



国际民用航空组织

工 作 文 件

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## 大会 — 第41届会议

### 执行委员会

议程项目 17: 环境保护 — 国际航空与气候变化

议程项目 18: 环境保护 — 国际航空碳抵消和减排计划 (CORSA)

### 国际航空气候目标联盟成员国对长期理想目标 (LTAG) 和国际航空碳抵消和减排计划 (CORSA) 的看法

(由加拿大、日本、肯尼亚、墨西哥、挪威、大韩民国、卢旺达、瑞士、土耳其、联合王国、美国和欧洲联盟及其成员国<sup>1</sup>提交和由阿尔巴尼亚、亚美尼亚、阿塞拜疆、波斯尼亚和黑塞哥维那、格鲁吉亚、冰岛、摩纳哥、黑山、北马其顿、摩尔多瓦共和国、圣马力诺、塞尔维亚和乌克兰联署)

#### 执行摘要

鉴于航空业具有全球性质，为解决航空排放问题进行国际合作和采取行动对于成功减少航空业对气候变化的贡献至关重要。本文件共同撰文者对国际航空二氧化碳减排长期理想目标可行性高级别会议 (HLM-LTAG) 取得的进展表示赞赏，并热烈欢迎在结论中提及的到 2050 年实现净零碳排放的目标，这为在即将举行的大会确立这一目标奠定了良好基础。随着我们朝向商定并随后实现航空业雄心勃勃的减排目标迈进之时，有否资金、能力建设和培训及其获取的途径对于确保没有一个国家在航空整体脱碳方面落后至关重要。为确保国际航空碳抵消和减排计划 (CORSA) 持续可信以及国际民航组织及其一流的全球气候计划保持声誉，共同撰文者鼓励大会最大限度地实现国际航空碳抵消和减排计划的环境目标，同时在雄心壮志和脚踏实地之间谨慎取得平衡，以免航空业负担过重，因为它仍在从 COVID-19 大流行中恢复。

<sup>1</sup> 奥地利、比利时、保加利亚、克罗地亚、塞浦路斯、捷克、丹麦、爱沙尼亚、芬兰、法国、德国、希腊、匈牙利、爱尔兰、意大利、拉脱维亚、立陶宛、卢森堡、马耳他、荷兰、波兰、葡萄牙、罗马尼亚、斯洛伐克、斯洛文尼亚、西班牙、瑞典

<b>行动：请大会：</b>	
a) 同意通力合作，努力实现到 2050 年达到国际航空净零碳排放的集体长期全球理想目标（LTAG），以支持《巴黎协定》的温度目标；	
b) 同意能力建设和推动获得供资的重要性，以帮助国际民航组织所有国家实现国际航空的远大长期理想目标（LTAG），包括探索将投资者与投资需求匹配起来的可能机制；和	
c) 鼓励大会最大限度地实现国际航空碳抵消和减排计划（CORSIA）的环境目标，避免对其设计进行较大范围的更改，同时鼓励尚未加入 CORSIA 的国家自愿加入。	
<b>战略目标：</b>	本工作文件涉及的战略目标 — 环境保护
<b>财务影响：</b>	不适用
<b>参考文件：</b>	附件16 — 《环境保护》，第IV卷 — 《国际航空碳抵消和减排计划》（CORSIA） Doc 10178号文件 — 《国际航空二氧化碳减排长期理想目标可行性高级别会议的报告》

## 1. 引言

1.1 国际航空气候目标联盟（IACAC）于去年在格拉斯哥举行的 COP 26 气候变化峰会上成立。这个联盟是一个开放性的团体，它欢迎任何支持其目标和承诺的国际民航组织成员国加入其中。联盟成员承诺共同努力推进减少航空二氧化碳排放的艰巨行动，将其与全球平均温度升高限制在 1.5°C 的努力相一致，包括：支持通过一项远大的国际航空二氧化碳排放的全球目标；确保国际航空碳抵消和减排计划（CORSIA）取得最大效力；促进可持续航空燃料（SAF）的开发和部署；促进新的航空器技术的开发和部署，以及更加环保的运营。<sup>2</sup>

1.2 鉴于航空业具有全球性质，为解决航空排放问题进行国际合作和采取行动对于成功减少航空业对气候变化的贡献至关重要。航空部门的气候雄心对于保持航空业可持续增长的能力是必要的。气候雄心还将保护遭受气候变化风险最大的国家（这些国家往往过度依靠航空互联互通）并使脆弱的航空基础设施免受气候的影响。随着我们朝向商定并随后实现航空业雄心勃勃的减排目标迈进之时，有否资金、能力建设和培训及其获取将是关键所在。这对于确保没有一个国家在航空整体脱碳方面掉队至关重要。

## 2. 国际航空的长期理想目标

2.1 本文件撰文者对国际航空二氧化碳减排长期理想目标可行性高级别会议（HLM-LTAG）取得的进展表示赞赏，并热烈欢迎在结论中提及的到 2050 年实现净零碳排放的目标，这为在即将举行的大

<sup>2</sup> 国际航空气候目标联盟（IACAC）宣言 (<https://www.gov.uk/government/publications/cop-26-declaration-international-aviation-climate-ambition-coalition>)。希望加入联盟的国家可通过 [IACAC@dft.gov.uk](mailto:IACAC@dft.gov.uk) 与联合王国联系。

会第 41 届会议确立这一目标奠定了良好基础。共同撰文者回顾指出，《巴黎协定》的长期温度目标是把全球平均气温的上升幅度控制在工业化前温度的 2°C 以下，并努力争取将气温增长限制在 1.5°C 以内？到 2050 年实现全球温室气体净零排放将最有可能将全球平均气温上升控制在 1.5°C 以下。

2.2 因此，国际民航组织及其成员国应与相关机构就一揽子措施开展合作并力求航空业在技术、运行和燃料方面取得最大可能程度的削减。特别是，可持续航空燃料（SAF）将是确保航空业能够实现净零排放目标的关键。作为一个新兴行业，可持续航空燃料的研发和部署需要国际、地区和国家措施提供大量支持。本文件的共同撰文者欢迎在 2023 年召开国际民航组织第三次航空与代用燃料会议（CAAF/3），以确定可持续航空燃料的全球框架。各国应推动研发和部署可降低排放生命周期并有助于实现联合国可持续发展目标（SDG）的可持续航空燃料（SAF）。共同撰文者建议重点关注避免与粮食生产所需的土地使用和供水发生竞争的可持续航空燃料，并准确量化航空业以外的净碳减排的封存量。

2.3 国际航空碳抵消和减排计划（CORSIA）有助于激励可持续航空燃料（SAF）的使用，因为它在创造对燃料的需求的同时，还提供了一套实际达到减排的可持续准则。此外，国际航空碳抵消和减排计划的监控、报告和验证流程为跟踪可持续航空燃料的使用提供了一种全球统一的方法。国际航空碳抵消和减排计划只是达到行业外减排的一种可能方法，它是有效和高效地实现 2050 年净零排放目标所必需的。

### 3. 通过促进获得资金、能力建设和培训来支持各国

3.1 各国特别是小岛屿发展中国家、内陆发展中国家和最不发达国家都需要帮助和支持，以确保每个国家都能有意义地参与航空部门向脱碳过渡。国际民航组织可以通过促进获得资金、能力建设和培训的方法来提供帮助。这对于确保在航空业向净零过渡的过程中不让任何国家掉队至关重要。能力建设对于确保不让任何国家掉队至关重要，国际航空气候目标联盟（IACAC）成员国已经承诺促进能力建设，以支持国际航空碳抵消和减排计划（CORSIA）和其他国际民航组织气候措施的实施。因此，我们欢迎现有的国际航空碳抵消和减排计划援助、能力建设和培训方案（ACT-CORSIA）以及最近启动的国际民航组织可持续航空燃料援助、能力建设和培训方案（ACT-SAF）。我们完全支持国际民航组织及其成员国为进一步加强能力建设支持实施一揽子措施的努力。

3.2 实现真正远大的长期理想目标（LTAG）还需要推动对有助于实现民用航空脱碳的项目、方案和举措作出私有投资。这种供资对加速创新和促进开发更高效、更少污染的航空器至关重要，最终导致生产零二氧化碳排放的航空器，这将显著提高每次飞行的环境绩效，也有助于这些创新的航空器设计的基础设施以及在所有地区有效开发和部署可持续航空燃料（SAF）的基础设施的必要发展。国际民航组织可以通过建立和支持国家、捐助者、国际投资界和航空业之间的对话以及探索将潜在投资者与成员国的投资需求相匹配的可能机制来加快全球脱碳步伐的方法发挥重要作用。

3.3 通过多个机构提供大量供资的机会已经存在。附录提供了对已经存在的资源的第一次汇编结果，任何新的国际民航组织举措都可以在此基础上加以补充。还应使国际民航组织自愿环境基金受到更多关注，并应鼓励各国为其捐款，同时将捐款指定用于国际民航组织减少排放的具体活动。最后，在合作方案、技术援助和类似活动的背景下，各国还应共同开展其他能力建设和支助活动。

## 4. 行动计划和监测

4.1 至关重要的是，所有成员国制定和更新其关于航空部门二氧化碳减排的国家行动计划（SAP），其中列出各自的行动、路线图和援助需求。这些国家行动计划是监测自下而上实现长期理想目标（LTAG）进程的重要手段。除了通过国家行动计划监测国家进展之外，国际民航组织还需要跟踪全球实现长期理想目标（LTAG）的进展。这项工作的基石是汇编通过国际航空碳抵消和减排计划（CORSIA）的监测、报告和核查获得的排放数据。此外，国际民航组织的努力应包括跟踪成功的项目的关键指标，例如整体效率的改进、新技术以及可持续航空燃料原料资格和数量。不同的监测手段将适用于不同的领域（例如，国际民航组织环境盘点过程和可持续航空燃料将是有关新发展的关键信息来源）。监测国际民航组织支助举措下的活动的效用也将是关键。

## 5. 国际航空碳抵消和减排计划（CORSIA）

5.1 国际航空碳抵消和减排计划（CORSIA）是目前解决国际航空排放问题的最重要全球措施。然而，由于持续的 COVID-19 大流行导致国际运量减少，至今尚未要求任何运营人购买碳信用额或符合 CORSIA 条件的燃料来履行义务。为确保国际航空碳抵消和减排计划（CORSIA）持续可信以及加强国际民航组织及其一流的全球气候计划保持声誉，共同撰文者鼓励大会最大限度地实现国际航空碳抵消和减排计划的环境目标，同时在雄心壮志和脚踏实地之间谨慎取得平衡，以免航空业负担过重，因为它仍在从 COVID-19 大流行中恢复。共同撰文者强调需要保持该计划的完整性和预备实现的目标，并防止市场条件和各种预期随着时间推移而发生任何滚动变化，因为这种变化可能会破坏使国际航空碳抵消和减排计划（CORSIA）取得成功在可持续航空燃料和碳抵消市场方面所需的稳定。

5.2 共同撰文者欢迎全世界有 115 个国家承诺从 2023 年开始参与国际航空碳抵消和减排计划（CORSIA），并进一步鼓励各国通过国际航空碳抵消和减排计划援助、能力建设和培训（ACT-CORSIA）方案共同合作，以增加对该计划的参与并建立实施能力。进一步鼓励国际民航组织成员国努力在国内尽可能全面和及时地实施《芝加哥公约》附件 16 第 IV 卷，包括采取措施避免重复计算 CORSIA 下报告的排放单位和 CORSIA 的合格燃料。在某些情况下，这可能需要根据 COP 26 最终确定的指导准则，对《巴黎协定》下的国家自主贡献（NDC）所报告的排放水平进行相应调整。国际航空气候目标联盟（IACAC）成员国还呼吁尚未自愿参加国际航空碳抵消和减排计划（CORSIA）的国家考虑尽快参加。

## 6. 大会的行动

### 6.1 请大会：

- a) 同意通力合作，努力实现到2050年达到国际航空净零碳排放的集体长期全球理想目标（LTAG），以支持《巴黎协定》的温度目标；
- b) 同意能力建设和推动获得供资的重要性，以帮助国际民航组织所有国家实现国际航空的远大长期理想目标（LTAG），包括探索将投资者与投资需求匹配起来的可能机制；和

- c) 鼓励大会最大限度地实现国际航空碳抵消和减排计划（CORSIA）的环境目标，避免对其设计进行较大范围的更改，同时鼓励尚未加入CORSIA的国家自愿加入。

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## APPENDIX

### DIRECTORY OF PUBLIC FINANCING PROGRAMMES FOR MITIGATING AVIATION EMISSIONS

#### I. CLEAN TECHNOLOGY FUND (CTF)

ADMINISTERED BY THE CLIMATE INVESTMENT FUND AT THE WORLD BANK

##### PURPOSE

Increase the development of low carbon technologies including renewable energy.

##### FUNDING TYPES

Financing, senior loans, convertible grants/contingent recovery grants, equity, local currency swaps and guarantees, contingent recovery loans, subordinated debt, plus technical assistance and capacity building.

##### WEBSITE

[www.climateinvestmentfunds.org/fund/clean-technology-fund](http://www.climateinvestmentfunds.org/fund/clean-technology-fund)

#### II. SCALING UP RENEWABLE ENERGY IN LOW INCOME COUNTRIES (SREP)

ADMINISTERED BY THE CLIMATE INVESTMENT FUND AT THE WORLD BANK

##### PURPOSE

Increase the development of renewable energy in developing countries.

##### FUNDING TYPES

Concessional Financing, senior loans, convertible grants/contingent recovery grants, equity, local currency swaps and guarantees, contingent recovery loans, subordinated debt, plus technical assistance and capacity building.

##### WEBSITE

[www.climateinvestmentfunds.org/fund/scaling-renewable-energy-program](http://www.climateinvestmentfunds.org/fund/scaling-renewable-energy-program)

#### III. GLOBAL ENERGY EFFICIENCY AND RENEWABLE ENERGY FUND (GEEREF)

ADMINISTERED BY GEEREF WITH SUPPORT FROM THE EUROPEAN INVESTMENT BANK GROUP

##### PURPOSE

Provide attractive, low risk financial investments that will produce economic, environmental, and social benefits.

##### FUNDING TYPES

Invests public and private risk capital in private equity funds, which provide equity financing for small and medium sized renewable energy and energy efficiency projects in emerging economies.

##### WEBSITE

[geeref.com](http://geeref.com)

#### IV. THE GLOBAL ENVIRONMENT FACILITY (GEF)

ADMINISTERED BY THE GEF

##### PURPOSE

To help developing countries and countries with economies in transition to meet the objectives of international environmental conventions and agreements.

##### FUNDING TYPES

Multilateral grants, contingent loans, loan to grant, mitigate technology specific risks, microfinancing for residences.

##### WEBSITE

[www.thegef.org](http://www.thegef.org)

V. GREEN CLIMATE FUND (GCF)  
ADMINISTERED BY THE GCF BOARD UNDER THE UNFCCC, WITH SUPPORT FROM THE  
WORLD BANK

PURPOSE

To advance the goal of keeping the temperature increase on earth below two degrees Celsius by investing into low-emission and climate-resilient development.

FUNDING TYPES

Variety of financial instruments available, including grants, concessional loans, subordinated debt, equity, and guarantees, giving flexibility to match project needs. Risk-bearing capacity, allowing the Fund to support innovation and leverage and crowd in additional financing.

WEBSITE

[www.greenclimate.fund](http://www.greenclimate.fund)

VI. GLOBAL CLIMATE CHANGE ALLIANCE (GCCA)  
ADMINISTERED BY THE EUROPEAN COMMISSION UNDER THE EUROPEAN UNION (EU)

PURPOSE

To help the most vulnerable and least developed countries address climate change through support of their national programmes.

FUNDING TYPES

National budget support with funds sent directly to the country in tranches with supplemental funds delivered on completion of first programme.

WEBSITE

[www.gcca.eu](http://www.gcca.eu)

VII. NEIGHBORHOOD, DEVELOPMENT AND INTERNATIONAL COOPERATION  
INSTRUMENT (NDICI)

ADMINISTERED BY THE EUROPEAN COMMISSION UNDER THE EUROPEAN UNION

PURPOSE

To support EU Development Policy and "Agenda for Change" including sustainability goals.

FUNDING TYPES

Grants to organizations or projects being developed by them. Contracts through tendering process for goods and services. Budget support to countries through financial transfers to national treasuries. Funding directly to specific in-country sectors.

WEBSITE

<https://ec.europa.eu/international-partnerships/global-europe>

VIII. PILOT AUCTION FACILITY FOR METHANE AND CLIMATE MITIGATION (PAF)  
ADMINISTERED BY THE WORLD BANK WITH FUNDING FROM THE GOVERNMENTS OF  
GERMANY, SWEDEN, SWITZERLAND, AND THE UNITED STATES

PURPOSE

To support a market for carbon credits.

FUNDING TYPES

Grants to organizations or projects being developed by them. Contracts through tendering process for goods and services. Budget support to countries through financial transfers to national treasuries. Funding directly to specific in-country sectors.

WEBSITE

<https://www.pilotauctionfacility.org/>

IX. AFRICA CLIMATE CHANGE FUND (ACCF)  
ADMINISTERED BY THE AFRICAN DEVELOPMENT BANK, FINANCED BY VARIOUS  
CLIMATE FUNDS AND DONOR COUNTRIES

PURPOSE

To support low carbon development and climate resiliency.

FUNDING TYPES

Grants for capacity building, strategic planning, policy development, project implementation.

WEBSITE

[www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund/](http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund/)

X. SUSTAINABLE ENERGY FUND FOR AFRICA (SEFA)  
ADMINISTERED BY THE AFRICAN DEVELOPMENT BANK, FINANCED BY THE  
GOVERNMENTS  
OF DENMARK AND THE  
UNITED STATES

PURPOSE

To support private sector-led small and medium scale renewable energy development in Africa.

FUNDING TYPES

Grant funding to target renewable energy development from feasibility to financial close. Grants for technical

assistance and project preparation. Equity investments through the Africa Renewable Energy Fund, managed

by Berkeley Investments. Grants to fund public activities that enable private investments

WEBSITE

[www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa/](http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa/)

XI. INTERNATIONAL CLIMATE FUND (ICF)  
ADMINISTERED BY THE GOVERNMENT OF THE UNITED KINGDOM

PURPOSE

As the United Kingdom's primary source of climate finance, it funds existing multilateral and national programmes focused on supporting private sector innovation and public-private partnerships, including renewable energy development in Africa.

FUNDING TYPES

Project grants, investments in climate funds. Grants primarily provided for bilateral projects.

Concessional loans provided to multilateral programmes.

WEBSITE

[www.gov.uk/government/publications/international-climate-fund/international-climate-fund](http://www.gov.uk/government/publications/international-climate-fund/international-climate-fund)

XII. INTERNATIONAL CLIMATE INITIATIVE (IKI)  
ADMINISTERED BY THE GERMAN FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE  
CONSERVATION, BUILDING AND NUCLEAR SAFETY

PURPOSE

To mitigate GHG emissions, adapt to climate change, conserve carbon sinks, and conserve biodiversity.

FUNDING TYPES

Grants to support policy advice, capacity building and appropriate training measures, and also technological lighthouse projects and technological cooperation scheme.

WEBSITE

[www.international-climate-initiative.com/en/](http://www.international-climate-initiative.com/en/)

### XIII. NAMA FACILITY

ADMINISTERED BY THE NAMA BOARD AND IMPLEMENTED BY DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH

#### PURPOSE

Implement ambitious mitigation projects in developing and emerging economies.

#### FUNDING TYPES

Funding for transformational changes in sector development driven by in-country planning and implementation.

#### WEBSITE

[www.nama-facility.org](http://www.nama-facility.org)

### XIV. GLOBAL CLIMATE PARTNERSHIP FUND (GCPF)

ADMINISTERED BY THE INVESTMENT FIRM RESPONSIBILITY INVESTMENTS AG, AND FINANCED BY THE GOVERNMENTS OF DENMARK, GERMANY, AND THE UK, THE INTERNATIONAL FINANCE CORPORATION, THE DEVELOPMENT BANKS OF AUSTRIA AND THE NETHERLANDS, AND PRIVATE INVESTORS

#### PURPOSE

Use public funding to leverage private capital in order to mitigate climate change and drive sustainable growth in developing and emerging markets.

#### FUNDING TYPES

Dedicated funding to local institutions in the form of senior or subordinated debt; mid- to long-term financing with flexible schedules; direct financing for projects in the late stage of development through direct funding primarily in the form of senior debt; maturities of up to 10 years; equity or mezzanine debt, provided in smaller amounts where this strengthens the funding package.

#### WEBSITE

[www.gcpf.lu/investing-in-renewable-energy-and-energy-efficiency.html](http://www.gcpf.lu/investing-in-renewable-energy-and-energy-efficiency.html)

XV. PRIVATE FINANCE ADVISORY NETWORK (PFAN) ADMINISTERED BY THE UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION AND THE RENEWABLE ENERGY AND ENERGY EFFICIENCY PARTNERSHIP

#### PURPOSE

Provide free business consulting services to early-stage clean energy development projects in emerging economies.

#### FUNDING TYPES

Free advisory services, networking to bring entrepreneurs in the developing world together with investors from the developed world.

#### WEBSITE

<https://pfan.net>

### XVI. UAE SOUTH PACIFIC PARTNERSHIP FUND (UAE-PPF)

ADMINISTERED THE ABU DHABI FUND FOR DEVELOPMENT AND FINANCED BY THE GOVERNMENT OF THE UNITED ARAB EMIRATES

#### PURPOSE

To diversify energy mix and advance sustainability.

#### FUNDING TYPES

Grants and technical assistance.

#### WEBSITE

<http://www.masdar.ae>

**XVII. IRENA / ADFD PROJECT FACILITY  
ADMINISTERED THE INTERNATIONAL RENEWABLE ENERGY AGENCY (IRENA) AND  
FINANCED BY THE ABU DHABI FUND FOR DEVELOPMENT (ADFD)**

**PURPOSE**

To overcome financial barriers to clean energy development.

**FUNDING TYPES**

IRENA provides technical assistance and capacity building, ADFD provides concessionary loans.

**WEBSITE**

[adfd.irena.org](http://adfd.irena.org)

**XVIII. PACIFIC ENVIRONMENT COMMUNITY (PEC) FUND  
ADMINISTERED THE PACIFIC ISLAND FORUM SECRETARIAT PURPOSE**

To install renewable energy and sea water desalination projects to solve energy and drinking water problems.

**FUNDING TYPES**

Grants for solar power generation systems and sea water desalination plants or a combination of both.

**WEBSITE**

[www.forumsec.org](http://www.forumsec.org)

**XIX. UAE-CARIBBEAN RENEWABLE ENERGY FUND  
ADMINISTERED THE ABU DHABI FUND FOR DEVELOPMENT AND FINANCED BY THE  
GOVERNMENT OF THE UNITED ARAB EMIRATES**

**PURPOSE**

To diversify energy mix and advance sustainability.

**FUNDING TYPES**

Grants and technical assistance.

**WEBSITE**

<http://www.masdar.ae>

**XX. ADAPTATION, CLEAN ENERGY, AND SUSTAINABLE LANDSCAPES PROGRAMS  
ADMINISTERED BY THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT**

Support plans and programmes to mitigate and adapt to climate change in developing countries.

**FUNDING TYPES**

Various measures from direct technical assistance, training, grant funding, and financial support through implementing partners.

**WEBSITE**

[www.usaid.gov/climate](http://www.usaid.gov/climate)