



ICAO EUR/NAT Environment Workshop
Hosted by the State Civil Aviation Agency of the
Republic of Azerbaijan



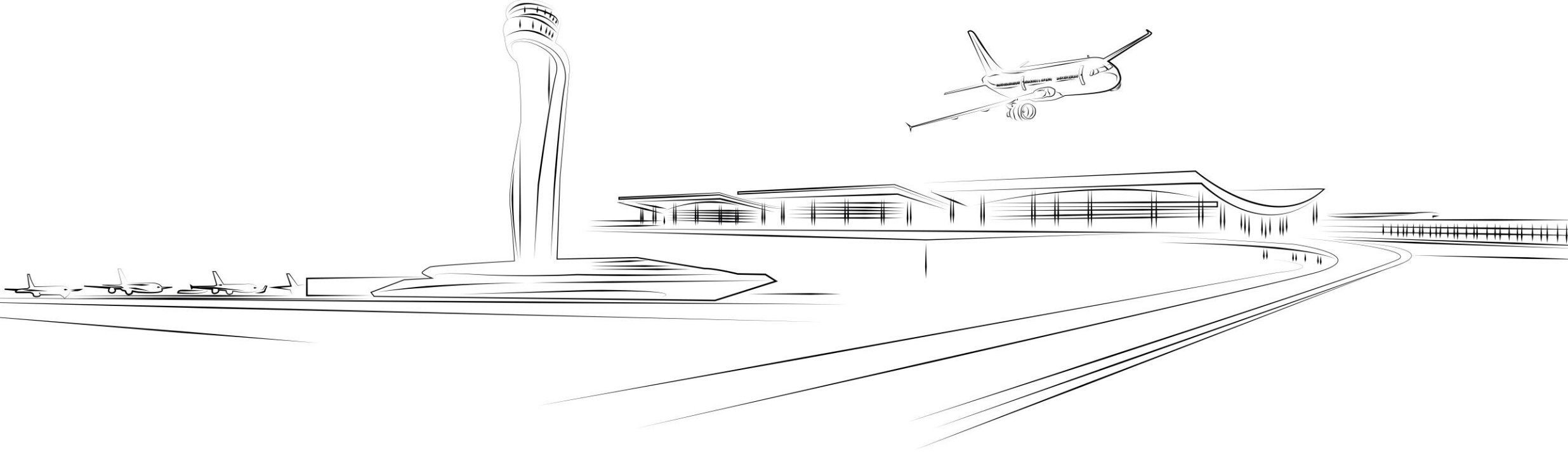
ICAO



Emission Reduction Works at Airports
&
State Action Plan of TÜRKİYE



REPUBLIC OF TÜRKİYE
MINISTRY OF TRANSPORT AND INFRASTRUCTURE
General Directorate of State Airports Authority





State Airports Authority



Who we are?

- Governmental Organisation Under Ministry of Transport and Infrastructure
- ANS Provider
- Airport Operator





State Airports Authority



- DHMI is the responsible authority for providing Air Navigation Services within entire territory of Türkiye





State Airports Authority



- Responsible Authority for Airport Operations
- There are 58 Airports serves to Civil Aviation in Türkiye
- Directly operating 50 Airports
- Others are operated via Public Private Partnership Cooperation (PPPC) under administration of DHMI
- Central Organisation and Airport Directorates





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- Environmental Department Structure;
- Airport Operations Department
- Management of Environment and Sustainability
- Environmental Units at Airports





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We have to obey the rules put into effect by the Ministry of Environment for our all environmental dimensions (waste, waste water, noise, emissions etc.)





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A Member of Green Airport Project (2009-2020)

- Monitoring, Calculating, Reporting and Verifying Emissions by admin organisation Turkish Standards Institution.





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“Carbon-free Airport Project”

- In 2020 we initiated a Project called “Carbon-Free Airport” and since then we have managed all environmental dimensions with stakeholders in the airports according to application principles of this project in addition to all legislations we must obey. Since 2021, we have carried out activities related to greenhouse gas emissions in the scope of ACA (Airport Carbon Accreditation) Programme run by ACI (Airports Council International).





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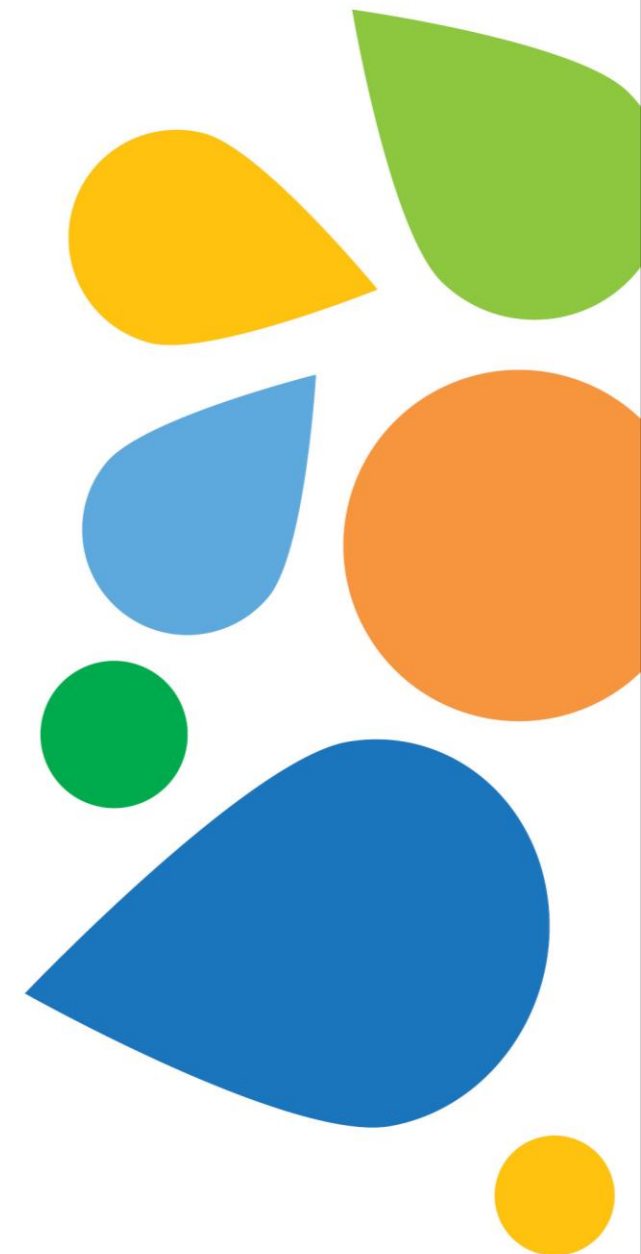
- Airports Council International is an organization of airport authorities that informs its members about industry practices and airport standards.
- DHMI is a member of ACI with all airports.



**AIRPORTS COUNCIL
INTERNATIONAL**

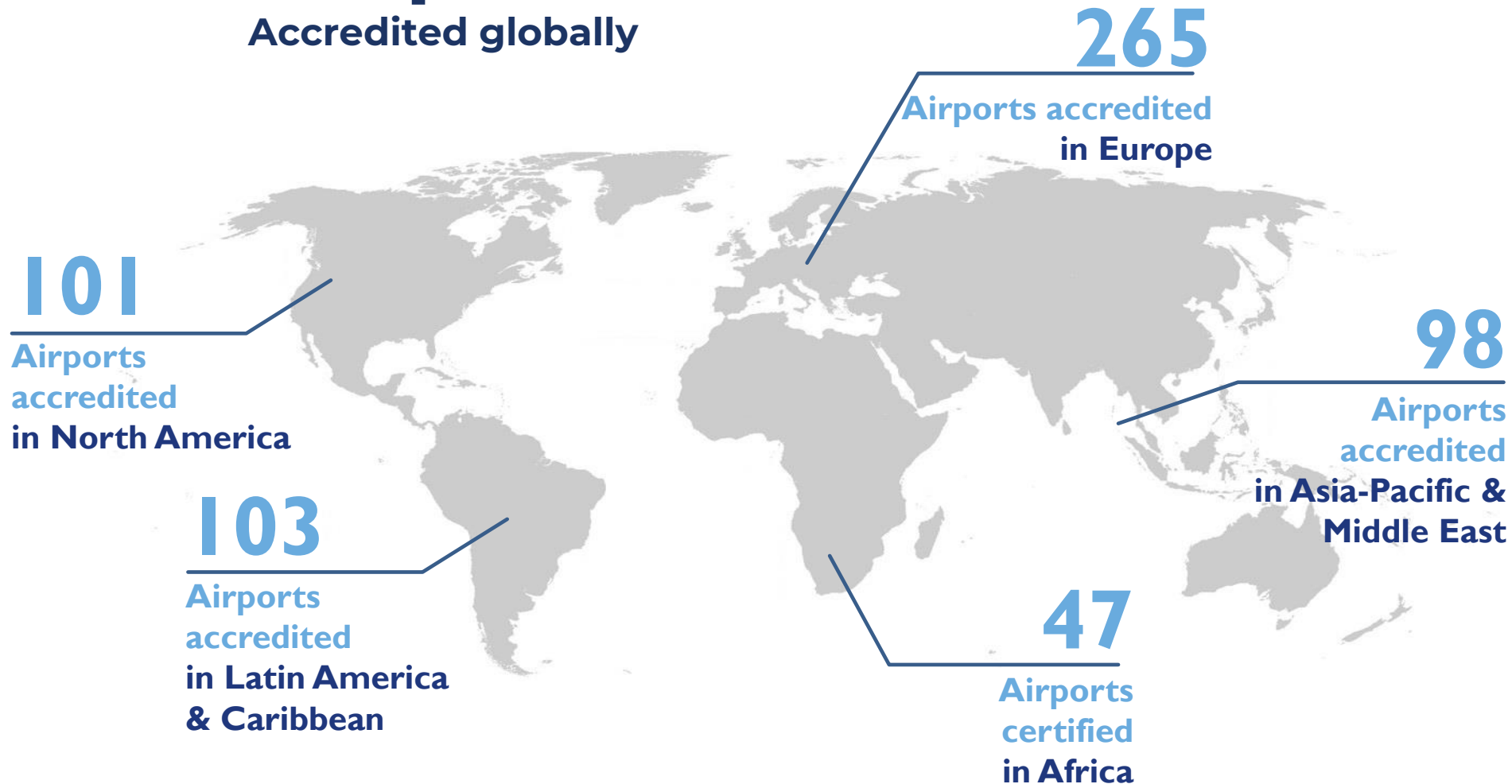


**The only global standard for
airport carbon management
carried out by ACI**



614 airports

Accredited globally



Welcoming
5,3 billion
passengers a
year

In **91**
countries
across the
world

55,8% of
global air
passenger
traffic





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- 43 Certified Airports by DHMI,
With PPC Airports
- 50 Certified Airports in Türkiye

CERTIFICATE
of ACCREDITATION

Valid 26th November 2023 – 25th November 2024

This is to certify that **Airport Carbon Accreditation**, under the administration of WSP, confirms that the carbon management processes at

CANAKKALE AIRPORT
implemented by General Directorate of State Airports Authority (DHMI)

have earned the accreditation level of **REDUCTION**, in recognition of the airport's actions to map and reduce its CO₂ emissions, as part of the Global airport industry's response to the challenge of Climate Change.

 airport carbon accreditation
www.airportCO2.org

 airport carbon accredited
REDUCTION




Olivier Jankovec
Director General
ACI EUROPE


Giulio Corte
Programme Director
WSP



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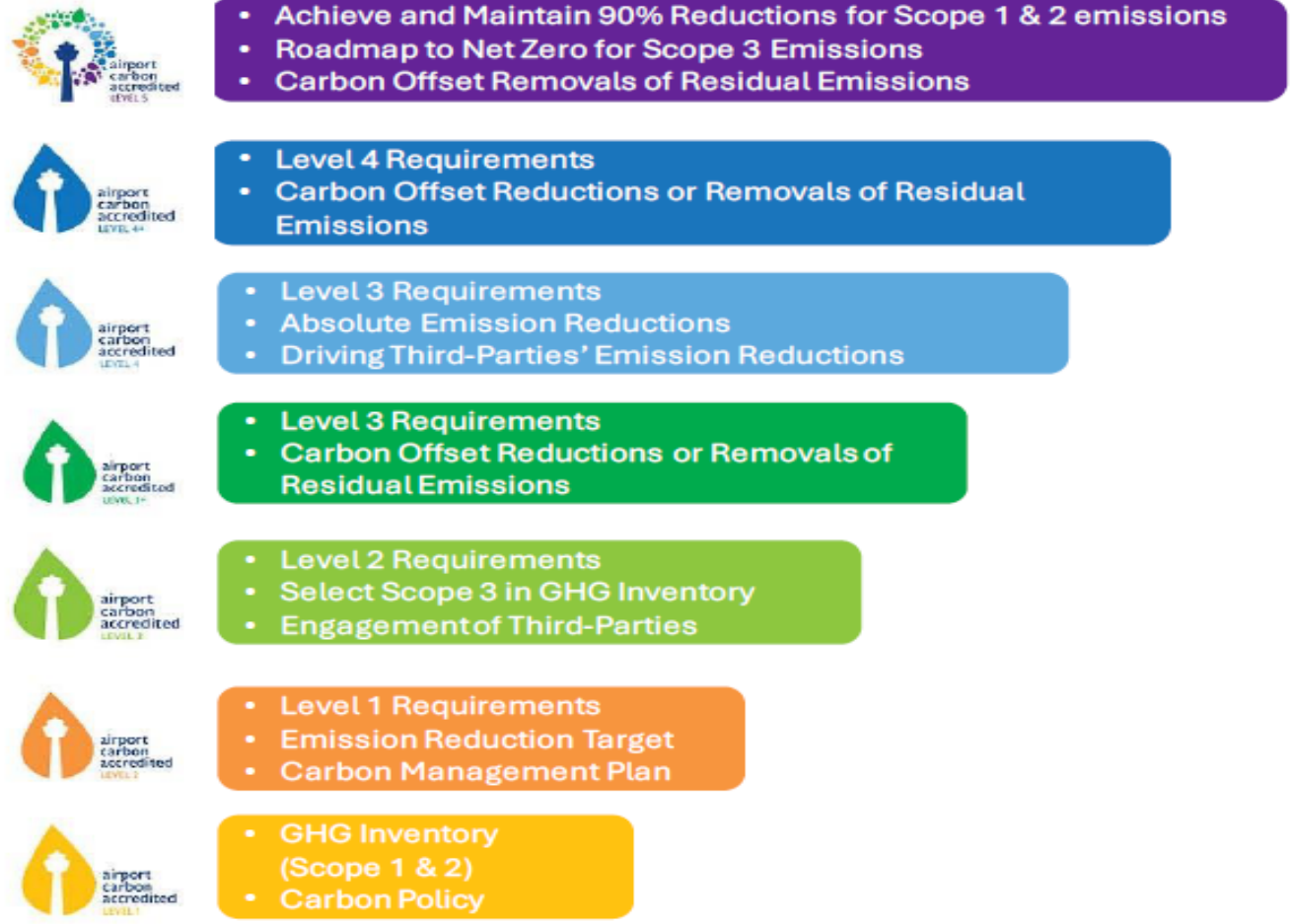


- With 43 Airports certified at different levels DHMI is recognized as « The airport operator with **the most ACA** accredited Airports.
- And with totally 50 Airports our country is **the third** in the World after France and the USA.



ACA Levels And Requirements

Figure 1 Airport Carbon Accreditation Levels and Requirements





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- 614 accredited airports around the World
- 50 accredited airports with different levels in Türkiye
- "Toulouse Declaration" approved by the European Union Council, which is the first public-private enterprise supporting the "target of achieving net zero CO2 emissions by 2050 of European Aviation" was approved by DHMI.
- DHMI joined the ACI commitment to airports to achieve Net Zero Emissions by 2050.

Level 1 (Mapping)

1 Airport Level 1 Mapping

Level 2 (Reduction)

43 Airports Level 2 Reduction

Level 3 (Optimisation)

2 Airports Level 3 Optimisation

Level 3+ (Neutrality)

2 Airports Level 3+ Neutrality

Level 4 (Transformation)

1 Airport Level 4 Transformation

Level 4+ (Transition)

1 Airport Level 4+ Offsetting

EMISSION SCOPES



Which emissions can occur at an airport?



Scope 1

Emissions from airport controlled sources

- 01 Vehicles/ground support equipment belonging to the airport
- 02 On-site waste management
- 03 On-site waste water management
- 04 On-site power generation
- 05 Firefighting exercises
- 06 Boilers, furnaces
- 07 De-icing substances
- 08 Refrigerant losses

Scope 2

Emissions from purchased electricity

- 09 Off-site electricity generation
 - A Heating
 - B Cooling
 - C Lighting

Scope 3

Emissions from upstream and downstream value chain

- 10 Goods: water, materials, products, ... (Cat. 1)
- 11 Services: construction, shuttle, ... (Cat. 1)
- 12 Capital goods: Buildings, surfaces, vehicles (Cat. 2)
- 13 Energy & Fuels production offsite (Cat. 3)
- 14 Waste & waste water management (Cat. 5)
- 15 Staff business travel (Cat. 6)
- 16 Staff Commute (Cat. 7)
- 17 Aircraft and APU operation, flights and MRO (Cat. 11)
- 18 3rd party vehicles/ground support equipment and de-icing (Cat. 11)
- 19 Passenger travel to the airport (Cat. 11)
- 20 Cargo, goods to the airport (Cat. 11)
- 21 Tenant energy and electricity (Cat. 13)
- 22 Franchises (Cat. 14)
- 23 Investments (Cat. 15)

Note: The presented list of possible emissions sources at the airport is not exhaustive. Furthermore, the operational structure of every airport is different. Therefore, not all of the depicted emissions sources are present at every airport.

Design: inextrimis.be - Illustrations: stock.adobe.com





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ACA Calculations

- **Scope 1**
Stationary Combustion
Transport Tools
- **Scope 2**
Purchased Electricity
Sold Electricity
- **Scope 3**
LTO, APU, Stekholders Emissions,
Public Transport, Employee Business Travel

DHMI ERZURUM AIRPORT 2023 GHG EMISSIONS		
SCOPE-1	Naturel Gas Heating Boiler (Kalorifer Kazanı)	850,54
	Diesel Heating Boiler (Gas/Diesel Oil)	105,84
	Generator	7,98
	Kitchen Tubes (LPG)	6,90
	Fire Drills (Yangın Tatbikatları)	1,82
	Diesel Cars (Dizel Araçlar)	221,27
	Gasoline Cars (Benzinli Araçlar)	8,01
	Equipment Diesel (Ekipmanlar-Dizel)	2,76
	Equipment Gasoline (Ekipmanlar-Benzin)	2,84
	Mobile Generator, tractors	-
	Employee Transportation (Çalışan Taşımacılığı)	75,48
	Scope 1 Total	1284,00 ton CO2e
SCOPE-2	Purchased Electricity (Satın Alınan)	1.710,47
	Sold Electricity (Tenants) (TUM)	42,02
Scope 2 Total	1668,45 ton CO2e	
Scope 1+ Scope 2		2952,45 ton CO2e
SCOPE-3	LTO	6.990,00
	APU	589,00
Scope 3 Total		7579,00 ton CO2e



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Total GHG Emissions, exclude Biofuel CO2 (metric tonnes CO2e)	80,625
Biofuel CO2 Emissions (metric tonnes)	0

Activity Data The default emission factors are sourced from the US EPA Climate Leaders program or from the UK DEFRA (for air travel only).

Status	Source Description	Region	Mode of Transport	Scope	Type of Activity Data	Activity Data						Error Messages	GHG Emissions					
						Vehicle Type (For air transport, see footnote)	Distance Travelled	Total Weight of Freight	# of Passenger	Units of Measurement	Fuel Used		Fuel Amount	Unit of Fuel Amount	Fossil Fuel CO2 (metric tonnes)	CH4 (kilograms)	N2O (kilograms)	Total GHG Emissions, exclude Biofuel CO2 (metric tonnes CO2e)
Equipment Gasoline	Other	Road	Scope 1	Fuel Use						Gasoline*Litre	891.19	Litre		2,021			2,021	
Employee Transport	Other	Road	Scope 1	Vehicle Distance (e.g. Road Transport)	Light Goods Vehicle - Diesel - Year 1580-present	15395								5,985			5,985	
Diesel Vehicles	Other	Road	Scope 1	Fuel Use						On-Road Diesel Fuel	25021.87	Litre		68,395			68,395	
Gasoline Vehicles	Other	Road	Scope 1	Fuel Use						Gasoline*Litre	2483.5	Litre		5,853			5,853	

- Scope 1
- Transport Combustion
- Equipments
- Employee Transport
- Vehicles

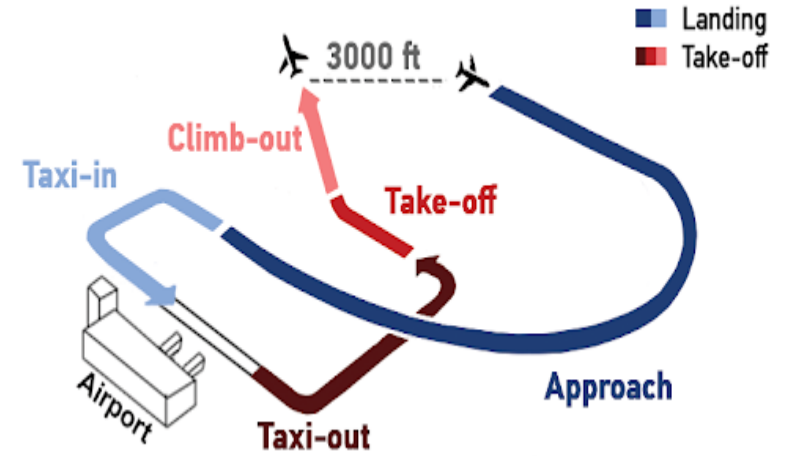
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	Equipment Gasoline	Other	Road	Scope 1	Fuel Use
	Employee Transport	Other	Road	Scope 1	Vehicle Distance (e.g. Road Transport)
	Diesel Vehicles	Other	Road	Scope 1	Fuel Use
	Gasoline Vehicles	Other	Road	Scope 1	Fuel Use



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- Scope 3 Emissions;
- LTO,
- APU,
- Stakeholders Emissions,
- Public Transport,
- Employee Business Travel





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- Applying via aca@environmental-minds.com (Environmental Minds is ACA Administrator)
- Select Level
- Annual Passenger Number
- Pay Fee
- Get an Account
- Upload all Calculations and necessary Documents
- Find a Verifier (QSI Certification & Verificator)
- Renew all this processes annually.

Accreditation Level
Footprint
✓ Verification Credentials
✓ Organisational Boundary
✓ Operational Boundary
✓ Verify Boundaries
✓ Benchmarks
✓ Carbon Footprint
✓ Verify Carbon Footprint
Management
✓ Carbon Reduction Policy
✓ Verify Application Completion
Verification Summary
Submit

Draft	Verifier Review	Airport Review	Admin Review	Approved
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Application Overview

Application Details	
Date Started	25 Nov 2022
Airport	KonyaAirport
Airport Band	
Accreditation Level	Level 1
Questions Answered	17
Questions Remaining	0
Verifier	Okay Kayhanli
Verification Type	Verification completed off-site

Uploaded Documents

Footprint	
Organisational Boundary	
KONYA Havalimani Karbon Emisyon Raporu 2021.docx	[Added by Airport] [Added at Draft stage]
Carbon Footprint	
Elektrik Kapsam 2 KONYA_2021.xlsx	[Added by Airport] [Added at Draft stage]
Hareketli Yanmali Kap 1 KONYA 2021.xlsx	[Added by Airport] [Added at Draft stage]
Sabit Yanmali Kapsam 1 KONYA 2021.xlsx	[Added by Airport] [Added at Draft stage]
DHİM_Konya Airport_Emission-2021.xlsx	[Added by Airport] [Added at Airport Review stage]
Management	
Carbon Reduction Policy	
Integrated Environmental Company Policy.jpg	[Added by Airport] [Added at Draft stage]
ISL.CYS.PRJ.KARBONSUZ HAVALIMANI PROJESİ UYGULAMA ESASLARI DOKÜMANI.tr.en.docx	[Added by Airport] [Added at Draft stage]

Application Report

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Application Page

- Draft
- Verifier Review
- Airport Review
- Admin Review
- Approval

Accreditation Level
Footprint
✓ Verification Credentials
✓ Organisational Boundary
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Application Report

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Mitigation Measures:

Renewable Energy Investments

Solar Pannels





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Mitigation Measures:

Required activities have initiated to obtain the TS EN ISO 50001 Energy Management System Certificate.





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Mitigation Measures:

3 airports Tri-generation plant where electricity is generated by natural gas.





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Mitigation Measures:

Converting Heating Systems
From Fuel Oil to Natural Gas
(LNG,LPG, CNG)

Replacing end-of-life systems with
energy efficient systems.





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Mitigation Measures:

Lighting and HVAC
(Heating, ventilation, and air
conditioning) processes are
all being controlled via
automation.





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Mitigation Measures:

- The ground services and other vehicles at the airport are changing to electric vehicles. 145 TOGG (National Production Electric Car) Vehicles were procured and initiated to be used at our airports as follow me vehicles.





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Mitigation Measures:

- In order to support the procurement and use of electric vehicles instead of fossil fuels in the ground services, a clause was added to the 2025 Fee Tariffs that would charge a 50% fee for the electric vehicles are used instead of fossil fuel vehicles.





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Mitigation Measures:

Converting to LED lighting
Terminal and Outdoor





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Mitigation Measures:

Greening works inside and outside the airport terminal





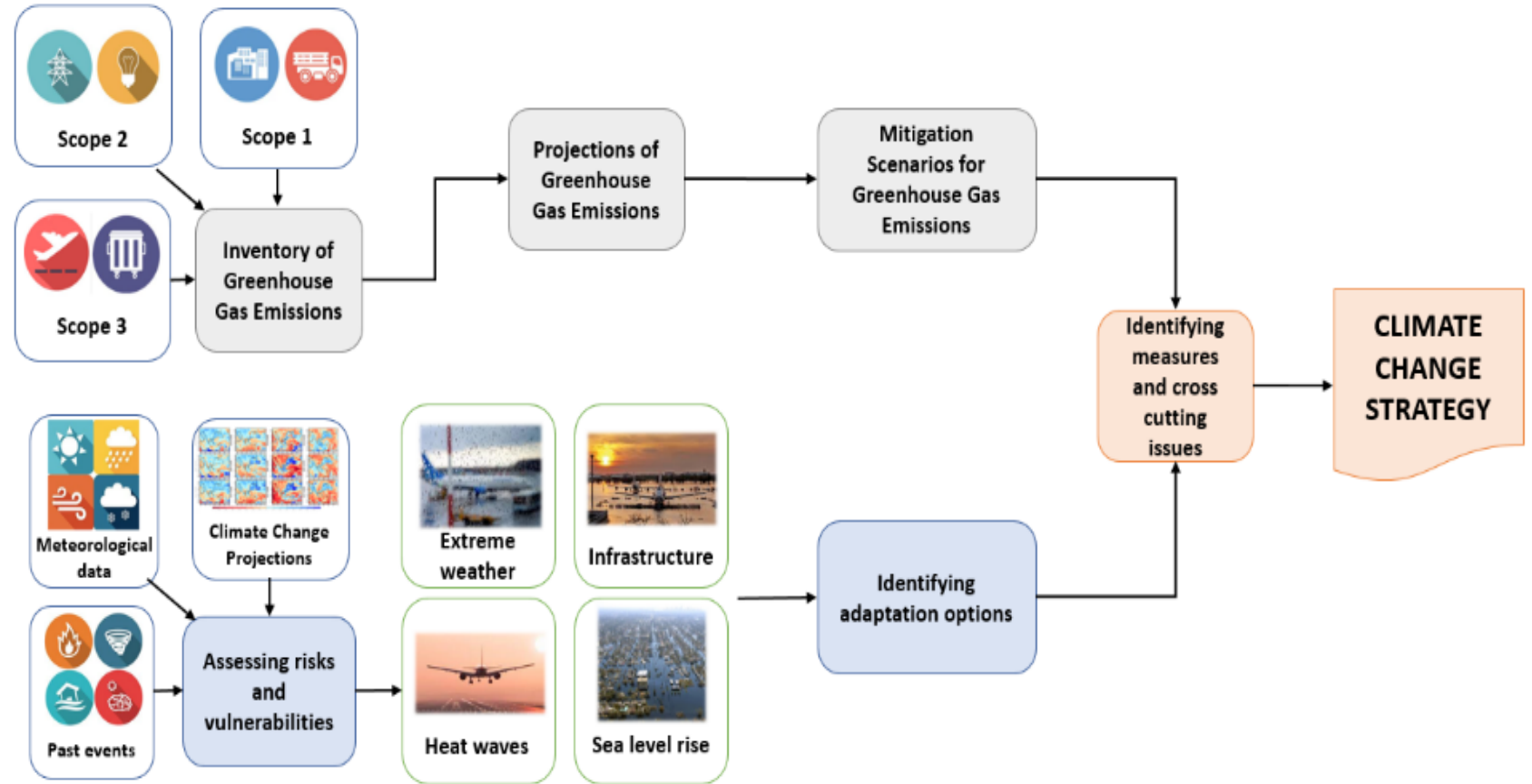
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Mitigation Measures:

Project: Preparation of Climate Change Strategies for airports

The Scientific And Technological Research Council Of Türkiye





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State Action Plan:

- Latest SAP published on 2018, for the period of 2018-2021
- New SAP of Türkiye will be published after National SAF Roadmap is prepared.
- The baseline scenario is selected in the absence of any of the mitigation actions. The data used (2010, 2016) and forecasts (for 2020, 2030 and 2040) were provided by EUROCONTROL for this purpose.

State Action Plan of TURKEY

ICAO State Action Plan
for
Emission Reduction
TURKEY





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State Action Plan:

- **Measures taken at Supranational Level**
- Emission reductions at source
- Research and development on emission reductions technologies
- Development and deployment of low-carbon, sustainable alternative fuels
- Improvement and optimisation of Air Traffic Management and infrastructure
- Market Based Measures; purchase of carbon units that foster emission reductions in other sectors of the economy



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CORSIA:

- Turkey has voluntarily implemented CORSIA since the pilot phase.
- Domestic and international flights are included in the MRV System.
- Airlines exceeding the limit value must offset their emissions for the 2024-2026 period in accordance with offset requirements.
- There are numerous projects generating credits under CORSIA.
- Türkiye continues its intensive efforts under the Ministry of Environment, Urbanization and Climate Change, to produce its own A Letter of Agency (LOA) certificate.



Thanks for listening

Sustainable Environment, Sustainable Airports...

