based only on a) in service – producing SAF and b) in service – producing other renewable fuels. The regional distribution of certified SAF is based on the “Production location of the neat CORSIA Eligible fuel” i.e., Field 8.e in the SCS Reports from 2022 and 2023. The regional distribution of Emissions Reductions from CEF claimed under CORSIA is based on the contextual information of the provider of this ad hoc information i.e., United States. The regional distribution of CEEUs is based on information from the TAB report to the 230th session of the Council.

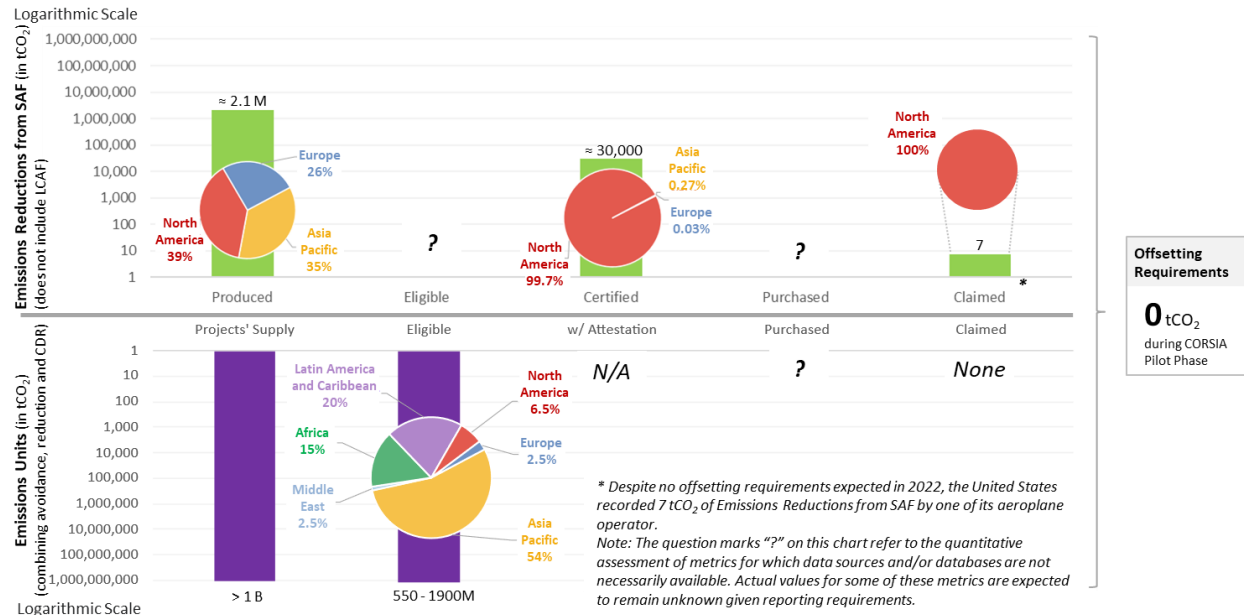


Figure 11 | Regional Breakdown of the Emissions Reductions from CEF and CEEUs

Net CO₂ Emissions in Context of the ICAO Carbon Neutral Growth goal from 2020 (CNG2020)

In 2013, ICAO agreed to a Carbon Neutral Growth goal aimed at achieving carbon neutral growth in international aviation from 2020 onwards (CNG2020). This goal is achieved through a "basket of measures," including technological advancements, operational improvements, SAF, and market-based measure i.e., CORSIA.

The CAEP tracked net CO₂ emissions from international aviation (i.e., after emissions reduction from CEF and cancelled CEEUs). Given reported data through the CCR, net CO₂ emissions remained below their 2019 level. The COVID-19 global pandemic was the primary driver of the decline in international aviation activity and resulting CO₂ emissions. As a result, the international aviation sector met its mid-term goal of "keeping net carbon emissions from 2020 at the same level" (assuming 2019 level as a proxy for pre-COVID 2020 expected emissions).

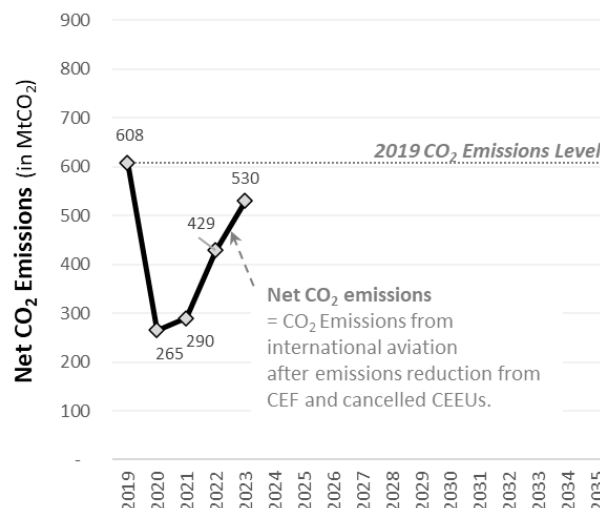


Figure 12 | Evolution of Net CO₂ Emissions in context of Carbon Neutral Growth goal from 2020 (CNG2020)



UPDATED FORWARD LOOKING CORSIA ANALYSES

Using the approach described in the previous chapter, the CAEP (WG4 CTAG) updated its forward-looking assessment in support of the 2025 CORSIA periodic review through 2035 with a focus on the first phase of CORSIA from January 1, 2024, to December 31, 2026.

Potential Evolution of CO₂ emissions from International Aviation from 2024 to 2035

Historically, the CTAG CORSIA Analyses Group has used the CAEP GHG (CO₂) emissions trends as input to its analyses i.e., updated forward looking assessments. Figure 13 shows the CAEP/13 trends of CO₂ emissions from international aviation from 2019 to 2035 adjusted for CORSIA analyses purposes. These trends reflect historical CO₂ emissions from international aviation that are becoming available from the continued MRV under CORSIA. The CCR and resulting documents report these statistics. The CAEP WG4 CTAG adjusted the CAEP/13 CO₂ emissions trends to match the CCR reported data in 2023.

According to the adjusted CAEP/13 CO₂ emissions trends, CO₂ emissions are expected to return to 2019 level by 2026, 2027 and 2029 under the High, Mid and Low CAEP/13 scenarios, respectively.

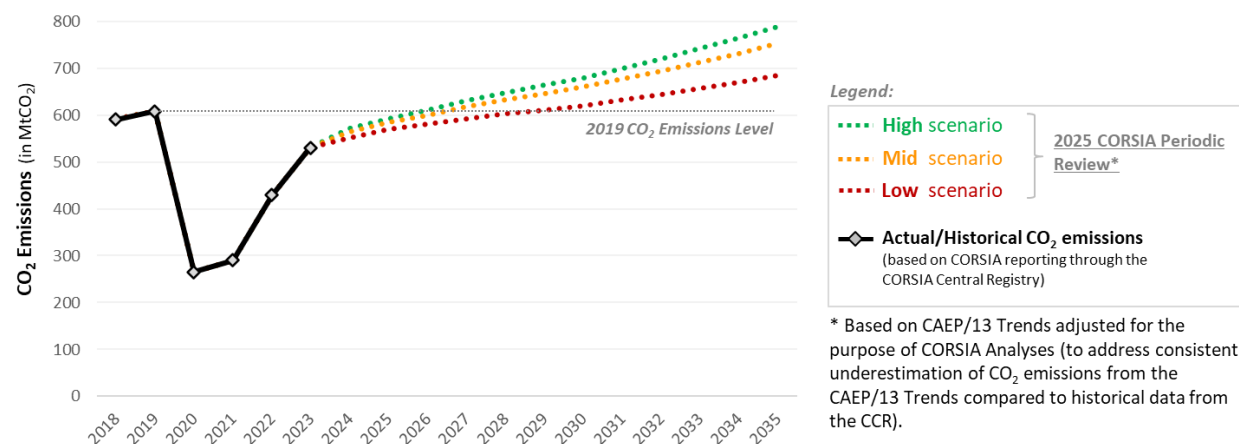


Figure 13 | Updated CO₂ Emissions Projections from CAEP WG4 CTAG

It should be noted that the CAEP/13 Trends are based on the CAEP/13 ICAO/CAEP Traffic Demand Forecasts. These forecasts were developed in 2022-2023 with a base year of 2018 and recommended by CAEP at its 2023 Steering Group meeting (Oct. 2023). As a result, they reflect expectations and long-term trends as of 2023. These forecasts, however, do not take into consideration the current uncertainty and potential effects of changes in trade conditions and the global, regional, and/or national economic dynamics that may affect international aviation traffic demand.



Potential Offsetting Requirements from 2024 to 2035

Total offsetting requirements across the international aviation sector are influenced by the impact of COVID-19 and the rate of recovery across years. Offsetting requirements are expected to start in 2024 under all CAEP/13 scenarios.

Figure 14 shows the offsetting requirements through 2035 under the proxy CAEP/13 trends (i.e., low, mid, and high scenarios). The estimations of offsetting requirements reflect the outcome of the Assembly Resolution A41-22 i.e., 85% of 2019 baseline from 2024 and adjustments to sectoral/individual shares (i.e., 100% sectoral share from 2030-2032 and 85% sectoral share from 2033-2035).

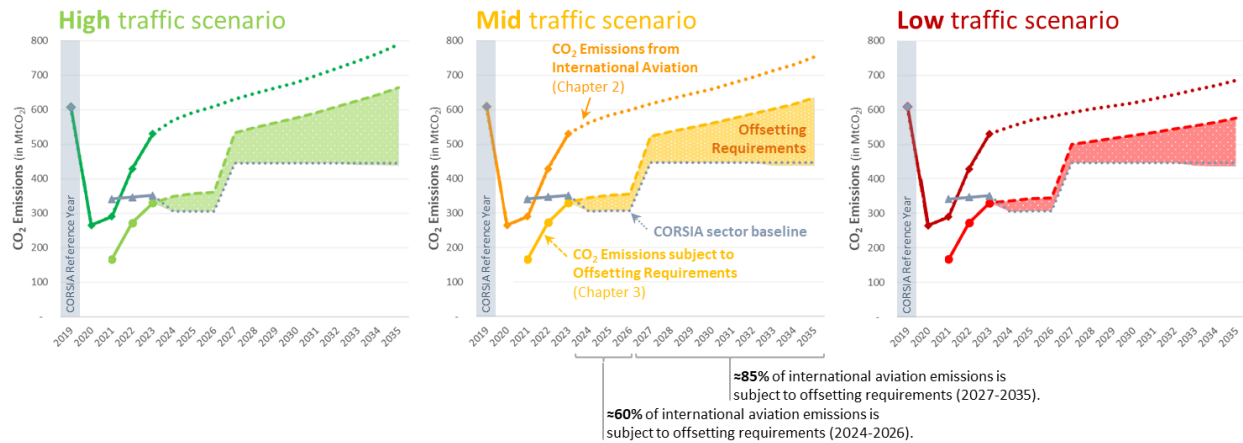


Figure 14 | Estimation of Offsetting Requirements from 2024 to 2035

Figure 15 shows the temporal distribution of offsetting requirements from 2024 to 2035 under the proxy CAEP/13 trends. It takes into account the decisions made at the 41st Session of the ICAO Assembly (as reflected in Assembly Resolution A41-22). Offsetting is expected to start in 2024 under all three traffic forecasts/scenarios.

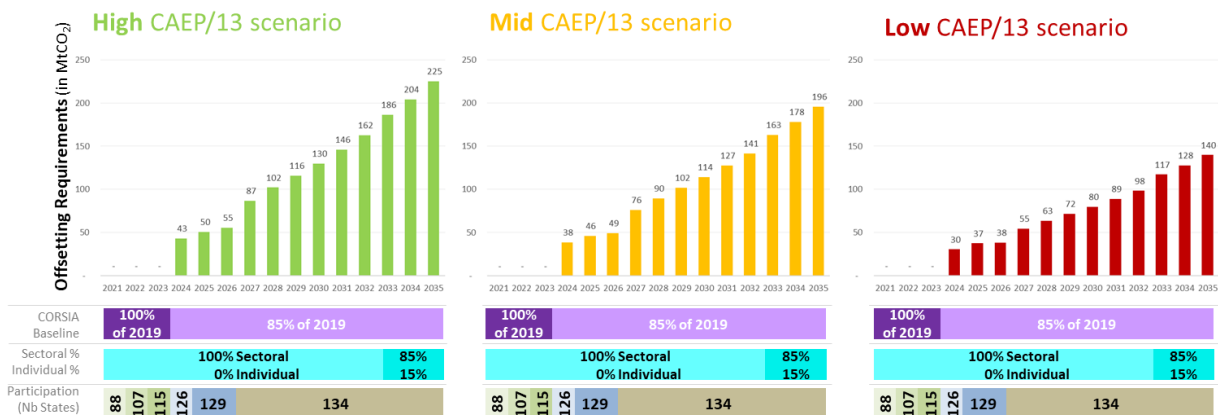


Figure 15 | Offsetting Requirements from 2024 to 2035

Figure 16 shows the cumulative offsetting requirements from 2021 to 2035. Given the ICAO CAEP/13 traffic forecasts and decisions at Assembly 41, cumulative offsetting requirements (O.R.) from 2024 to 2035 could range from 950 to 1500 MtCO₂.

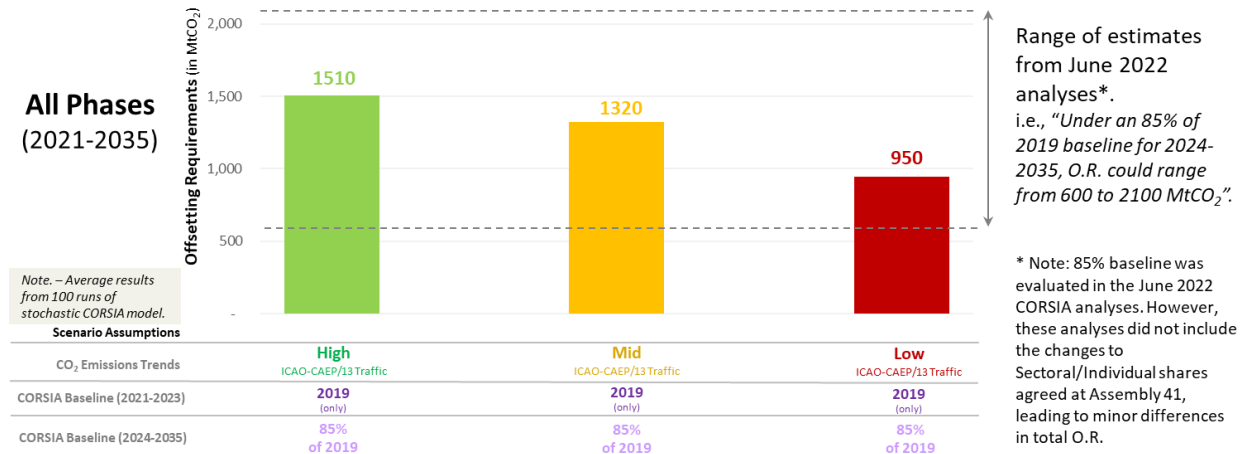


Figure 16 | Cumulative Offsetting Requirements from 2021 to 2035

During its 232nd session the Council “emphasized the need for further information to be provided on the supply, regional distribution and price of CORSIA Eligible Emissions Units and CORSIA Eligible Fuels, as a key input to the 2025 CORSIA periodic review and to any recommendations that would form part of the report by the Council to the 42nd Session of the Assembly.”

The WG4 CORSIA Analyses task group has started to conduct a comprehensive assessment of the regional distribution of key metrics underlying the emissions reductions from CEF as well as emissions units. This assessment is based on the definitions of the ICAO Regions as depicted in Figure 17.

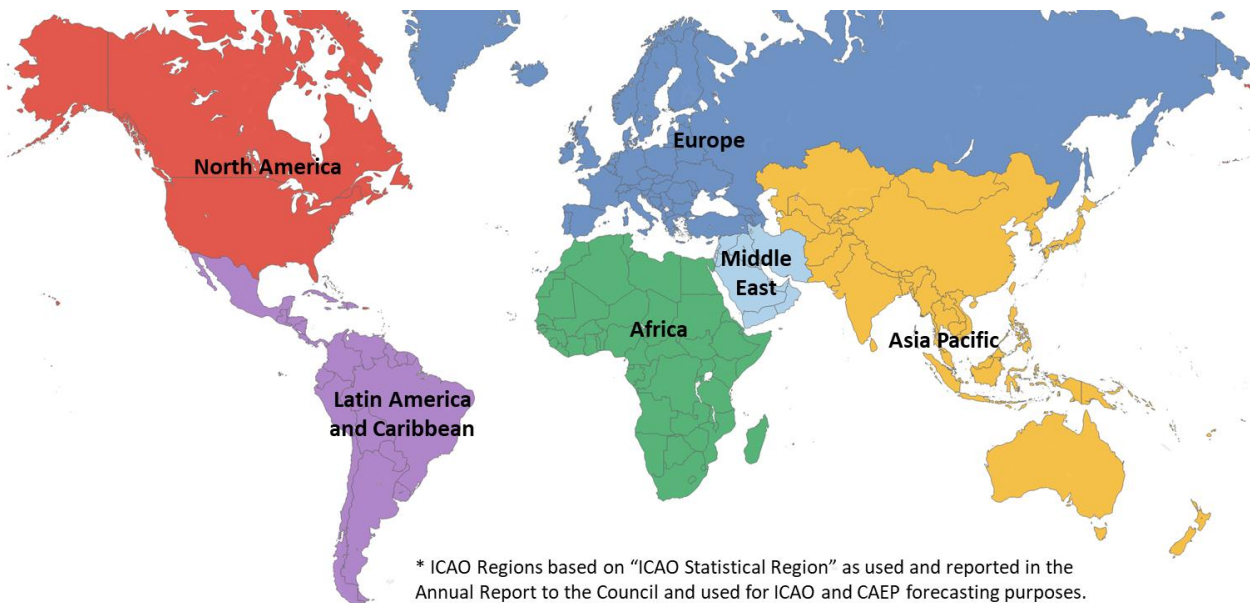


Figure 17 | ICAO Regions Definitions

Figure 18 shows the regional distribution of estimated offsetting requirements from 2024 to 2035 based on the CAEP/13 CO₂ emissions trends and assumptions on the expected implementation of CORSIA through 2035.

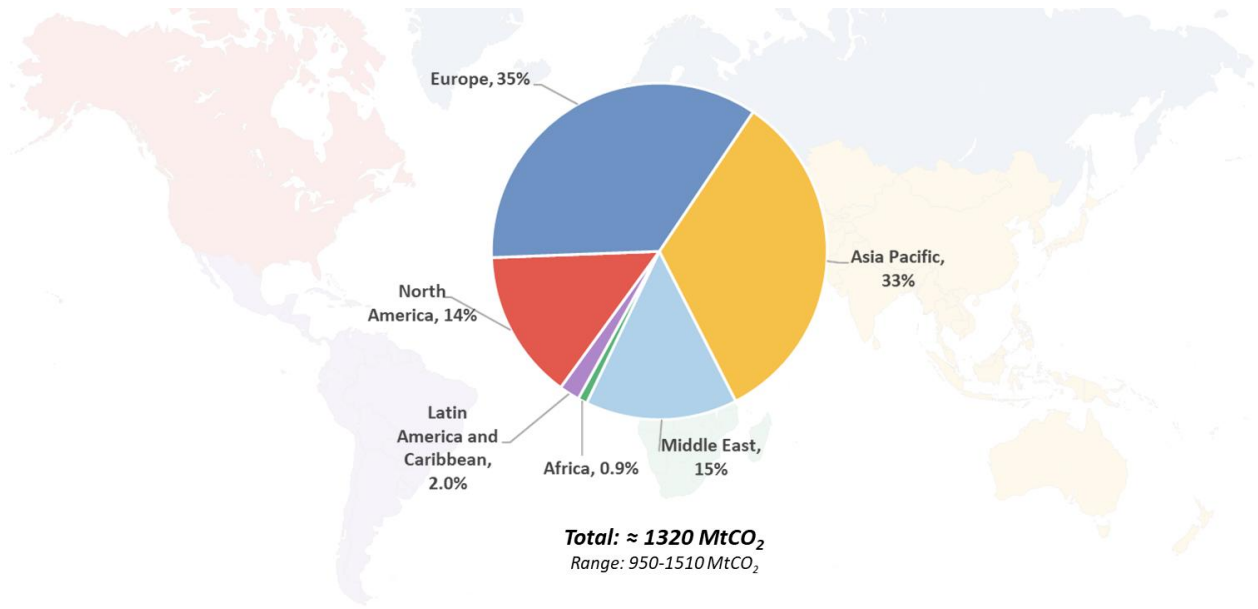


Figure 18 | Regional breakdown of demand i.e., regional distribution of offsetting requirements (2021-2035)

Figure 19 shows the regional breakdown of offsetting requirements by ICAO Regions. Offsetting requirements were then placed in context of CO₂ emissions from international aviation (as displayed in Figure 19 that depicts percent CO₂ emissions to offset divided by CO₂ emissions from international aviation; aka Chapter 2 CO₂ emissions).

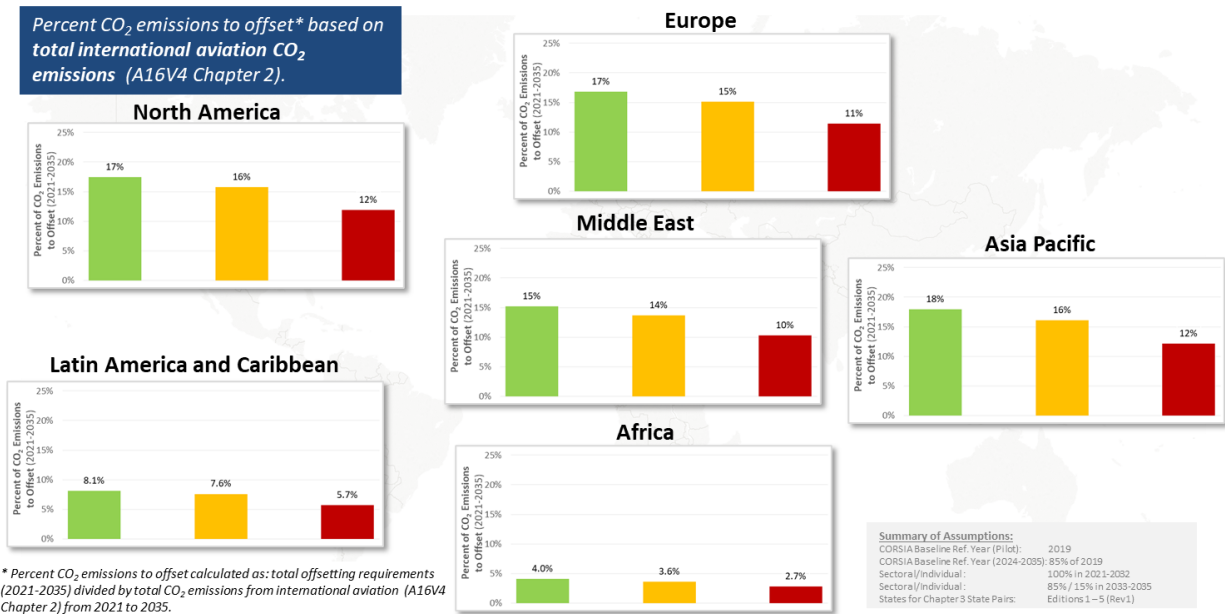


Figure 19 | Regional Distributions of Offsetting Requirements Relative to CO₂ emissions

Figure 20 shows the same estimates of offsetting requirements in context of CO₂ emissions from international aviation subject to offsetting requirements (i.e., Chapter 3 CO₂ emissions).

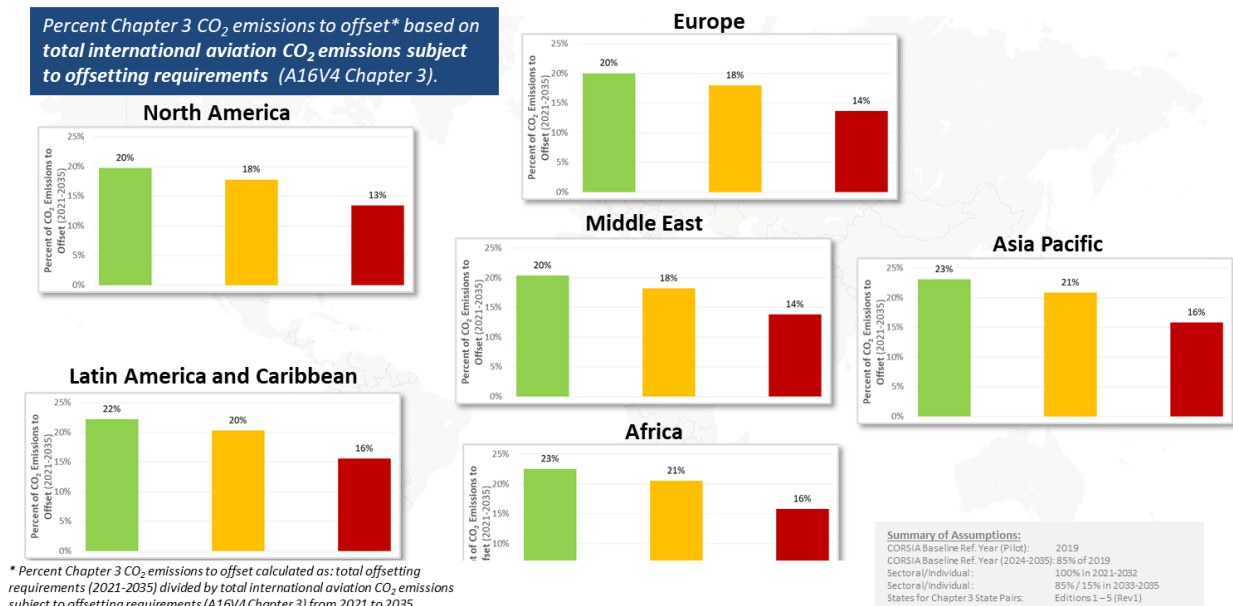


Figure 20 | Regional Distributions of Offsetting Requirements Relative to CO₂ emissions subject to Offsetting Requirements.

All regions show the effect of the COVID-19 global pandemic in a similar manner. The percent of CO₂ emissions offset, which is driven by the participation of States in CORSIA, the CORSIA baseline and the overall growth between 2021 and 2035 on the 40 FESG route groups, is also similar across all regions, except certain regions where there is a relatively higher number of States that are exempted and not voluntarily participating which results in lower percent of CO₂ emissions offset through 2035.

Assessment of offsetting requirements (demand) given the supply of emissions reductions from CEF and CEEUs

The CTAG CORSIA Analyses Group applied the framework described in Figure 21 for its forward-looking assessment of CORSIA offsetting requirements and how they may be met with a focus on the first phase of CORSIA. Based on interim and available information and data, Figure 22 summarizes the role of emissions reductions from CEFs and CEEUs during the first phase of CORSIA.

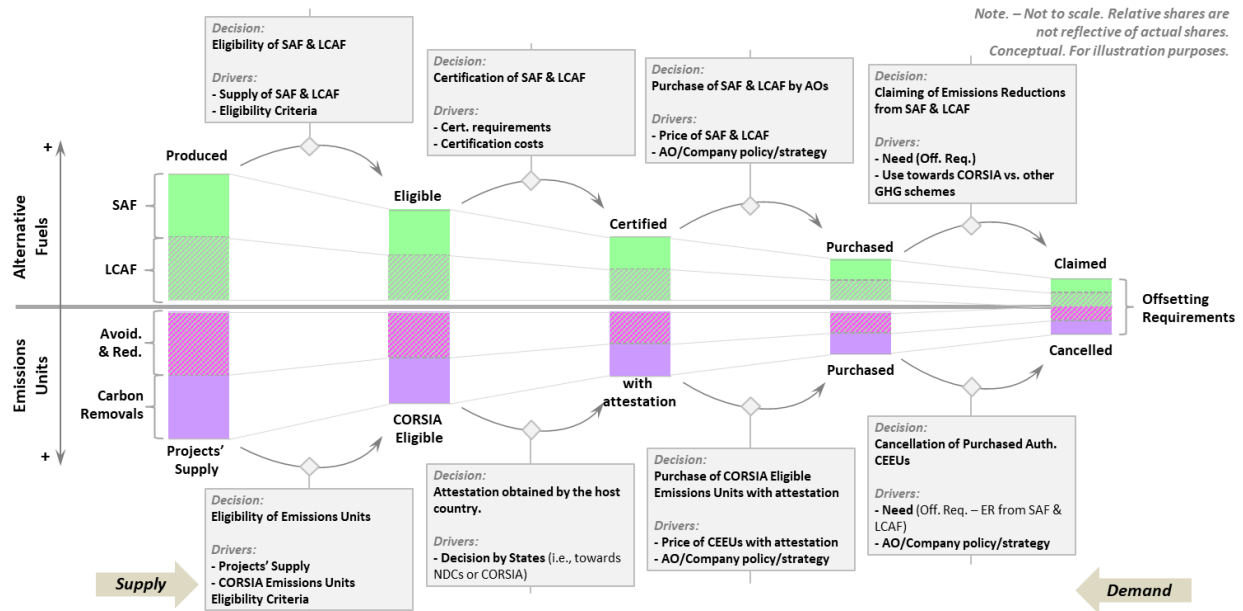


Figure 21 | Framework towards the assessment of the role of Emissions Reductions from CEF and CEEUs

The CORSIA Analyses task group has started to collect and process data to attempt to break down the estimates of SAF production, certified SAF, and Emissions Reductions from SAF claimed under CORSIA. Similarly, the CEEUs were broken down by ICAO Regions. Figure 22 depicts the regional distributions of emissions reductions from SAF and emissions units.

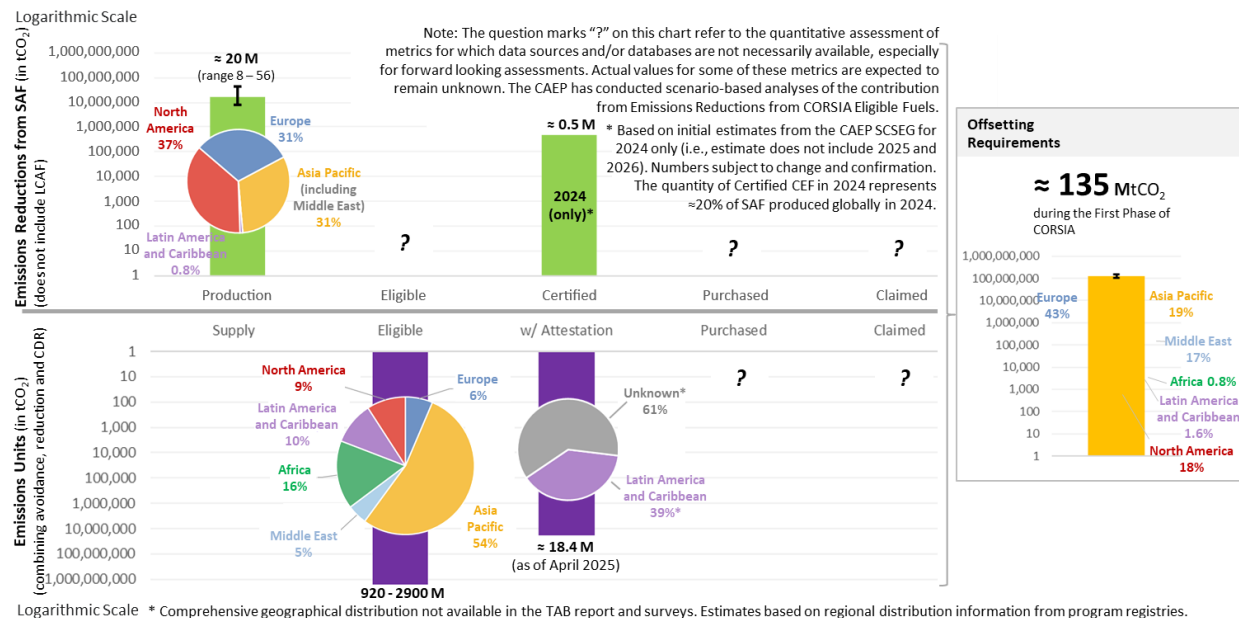


Figure 22 | Assessment of the role of Emissions Reductions from SAF and CEEUs (Focus on 2024-2026)



SAF & LCAF: Production

When estimating the emissions reductions from SAF (i.e., production of SAF regardless of its eligibility towards CORSIA) and as presented in Figure 24, data is based on a combination of International Air Transport Association (IATA) and CAEP WG5 CEF short-term production projection. The CAEP WG5 maintains two databases to meet the varied needs of ICAO:

- *Production Analysis Database* – This database includes announcements and production facilities that fulfill a set of scope and data requirements.
- *Announcements Database* – This database includes announcements including characteristics of the expected SAF production that help assign a maturity level used in assessing the likelihood of future production under various scenarios.

The projection analysis considers a set of four production scenarios: Low, Moderate, High, and High+. The different scenarios are representative of more pessimistic or optimistic expectations on the development of the SAF market in the short term. The CAEP WG5 SAF short-term production projections uses 2024 as the baseline year based on SAF production estimate by IATA of 1 million tonnes of SAF.

As shown in Figure 24, across the four scenarios (Low, Moderate, High, and High+), SAF volumes in the year 2030 range from 2.3 Mt in the Low scenario, to 32.1 Mt in the High+ scenario.

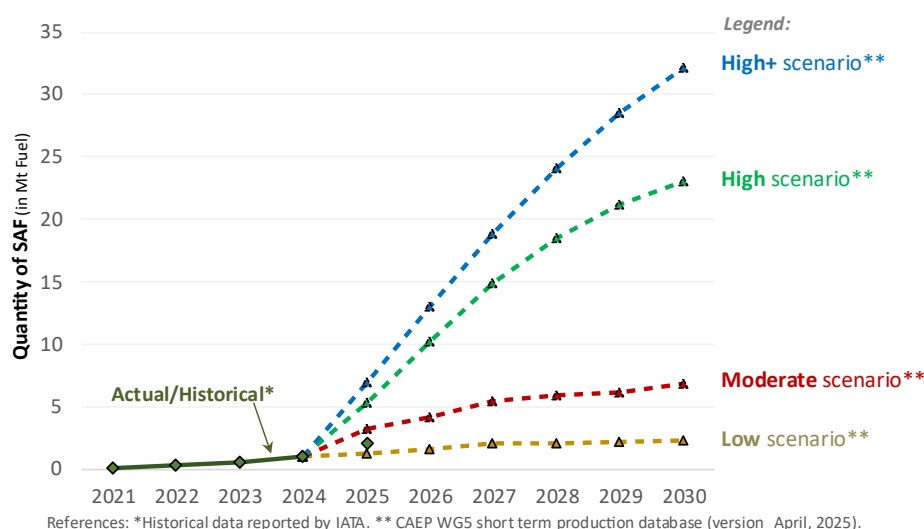


Figure 23 | Scenario-based projections of the production of SAF in million tonnes of fuel

For the purpose of estimating the first order magnitude of emissions reductions associated from SAF produced in 2024 through 2026, an average emissions reduction factor (ERF) of $\approx 75\%$ was assumed with a range from $\approx 65\%$ based on the CAEP Long Term Aspirational Goal (LTAG) F1 scenario and $\approx 85\%$ based on CORSIA Default Values for Tallow and Used Cooking Oil based SAF as 85% of SAF supply over the next five years should be produced from this type of process and feedstock. Figure 24 shows potential emissions reductions associated with the SAF production scenarios and assumptions on emissions reductions factor. Under the moderate scenario, emissions reductions from SAF may reach up to ≈ 20 Mt CO₂.

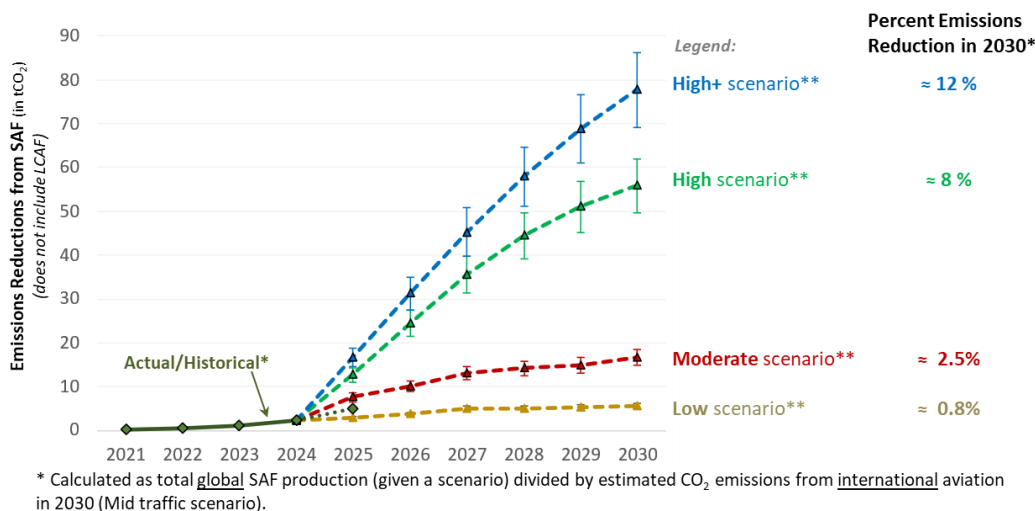


Figure 24 | Scenario-based projections of potential emissions reductions from SAF

While the LTAG-TG assumed a potential role of LCAF starting in 2026, there are currently no details about announcements of the availability of LCAF for CORSIA purposes. Such information is being tracked and will be considered as it becomes available.

CEF & LCAF: Certified

The SCS reports on Certified CEFs only provided actual/historical data. Initial estimates by the CAEP Sustainability Certification Scheme Evaluation Group (SCSEG) for certified CEF in 2024 were considered. There are no forward-looking projections on how much CEF may be certified in the future.

CEF & LCAF: Purchased

SAF memoranda of understanding (MOU) and purchase contracts are distinct from actual SAF usage by airline operators. Data on SAF volume and CO_{2e} emissions reductions was collected from airline ESG reports from 2019 to 2024 and announcements from 2024 onward. This data is used for other CORSIA analyses purposes but not reported on Figure 22 as the quantities of SAF reported and announced by operators do not specify the share of CEFs with Certification.

CEF & LCAF: Claimed under CORSIA

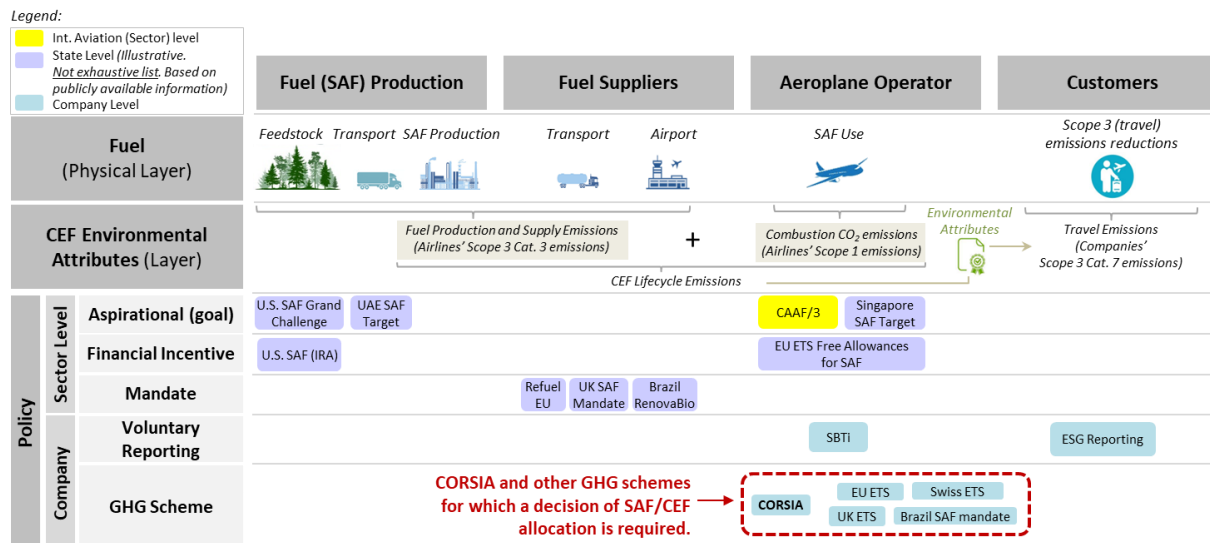
For the purpose of forward-looking assessments and given the uncertainty in the fraction of SAF that may be certified towards CORSIA, purchased and ultimately claimed by operators, the CAEP WG4 (CTAG) developed scenarios that provide an upper bound of the contribution from emissions reductions from CEF based on the scenarios of productions of SAF and a lower bound where no CEF is claimed towards CORSIA.

While CORSIA is the only global market-based measure applying to CO₂ emissions from international aviation, emissions reductions from CEFs may be claimed towards other GHG schemes. The CAEP identified and reviewed other relevant GHG schemes. The CAEP also started to assess the use of SAF/CEF by aeroplane operators and quantify the likelihood of claiming SAF/CEF towards CORSIA in comparison to other schemes.

Figure 25 depicts the SAF supply chain, considering both the physical layer and the environmental attributes layer. On the physical layer, the first step is the production of the SAF which includes the acquisition of feedstock, its transportation and the actual production of the SAF. Once the SAF is produced it is generally transported to a jet fuel blending point that may be at an airport but could also be at a remote location in the jet fuel transportation network. The blended SAF is then used by the global aviation system (not necessarily the operator who purchased



the SAF and would claim its environmental attributes). The CEF Environmental Attributes depict the emissions and emissions reductions associated with the production and use of the CEF. The emissions associated with the fuel production and supply emissions are upstream emissions of the combustion CO₂ emissions by the operator. They are generally referred to as airlines' scope 3 category 3 (upstream) emissions and airlines' scope 1 emissions respectively. Downstream of the aeroplane operator, the customer (i.e., flying public or corporations) may purchase the environmental attributes of the CEF to reduce its "Travel Emissions" (i.e., companies' scope 3 category 7 emissions). The use of environmental attributes of CEF to address companies' scope 3 category 7 emissions (e.g., for ESG reporting purposes) is not considered double claiming given the different emissions accounting frameworks.



* Not an exhaustive list given the ongoing development of national schemes (to address domestic aviation). Subject to updates and future work by CAEP.

Figure 25 | Identification and Review of Other Relevant GHG Schemes

Figure 25 also depicts policies related to SAF incentivization, development support, and accounting of its emissions reductions. At the sector level, various aspirational goals on the production of SAF (e.g., US SAF Grand challenge, UAE SAF Target) were reviewed as well as the operator level CAAF/3 aspirational goal for international aviation. Financial incentive mechanisms may also affect the production of SAF (e.g., US SAF IRA fuel production incentives) along with mandate on the supply of SAF (e.g., Refuel EU). Finally, companies may also have voluntary goals and reporting associated with the use of SAF or CEF (e.g., Science Based Target initiative at the company level and ESG reporting for companies which includes travel emissions). None of these policies and mechanisms are considered "other GHG schemes" from a CEF claiming perspective. In other words, these SAF production and supply incentivization mechanisms can co-exist with CORSIA without risks of double claiming.

From the universe of policies, the following were considered to require a decision with regards to SAF/CEF allocation: EU-ETS, UK-ETS, Swiss ETS, and the Brazil SAF mandate. Each GHG scheme possibly triggering a decision by operators have specific applicability rules and SAF eligibility criteria, including provisions for domestic emissions (not included in the scope of applicability of CORSIA that applies to international aviation only). The main characteristics of each Scheme are shown in Figure 26. It should be noted that the set of other schemes presented in Figure 26 does not represent an exhaustive list given the ongoing development of national schemes (to address domestic aviation). CAEP intends to continue to monitor the development of other relevant schemes and update its analyses accordingly.



Scheme*	Scope	Types of Fuel Eligible	Description
CORSIA	Global	CORSIA Eligible Fuels	Operators may claim emissions reductions from CORSIA Eligible Fuel
EU ETS	Regional	Food/Feed crop-based fuel not allowed	Operators may claim emissions reductions from eligible SAF
UK ETS	National	Food/Feed crop-based fuel not allowed	Operators may claim emissions reductions from eligible SAF
Swiss ETS	National	Food/Feed crop-based fuel not allowed	Operators may claim emissions reductions from eligible SAF.
Brazil SAF Mandate	National	Aligned with CORSIA	Operators should reduce net emissions using SAF

* Not an exhaustive list given the ongoing development of national schemes (to address domestic aviation). Subject to updates and future work by CAEP.

Figure 26 | “Other GHG Schemes” Possibly Triggering a Decision by Operators to Claim SAF/CEF

Demand from CORSIA and other schemes is likely to exceed the supply of SAF/CEF, making it a supply constrained market. The use or allocation of limited emissions reductions from SAF/CEF (towards the least overall cost outcome) will likely be driven by the costs of alternatives e.g., emissions units under CORSIA and carbon permits (allowances) under other GHG schemes. Figure 27 shows a simplified decision tree representing the drivers and the process by which an aeroplane operator may decide to allocate (i.e., claim) CEF towards CORSIA vs. other GHG schemes or not claimed towards any schemes.

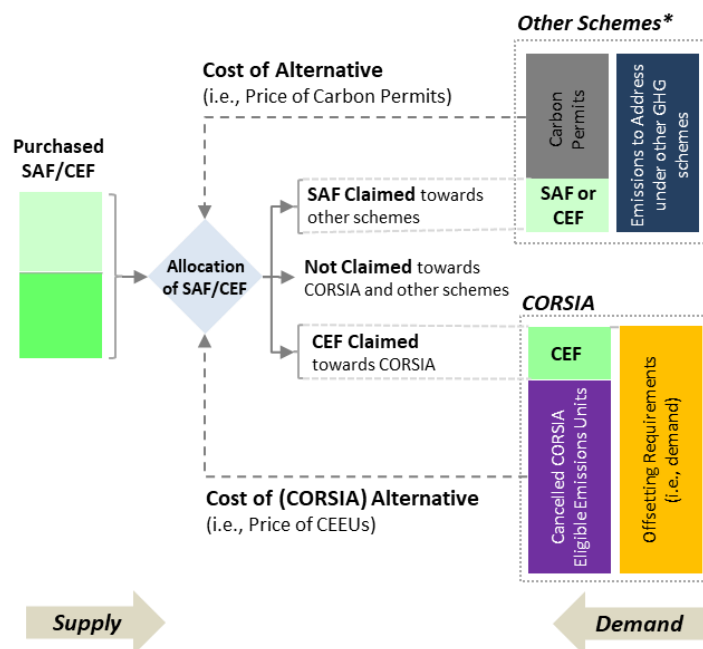


Figure 27 | Assessment of the Potential Allocation of SAF/CEF to CORSIA vs. other GHG Schemes¹

¹ “CORSIA is the only global market-based measure applying to CO₂ emissions from international aviation” (ICAO Resolution A41-22 par. 18). Note: Through C-DEC 232/6 action e), the Council requested CAEP to consider “other [...] GHG schemes”, which requires considering specific country and/or regional schemes for purpose of technical analyses.



If an aeroplane operator has purchased SAF, some of which may be certified CEF, depending on the GHG schemes that are applicable it could need to decide where to allocate the emissions reductions from the SAF/CEF. As shown on Figure 27, CEF could be claimed under CORSIA to meet offsetting requirements in a given compliance cycle. The remainder of the offsetting requirements (i.e., final offsetting requirements) would need to be addressed with CEEUs. Alternatively, the operator may choose to allocate the SAF toward the other GHG schemes to reduce its needs for carbon permits to meet its obligations. All else being equal, the price of the alternatives (i.e., CEEUs or Carbon Permits) may drive and be a factor driving the allocation decision. If the prices of carbon permits are greater than CEEUs, a least cost of compliance approach would indicate that the SAF would be allocated towards the other GHG scheme. It is important to highlight that other factors, such as the cost of certification of CEF, may also play a role in how SAF/CEF may be claimed. Specific provisions of other schemes (affecting the allocation of SAF/CEF) are yet to be accounted for in this initial assessment.

The CAEP has started to implement the assessment approach presented in Figure 27 via independent and complementary analyses.

Assessment based on Operator Reported SAF Use and Uptake Announcements

The use/claiming of emissions reductions from SAF/CEF towards CORSIA or other GHG schemes is inherently an operators' driven decision (considering applicable schemes and alternatives). As such, aeroplane operator data of SAF actual usage and planned/announced usage was collected. Two tiers of data were considered in this analysis. Tier 1 included actual SAF usage as reported by operators, for example through their ESG reports. Tier 2 was based on operators' announcements of SAF uptake. As the announcements include volume of SAF and years of start and end of procurements. The WG5 Moderate scenario uptake rates were used as a proxy to allocate SAF across years. Figure 28 shows an overview of the analysis approach. The operator level data was then aggregated by State of attribution. Given the applicability of GHG schemes, the SAF actual and planned/announced usage was calculated for "CORSIA only" States vs. States with CORSIA and other GHG schemes.

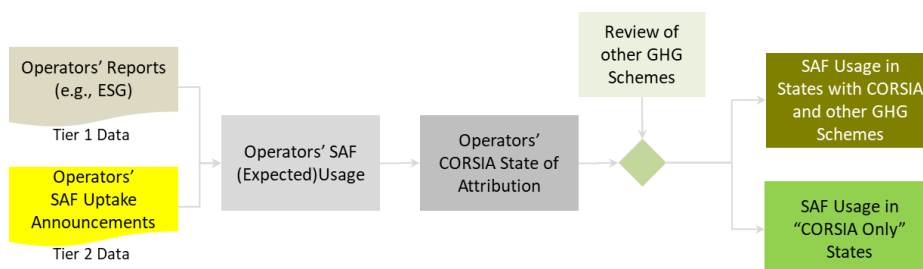


Figure 28 | Approach for collecting data on SAF actual and planned usage and categorization by applicability of CORSIA and other schemes if applicable

Figure 29 shows the State level aggregation of operators' actual and planned SAF usage from 2021 to 2026 with general applicability of schemes.



State of Attribution	2021	2022	2023	2024*	2025*	2026*	Applicability of other GHG Schemes
Australia	-	2,535	6,807	7,993	10,265	13,503	CORSIA Only
China	3	450	1,085	11,144	14,660	19,195	CORSIA Only
Finland	-	-	2,266	4,855	5,132	6,751	CORSIA & Other GHG Scheme(s)
France	-	44,400	88,799	115,799	239,261	314,738	CORSIA & Other GHG Scheme(s)
Germany	-	13,000	88,903	95,000	384,564	473,047	CORSIA & Other GHG Scheme(s)
Hungary	-	-	-	-	34	-	CORSIA & Other GHG Scheme(s)
Ireland	-	-	-	1,000	-	-	CORSIA & Other GHG Scheme(s)
Japan	4	125	351	-	-	-	CORSIA Only
New Zealand	-	-	-	-	-	24,000	CORSIA Only
Norway	-	1,777	1,759	-	-	-	CORSIA & Other GHG Scheme(s)
Qatar	-	-	3,120	-	-	-	CORSIA Only
Singapore	-	1,000	-	1,000	1,000	-	CORSIA Only
Sweden	-	3,083	6,049	11,000	15,140	15,140	CORSIA & Other GHG Scheme(s)
United Arab Emirates	-	153	179	9,084	-	-	CORSIA Only
United Kingdom	-	1,952	55,671	172,106	68,717	80,842	CORSIA & Other GHG Scheme(s)
United States	13,488	24,218	48,489	145,327	650,625	1,044,265	CORSIA Only
Total SAF (in tonnes of Fuel)	13,495	92,692	303,478	574,309	1,389,398	1,991,481	

* Planned/Announced.

Figure 29 | State level aggregation of operators' actual and planned SAF usage from 2021 to 2026 with general applicability of schemes

As shown on Figure 30, based on partial data reported by operators for 2024 and estimates based on announcements through 2026, approximately 49% of the global SAF usage from 2024-2026 may be by operators attributed to States where only CORSIA is applicable. It should be noted that this analysis does not include the allocation of crop-based SAF (not eligible under the EU ETS, UK ETS and Swiss ETS) that may be used towards CORSIA (if any). It also does not include specific obligations from individual operators regarding other GHG schemes (beyond CORSIA). Finally, it assumes that all the CEF possibly claimed towards CORSIA would be certified.

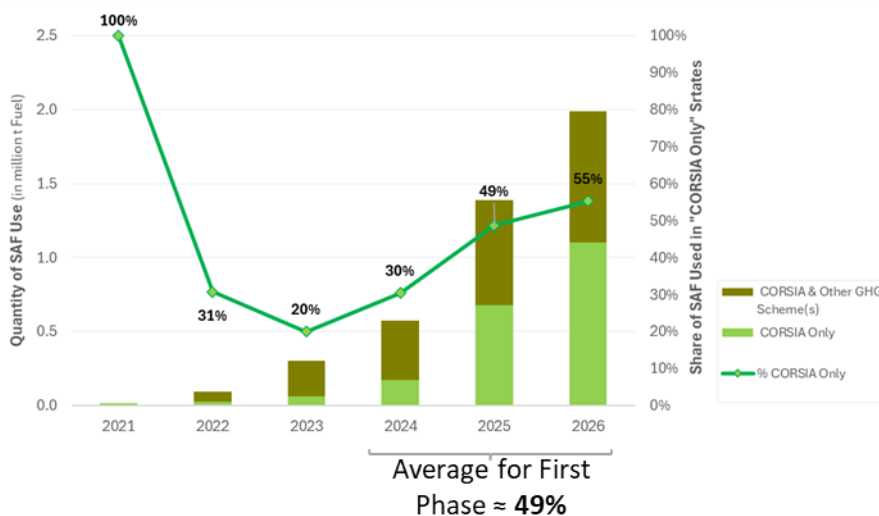


Figure 30 | Summary of results on operators' actual and planned SAF usage from 2021 to 2026 given the applicability of schemes

Multi-Factor Assessment of the Potential Allocation of SAF

To assess the potential SAF/CEF allocation on CORSIA and Other Schemes across all CORSIA phases, an analysis of **SAF distribution** and **allocation decision**, given the characteristics of the various GHG schemes, was conducted. Figure 31 shows the approach considered for the SAF allocation decision.

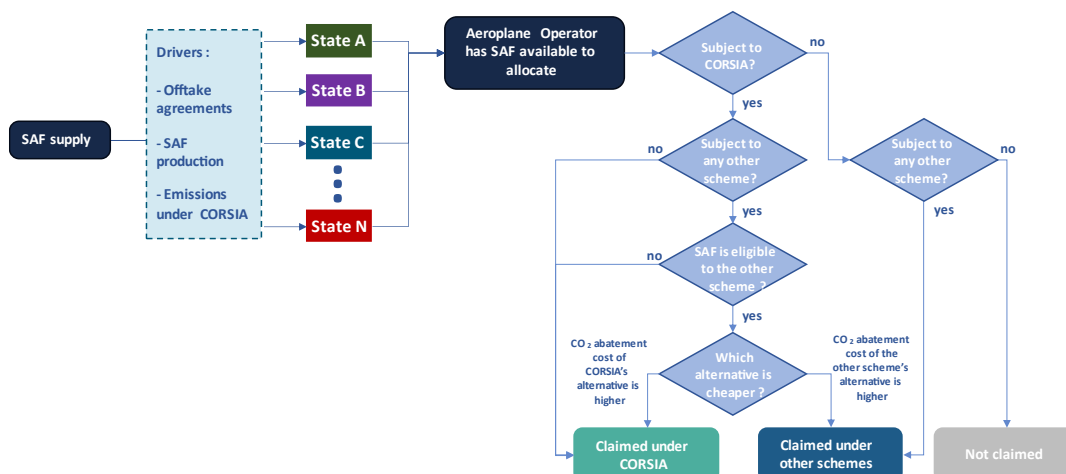


Figure 31 | Assessment of the SAF Allocation decision

The first part of the analysis consists of distributing SAF to operators and States. The total SAF supply considers the average Moderate scenario of total emissions reductions from SAF shown in Figure 24. This part of the analysis takes into consideration three factors as contributors to SAF distribution: (1) the commitment of operators to buy SAF through off-take agreements, (2) the geographic location of the SAF production facilities in place and announced to start operations in the coming years, and (3) the level of operators' emissions covered by CORSIA Chapter 2 emissions.

- **Off-take Agreements:** This factor reflects the share of SAF allocated to operators that have entered into off-take agreements with SAF producers, demonstrating their commitment and interest in purchasing SAF.
- **Location of SAF Facilities:** This factor captures the impact of SAF distribution logistics and acknowledges that States expected to host SAF production facilities are introducing policies to support both SAF production and use.
- **CO₂ Emissions:** This factor accounts for the greater capacity of larger aeroplane operators to invest in SAF, as well as their increased need for emissions offsetting due to higher overall emissions.

Once SAF is distributed to the States, each State's SAF share is allocated based on the specific rules of any applicable GHG Schemes, i.e., according to the information summarized Figure 26. The CO₂ abatement cost for the SAF claim alternative under each Scheme was determined using historical pricing data. If an alternative is not available or not yet defined for a particular Scheme, it is assumed to be more expensive than CORSIA Emissions Units. It was also not considered possible pricing differences concerning the certification process under each scheme.

In the first phase of CORSIA (2024–2026), off-take agreements should play a more prominent role in the distribution of SAF among operators than other factors. Given the limited SAF supply, only a subset of operators will have access to it. Additionally, many state-level policies are set to come into effect during or after this initial phase. Therefore, for the first phase, only the off-take agreements factor was considered. For the second phase, the average of the three factors was used.

The share of crop-based SAF available is determinant to the results, since this kind of feedstock is restricted in some of the Other GHG Schemes. The LTAG Report on Fuels² estimates a roughly 40% share of crop-based fuel in 2035. However, from the SCS reports available so far, limited SAF has been certified using this kind of feedstock. It is expected that this share will increase as new SAF facilities start to operate, and more feedstock is needed. The analysis considered a 0% share of crop-based SAF for the first phase of CORSIA and both 0% and 40% scenarios for the other compliance cycles.

² ICAO, "ICAO Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions - SAF production projections and associated GHG emissions reductions", Available at: https://www.icao.int/environmental-protection/LTAG/Documents/ICAO_LTAG_Report_AppendixM5_AttachmentB.pdf



Figure 32 shows the assessment results based on the assumptions outlined above. During CORSIA's First Phase, a total of 48% of the available SAF would be allocated under the scheme. Within this phase, the proportion of SAF claimed under CORSIA is projected to be lower in 2024 compared to 2025 and 2026, due to a larger share being directed to States operating Other GHG Schemes. For the second phase, when CORSIA becomes mandatory, the share of SAF claimed under CORSIA may increase to a range between 58 and 70%, depending on the proportion of crop-based SAF available in the market.

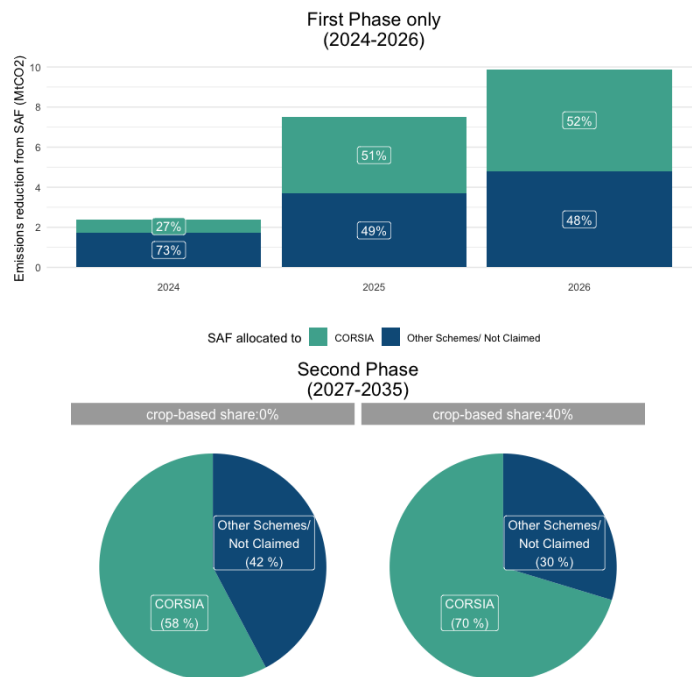


Figure 32 | Assessment of the Potential Allocation of SAF/CEF to CORSIA vs. other GHG Schemes

As presented in the two subsections above, the CAEP conducted two complementary assessments of the historical, current and expected use of SAF/CEF including:

- Operator based analyses using operator reported SAF usage (Tier 1 data), announcements of SAF uptake (Tier 2 data).
- Multi-factor assessment including: SAF announcements, SAF production across States and emissions distribution.

Figure 33 shows the summary of results of the assessments of the potential allocation of SAF/CEF to CORSIA vs. other schemes. First order assessments indicate that $\approx$ 48-50% of CEF SAF, produced globally, may be claimed towards CORSIA (the remainder towards other schemes or not claimed). This percentage may increase with increasing fractions of crop-based CEF, however the share of crop-based CEF is likely to remain limited during the first phase of CORSIA.

For the purpose scenario-based analyses, a 50% fraction was assumed. It should be noted that this analysis does not include a constraint on the share of CEF certified in 2024 (pending confirmation by SCSEG). Such constraints will be added in future CAEP assessments. In addition, additional tracking and work is needed and expected to further refine future assessments.

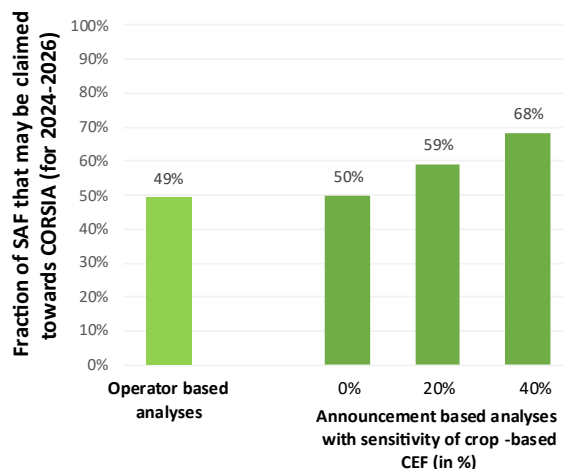


Figure 33 | Summary of Results of Assessment of the Potential Allocation of SAF/CEF to CORSIA vs. other Schemes

Given the uncertainty in how aeroplane operators may choose to address offsetting requirements (i.e., mix of ER from CEF and/or Emissions Units), a scenario-based assessment was conducted. Figure 34 shows the scenarios capturing the range of options for claiming emissions reductions from CEF and/or CEEUs to address offsetting requirements during the First Phase of CORSIA (2024-2026). As depicted on Figure 15, under a mid-traffic scenario, offsetting requirements during the First Phase may reach approximately 135 MtCO₂. As shown on the far-left bar of Figure 15, these offsetting requirements may be addressed with emissions reductions from CEF according to (Moderate CEF scenario) assuming that all the CEF produced would be claimed under CORSIA. The remainder of the offsetting requirements (i.e., final offsetting requirements) would be addressed using CEEUs. As shown on the second bar and considering the results of the assessments summarized above (i.e., Figure 33) a fraction (e.g., 50%) of the emissions reductions from CEF according to (Moderate CEF scenario) could be claimed towards CORSIA with the other half being claimed towards other GHG schemes or not claimed at all. As with the previous scenario, the remainder of the offsetting requirements (i.e., final offsetting requirements) would be addressed using CEEUs. Finally, as a bounding scenario, if none of the CEF is claimed towards CORSIA, the entirety of the offsetting requirements could be addressed using CEEUs only.

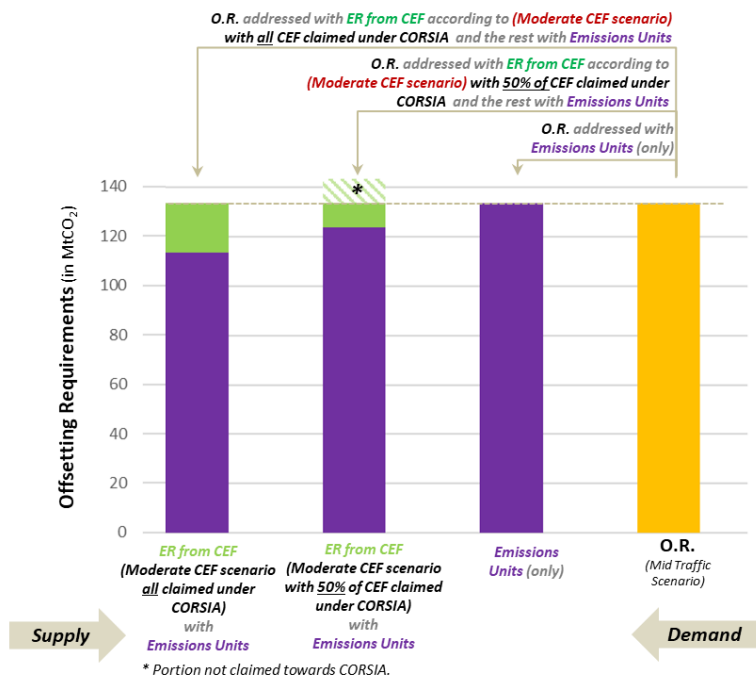
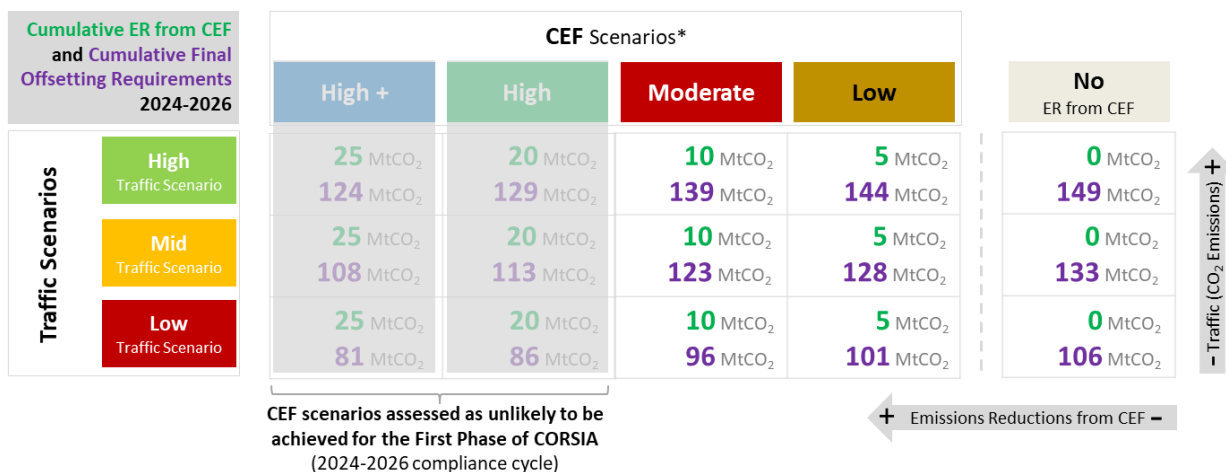


Figure 34 | Scenarios capturing the range of options for claiming emissions reductions from CEF and/or CEEUs to address offsetting requirements during the First Phase of CORSIA (2024-2026)

Cumulative Final Offsetting Requirements (i.e., demand for emissions units) during the First Phase (2024-2026) would vary depending on traffic and emissions reductions from CEF scenarios. Figure 35 shows the summary results of the splits between cumulative emissions reductions from CEF and cumulative final offsetting requirements during the First Phase (2024-2026) across traffic scenarios and CEF scenarios.



* References and assumptions: Emissions Reductions from CEF based on 2025 CAEP Short Term SAF Production projections and partial allocation (50% split) of CEF towards CORSIA.

Figure 35 | Summary of potential claiming of emissions reductions from CEF and/or CEEUs across traffic forecasts and CEF scenarios (illustration for 50% allocation towards CORSIA vs. other schemes)

As noted in the subsection on “SAF/CEF: Production” the CAEP WG5 High and High+ CEF Scenarios were assessed as unlikely to be achieved for the First Phase of CORSIA (2024-2026 compliance cycle). Depending on the traffic forecasts and the amount of SAF produced in the coming years, emissions reductions from CEF may range from 0 to 20 MtCO₂ (10 MtCO₂ if only half is claimed towards CORSIA). A total of 86 to 149 million CEEUs may be required to address final offsetting requirements during the first phase of CORSIA.



Emissions Units: Eligible

The data provided by TAB's most recent supply analysis (September 2023) finds that the two Council-approved programmes to supply units for CORSIA's first phase (2024 – 2026), ACR and ART, have the potential to issue up to around 270 – 320 million CEEUs for mitigation years 2021-2026.

For the first phase (2024-2026 compliance period), based on data collected in TAB's survey of June 2023 indicate that, the "eight conditionally approved programmes would have the potential to issue 1 to 2 billion emissions units for mitigation years 2021-2026".

Emissions Units: Host Country Attestation

On February 28, 2024, the Government of Guyana's announced the authorization of carbon units for use in the CORSIA for the 2024-2026 compliance period. Under the ICAO Council approved Architecture for REDD+ Transactions (ART) programme, 4.64 million CORSIA-eligible units have been issued and authorized by Guyana, now accessible to aircraft operators for meeting offsetting obligations. This decision applies the provisions of Article 6 of the Paris Agreement within the framework of the United Nations Framework Convention on Climate Change (UNFCCC). Guyana's host-country authorization ensures the environmental integrity of these carbon units, emphasizing the prevention of double-claiming between CORSIA and other national environmental purposes.

As of April 2025, the known supply of CORSIA EEUs with attestation reached approximately 18.4 million units.

The CTAG CORSIA Analyses Group intends to continue to track the availability of information and data on CEEUs with host country attestation.

As shown in Figure 36, after taking into account the potentiation contribution from emissions reductions from CEF, there is a gap in the supply of CORSIA EEUs with attestation of ≈ 95 -115 million units (range across traffic forecasts and CEF scenarios: 70-130 MtCO₂). It is expected that the supply of CORSIA EEUs with attestation will increase in the coming year(s). It is critical to ensure that aeroplane operators can address their offsetting requirements under CORSIA during the first phase, where emissions units have to be cancelled no later than February 2028.

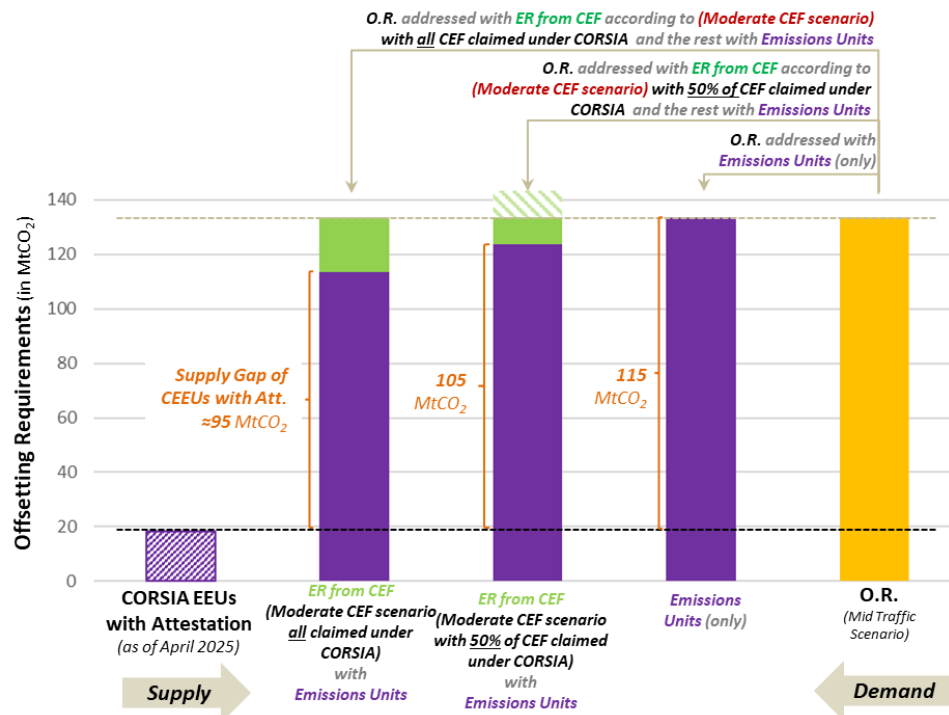


Figure 36 | Gap in CEEUs with attestation for compliance during the First Phase of CORSIA



Emissions Units: Purchased

Information and data on emissions units purchased by aeroplane operators may not be easily available as this information is not necessarily reported in a comprehensive manner.

Emissions Units: Cancelled towards CORSIA

For the purpose of analyses, Figure 37 shows the scenarios capturing the range of options for claiming emissions reductions from CEF and/or CEEUs to address offsetting requirements during the First Phase of CORSIA (2024-2026). These scenarios are then used to estimate the potential costs of compliance during the first phase of CORSIA.

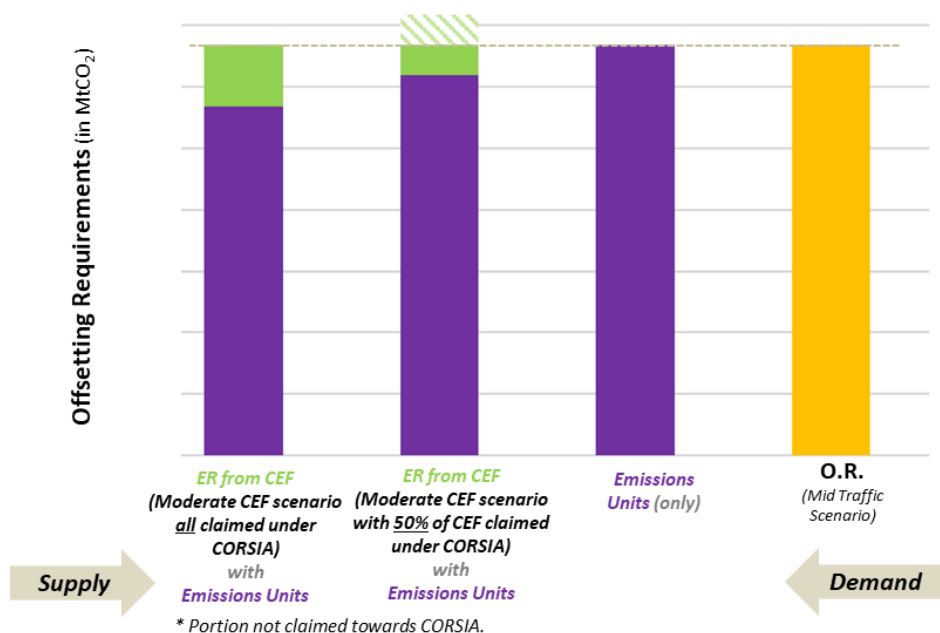


Figure 37 | Scenarios capturing the range of options for claiming emissions reductions from CEF and/or CEEUs to address offsetting requirements during the First Phase of CORSIA (2024-2026)

Potential costs of compliance (focus on the First Phase of CORSIA 2024-2026)

Cost of compliance with CORSIA Standards and Recommended Practices (SARPs), captured in Annex 16 Volume IV, include costs from CEEUs and emissions reductions from CEF as well as administrative costs associated with the CORSIA MRV processes as well as registry related costs. Figure 38 shows the scope of key functions and processes associated with CORSIA and identification of costs, emissions reductions and co-benefits.

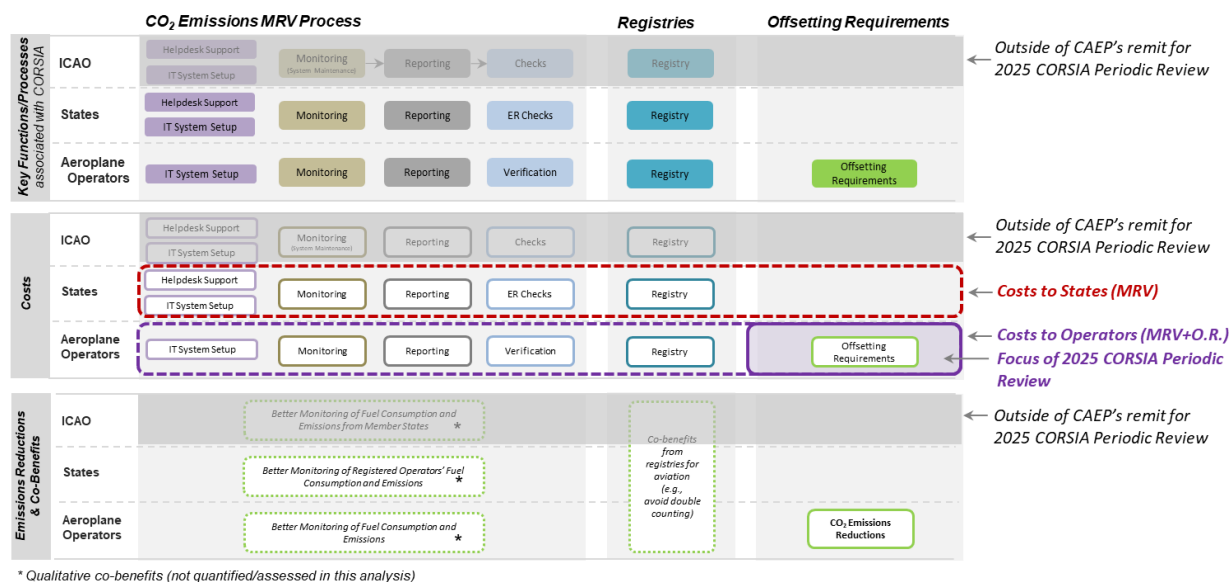


Figure 38 | Scope of key functions and processes associated with CORSIA and identification of costs, emissions reductions and co-benefits

As noted as part of the technical assessments in support of the 2022 CORSIA periodic review, the costs to operators are largely driven by offsetting requirements, and to a lesser extent MRV. The costs to the States are solely from MRV. It was found that total MRV and Registry costs for all Aeroplane Operators and States could be approximately \$430 million from 2018 – 2035 (ranging from \$170 to 700 million). Aeroplane operators bear most of the total MRV costs (63% to 78%). Mid- and large-size aeroplane operators account for approximately 70% of total MRV and Registry costs for operators, with verification and monitoring the dominant costs. Verification is the dominant cost for aeroplane operators eligible to use simplified procedures.

Given the relative limited share of administrative costs to total costs and that the scope of applicability of CORSIA has not fundamentally changed since the 2022 CORSIA periodic review, the updated cost assessments have focused on the costs associated with from CEEUs and emissions reductions from CEF for the 2025 CORSIA periodic review.

Summary of Jet Fuel Unit Prices

Figure 39 shows the prices of SAF in context of prices of conventional jet fuel. From 2021 to 2023, the price of conventional jet fuel ranged from \$0.49 to \$0.87 per liter. As of December 2024, IATA estimated that conventional jet fuel prices averaged \$0.64 per liter for 2024 and could be approximately \$0.67 in 2025. It should be noted that as of April 2025, the price of conventional jet fuel has declined to approximately \$0.53 per liter.

The unit price of SAF was approximately \$2.1 per liter in 2023 and ranged from \$1.8 to \$2.3 in 2024 representing $\approx$ 3 times the price of conventional jet fuel.

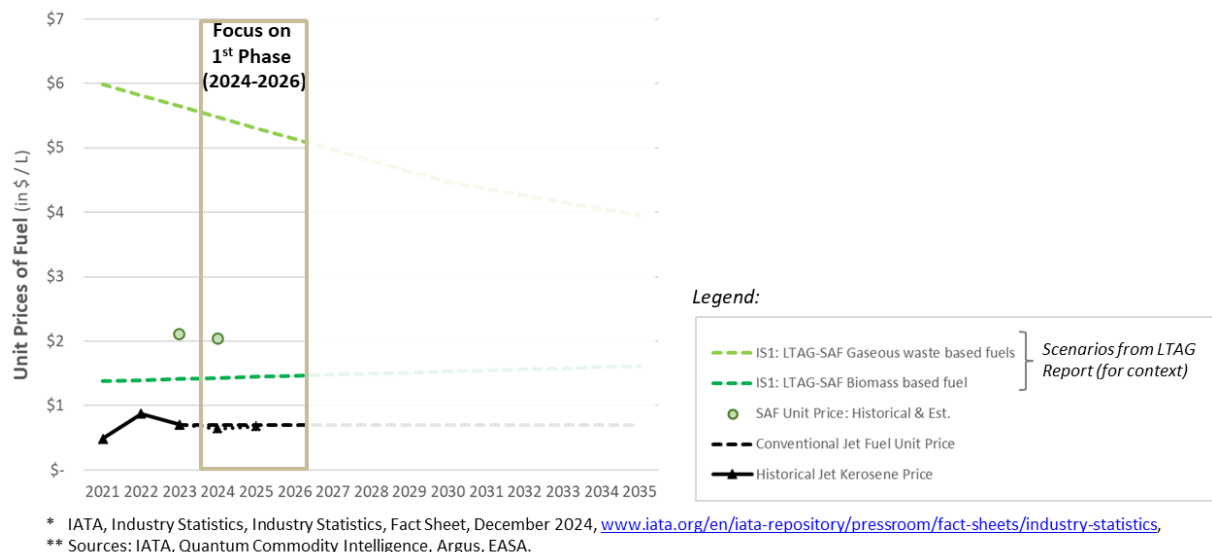


Figure 39 | Summary of estimates of price of SAF in context of the price of conventional jet fuel

Summary of Estimates of Price of Emissions Units

The CAEP WG4 Supply, Demand and Price task group considered the latest available information and data on prices of emissions units.

New data and external analysis on the price of CORSIA eligible emission units (CEEU) has emerged since the scenario-based price analysis was updated in May of 2024. This includes two CORSIA Phase 1 EEU procurement events held by IATA, market reports from Quantum Intelligence and MSCI, and transactions in the voluntary carbon market. Taken together, CTAG-SDP has updated its pricing analysis to reflect the most up-to-date information in this nascent market.

CTAG-SDP estimated a price band of \$10 to \$40 per tCO_{2e} for Phase 1 (2024-2026) CEEUs. The lower end is informed by the voluntary carbon market while the upper bound is the rounded average of external market forecasts. Actual transactions have not exceeded \$23 per tCO_{2e}, and based on typical carbon market pricing behaviours, prices are expected to come down as volume comes online. However, groups like MSCI project potentially higher prices based on supply constraint risks. As such, the \$10-\$40 price range includes both actual and projected pricing data and reflects large uncertainties in the market. As more market information becomes available, such as supply volumes and CEEU transactions, pricing analysis will become more precise. Because data is still very limited, this analysis should not be considered final or determinative for future CEEU price trends.

The first large-scale purchase of Phase 1 CEEUs occurred in November 2024, supported by IATA in partnership with the Government of Guyana, Mercuria, and Xpansiv. CEEUs were sold at a fixed price of \$21.70 per tCO_{2e}. A second procurement event was held in March 2025, where CEEUs sold for \$22.25 per tCO_{2e}. In both events, The Government of Guyana made 1 million units available for sale. IATA intends to host quarterly procurement events for airlines through 2025.

Quantum Intelligence expects lower prices and larger volumes in the near term. In December 2024, Quantum Intelligence forecasted Phase 1 CEEUs will cost between \$15 and \$25 per tCO_{2e}, recognizing that work remains to narrow the figure and that the price band could move in the future. This mirrors trends observed in the futures market, where the Abaxx CP1 futures curve is in steep backwardation— usually a sign of tight supply, high demand, or both, with 2025 delivery starting at above \$24/ tCO_{2e}, while December 2027 falls to \$14.95/ tCO_{2e}.

MSCI forecasts a wider price range. In November 2024, MSCI reported Phase 1 CEEUs will fall anywhere between \$18 and \$51 per tCO_{2e}. The range is largely influenced by modelled uncertainty around supply volumes, which depends on countries' ability to authorize emission units for use towards CORSIA. If countries can provide attestation



and the supply of CEEUs become available to meet demand, prices will be lower. If supply continues to be constrained, prices will be higher. Other market uncertainties, such as fluctuations in demand, will also impact the price of Phase 1 CEEUs.

The voluntary carbon market (VCM) may function as an implicit price floor, in that the transaction cost of selling to a voluntary private buyer is lower than selling to an airline for use towards CORSIA or to a sovereign state for use towards its Nationally Determined Contribution (NDC). If a voluntary buyer and an airline are offering the same terms (price, volume, and structure), but the airline requires attestation of the outcomes, the seller is likely to prefer the voluntary buyer. Thus, an airline would need to exceed the highest price a voluntary buyer is willing to pay. Moreover, voluntary buyer coalitions such as the LEAF Coalition (Lowering Emissions by Accelerating Forest Finance) have committed to a price floor of \$10 per tCO_{2e}. With that benchmark, it is unlikely emission units with attestation would sell at a lower cost.

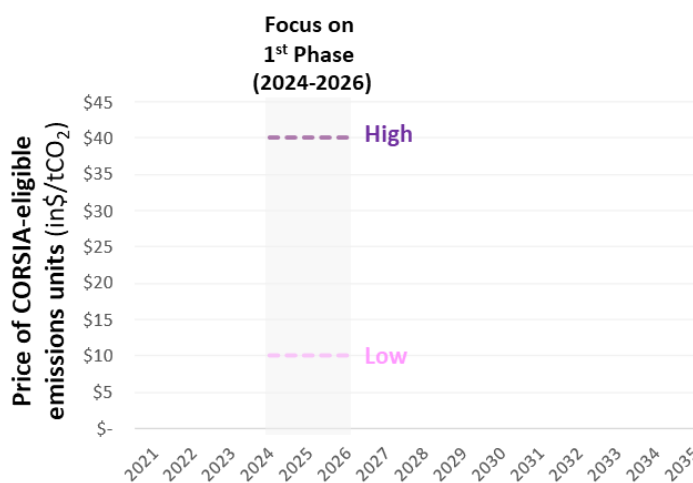


Figure 40 | Summary of estimates of price of CEEUs for the first phase of CORSIA

Several caveats apply to the range of prices of emissions units used for the purpose of the 2025 CORSIA periodic review. Although new data is beginning to emerge, accurate market information is still very limited. Previously, CTAG-SDP looked to the voluntary carbon market to forecast CEEU price scenarios. While the VCM remains an important indicator and helps to inform the price floor of CEEUs, voluntarily traded units do not reflect the price premium of attestation required for use towards CORSIA. At the same time, transaction data on CORSIA-eligible units with attestation remains extremely low. Operators have until January 31, 2028, to fulfil their CORSIA Phase 1 offsetting obligations for the period 2024-2026.

The CEEUs purchased by airlines in late 2024 and early 2025 were Jurisdictional REDD+ ART TREES credits as part of a fixed-price auction. The transaction price of around \$22 reflects both the novelty of the transaction and today's supply constraint, where the first auctions took place in a situation of monopoly by the seller and the sales were of a novel project type. In addition to being the first (and only) sales of CORSIA Phase 1 emission units, they were the first sales of jurisdictional ART TREES emission units with attestation. Other factors that put upward pressure on the transaction price of these units include the transaction structure, the low volume of units traded, the low number of seller(s), and the type of seller.

Generally, the price of new project types trends downward over time as they become mainstream and other project types enter the market to compete. There often is a misconception that the cost of carbon credit markets goes up over time because the quality goes up. The only context within which the price of carbon credits reliably increases over time is if they are linked to an emissions trading scheme where supply is being intentionally ratcheted down on a regular basis, which is not the case with CORSIA.

While analysts expect prices for authorized units to come down as the rate and type of transactions increase and the private sector enters the market, some developments could moderate this downward trend over time. These include the introduction of national regulatory carbon prices (emissions allowances, levies) where regulators allow



emitters to surrender CORSIA carbon credits in lieu of paying the tax or surrendering permits. In such instances, emissions unit prices could be influenced by the cost of compliance alternatives, i.e., may fall just below a regulatory carbon price, which is typically higher than unregulated or over-the-counter emissions unit prices. Currently, only a few such systems are operational or planned, such as Singapore’s national carbon tax—and their price impact is foreseen to be limited, both geographically and in terms of total demand volume.

Unknown supply volume is a major source of market uncertainty. Operators must purchase emission units that meet ICAO criteria, including corresponding adjustments that prevent double counting of emissions reductions towards a country’s NDC. This requires countries to provide a Letter of Attestation (LoA) that authorizes the use of emission units towards CORSIA compliance. Host countries—where emission units are generated—are often developing countries that lack the infrastructure to issue LoAs. If this continues to be the case, the supply of CEEUs with attestation will remain constrained through the end of Phase 1. Capacity-building initiatives exist to address this, including Global Green Growth Institute, Article 6 Implementation Partnership, UN-REDD Programme, and more. Support for host countries to authorize the use of EEUs towards CORSIA will ease supply constraints and help to mitigate the cost associated therein.

There is also uncertainty around the demand for CEEUs. As captured in the technical assessments of offsetting requirements (i.e., demand for emissions reductions from CEF and/or CEEUs) conducted by the CAEP WG4 CTAG CORSIA Analyses group, a range from Low, Mid to High traffic forecasts was considered. These traffic forecasts were based on the CAEP/13 ICAO/CAEP traffic forecasts finalized in 2022/2023. They do not necessary reflect the potential impacts of recent/ongoing developments in global trades and the economy. Also, additional sources of demand for carbon offsets are expected in the years to come, including from Parties to the Paris Agreement that may use carbon markets to help achieve their NDCs, as well as from private companies.

Summary of Unit Prices

As shown on Figure 41, the cost abatement from the emissions reductions from CEF, defined as the CEF Premium divided by CO₂ emissions abated is assumed to range from ≈ \$ 600 to \$ 800 per tCO₂ during the first phase of CORSIA. The average unit prices of emissions units may range from ≈ \$10 to \$40 per tCO₂ during the first phase of CORSIA (2024-2026).

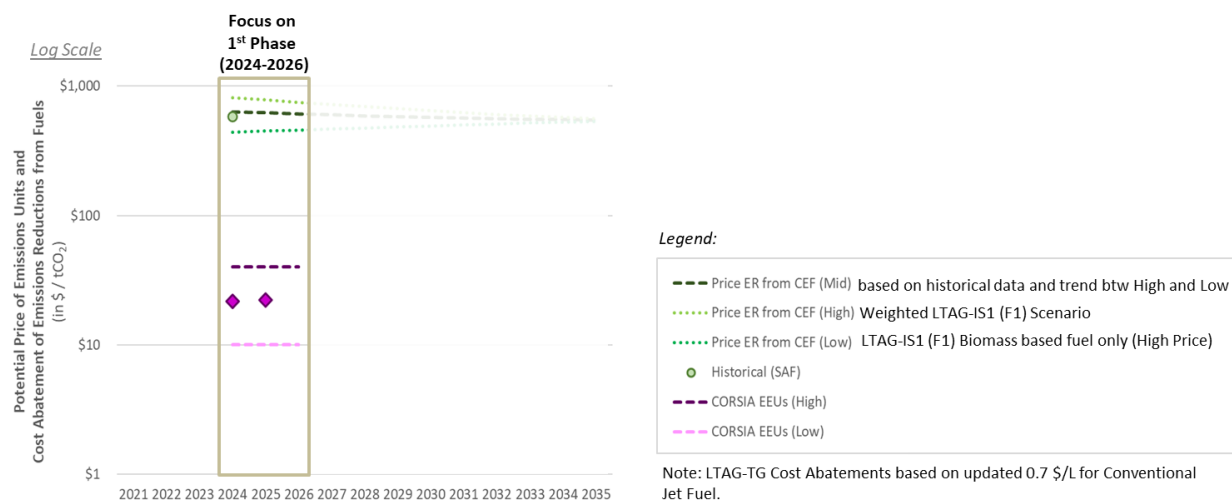


Figure 41 | Summary of Unit Prices of CEFs and Emissions Units

Costs of Addressing Offsetting Requirements during the First Phase of CORSIA

Figure 27 shows the scenarios for addressing offsetting requirements during the first phase of CORSIA with cost implications. Costs associated with addressing offsetting requirements from 2024 to 2026 could range from:



- ≈ \$1 to 5 billion using Emissions Units only,
- ≈ \$6 to 13 billion using a mix of Emissions Units and ER from CEF assuming that 50% of the CEF according to the latest CAEP Moderate scenario are claimed towards CORSIA, or
- ≈ \$10 to 20 billion using a mix of Emissions Units and ER from CEF assuming that all the CEF according to the latest CAEP Moderate scenario are claimed towards CORSIA. These costs are lower than those anticipated in 2016 before CORSIA was agreed.

In 2016, the CAEP estimated the costs from a global market-based mechanism (MBM) to range from \$2.2 to \$6.2 billion (in 2025 alone). References: CAEP analysis presented at EAG/15 (January 2016); and IATA, “Comments on the Cost Impact of a Global Carbon Offsetting Mechanism”³.

It should be noted that (1) the total cost abatement from CEF may not be fully attributable to CORSIA as airlines/operators have purchased and used SAF towards other decarbonization efforts (in the absence of CORSIA compliance requirements); (2) where States will implement SAF blending mandates (e.g., ReFuelEU Aviation regulation for EU Member States) the related abatement costs are more logically attributed to the blending mandate regulation instead of CORSIA; and (3) the actual cost of emissions reductions from CEF is expected to be lower than estimated in this analysis due to States’ support (e.g., tax credits, subsidies) that reduce the effective (net) abatement cost.

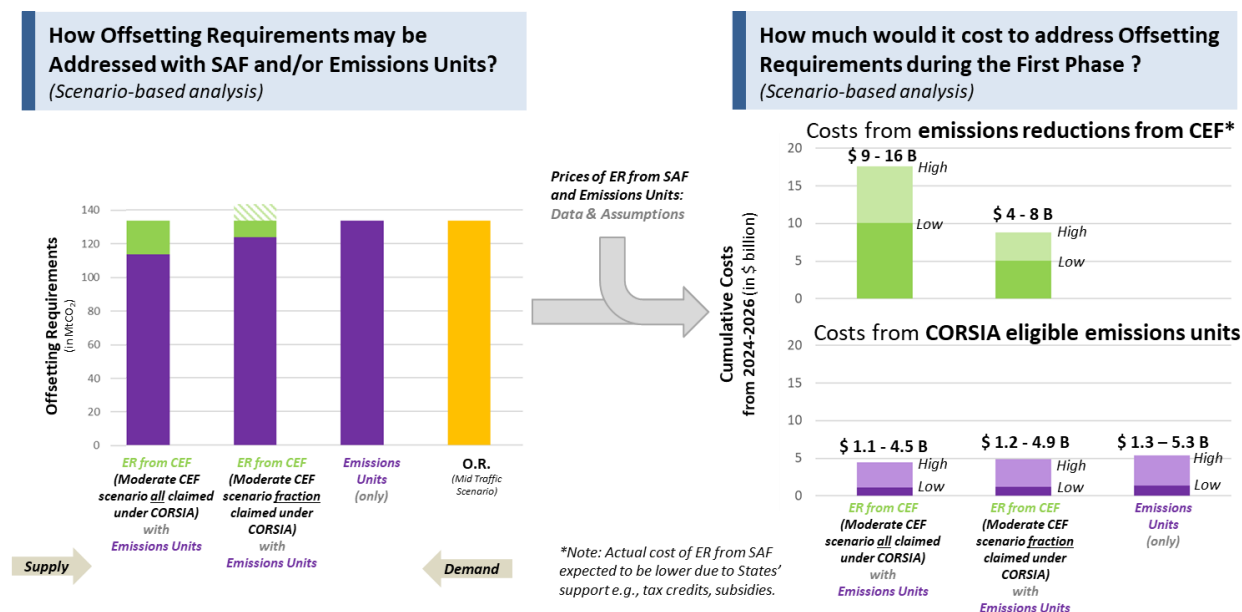


Figure 42 | Addressing Offsetting Requirements during the First Phase of CORSIA with Cost Implications

Figure 43 presents the total costs associated with addressing offsetting requirements in context of the estimated revenue and profits of the international aviation industry. IATA estimated global aviation industry revenues of \$ 965 billion with projected revenues for 2025 at \$1007 billion⁴. Extrapolating for 2026 and assuming a 60% ratio for international aviation, cumulative revenues from international aviation were estimated to be approx. \$ 1800 billion.

The total costs associated with addressing offsetting requirements could represent ≈ 0.07% to 1.1% of international aviation revenue from 2024 to 2026 or ≈ 2% to 32% of net profits from 2024 to 2026.

³ ICAO, Assembly 39th session, A39-WP/153, “Comments on the Cost Impact of a Global Carbon Offsetting Mechanism”, available at: https://www.icao.int/Meetings/a39/Documents/WP/wp_153_rev1_en.pdf

⁴ References: IATA, Industry Statistics, December 2024, Fact Sheet, <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/industry-statistics/> and Global Outlook for Air Transport <https://www.iata.org/en/iata-repository/publications/economic-reports/global-outlook-for-air-transport-december-2024/>.

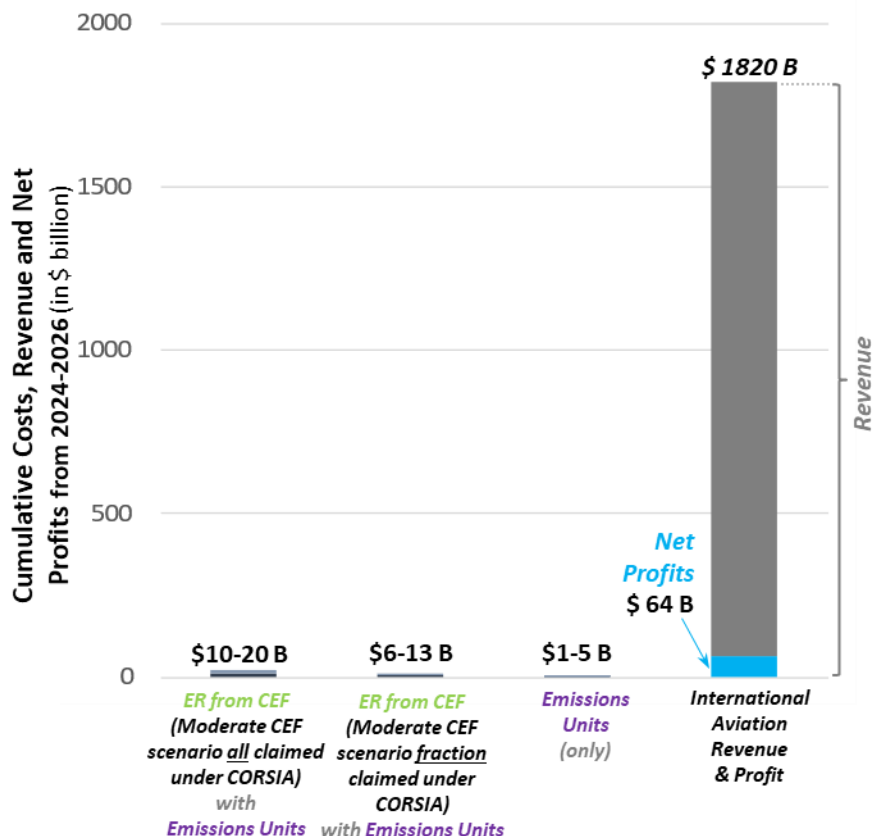


Figure 43 | Costs of Addressing Offsetting Requirements during the First Phase in Context of Industry's Revenue

Potential Offsetting Requirements at Operator Level

Offsetting requirements (and differences across operators) evolve over time and are driven by (1) phased implementation of CORSIA (i.e., States' participation), (2) Sector Growth Factor (e.g., CORSIA baseline) and (3) transition to individual approach from 2033.

To evaluate the impact of CORSIA on aeroplane operators, a scenario-based analysis was undertaken on different types of operators including (1) those that are in scope during the reference year(s) 2019-2020; (2) new entrants and (3) new operators (subsidiaries) who were operators not in scope during the reference years and do not meet the definition of new entrants. Operators that are in scope during the reference years and subsequently remained in scope throughout the 2021 to 2035 period contribute to 89% of total emissions, while operators that dropped out of scope contributed to 2.5% of total emissions. Likewise, new entrants and new operators (subsidiaries) contributed 5.2% and 1.3% respectively, while those that dropped out of scope represented 1.4% and 0.4% respectively.

The offsetting requirements of aeroplane operators with various characteristics were modelled in the context of their individual total CO₂ emissions, their individual growth rate and the % CO₂ emissions to offset as a proportion of their total CO₂ emissions from international aviation (aka Chapter 2) during 2021 to 2035.

Total offsetting requirements and differences across aeroplane operators evolve over time and are driven by (1) the phased implementation of CORSIA (i.e., changes in States participation throughout), (2) the SGF (e.g., emissions forecasts, CORSIA baseline from 2024) and (3) the transition to the individual approach from 2033.

Figure 44 shows the effects of decisions contained in Assembly Resolution A41-22 on the evolution of the offsetting requirements at the operator level for each CORSIA compliance phase assuming a mid-COVID scenario. Each chart depicts the percentage of CO₂ emissions to offset as a proportion of their total CO₂ emissions from international



aviation (aka Chapter 2) vs. average individual year-over-year growth rate from 2021 to 2035. Each bubble represents an individual operator, and the size of the bubble is proportional to the operator's CO₂ emissions from international aviation (aka Chapter 2) from 2021 to 2035.

During the pilot phase (2021-2023), all operators offset 0% as the SGF is expected to be 0. This phase could represent 14% of CO₂ emissions and 0% of offsetting requirements from 2021-2035.

During the first phase (2024 to 2026), where the SGF becomes positive, operators offset 0 to 10% of their CO₂ emissions. The range reflects the 100% sectoral approach and State participation, with higher percentage offset by operators with more flights on participating routes. New entrants benefit from a three-year grace period. This phase could represent 19% of CO₂ emissions and 8% of offsetting requirements from 2021-2035.

During the second phase (2027-2029), overall offsetting increases due to higher SGF and more participating states. Operators with no flights between participating States still offset zero. This compliance cycle could represent 21% of CO₂ emissions and 23% of offsetting requirements from 2021-2035.

During the second compliance cycle of the second phase (2030-2032), overall offsetting increases due to higher SGF. This compliance cycle could represent 22% of CO₂ emissions and 30% of offsetting requirements from 2021-2035. During the last compliance cycle of the second phase (2033-2035), the influence of individual approach on operators starts to be seen with a pivot point at an individual growth rate of 2%. Operators with high growth rates start to have a higher relative increase in offsetting requirements. This compliance cycle could represent 24% of CO₂ emissions and 39% of offsetting requirements from 2021-2035.

Figure 45 shows the effects of decisions contained in Assembly Resolution A41-22 on the evolution of the offsetting requirements at the operator level for each CORSIA compliance phase assuming a mid-COVID scenario. Unlike Figure 44 that normalized offsetting requirements as a proportion of total CO₂ emissions from international aviation (aka Chapter 2 CO₂ emissions) this Figure 45 presents offsetting requirements as a proportion of CO₂ emissions from international aviation subject to offsetting requirements (aka Chapter 3 CO₂ emissions). Chapter 3 emissions represent the subset of total CO₂ emissions from international aviation on State pairs between States that participate in CORSIA in the given year. As shown in Figure 45, the vertical spread of percent of CO₂ emissions to offset is reduced (compared to Figure 44) as normalizing with Chapter 3 emissions removes the effects of participation in CORSIA.

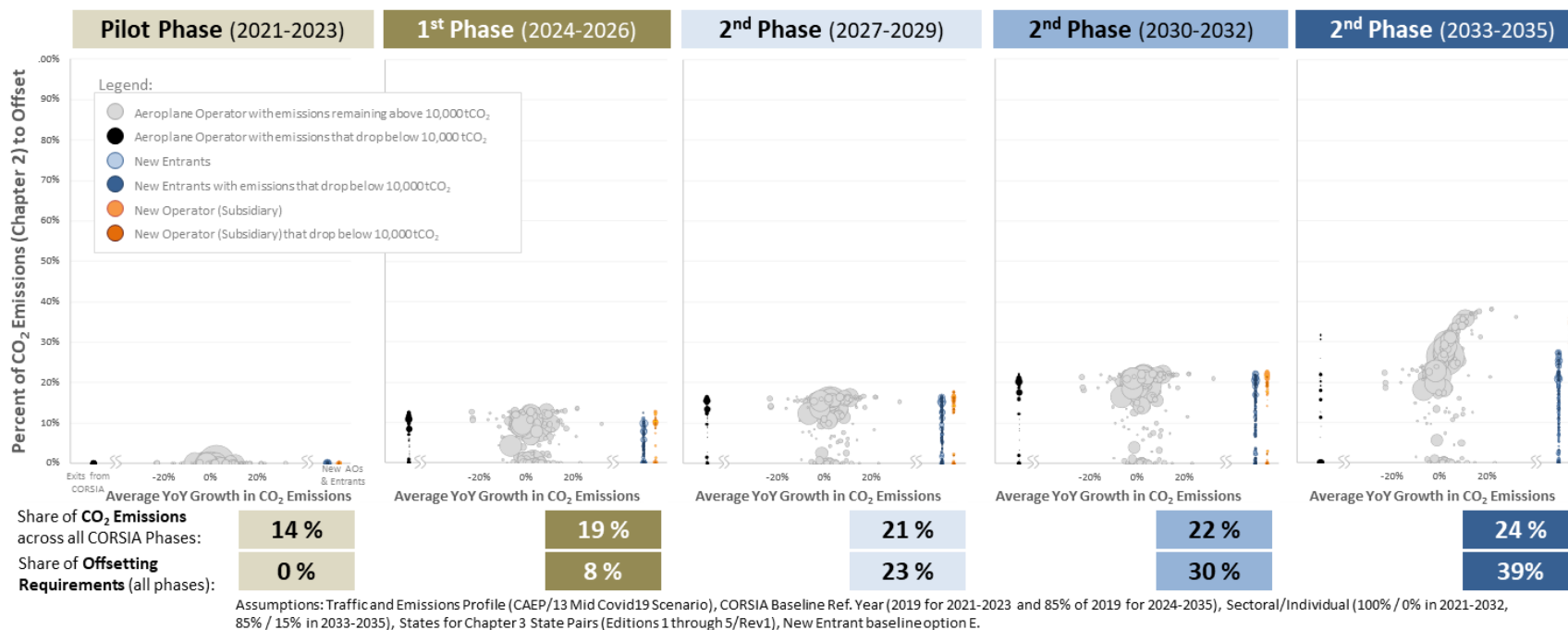


Figure 44 | Assessment of CORSIA's impact on Aeroplane Operators: Offsetting requirements in context of CO₂ emissions from international aviation

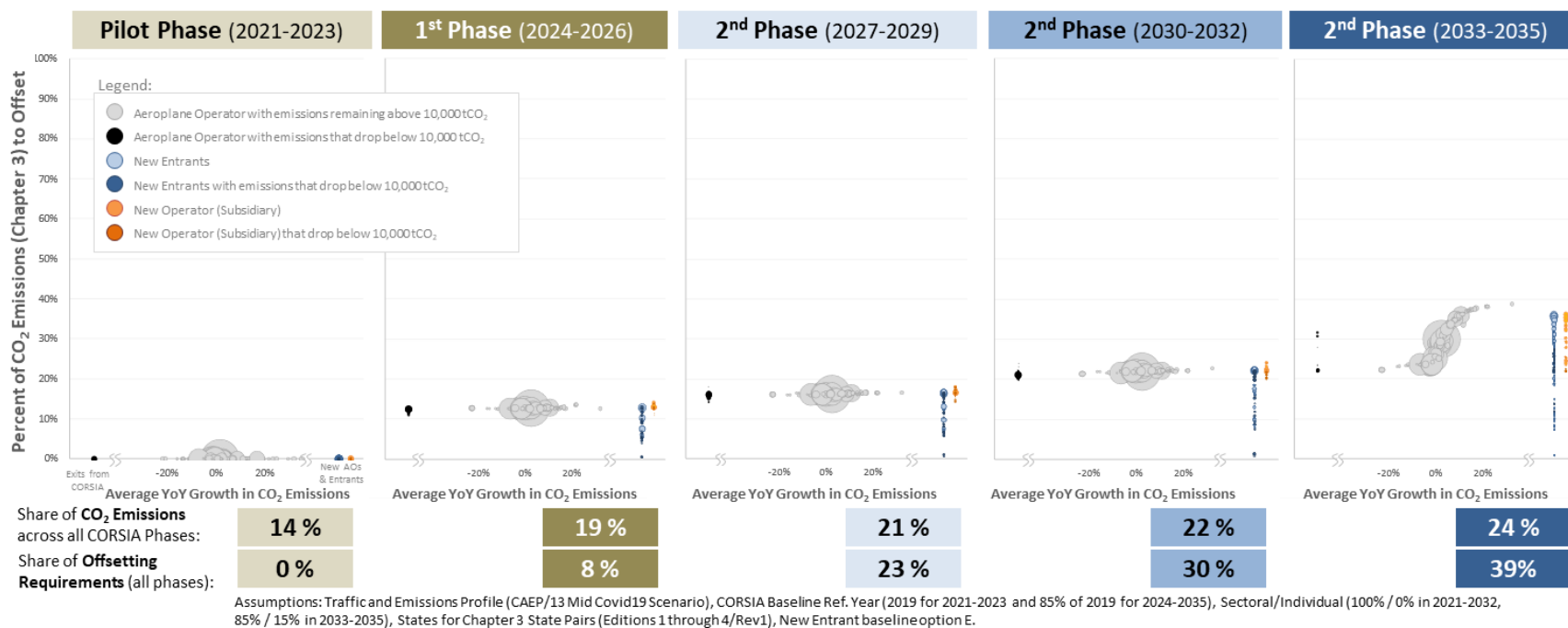


Figure 45 | Assessment of CORSIA's impact on Aeroplane Operators: Offsetting requirements in context of CO₂ emissions from international aviation subject to offsetting requirements



Potential Evolution of CO₂ Emissions from International Aviation in Context of Carbon Neutral Growth goal from 2020 (CNG2020)

As shown in Figure 46, net CO₂ emissions may be ≈550 to 560 MtCO₂ in 2035 (≈ -7.4% to -10.2% below the 2019 level). Given scenarios of expected CORSIA implementation, international aviation sector would meet its mid-term goal of “keeping net carbon emissions from 2020 at the same level” (assuming 2019 CO₂ emissions level as a proxy for 2020 emissions expected prior to the COVID-19 global pandemic impact on international aviation).

It should be noted that net CO₂ emissions are not expected to stabilize at 85% of 2019 emissions level due to partial participation in CORSIA (i.e., announcements of intention to voluntarily participate in CORSIA as reported in the ICAO document titled: “States for Chapter 3 State Pairs”).

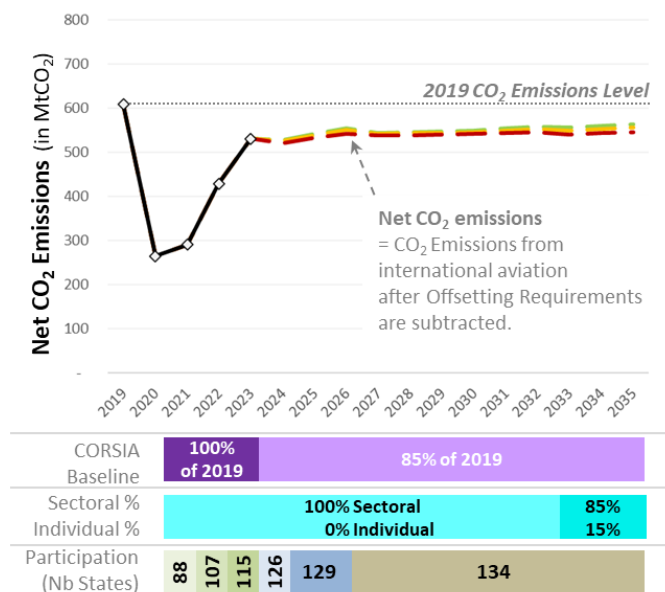


Figure 46 | Projections of Net CO₂ Emissions through 2035



OBSERVATIONS & CONCLUSIONS

Review of CORSIA's Pilot Phase

The CAEP continued its analyses in support of the 2025 CORSIA Periodic Review. Based on interim review and assessment of CORSIA's Pilot Phase (2021-2023), the CAEP:

- observed that due to the decline in CO₂ emissions during the COVID-19 global pandemic coupled with a CORSIA baseline based on 2019 emissions, there was no offsetting required during the Pilot Phase.
- noted that despite the lack of offsetting requirements, markets started to develop and prepare to meet potential and future demand for emissions reductions from CEF and CORSIA emissions units.
- identified the need to develop possible approaches to access data on price information for CORSIA eligible units and CORSIA Eligible Fuels.

Updated Forward Looking CORSIA Analyses

Based on its updated forward-looking assessments through 2035 with focus on the First Phase (2024-2026), the CAEP noted that:

- Given amended CO₂ emissions forecasts and 85% of 2019 CORSIA baseline, offsetting requirements are expected to start in 2024 under all traffic scenarios.
- Cumulative offsetting requirements could range from 950 to 1500 MtCO₂ from 2024 to 2035 and 105 to 150 MtCO₂ during the First Phase (2024-2026).
- Emissions reduction from CEF may address up to ≈15 % of offsetting requirements during the First Phase of CORSIA.
- Costs associated with addressing offsetting requirements from 2024-2026 could range from:
 - ≈ \$1 to 5 billion using Emissions Units only,
 - ≈ \$6 to 13 billion using a mix of Emissions Units and ER from CEF assuming that 50% of the CEF according to the latest CAEP Moderate scenario are claimed towards CORSIA, or
 - ≈ \$10 to 20 billion using a mix of Emissions Units and ER from CEF assuming that all the CEF according to the latest CAEP Moderate scenario are claimed towards CORSIA.
- Net CO₂ emissions may be 550 to 560 MtCO₂ in 2035 (-7.4% to -10.2% below the 2019 level) which would result in the international aviation sector meeting its mid-term goal of "keeping net carbon emissions from 2020 at the same level" (assuming 2019 level as a proxy for pre-COVID 2020 expected emissions).



GLOSSARY OF TERMS

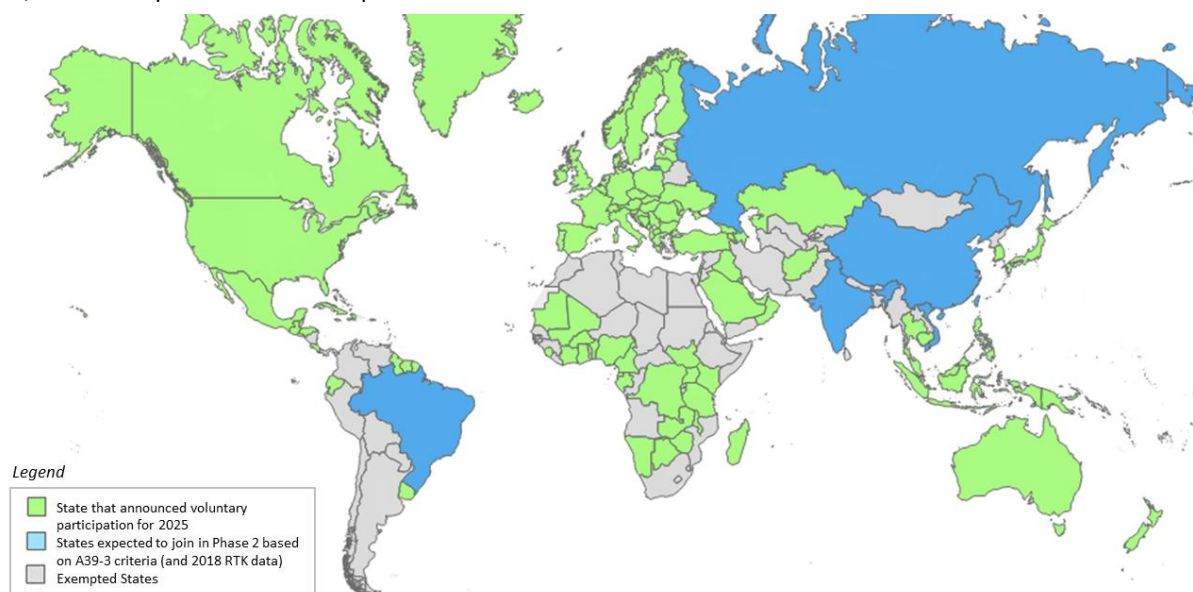
ACM	AERO-MS CORSIA Module
CAEP	Committee on Aviation Environmental Protection
CAGR	Compound annual growth rate
CCR	CORSIA Central Registry
C-DEC	Council (Summary of) Decisions
CEEU	CORSIA Eligible Emissions Unit
CEF	CORSIA Eligible Fuels
CNG	Carbon Neutral Growth
CO ₂	Carbon dioxide
COMPASS	CORSIA Model for Parametric Analyses and Stochastics Assessments
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
COD	Common Operations Database
CTAG	CORSIA Tools and Analysis Group
C-WP	Council Working Paper
EASA	European Union Aviation Safety Agency
ESG	Environmental, Social, and Governance
FESG	Forecast and Economic Analysis Support Group
GHG	Greenhouse Gas
IATA	International Air Transport Association
ISCC	International Sustainability & Carbon Certification
LCAF	Lower Carbon Aviation Fuel
LTAG	Long Term Aspirational Goal
MDG	Modelling and Database Group
MRV	Monitoring, Reporting and Verification
OR	Offsetting Requirement
RPK	Revenue Passenger Kilometre
RSB	Roundtable on Sustainable Biomaterials
RTK	Revenue Tonne Kilometre
SAF	Sustainable Aviation Fuel
SARP	Standards and Recommended Practice
SCS	Sustainability Certification Scheme
SCSEG	Sustainability Certification Scheme Evaluation Group
SG	Steering Group
SGF	Sector Growth Factor
V&V	Verification and Validation



APPENDIX A: ADDITIONAL INFORMATION ON CORSIA MODELLING

Assumptions on participation in CORSIA

As illustrated on Figure 47, this document includes the list of 129 States that participate in CORSIA from 1 January 2025. The CORSIA Analyses also reflect the States expected to join CORSIA during the second phase based on Annex 16, Volume IV provisions and the published 2018 RTK statistics.



* Edition 5/Rev1 based on list of States that announced intention to voluntarily participate for 2024 and announcements. ICAO CORSIA Document “CORSIA States for Chapter 3 State Pairs”, Details available at: www.icao.int/environmental-protection/CORSIA/Pages/state-pairs.aspx, with 2018 RTK data from ICAO.

Figure 47 | CORSIA States for Chapter 3 State Pairs (Edition 5, rev1)



APPENDIX B: SUPPORTING INFORMATION AND DATA

Summary of Results from COMPASS

Traffic Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
High	0.0%	0.0%	0.0%	12.3%	14.2%	15.3%	16.3%	18.6%	20.6%	22.5%	24.6%	26.7%	29.8%	31.7%	33.9%
Mid	0.0%	0.0%	0.0%	11.1%	13.0%	13.9%	14.6%	16.7%	18.6%	20.3%	22.2%	24.1%	27.1%	28.9%	30.9%
Low	0.0%	0.0%	0.0%	9.1%	10.9%	11.1%	10.9%	12.4%	13.8%	15.1%	16.6%	18.1%	21.1%	22.6%	24.3%

Figure 48 | Summary of Sector Growth Factors (SGF)

Note: When the Sector Growth Factor (SGF) was negative for a given year, it is set at zero percent per Annex 16 Volume IV standards.



	Unit	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total (2021-2035)
High CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	571.2	592.6	610.6	630.3	647.7	663.7	679.6	699.4	720.0	741.6	763.5	788.9	9,358.8
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	348.6	356.6	361.5	532.8	548.1	561.9	575.9	591.8	608.5	625.7	643.5	664.5	7,189.2
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.0%	60.2%	59.2%	84.5%	84.6%	84.7%	84.7%	84.6%	84.5%	84.4%	84.3%	84.2%	76.8%
Offsetting requirements	Mt			0.0	0.0	0.0	42.9	50.5	55.4	86.7	102.0	115.8	129.8	145.7	162.4	186.2	204.2	225.2	1,507.1
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	7.5%	8.5%	9.1%	13.8%	15.8%	17.5%	19.1%	20.8%	22.6%	25.1%	26.7%	28.5%	16.1%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	12.3%	14.2%	15.3%	16.3%	18.6%	20.6%	22.5%	24.6%	26.7%	29.8%	31.7%	33.9%	21.0%
Mid CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	563.6	584.5	600.1	617.2	632.4	646.3	660.2	676.9	694.3	712.5	731.1	752.6	9,121.3
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	344.0	351.9	355.5	522.2	535.6	547.8	560.0	573.5	587.5	601.8	616.5	633.8	6,999.8
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.0%	60.2%	59.2%	84.6%	84.7%	84.8%	84.8%	84.7%	84.6%	84.5%	84.3%	84.2%	76.7%
Offsetting requirements	Mt			0.0	0.0	0.0	38.3	45.8	49.4	76.1	89.5	101.7	113.9	127.5	141.4	163.1	178.1	195.6	1,320.4
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	6.8%	7.8%	8.2%	12.3%	14.2%	15.7%	17.3%	18.8%	20.4%	22.9%	24.4%	26.0%	14.5%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	11.1%	13.0%	13.9%	14.6%	16.7%	18.6%	20.3%	22.2%	24.1%	27.1%	28.9%	30.9%	18.9%
Low CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	550.4	570.4	580.8	592.2	602.2	611.4	620.7	632.4	644.7	657.4	670.5	685.5	8,668.5
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	336.1	343.6	344.3	500.6	509.5	517.6	525.7	534.8	544.4	554.4	564.5	576.3	6,621.4
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.1%	60.2%	59.3%	84.5%	84.6%	84.7%	84.7%	84.6%	84.4%	84.3%	84.2%	84.1%	76.4%
Offsetting requirements	Mt			0.0	0.0	0.0	30.4	37.5	38.2	54.5	63.4	71.5	79.6	88.7	98.3	117.2	127.5	139.8	946.7
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	5.5%	6.6%	6.6%	9.2%	10.5%	11.7%	12.8%	14.0%	15.3%	17.8%	19.0%	20.4%	10.9%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	9.1%	10.9%	11.1%	10.9%	12.4%	13.8%	15.1%	16.6%	18.1%	21.1%	22.6%	24.3%	14.3%

Figure 49 | Summary of results for key CORSIA metrics (average across 100 model runs of stochastic model)



Summary of Results from AERO-MS ACM

	Unit	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total (2021-2035)
High CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	570.4	592.0	609.8	628.1	647.0	662.7	678.9	699.2	720.2	742.0	764.6	788.0	9,352.7
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	348.4	354.5	359.1	537.2	553.1	565.9	579.1	595.8	613.1	630.9	649.3	668.4	7,224.6
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.1%	59.9%	58.9%	85.5%	85.5%	85.4%	85.3%	85.2%	85.1%	85.0%	84.9%	84.8%	77.2%
Offsetting requirements	Mt			0.0	0.0	0.0	42.9	48.6	53.3	91.2	107.1	120.0	133.2	149.9	167.1	185.2	203.6	222.6	1,524.6
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	7.5%	8.2%	8.7%	14.5%	16.6%	18.1%	19.6%	21.4%	23.2%	25.0%	26.6%	28.3%	16.3%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	12.3%	13.7%	14.8%	17.0%	19.4%	21.2%	23.0%	25.2%	27.3%	29.4%	31.4%	33.3%	21.1%
Mid CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	563.5	583.8	599.2	615.0	631.3	645.0	659.1	676.4	694.2	712.6	731.7	751.3	9,112.9
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	345.3	350.2	353.6	526.4	540.2	551.4	562.8	577.0	591.6	606.6	622.1	638.1	7,034.9
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.3%	60.0%	59.0%	85.6%	85.6%	85.5%	85.4%	85.3%	85.2%	85.1%	85.0%	84.9%	77.2%
Offsetting requirements	Mt			0.0	0.0	0.0	39.8	44.3	47.7	80.4	94.2	105.4	116.9	131.0	145.6	161.0	176.5	192.4	1,335.2
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	7.1%	7.6%	8.0%	13.1%	14.9%	16.3%	17.7%	19.4%	21.0%	22.6%	24.1%	25.6%	14.7%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	11.5%	12.6%	13.5%	15.3%	17.4%	19.1%	20.8%	22.7%	24.6%	26.5%	28.4%	30.2%	19.0%
Low CAEP/13 scenario																			
CO ₂ emissions international aviation (chapter 2)	Mt	608.1	265.2	290.4	429.0	530.4	550.1	570.3	580.4	590.6	601.0	610.2	619.6	631.6	644.0	656.7	669.8	683.2	8,657.2
CO ₂ emissions subject to offsetting requirement (chapter 3)	Mt			167.1	272.4	330.2	340.5	343.6	344.9	505.8	514.6	521.9	529.4	539.2	549.2	559.4	569.9	580.7	6,668.8
Share of CO ₂ emissions subject to offsetting requirements	%			57.6%	63.5%	62.3%	61.9%	60.2%	59.4%	85.6%	85.6%	85.5%	85.5%	85.4%	85.3%	85.2%	85.1%	85.0%	77.0%
Offsetting requirements	Mt			0.0	0.0	0.0	35.0	37.7	39.0	59.8	68.6	76.0	83.5	93.2	103.2	113.9	124.4	135.1	969.5
Offsetting requirements / chapter 2 emissions	%			0.0%	0.0%	0.0%	6.4%	6.6%	6.7%	10.1%	11.4%	12.5%	13.5%	14.8%	16.0%	17.3%	18.6%	19.8%	11.2%
Offsetting requirements / chapter 3 emissions	%			0.0%	0.0%	0.0%	10.3%	11.0%	11.3%	11.8%	13.3%	14.6%	15.8%	17.3%	18.8%	20.4%	21.8%	23.3%	14.5%

Figure 50 | Summary of results for key CORSIA metrics



Summary of Results across CORSIA Models

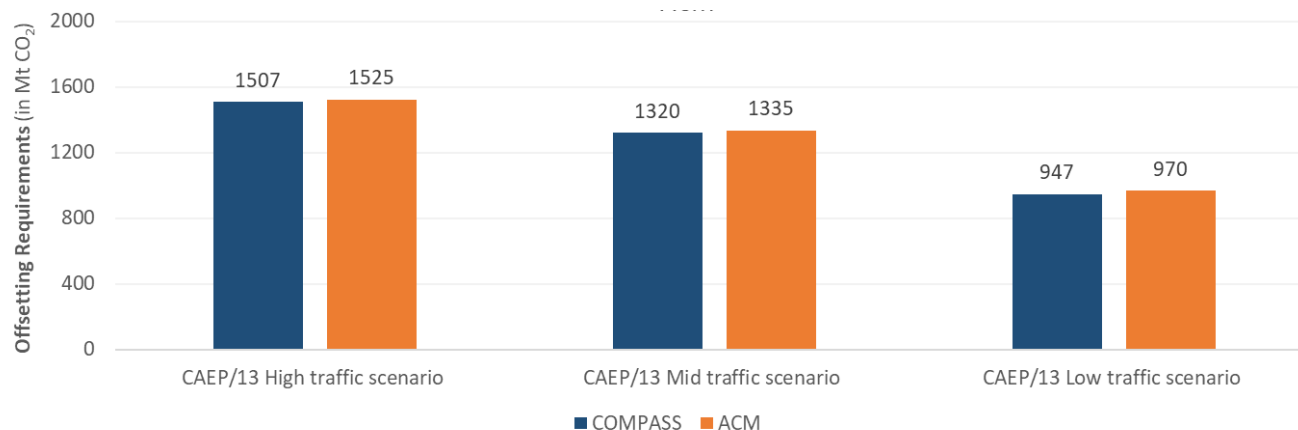


Figure 51 | Offsetting requirements for all phases (2021-2035) for CAEP/13 scenarios

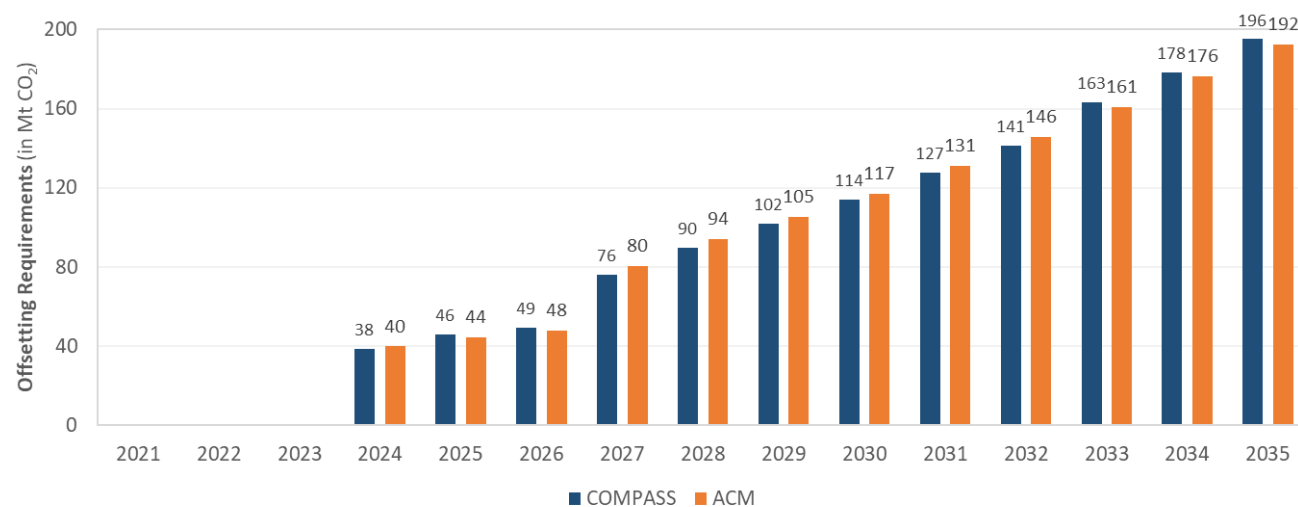


Figure 52 | Offsetting requirements by year for CAEP/13 Mid traffic scenario

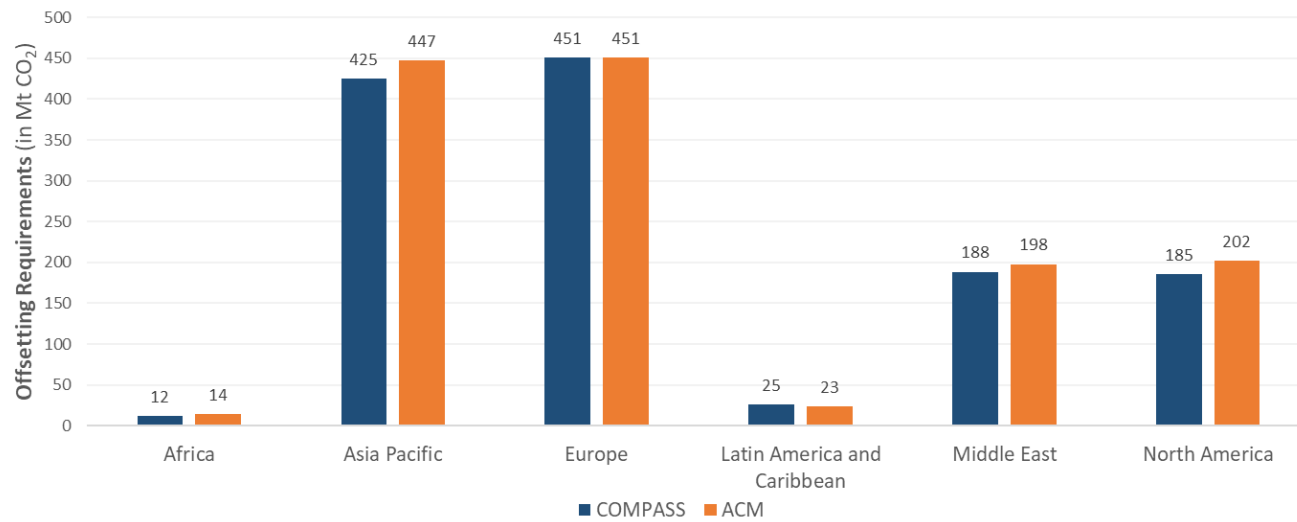


Figure 53 | Offsetting requirements all phases (2021-2035) by ICAO region for CAEP/13 Mid traffic scenario

ДОБАВЛЕНИЕ С

**Резолюция
A42-xxA41-22:**

Сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды. Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)

Ассамблея,

принимая во внимание, что резолюция A38-18 Ассамблеи постановила разработать глобальную систему рыночных мер (PM) для международной авиации и представить ее 39-й сессии Ассамблеи для принятия решения,

напоминая, что резолюция A38-18 Ассамблеи поручила Совету определить при поддержке государств-членов основные вопросы и проблемы, в том числе стоящие перед государствами-членами, и подготовить рекомендацию о создании глобальной системы PM, которая бы решала их надлежащим образом, а также главных структурных элементов системы, включая средство учета особых условий и соответствующих возможностей и механизмы внедрения этой системы с 2020 года в качестве составного элемента корзины мер, в число которых также входят технологии, эксплуатационные улучшения и внедрение устойчиво производимых видов топлива в целях достижения глобальных желательных целей ИКАО,

принимая во внимание резолюцию A39-3 Ассамблеи, в которой Ассамблея постановила внедрить глобальные рыночные меры в виде Системы компенсации и сокращения выбросов углерода для международной авиации (CORSIA) в качестве составного элемента корзины мер, которая также включает авиационные технологии, эксплуатационные усовершенствования и внедрение устойчиво производимых видов авиационного топлива в целях достижения глобальных желательных целей ИКАО,

признавая, что ИКАО является надлежащим форумом для решения проблемы эмиссии международной авиации, а также значительный объем работы, проделанной Советом, его Комитетом по климату и окружающей среде (CEC), его Техническим консультативным органом (ТАВ) и его Комитетом по охране окружающей среды от воздействия авиации (САЕР) в поддержку внедрения CORSIA,

приветствуя принятие ~~второго~~^{первого} издания тома IV "Система компенсации и сокращения выбросов углерода для международной авиации (CORSIA)" Приложения 16 "Охрана окружающей среды", положения которого включают процедуры мониторинга, отчетности и верификации (MRV) для CORSIA,

приветствуя также публикацию ~~третьего~~^{второго} издания тома IV "Порядок демонстрации соответствия требованиям системы компенсации и сокращения выбросов углерода для международной авиации (CORSIA)" Технического руководства по окружающей среде (ETM) (Doc 9501),

приветствуя прогресс, достигнутый в разработке и обновлении элементов внедрения CORSIA ИКАО, которые отражены в 14 документах ИКАО, непосредственно упомянутых в томе IV Приложения 16, и которые содержат материалы, утвержденные Советом, и имеющие очень важное значение для внедрения CORSIA,

приветствуя также создание Советом Технического консультативного органа (ТАВ), уполномоченного представлять Совету рекомендации в отношении единиц эмиссии, отвечающих критериям CORSIA,

признавая важность скоординированного подхода ИКАО и ее государств-членов к деятельности по наращиванию потенциала в сотрудничестве с авиационной отраслью в поддержку внедрения CORSIA, в частности в рамках программы ИКАО "Помощь, наращивание потенциала и подготовка персонала для CORSIA" (ACT-CORSIA), которая включает организацию семинаров, разработку информационно-разъяснительных материалов и установление партнерских отношений между государствами в рамках CORSIA, что способствовало успешному выполнению требований MRV государствами и предоставлению отчетности в центральный реестр CORSIA данных о годовой эмиссии CO₂,

приветствуя растущее количество заявлений государств-членов об их намерении добровольно участвовать в CORSIA на экспериментальном этапе с 2021 года, при этом ~~такое добровольное участие приняли~~ 88 государств ~~добровольно принимают участие~~ в 2021 году, 107 государств в 2022 году, ~~и~~ 115 государств в 2023 году, 126 государств в 2024 году, 129 государств в 2025 году и 130 государств в 2026 году,

признавая, что активная деятельность по наращиванию потенциала может способствовать принятию государствами-членами решений о добровольном участии в системе CORSIA,

~~напоминая о решении Совета (июнь 2020 года) об использовании показателей эмиссии за 2019 год вместо показателей эмиссии за 2020 год в целях внедрения соответствующих структурных элементов CORSIA (т. е., базовый уровень эмиссии, базисный год для расчета компенсационных обязательств эксплуатанта самолетов и пороговая величина для новых участников) в ходе экспериментального этапа в свете пандемии COVID-19 и обеспечивая защиту от необоснованного экономического бремени для эксплуатантов самолетов,~~

~~напоминая признавая проведение~~ о периодическом обзоре CORSIA, проведенном Советом в 2022 году ~~периодического обзора CORSIA за 2022 год~~ при техническом участии CAEP, включая анализ воздействия пандемии COVID-19 и ~~его~~ соответствующих сценариев восстановления эмиссии CO₂ на выполнение принятых в рамках CORSIA компенсационных обязательств с точки зрения спроса, предложения и затрат и принятие в этой связи резолюции A41-22 Ассамблеи с уточнением соответствующих структурных элементов CORSIA, таких как базовые уровни эмиссии в рамках CORSIA, а также расчет компенсационных обязательств эксплуатантов самолетов на экспериментальном этапе и после его завершения ~~после окончания экспериментального этапа,~~

принимая во внимание, что авиационная отрасль поддерживает CORSIA как единую глобальную систему компенсации выбросов углерода в противовес несогласованным государственным и региональным РМ, рассматривая это в качестве экономически эффективной меры, которая дополнит более широкий пакет мер, включая технические, эксплуатационные и инфраструктурные меры,

признавая, что РМ не должны носить дублирующего характера, а эмиссия CO₂ международной авиации должна учитываться только однократно,

подчеркивая, что решение 39-й сессии Ассамблеи о внедрении CORSIA свидетельствует о решительной поддержке государствами-членами глобального решения для международной авиационной отрасли в противовес несогласованным государственным и региональным РМ,

вновь подтверждая обеспокоенность в связи с использованием международной гражданской авиации в качестве одного из потенциальных источников доходов, мобилизуемых для финансирования связанной с климатом деятельности других секторов, и что РМ должны обеспечить справедливые условия для сектора международной авиации по отношению к другим секторам,

ссылаясь на Рамочную конвенцию ООН об изменении климата (РКИК ООН) и Парижское соглашение и признавая их принцип общей, но дифференцированной ответственности и соответствующих возможностей в свете различных национальных условий,

также признавая принципы недискриминации и равных и справедливых возможностей для развития международной авиации, заложенные в Чикагской конвенции,

признавая, что работа, касающаяся CORSIA и ее внедрения, будет способствовать достижению целей, поставленных в Парижском соглашении, принятом в рамках РКИК ООН,

принимая во внимание, что РКИК ООН, Киотским протоколом к ней и Парижским соглашением предусматриваются механизмы, такие как механизм чистого развития (МЧР) в рамках Киотского протокола и ~~новый рыночный механизм~~ механизм кредитования в рамках Парижского соглашения (РАСМ), ~~в рамках Парижского соглашения~~ для содействия сокращению эмиссии ПГ в целях обеспечения устойчивого развития, которое в особенности приносит пользу развивающимся государствам,

~~*приветствуя сотрудничество между РКИК ООН и ИКАО в области разработки методики МЧР для авиации,*~~

признавая, что данная резолюция не создает прецедента для переговоров в рамках РКИК ООН, Парижского соглашения или других международных договоренностей или не предвосхищает результатов этих переговоров и не представляет собой позицию сторон РКИК ООН, Парижского соглашения или других международных договоренностей,

1. *постановляет*, что настоящая резолюция совместно с резолюцией ~~A42-xx~~A41-20 "Сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды. Общие положения, шум и качество местного воздуха" и резолюцией ~~A42-xx~~A41-21 "Сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды. Изменение климата" заменяют резолюции ~~A41-20, A41-21 и A41-22~~A40-17, A40-18 и A40-19 и представляют собой сводное заявление о постоянной политике и практике ИКАО в области охраны окружающей среды;
2. *признает* прогресс, достигнутый в разработке всех элементов корзины мер для решения проблемы эмиссии CO₂ международной авиации, включая авиационные технологии, эксплуатационные усовершенствования, устойчиво производимые виды авиационного топлива и CORSIA, и *подтверждает* предпочтение использованию авиационных технологий, эксплуатационных усовершенствований и устойчиво производимых видов авиационного топлива, обеспечивающих экологические выгоды для авиационного сектора;
3. *также признает*, что несмотря на этот прогресс, экологические выгоды, достигаемые за счет авиационных технологий, эксплуатационных усовершенствований и устойчиво производимых видов авиационного топлива, могут не обеспечить достаточного сокращения эмиссии CO₂ в условиях растущего объема международного воздушного движения в сроки, установленные для достижения глобальной желательной цели удержания глобальной нетто-эмиссии CO₂ международной авиации, начиная с 2020 года, на том же уровне;

4. *подчеркивает* роль CORSIA, дополняющей более широкий пакет мер для достижения глобальной желательной цели, не налагая при этом необоснованного экономического бремени на международную авиацию;
5. *напоминает* о своем решении, принятом на 39-й сессии, внедрить глобальную систему РМ в виде системы компенсации и сокращения выбросов углерода для международной авиации (CORSIA) в целях решения проблемы любого годового прироста объемов совокупной эмиссии CO₂ международной гражданской авиации (т. е. рейсы гражданской авиации, вылетающие из одной страны и прибывающие в другую страну), превышающих уровни 2020 года, с учетом особых условий и соответствующих возможностей;
6. *просит* Совет продолжать следить за тем, чтобы все государства-члены прилагали максимальные усилия для достижения дальнейшего прогресса в области авиационных технологий, эксплуатационных усовершенствований и внедрения устойчиво производимых видов авиационного топлива, и отражали эти усилия в планах действий государств по сокращению эмиссии CO₂ международной авиации, а также отслеживать и представлять отчеты о ходе работы по осуществлению планов действий и разработать методику, позволяющую в рамках данной системы сократить компенсационные обязательства эксплуатанта самолетов в данном году за счет использования топлива, отвечающего условиям CORSIA (т. е. устойчиво производимого авиационного топлива и низкоуглеродного авиационного топлива, которые отвечают условиям CORSIA), с тем чтобы отразить все элементы корзины мер;
7. *просит* Совет продолжать следить за внедрением всех элементов корзины мер и рассмотреть необходимую политику и действия с целью обеспечить достижение сбалансированного прогресса в рамках всех элементов при повышении со временем процентного показателя сокращения объемов эмиссии в результате не относящихся к РМ мер;
8. *признает* особые условия и соответствующие возможности государств, в частности развивающихся стран, с точки зрения уязвимости к воздействию изменения климата, уровней экономического развития и доли в объеме эмиссии международной авиации, помимо прочего, при одновременном сведении к минимуму нарушения рыночного равновесия;
9. *напоминает* о своем решении, принятом на 39-й сессии, осуществлять поэтапное внедрение CORSIA с целью учета особых условий и соответствующих возможностей государств, в частности развивающихся стран, при одновременном сведении к минимуму нарушения рыночного равновесия, следующим образом:
 - а) экспериментальный этап распространяется с 2021 по 2023 год на государства, которые согласились на добровольной основе участвовать в системе. Участвующие в этом этапе государства могут определять базовый уровень компенсационных обязательств своих эксплуатантов самолетов на основании п. 11 е) i) ниже;
 - б) первый этап распространяется с 2024 по 2026 год на государства, которые участвуют на добровольной основе в экспериментальном этапе, а также на любые другие государства, которые добровольно участвуют в этом этапе, при расчете компенсационных обязательств согласно п. 11 а) ниже;
 - с) всем государствам настоятельно рекомендуется участвовать на добровольной основе в экспериментальном и первом этапах с учетом того, что развитые страны, которые уже выразили желание сделать это, будут играть ведущую роль и что ряд других государств также выразили желание принять участие;

- d) Секретариат опубликует на веб-сайте ИКАО обновленную информацию о государствах, которые согласились участвовать на добровольной основе в экспериментальном и первом этапах;
 - e) второй этап распространяется с 2027 по 2035 год на все государства, индивидуальная доля которых в деятельности международной авиации в КТК за 2018 год превышает 0,5 % от общего показателя КТК или государства, суммарная доля которых в перечне государств от высшего до низшего показателя КТК достигает 90 % от общего показателя КТК, за исключением наименее развитых стран (НРС), малых островных развивающихся государств (МОСТРАГ) и развивающихся стран, не имеющих выхода к морю (РСНВМ), если только они добровольно не участвуют в данном этапе;
 - f) государствам, которые освобождены или еще не участвуют в системе, настоятельно рекомендуется как можно скорее стать участниками системы на добровольной основе, в особенности государствам, имеющим членство в какой-либо региональной организации экономической интеграции. Государства, которые принимают решение участвовать на добровольной основе в системе или принимают решение прекратить участие на добровольной основе в системе, могут сделать это только с 1 января любого рассматриваемого года, и они уведомляют ИКАО о своем решении не позднее 30 июня предшествующего года;
 - g) начиная с 2022 года Совет будет каждые три года проводить анализ внедрения CORSIA, в том числе ее влияния на рост международной авиации, что служит важной основой для рассмотрения Советом необходимости внесения коррективов в очередной этап или цикл обеспечения соблюдения условий и в соответствующих случаях подготовки рекомендаций по таким коррективам для принятия решения Ассамблеей;
10. *напоминает* о своем решении, принятом на 39-й сессии, о том, что с целью свести к минимуму нарушение рыночного равновесия CORSIA будет распространяться на всех эксплуатантов самолетов, выполняющих полеты по одним и тем же маршрутам между государствами, следующим образом:
- a) на все международные полеты по маршрутам между двумя государствами, участвующими в CORSIA на основании п. 9 выше, распространяются компенсационные обязательства в рамках CORSIA;
 - b) все международные полеты по маршрутам между государством, участвующим в CORSIA, и другим государством, не включенным в CORSIA на основании п. 9 выше, освобождаются от компенсационных обязательств в рамках CORSIA, но на них распространяются упрощенные требования к представлению отчетности;
 - c) все международные полеты по маршрутам между двумя государствами, не включенными в CORSIA на основании п. 9 выше, освобождаются от компенсационных обязательств в рамках CORSIA, но на них распространяются упрощенные требования к представлению отчетности;
11. *напоминает* о своем решении, принятом на 39-й сессии, а также о последующем решении, принятом на 41-й сессии, о том ~~и далее устанавливает~~, что ежегодный объем эмиссии CO₂, подлежащий компенсации эксплуатантом самолетов в рассматриваемом году после 2021 года, рассчитывается каждый год следующим образом:

- a) компенсационное обязательство эксплуатанта самолетов = [% секторальных показателей × (эмиссия эксплуатанта самолетов, на которую распространяется действие CORSIA в рассматриваемом году, × коэффициент роста в секторе за рассматриваемый год)] + [% индивидуальных показателей × (эмиссия эксплуатанта самолетов, на которую распространяется действие CORSIA в рассматриваемом году, × коэффициент роста этого эксплуатанта самолетов в рассматриваемом году)];
- b) где с 2021 по 2023 год коэффициент роста в секторе = (суммарная эмиссия, на которую распространяется действие CORSIA в рассматриваемом году, – значение суммарной эмиссии, на которую распространяется действие CORSIA в 2019 году) / суммарная эмиссия, на которую распространяется действие CORSIA в рассматриваемом году, и с 2024 по 2035 год коэффициент роста в секторе = (суммарная эмиссия, на которую распространяется действие CORSIA в рассматриваемом году, – 85 % значения суммарной эмиссии, на которую распространяется действие CORSIA в 2019 году) / суммарная эмиссия, на которую распространяется действие CORSIA в рассматриваемом году;
- c) где с 2033 по 2035 год фактор роста эксплуатанта самолетов = (эмиссия эксплуатанта самолетов, на которую распространяется действие CORSIA в рассматриваемом году, – 85 % значения эмиссии эксплуатанта самолетов, на которую распространяется действие CORSIA в 2019 году) / эмиссия эксплуатанта самолетов, на которую распространяется действие CORSIA в рассматриваемом году;
- d) где % секторальных показателей = (100 % – % индивидуальных показателей) и
- e) где % секторальных показателей и % индивидуальных показателей будет применяться следующим образом:
- i) с 2021 по 2023 год 100 % секторальных и 0 % индивидуальных показателей, хотя каждое государство-участник может в течение этого экспериментального этапа, выбирать, применять это:
 - a) к эмиссии эксплуатанта самолетов, на которую распространяется действие CORSIA в рассматриваемом году, как указано выше, или
 - b) к эмиссии эксплуатанта самолетов, на которую распространяется действие CORSIA в 2019 году;
 - ii) с 2024 по 2026 год 100 % секторальных и 0 % индивидуальных показателей;
 - iii) с 2027 по 2029 год 100 % секторальных и 0 % индивидуальных показателей;
 - iv) с 2030 по 2032 год 100 % секторальных и 0 % индивидуальных показателей;
 - v) с 2033 по 2035 год 85 % секторальных и 15 % индивидуальных показателей;
- f) эмиссия эксплуатанта самолетов и суммарная эмиссия, на которую распространяется действие CORSIA в рассматриваемом году, не включает эмиссию, исключенную из системы в этом году;
- g) объемы эмиссии в пп. 11 b) и 11 c) выше будут рассчитываться заново в начале каждого года, с тем чтобы учесть маршруты во все государства и из всех государств, которые

будут дополнительно включены ввиду их участия на добровольной основе или начала нового этапа или цикла обеспечения соблюдения условий;

12. *напоминает* о своем решении, принятом на 39-й сессии, а также о последующем решении, принятом на 41-й сессии, о том ~~и далее постановляет~~, что новый участник¹ освобождается от применения CORSIA на три года или до того года, когда годовой объем его эмиссии превысит 0,1 % от общего объема эмиссии за 2019 год, в зависимости от того, что наступит ранее. Со следующего за этим года новый участник включается в систему, и к нему применяется такой же подход, как к другим эксплуатантам самолетов;

13. *напоминает* о своем решении, принятом на 39-й сессии, о том, что, несмотря на вышеизложенные положения, во избежание административной нагрузки действие CORSIA не распространяется на участников с незначительными масштабами международной авиационной деятельности: эксплуатантов самолетов, на долю которых приходится менее 10 000 метрических тонн эмиссии CO₂ международной авиации в год; самолеты с максимальной взлетной массой (МТОМ) менее 5700 кг; или самолеты, выполняющие полеты в гуманитарных, медицинских или противопожарных целях;

14. *напоминает* о своем решении, принятом на 39-й сессии, о том, что ни одному из эксплуатантов самолетов, включенных в систему, не будет вменено обязательство по компенсации эмиссии, на которую действие системы не распространяется в силу поэтапного внедрения и освобождений;

15. *напоминает* о своем решении, принятом на 39-й сессии, ввести трехлетний цикл обеспечения соблюдения условий, начиная с первого цикла в 2021–2023 гг., для эксплуатантов самолетов в целях согласования своих компенсационных обязательств в рамках системы при ежегодном представлении ими необходимых данных в полномочный орган, назначенный государством регистрации эксплуатанта самолетов;

16. *напоминает* о своем решении, принятом на 39-й сессии, о том, что существует потребность в предоставлении гарантий в рамках CORSIA для обеспечения устойчивого развития международного авиационного сектора и во избежание необоснованного экономического бремени на международную авиацию, и *просит* Совет определить основания и критерии для введения таких действий и выявить возможные способы решения таких проблем;

17. *напоминает* о своем решении, принятом на 39-й сессии, о том, что начиная с 2022 года Совет каждые три года при технической поддержке со стороны САЕР проводит периодический анализ CORSIA для рассмотрения Ассамблеей в целях, указанных в п. 9 g) выше, и с тем, чтобы содействовать устойчивому развитию международного авиационного сектора и действенности данной системы и *просит* Совет подготовить методику и установить сроки проведения таких обзоров. Помимо прочего, это будет включать:

- а) оценку прогресса в достижении глобальных желательных целей ИКАО, рыночного и стоимостного воздействия системы на государства и эксплуатантов самолетов и на международную авиацию, а также оценку функционирования структурных элементов;

¹Новым участником является любой эксплуатант самолетов, начавший осуществлять авиационную деятельность, на которую распространяются положения тома IV Приложения 16 во время их вступления в силу или позднее, и чья деятельность не является полностью или частично продолжением авиационной деятельности, ранее осуществлявшейся другим эксплуатантом самолетов.

- b) рассмотрение вопросов совершенствования системы в поддержку целей Парижского соглашения, в частности его долгосрочных температурных целей, а также обновление структурных элементов системы с целью активизировать внедрение, повысить эффективность и свести к минимуму нарушение рыночного равновесия, принимая во внимание связанные с этим последствия изменения структурных элементов системы, например, для требований к MRV;
- c) проведение специального анализа в конце 2032 года относительно прекращения действия системы, продления ее действия или других усовершенствований системы после 2035 года, включая рассмотрение вклада авиационных технологий, эксплуатационных усовершенствований и устойчиво производимых видов авиационного топлива в достижение экологических целей ИКАО;

18. *определяет*, что CORSIA является единственной глобальной рыночной мерой, применяемой к эмиссии CO₂ международной авиации, во избежание возможных несогласованных и дублирующих друг друга государственных или региональных РМ, обеспечивая тем самым однократный учет эмиссии CO₂ международной авиации;

19. *просит* осуществить следующие действия в целях внедрения CORSIA:

- a) Совету при технической поддержке со стороны CAEP обновлять по необходимости том IV Приложения 16 и том IV Технического руководства по окружающей среде;
- b) Совету при технической поддержке со стороны CAEP продолжать обновление по необходимости документов ИКАО по CORSIA, упоминаемых в томе IV Приложения 16 и относящихся к: "CORSIA. Инструмент ИКАО для оценки и представления отчетности в отношении CO₂", "CORSIA. Виды авиационного топлива, отвечающего условиям CORSIA", "CORSIA. Отвечающие критериям единицы эмиссии (EUC)" и "CORSIA. Центральный реестр";
- c) Совету разрабатывать и обновлять документ ИКАО по CORSIA, упоминаемый в томе IV Приложения 16 и относящийся к единицам эмиссии, которые отвечают критериям CORSIA, с учетом рекомендаций TAB;
- d) Совету обновлять Центральный реестр CORSIA под эгидой ИКАО и поддерживать его деятельность, обеспечивая государства-члены возможностью представления в ИКАО соответствующей информации;
- e) Совету продолжать осуществлять надзор за функционированием CORSIA, опираясь при необходимости на поддержку со стороны CEC и CAEP;
- f) государствам-членам принять необходимые меры для создания национальной политики и нормативной базы для обеспечения соблюдения требований и ввода в действие системы CORSIA в соответствии со сроками, изложенными в томе IV Приложения 16;

20. *напоминает* о своем решении, принятом на 39-й сессии, о том, что единицы эмиссии, сформированные в рамках механизмов, созданных под эгидой РКИК ООН, Киотского протокола к ней и механизма кредитования в рамках Парижского соглашения (РАСМ) Парижского соглашения, отвечают критериям для использования в системе CORSIA при условии их соответствия решениям, принятым Советом при технической поддержке со стороны TAB и CAEP, включая решения об избежании двойного учета и о ~~об отвечающем критериям~~ ~~вintage, отвечающем критериям, и~~ ~~временных рамках и установленных сроках;~~

21. *постановляет*, что ИКАО и ее государства-члены должны предпринимать все необходимые меры по наращиванию потенциала и оказанию помощи, а также по установлению партнерских отношений в целях внедрения CORSIA в соответствии со сроками, изложенными в томе IV Приложения 16, в том числе посредством программы ИКАО "Помощь, наращивание потенциала и подготовка персонала для CORSIA" (ACT-CORSIA), которая включает организацию семинаров, разработку информационно-разъяснительных материалов и установление партнерских отношений между государствами в рамках CORSIA, подчеркивая при этом важность скоординированного подхода под эгидой ИКАО к осуществлению деятельности по наращиванию потенциала и оказанию помощи;
22. *напоминает* о своем решении, принятом на 39-й сессии, о том, что в CORSIA будут использоваться единицы эмиссии, которые соответствуют критериям приемлемости единиц эмиссии (EUC) в п. 19 выше;
23. *просит* Совет содействовать использованию сформированных единиц эмиссии, помогающих развивающимся государствам, и *рекомендует* государствам разработать местные проекты в области авиации;
24. *просит* Совет изучить вопрос о дальнейшей разработке методик, связанных с авиацией, для их применения в программах компенсации, включая механизмы или другие программы в рамках Парижского соглашения, и *рекомендует* государствам применять такие методики при осуществлении деятельности по сокращению авиационной эмиссии CO₂, что может позволить использовать кредиты, формируемые в результате реализации таких программ в рамках CORSIA, и избежать двойного учета при сокращении эмиссии.

— КОНЕЦ —