International Civil Aviation Organization

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WORKING PAPER

ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 16: Environmental Protection – International Aviation and Climate Change — Policy and Standardization

ANALYSIS OF THE ACHIEVEMENT OF SUSTAINABLE AIRPORTS IN ISLAND STATES

(Presented by the Dominican Republic)

EXECUTIVE SUMMARY

At several Assembly sessions, Member States have recognized the fundamental importance of exercising permanent leadership in international civil aviation in order to limit or reduce the emissions that contribute to world climate change. This has had a very positive impact, inasmuch as States have welcomed the Organization's initiatives, and 114 Member States, which account for more than 93.4% of international air traffic worldwide, have currently drawn up and submitted their action plans voluntarily to ICAO.

ICAO constantly highlights the active participation of Member States and international organizations in activities relating to State Action Plans and, moreover, facilitates the forging of alliances in order to assist States in formulating and implementing their action plans.

Accordingly, the Dominican Republic has drawn up and submitted three versions of its CO_2 emission reduction action plan to ICAO, having submitted the first version in 2013 to ICAO, thus displaying leadership in environmental management and in the adoption of various emission mitigation measures. Raising awareness of the main system players, such as airports, is crucial to obtaining the expected results. International airports in the Dominican Republic have accordingly played an extremely important role and airport operation policies have changed exponentially.

The success of the positive steps taken to mitigate the effects of climate change is clear evidence of commitment to the strategic objectives of ICAO and is reflected in green aviation, which can achieve the goal of carbon-neutral growth in airport terminals through commitment on the part of airport administrations and firm steps taken to that end.

Action: The Assembly is invited to:

a) urge ICAO to continue detailed feasibility studies in assessing proposed goals, their impact on the system, and their effect on growth and costs in all countries, in particular island developing countries; and
b) urge States to promote among their airport operators the achievement of sustainable airports in order to reduce CO_2 emissions.

[1] Spanish version provided by the Dominican Republic

Strategic Objectives:	This working paper relates to Strategic Objective E – Environmental Protection
Financial implications:	None
References:	Assembly Resolution A39-2 of the ICAO Assembly

1. INTRODUCTION

1.1 Strategic alliances with government entities in charge of national environmental policies have been a fundamental factor in consolidating the culture of protection in all areas of national production which, together with the country's commitment to contributing to the sustainable development goals through the national strategy, has driven State policies formulated to encourage the use of alternative sources of energy.

1.2 As aviation, a pillar of world economy and integration, cannot escape the reality, the Dominican Republic has capitalized on these circumstances to promote environmental protection in aviation, while contributing to national and ICAO strategic objectives, and to boost the development of the national aeronautical industry through direct financial benefits received.

1.3 Under its environmental policy designed to promote sustainable aviation development, the Dominican Civil Aviation Institute (IDAC) has installed a one-megawatt photovoltaic park at the Dominican Aeronautical Complex, which covers the Air Navigation and the "Norge Botello" Flight Control Headquarters Building and the Higher Academy of Aeronautical Sciences; the park supplies 45% of power consumption in the Complex, which highlights appropriate and responsible energy resource management policy in encouraging conscientious and sustainable consumption of electric energy.

1.4 It can now be claimed accountably that ongoing management by IDAC and arduous work by interest groups connected with this highly dynamic sector have largely spearheaded the transition from fossil fuel energy to energy drawn from renewable sources. As a result, a high percentage of the electricity consumption of many international airport terminals is now sustained by photovoltaic energy, with an installed capacity of approximately eight megawatts.

1.5 The objectives proposed in the State's emission reduction action plan for its airport infrastructure include at least the following:

(a) adopt operational best practices recommended by ICAO to reduce fuel consumption and CO_2 emissions as of 2019;
(b) reduce the current use of auxiliary power units (APUs) in the main international airports by 25% by 2020; and
(c) reduce emissions currently generated in airport-related activities by at least 15% by 2030.

1.6 These objectives have been implemented in real life, as can be seen from the images contained in the Appendix hereto.

2. ANALYSIS

2.1 As it is understood and recognized that the solution to the problem of greenhouse gas emissions (GHG) in international aviation requires active commitment and cooperation by States and industry, the collective commitments announced by Airports Council International (ACI), the Civil Air Navigation Services Organisation (CANSO), the International Air Transport Association (IATA), the International Business Aviation Council (IBAC) and the International Coordinating Council of Aerospace Industry Associations (ICCAIA) on behalf of the international air transport industry can only be welcomed as work continues in order to reduce CO_2 emissions, with a view to achieving carbon-neutral growth as of 2020 and reducing its carbon emissions by 50% by 2050, in comparison with the 2005 levels.

2.2 The Dominican Republic has drawn up and submitted to ICAO three versions of its CO_2 emission reduction action plan, having submitted the first one to ICAO in 2013, thus displaying regional leadership in environmental management and in the adoption of emission mitigation measures.

2.3 International airports in the Dominican Republic have played a highly active role and their operational policies have undergone exponential change. Progress has been noteworthy between 2013 and 2019 for, within that short span of time, mitigation of the greenhouse gas effect and has included the installation of approximately 10 megawatts of solar energy, privately funded to a high extent.

2.4 For one administration alone, namely Dominican Airports XXI Century (aerodrome, which manages five international, and one domestic, airports), this initiative, implemented under a strategy of setting sound environmental protection and sustainability goals for 2020 (such as a 20% carbon footprint reduction in comparison with 2013, protection of biological diversity, obtaining ISO 14001 certification and carbon accreditation for all airports in the network), requires a total yearly saving of 6,500 tons of CO_2, equivalent to the consumption of 731,405 gallons of fuel or 95,658 50-pound cylinders of propane gas.

2.5 Two of the four airport administrations (six of the eight international airports) in the Dominican Republic have been certified at two airport carbon accreditation levels under the Airport Carbon Accreditation (ACA) programme. Cibao International Airport at level 2 (Reduction) and Dominican Airports XXI Century at level 1 (Mapping), strive constantly to obtain the highest levels possible.

2.6 Of the 14 airports certified at level 1 (Mapping) in Latin America and the Caribbean, six are in the Dominican Republic. Furthermore, of the six airports certified at level 2 (Reduction) in Latin America and the Caribbean, one is in the Dominican Republic.

2.7 With regard to the introduction of highly energy-efficient equipment, a ramp service operator at Punta Cana airport is already rolling out the use of electric ground support equipment (GSE), and the airport terminal administrator will announce other renewable-energy projects shortly.

2.8 IDAC, representing the State for collaboration with ICAO, has driven change in corporate culture both internally and among all stakeholders, which has been both environmentally and economically beneficial, as can be seen from the use of air conditioning equipment, and ramp and ground support equipment powered by renewable sources of energy. This is all sustained by State policy that fosters these initiatives through tax incentives that generate a positive return on investment.

2.9 The Dominican Republic, in collaboration with other ICAO Member States, private sector organizations and the aviation industry, proposes joint endeavours in order to achieve in the medium term the collective global aspirational goal of maintaining net global carbon emissions from international civil aviation, as from 2020, at the same level, taking into account its special circumstances and respective capacities stemming from its status as an island developing State that nonetheless intends work towards sustainable growth of the international aviation industry.

3. DISCUSSION

3.1 The Dominican Republic understands that many current and future measures taken by ICAO Member States in order to achieve collective aspirational goals will open up many other fields in order to contribute to aviation emission reduction, and that it must therefore continue to promote the culture of environmental protection which holds great potential awaiting development.

3.2 Very great progress has been made in introducing renewable sources of energy at international airports in the Dominican Republic within a very short span of time. It is important to replicate this achievement in the change of airport corporate culture. The Dominican Republic invites ICAO to encourage the reproduction of activities carried out in the Dominican Republic in similar States.

3.3 The Dominican Republic urges ICAO Member States to consider the experience gained from initiatives implemented in the Dominican Republic in order to achieve CO_2 emission reduction goals.

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Appendix
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APPENDIX

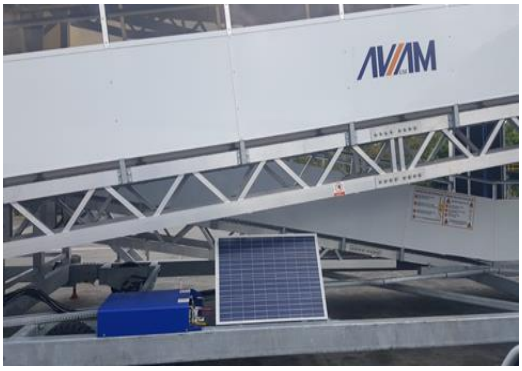
CO_2 EMISSION REDUCTION ACTION PLAN

INTERNATIONAL CIVIL AVIATION/DOMINICAN REPUBLIC

Energía solar en Aeropuerto del Cibao

Tractores Eléctricos en Punta Cana

GPU y PCA en Punta Cana



Escaleras solares en Punta Cana

Energía solar en Aeropuerto de Cibao = Solar energy at Cibao Airport
Tractores Eléctricos en Punta Cana = Electric tractors at Punta Cana
GPU y PCA en Punta Cana = GPU and PCA at Punta Cana
Escaleres solares en Punta Cana = Solar escalator at Punta Cana

Different AERODOM airports

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