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IMPLEMENTATION PROGRESS AND PERFORMANCE OVERVIEW OF THE CIVIL AVIATION ENVIRONMENTAL SUSTAINABILITY PROGRAM (CAESP) IN SAUDI ARABIA

(Presented by Saudi Arabia)

EXECUTIVE SUMMARY

This information paper provides an overview and update on the implementation progress and performance of the Civil Aviation Environmental Sustainability Program (CAESP) in Saudi Arabia. The CAESP was developed to align Saudi Arabia's expanding aviation sector with Vision 2030 national targets and the Saudi Green Initiative (SGI). In parallel, it supports international commitments under International Civil Aviation Organization (ICAO) policies and practices related to environmental protection and long-term aspirational goals.

The CAESP is implemented through a phased approach led by the Civil Aviation Environmental Sustainability Committee (CAESC). It is guided by 20 strategic KPIs and supported by a robust governance and collaboration framework. Specifically, the framework focuses on seven critical environmental sustainability domains: greenhouse gas emissions, noise, local air quality, biodiversity, waste management, water and energy management, and climate change adaptation. Collectively, these focus areas, reinforced by enabling initiatives and capacity-building and institutional capability enhancement measures, aim to fulfil both national and international environmental commitments while strengthening the aviation sector's sustainability and resilience.

<i>Strategic Goals:</i>	This information paper relates to Strategic Goal - <i>Aviation is Environmentally Sustainable</i>
<i>Financial implications:</i>	N/A
<i>References:</i>	Annex 16 - <i>Environmental Protection</i> , Volumes I to IV

1. INTRODUCTION

1.1 Saudi Arabia's National Aviation Strategy envisions substantial growth, aiming for a significant increase in annual passenger traffic by the end of 2030. Air cargo volumes are also expected to grow, with the number of destinations served rising in parallel. Alongside this growth, Saudi Arabia aspires to establish its aviation sector as the regional leader in environmental sustainability. This anticipated growth brings tremendous opportunities but also significant environmental responsibilities. In response, the Saudi General Authority of Civil Aviation (GACA) has developed the Civil Aviation Environmental Sustainability Program (CAESP) to chart a clear path toward thriving and sustainable aviation.

1.2 Moreover, the CAESP was developed as a sectoral strategic program under the aviation sector strategy through extensive engagement with stakeholders across the aviation ecosystem. During the planning and development phase, 32 stakeholders were engaged, including ministries, national centres and committees, airplane operators, airport operators, logistics and support service providers, and other relevant entities. More than 55 workshops and meetings were held, and over 85 documents were reviewed. CAESP provides a unified framework addressing all key seven environmental sustainability domains.

1.3 Specifically, the program outlines an ambitious scope that brings together all sector participants including airports, airlines, service providers, and regulatory entities under a shared vision of environmental stewardship and performance accountability. It establishes structured strategies aligned with national policies, regulations, and strategies, incorporating measurable targets and dedicated initiatives aimed at reducing emissions, optimizing natural resource use, and protecting the environment, while supporting the continued growth of the aviation sector.

1.4 To ensure robust oversight and coordination, the Civil Aviation Environmental Sustainability Committee (CAESC) was established as the principal governance body responsible for supervising CAESP implementation. Chaired by H.E. the President of GACA, the Committee consists of 25 members (representatives) who provide high-level strategic direction, ensure alignment with both national priorities and international environmental commitments, and facilitate cross-sectoral collaboration. Its responsibilities include activating the program, securing resource allocation, reviewing realized benefits, approving necessary scope changes, and evaluating performance against defined strategic KPIs. The official launch of the CAESC marked the beginning of CAESP's implementation phase and reaffirmed Saudi Arabia's commitment to embedding sustainability within the civil aviation sector.

1.5 To drive effective implementation, CAESP is supported by an annual planning cycle. This planning process ensures that priorities are continuously reviewed and adjusted in response to progress and emerging needs. In addition, specialized working groups comprising airlines, airports and service providers have been established to address focus areas in all domains of CAESP. These groups coordinate sector wide efforts through structured initiative cards, which define specific actions, targets, timelines, responsible parties, and performance metrics.

2. DEVELOPMENT AND IMPLEMENTATION OF THE CAESP PHASED APPROACH

2.1 To ensure structured progress and sustained impact, the Civil Aviation Environmental Sustainability Program (CAESP) was designed around a phased approach. This framework provides a clear sequence of planning, execution, performance evaluation, and continuous improvement. Each phase builds upon the outcomes of the preceding stage, thereby creating a dynamic and adaptive system that supports Saudi Arabia's environmental aspirations and international commitments. The four phases are outlined below:

2.2 **Phase 1 - Planning:** The planning phase established the strategic foundations of the CAESP framework. Specifically, this stage involved conducting comprehensive assessments of environmental risks and status, identifying priority focus areas, and defining clear objectives along with measurable performance indicators. Extensive stakeholder engagement was a central feature, facilitating alignment with national strategies such as Vision 2030 and ensuring consistency with international obligations under International Civil Aviation Organization (ICAO) and other environmental treaties. The outcome was a detailed implementation roadmap that set the direction for subsequent phases.

2.3 **Phase 2 (A) - Implementation:** Subsequently, the implementation phase focused on translating strategic plans into concrete actions across all participating entities, including six airport operators (managing 28 domestic and international airports), six airlines and seven service providers, among them air navigation. To drive progress, key initiatives were identified to define the targeted contributions of each stakeholder and enhance environmental management practices. In addition, capacity-building requirements were outlined, together with the development of GACA regulations, advisory circulars, and monitoring mechanisms to support compliance and foster a culture of environmental stewardship.

2.4 **Phase 2 (B) - Performance Review of Strategic KPIs:** As part of the implementation, this stage focuses on evaluating the effectiveness of the CAESP. Specifically, this is achieved through comprehensive standardized data collection, rigorous verification procedures, and the use of centralized environmental databases that consolidate all relevant information. Subsequently, systematic performance reviews are conducted against the 20 strategic Key Performance Indicators (KPIs) applicable to the monitoring scope, as determined through the applicability assessment. In addition, to ensure continuous improvement, regular assessments and progress reports are compiled to measure achievements, highlight areas requiring additional attention, and maintain accountability across all stakeholders. Furthermore, the performance review process provides critical insights that guide decision-making and ensure the program remains aligned with its objectives and commitments.

2.5 **Phase 2 (C) - Continual Improvement:** Finally, the continual improvement stage reinforces the program's commitment to adaptive management and sustained progress. Best practices identified during implementation and performance reviews are integrated into updated plans and processes. This phase is supported by an annual planning cycle coordinated by the CAESC, ensuring that priorities are regularly reviewed and adjusted in response to emerging needs. Additionally, specialized working groups address key focus areas across environmental sustainability domains, including greenhouse gas emissions, noise, local air quality, biodiversity, waste management, water and energy efficiency, and climate change adaptation. These groups coordinate efforts through structured Initiative Cards, which define actions, timelines, responsibilities, and performance metrics. This collaborative approach maintains accountability and responsiveness and ultimately drives the continuous enhancement of environmental performance across the civil aviation sector in Saudi Arabia.

3. **TIMELINE TO ACHIEVE STRATEGIC KPIs BY 2032 AND WAY FORWARD**

3.1 By 2024, Saudi Arabia established the foundation for the CAESP through comprehensive baseline assessments of all 20 strategic KPIs. Among these, greenhouse gas (GHG) emissions were specifically evaluated using business-as-usual and decarbonization models, thereby creating a benchmark for future action. To build on this foundation, data systems and monitoring protocols were developed to enable effective tracking, with the central goal of achieving a 33% reduction in GHG emissions by 2032 relative to the baseline scenario while also ensuring full CORSIA compliance. Furthermore, these efforts

were reinforced through capacity building and active stakeholder engagement, thereby securing readiness for long-term implementation.

3.2 Since the launch of CAESP, the aviation sector has achieved notable sustainability milestones. GACA attained ISO 14001 EMS certification, while 26 airports secured environmental permits from the NCEC. Several airports advanced in the ACA program, with DMM and 22 others reaching Level 1, MED and JED achieving Level 2, and RUH attaining Level 4, the highest distinction. Saudia Technic and APSCO earned Silver LEED Certification, MED received Gold LEED, and RUH and DMM received Gold recognition from ACI's Green Airports Award. The sector also modernized fleets with new generation aircraft, improved fuel efficiency, and launched afforestation initiatives under the Saudi Green Initiative (SGI) to support carbon sequestration. Most significantly, aviation sector greenhouse gas (GHG) emissions in 2024 were contained, representing a substantial 12.6% reduction compared to the Business-as-Usual (BAU) projection. These achievements clearly demonstrate the sector's strong commitment to decarbonization, while highlighting the effectiveness of CAESP implementation and its ability to deliver measurable results.

3.3 Moving forward from 2025, the focus will shift to deeper implementation. This phase will involve deploying monitoring infrastructure, introducing noise abatement and biodiversity programs, enhancing waste, water, and energy management systems, and advancing climate adaptation planning. Simultaneously, comprehensive actions across all seven CAESP domains will be reinforced in coordination with relevant stakeholders under the CAESP framework

3.4 Between 2027 and 2032, CAESP is expected to complete full-scale implementation, with results independently verified. The aim is to achieve 100% of the strategic KPIs across all focus areas. Verified outcomes will guide the refinement of future strategies and reinforce Saudi Arabia's long-term commitment to environmentally sustainable aviation.

4. CONCLUSION

4.1 Saudi Arabia reaffirms its commitment to sustainable aviation growth. The Civil Aviation Environmental Sustainability Program (CAESP) is designed to align the aviation sector's contributions with both national priorities and international environmental commitments. Through its implementation and continual improvement, Saudi Arabia aims to support ICAO's environmental objectives, achieve quantifiable emissions reductions, enhance resilience, and promote sustainable economic development, cascading Saudi Civil Aviation Environmental Sustainability efforts from national to global levels.

4.2 Saudi Arabia welcomes collaboration with Member States and stakeholders to exchange knowledge and accelerate progress towards a more sustainable global aviation sector.

4.3 The Assembly is invited to take note of the information provided in this information paper and to encourage States to share experiences on the development and implementation of environmental sustainability programs, including related challenges and benefits.