



PRISHTINA INTERNATIONAL AIRPORT “ADEM JASHARI”  
LIMAK KOSOVO INTERNATIONAL AIRPORT J.S.C

## CARBON FOOTPRINT ANNUAL REPORT 2021



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## 1. INTRODUCTION

Carbon Footprint Report 2021 is the eighth report that Limak Kosovo International Airport JSC has prepared, and it estimates the 2021 Greenhouse Gas emissions inventory. Precisely, this report reflects all the carbon footprint data of LKIA as: detailed emissions data, calculations, increases and reductions, activities, green initiatives, involvement, and engagement of stakeholders of stakeholders in our initiatives, the environmentally friendly project we invested and everything that lead to the accreditation with level 3+ renewal of Airport Carbon Accreditation. The methodologies used are all in accordance with ACA Guidance and GHG emission programs.

By continually measuring the GHG emissions emitted through our operations, we continue to develop and improve our carbon management strategy and identify new opportunities for carbon reduction. Thus, demonstrating commitment and effort for a healthier environment and a greener airport.

### 1.1 Reporting period

The reporting period covers the detailed carbon emissions data from 1 January 2021 to 31 December 2021, compared to the previous year (2020) figures and to a three-year rolling average, respectively 2017-2018-2019 excluding 2020 due to the pandemic as per request of Airport Carbon Accreditation. Data of 2020 are only for internal information and use.

## 2. ORGANIZATIONAL AND OPERATIONAL BOUNDARIES

### 2.1 Organizational Boundaries

Limak Kosovo International Airport's organizational and operational boundaries and structures remain the same. For any further details please refer to the previous report Carbon Footprint Report 2019.

If any change occurs within Limak Kosovo International Airport's footprint boundaries and/or sources, there will be an immediate update.

## 3. CALCULATION METHODOLOGY AND SCOPE EMISSIONS

Limak Kosovo International Airport's Greenhouse Gas emission footprint is calculated using the guidance of Greenhouse Gas Protocol (<http://www.ghgprotocol.org/>) and all the process is done under the guidance manual: Airport Greenhouse Gas Emissions Management (<http://www.aci.aero/Publications/Full-Publications-Listing/Guidance-Manual-Airport-Greenhouse-Gas-Emissions-Management>) and Airport Carbon Accreditation Guidance Document Issue 11 (<http://www.airportcarbonaccredited.org/>).

Based on their emission sources, GHG emission calculations are divided into three parts: Scope 1, Scope 2 and Scope 3.

### 3.1 Scope 1 emissions and calculation method

Direct emissions from sources that Limak Kosovo International Airport JSC owns or controls as;

- **Stationary Sources**
  - Heating facilities
  - Emergency generators
  - Rescue Firefighting Service exercises

- **Mobile Sources**
  - Transport (landside and airside operations) for every unit
- **Process Emissions**
  - Water management/consumption
- **Other**
  - Leaks from plants/other gases
  - Wastewater treatment system

Entire calculations covering scope 1 emission sources are measured by Greenhouse Gas Protocol Calculation Tools.

Worth mentioning is that wastewater treatment system emissions are not calculated because of the minor amount of emissions, while refrigerants (compounds used for refrigeration and air condition) are taken in account just in case of leaks.

### **3.2 Scope 2 emissions and calculation method**

Greenhouse gas emissions from purchased electricity, where emissions are generated externally but attributed to energy consumption at the airport.

The electricity of Kosovo relies on coal-fired power plants (97%). KEDS (Kosovo Energy Distribution Service) is the only licensed distributor and the regulation of activities in energy sector in Kosovo is the responsibility of the Energy Regulatory Office. For this reason, Limak Kosovo International Airport purchased electricity is calculated only in location-based.

The purchased electricity is calculated manually because of Kosovo missing as a region at the table. Kosovo electricity emission factor data is taken from The International Energy Agency (<http://www.iea.org>).

All of these tools are checked periodically in order to prevent errors of emission calculations, especially emissions factor of electricity in Kosovo to avoid the possible mistakes. No changes have been observed according to emissions factors for Kosovo therefore LKIA continues to calculate the purchased electricity on a location-based method.

### **3.3 Scope 3 emissions and calculation method**

All other indirect emissions from other sources, not controlled but related to the activities of the airport as:

- Flights/LTO Cycle
- Employee transport/private cars
- Employee transport/bus
- Cargo activities/Export Activities
- Municipality Waste
- Passenger & Visitor Car
- Business travel
- Re-sold Electricity
- Re-sold Water
- Construction Activities

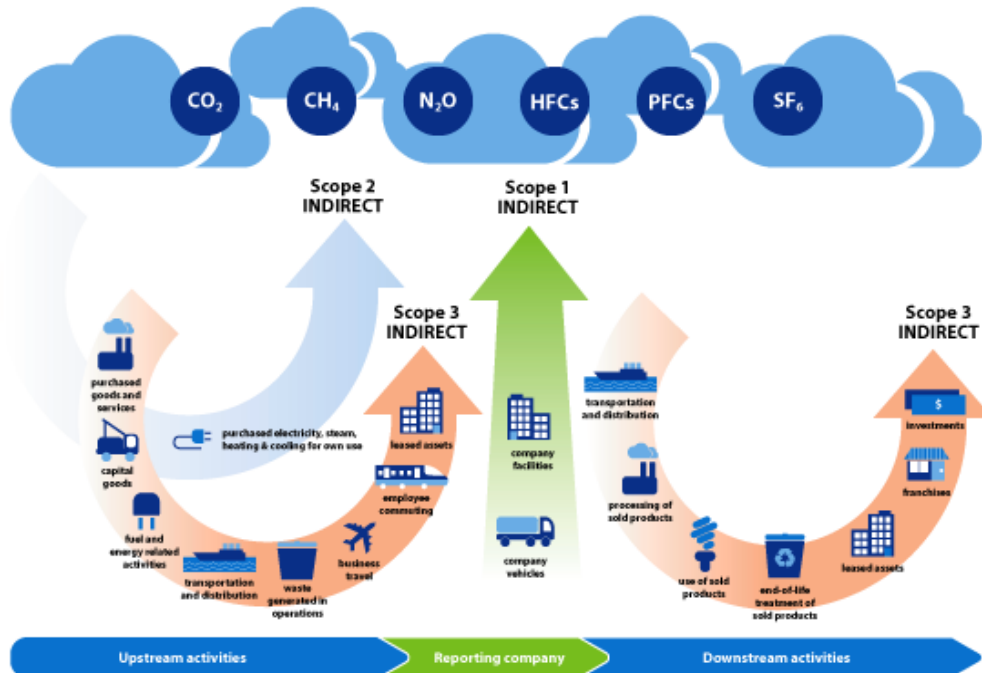
Including different emission sources, for scope 3 emissions are used different calculation methods such as GHG Protocol, ICAO Emission Calculator and ACERT Carbon Emission Calculation Tool.

- The ICAO Carbon Emissions Calculator allows us to estimate the emissions attributed to air travel, precisely our business travel emissions. It is simple to use and requires only a

limited amount of information the methodology applies the best publicly available industry data to account for various factors such as aircraft types, route specific data, passenger load factors and cargo carried.

- For flights or emissions generated during approach, taxi and ground idle (in), taxi and ground idle (out), take-off and landing, Limak Kosovo International Airport uses the ACERT Carbon Emission Calculation tool with option of detailed aircraft data based on annual movements.
- Greenhouse Gas Protocol Tools are used for employee transport and service bus based on interviews and checklists that are made with employees for their travel method under Mobile Combustion Tool.
- Cargo activities emissions are also calculated under GHG Mobile Combustion Tool with the characteristics of Weight Distance (Freight Transport), based on the exported cargo data (tone Kilometer)
- Municipality waste is calculated under GHG Protocol Calculation Tool based on solid fossil as fuel type and used fuel municipality waste (non-biomass fraction).
- Number of passenger cars is calculated under GHG Mobile Stationary Tool, based on vehicle distance (road transport). According to Ministry of Infrastructure of Kosovo the most used fuel type is diesel, therefore we calculate our emissions based on passenger car – diesel type.
- External users for electricity and water consumption are calculated in the same way as for Scope 1 and Scope 2 emissions. Emissions are netted off Scope 1 and Scope 2 then be included in Scope 3.

Every calculation methodology is regularly checked for any update or change.



## 4. BASE YEAR

LKIA monitors and measures its carbon emissions since 2014, however the data needed and presented in this report includes the period from 2017 until 2021.

### 4.1. Data collection

Carbon emissions are analyzed and calculated separately for each scope because they include different emissions sources. Calculations include like-for-like comparison method for all scopes and according to three-year rolling average (2017-2018-2019) for scope 1 and scope 2 emissions. These methods help us to continuously improve our carbon management performance.

#### Scope 1

Emission Source	Units	Resolution	Calculation Method
Heating facilities	Liter (L)	By site, per month	GHG Protocol Tool
Emergency Generator	Liter (L)	By site, per month	GHG Protocol Tool
LKIA Transport	Liter (L)	By units, per month	GHG Protocol Tool
Water Consumption	Meter Cubic (m <sup>3</sup> )	By site, per month	DEFRA Factor Emission
Rescue Firefighting Service Exercises	Liter (L) & Kilogram (Kg)	By site, per month	GHG Protocol

#### Scope 2

Emission Source	Units	Resolution	Calculation Method
Purchased Electricity	Kilowatt per hour (kWh)	By invoices, per month	International Energy Agency Factor Emission

#### Scope 3

Emission Source	Units	Resolution	Calculation Method
Flights/LTO Cycle	Aircraft data/ Annual movement	By aircraft movements, annually	ACERT Carbon Emission Calculation Tool
Employee transport (Private Cars)	Distance (Km)	Single figure	GHG Protocol Tool
Employee Transport (Bus)	Distance (Km)	Single Figure	GHG Protocol Tool
Cargo Activities/Export	Ton/kilometer		
Municipality Waste	Kilogram (Kg)		
Passenger & Visitor Car	Distance and number of cars	By site, per month	GHG Protocol Tool
Business Travel/Flights	Aircraft types, passenger load factors and cargo carried	By journey, per month	ICAO Calculator
Re-sold Electricity	Kilowatt per hour (kWh)	By site, per month	International Energy Agency Factor Emission
Re-sold Water	Meter Cubic (m <sup>3</sup> )	By site, per month	DEFRA Factor Emission
Construction activities	Liter (L)	By construction site, by contractors	GHG Protocol Tool

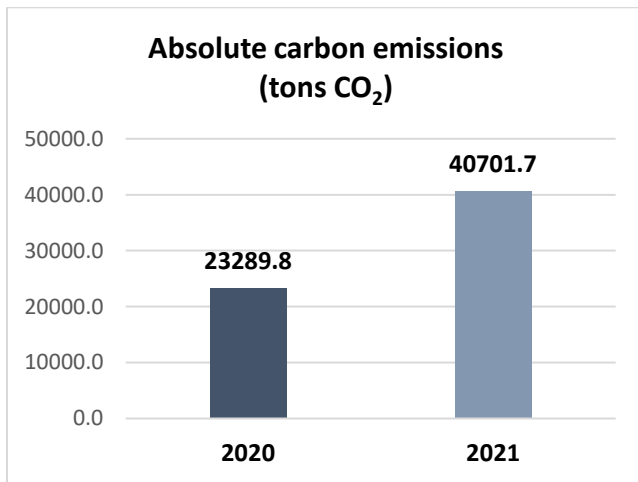
## 5. CARBON FOOTPRINT PROGRESS

The pandemic which started in 2020 and is still on-going, has stopped many operations which had a positive effect by reducing carbon emissions. While during 2021 operations started to function which in parallel increased carbon emissions. All this situation has deviated the linearity of carbon emission figures.

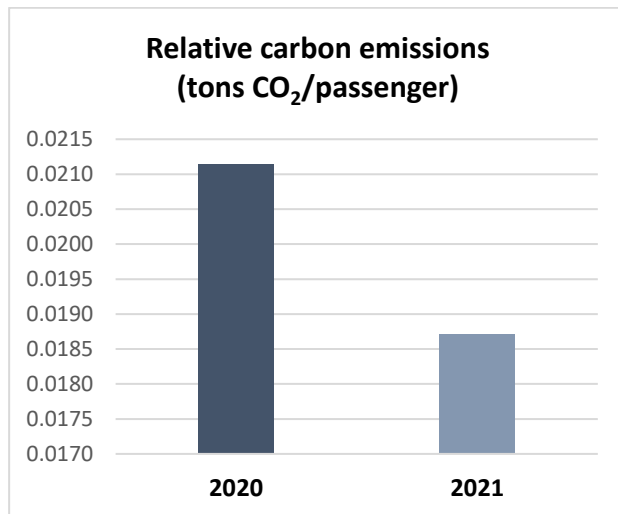
Carbon emission data covering all three scopes are presented below.

### 5.1 2020/2021 Three scopes data comparison

For absolute carbon emissions of scope 1, scope 2 and scope 3 with a *total 40701 tonsCO<sub>2</sub> emitted in 2021* we had an increase by 75% compared to 2020 data. While for relative emissions (tonsCO<sub>2</sub>/passengers) in 2021 we had a reduction of 11%.



**75% Increase**

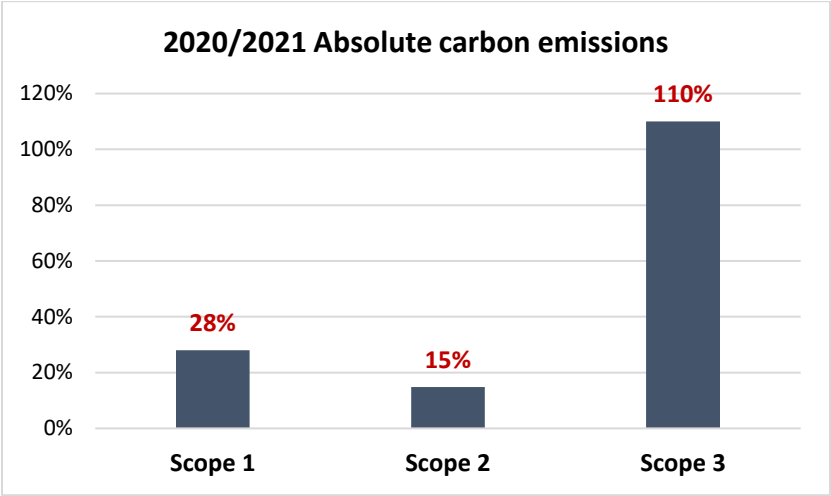


**11% Reduction**

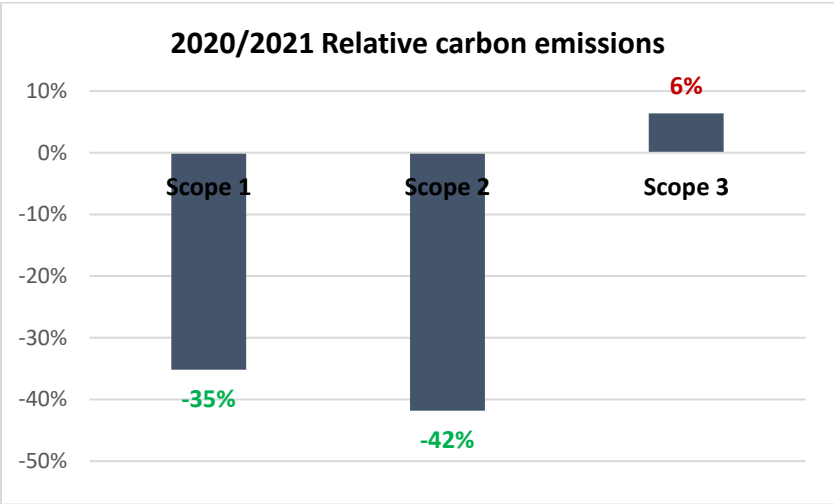




When we compare the data 2020/2021 for each scope separately, we can see that due to the start of the operations there is an increase in each of them.



When we involve the passenger's number into our values, which had a 97% increase in 2021, the relative carbon emission differs from the absolute.

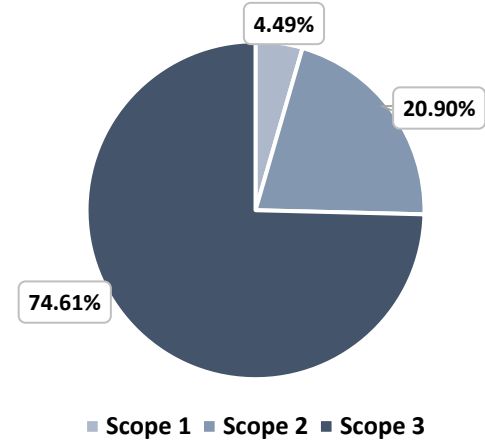
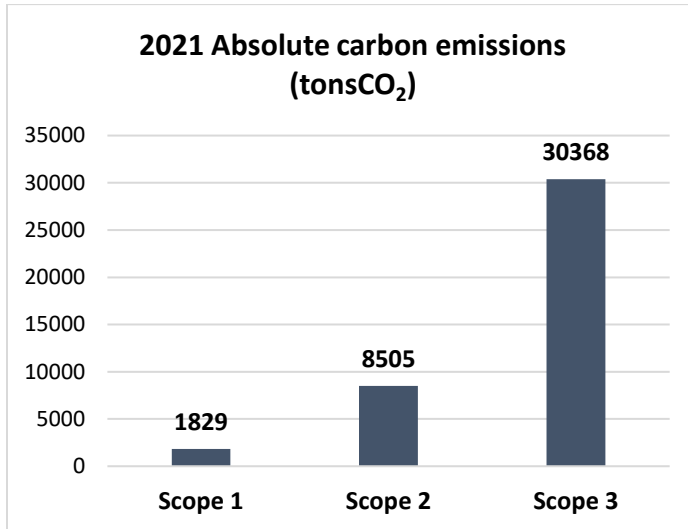


Something we must consider is that scope 1 among others presents heating and water treatment, and scope 2 presents emissions from purchased electricity which have operated even in 2020 when the airport operations were at lowest and despite the change of the passenger number to make sure airport is always available and fully operative.

## 5.2 All scopes summary of 2021

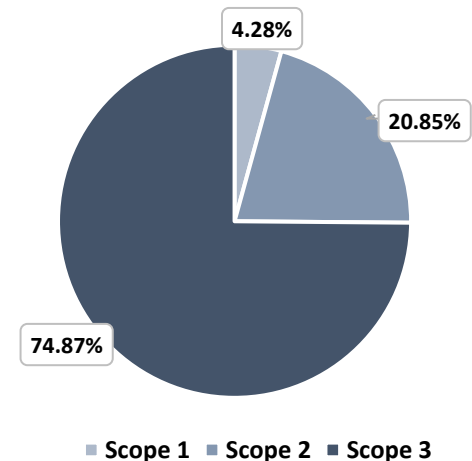
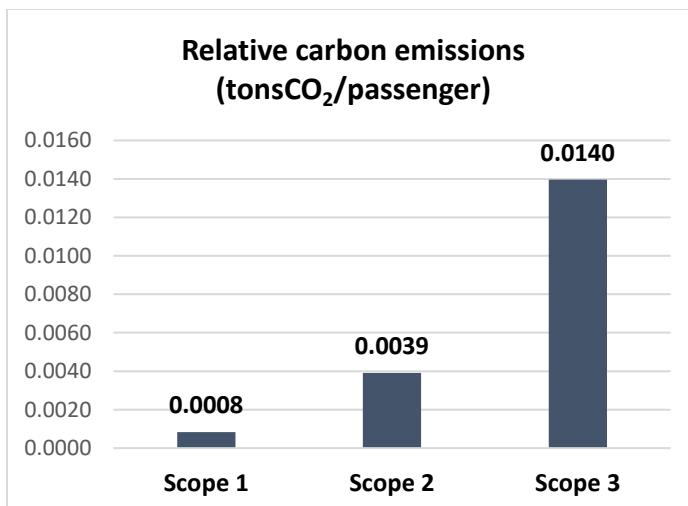
### *Absolute carbon emissions (TonsCO<sub>2</sub>)*

Scope 3 is responsible for the highest amount of carbon emissions at LKIA, while scope 1 is responsible for the lowest.



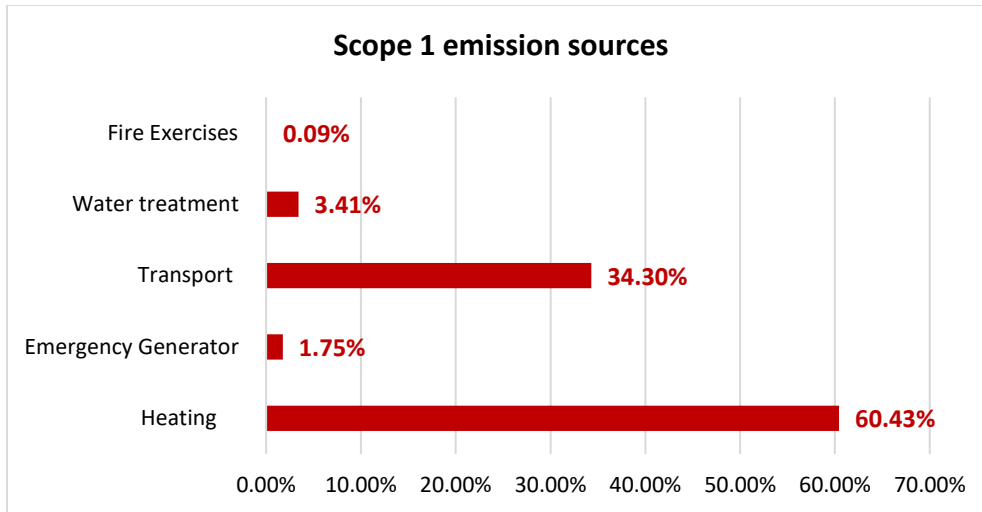
### *Relative carbon emissions (TonsCO<sub>2</sub>/passengers)*

As per absolute carbon emissions, the same also goes for the relative carbon emissions. Scope 3 is responsible for the highest amount of carbon emissions, while scope 1 represents the lowest.



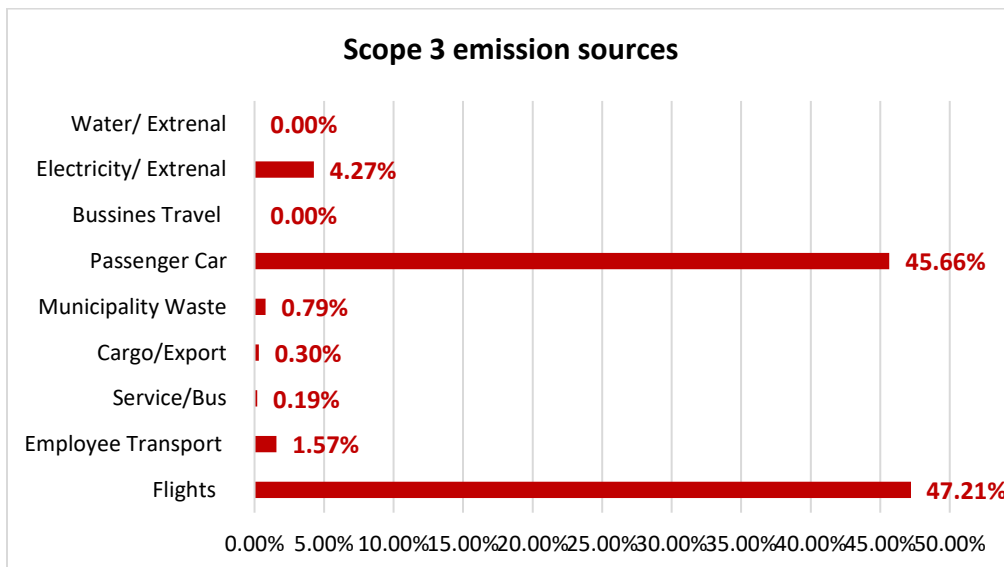
### 5.2.1 Scope 1 emissions figures by their sources

From a total of 1828.94 tonsCO<sub>2</sub>, scope 1 carbon emissions are dominated by heating facilities with 60.43% and transport with 34.30%, while other scope 1 emission sources are minor.



### 5.2.1 Scope 3 emissions figures by their sources

Scope 3 emissions include different major sources that we do not control therefore we only monitor, advise and measure their emissions. From a total of 30368.08 tonsCO<sub>2</sub>, scope 3 carbon emissions are dominated by landing & take-off cycle of aircraft (LTO cycle) with 47.21%, passenger & visitor transport with 45.66% and external electricity with 4.27%, while the other scope 3 carbon emission sources are minor.



### 5.3 Airport Carbon Accreditation calculation method

Based on ACA calculation requirements we compared the present year carbon emissions to the average of three-year rolling, respectively 2017-2018-2019. Year 2020 as mentioned earlier is excluded from the calculation due to the pandemic, where all emission figures changed significantly after Limak Kosovo International Airport JSC had low operation for a long period of time.

These analyses include only Scope 1 and Scope 2 figures because we can control and can act directly over them for any reducing possibilities, different from Scope 3 where we can only advice.

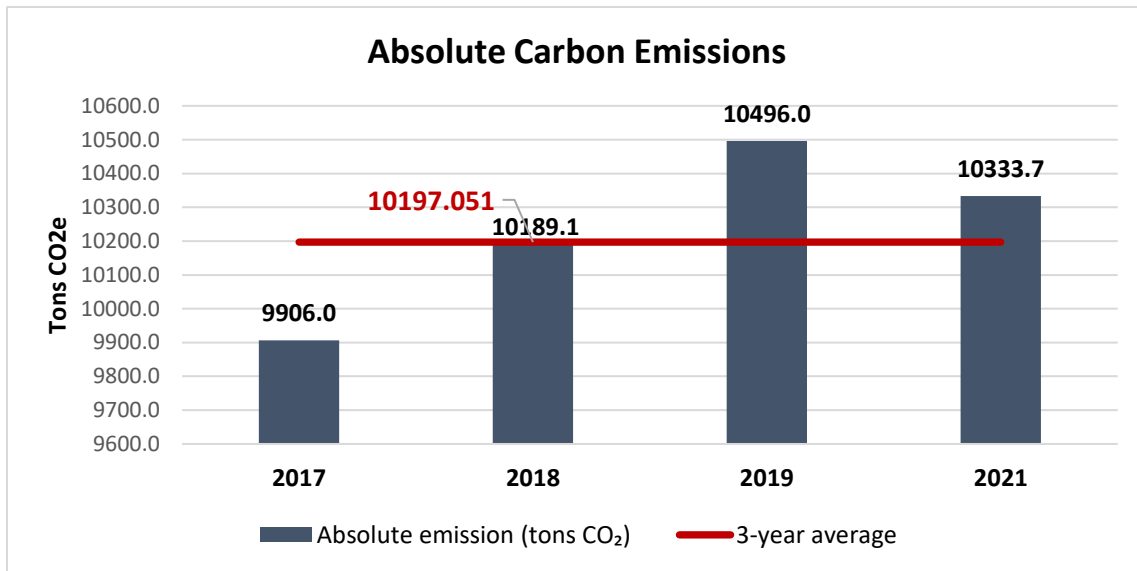
The detailed analysis is presented below:

The data of absolute carbon emissions for each year is:

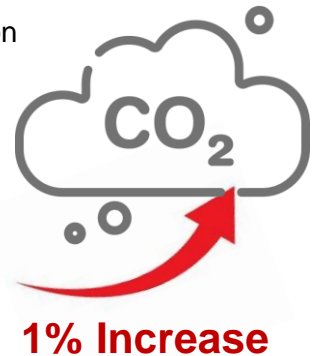
- **2017** corresponds for 9906.014 tonsCO<sub>2</sub>e.
- **2018** corresponds for 10189.113 tonsCO<sub>2</sub>e
- **2019** corresponds for 10496.025 tonsCO<sub>2</sub>e.
- **2021** corresponds for 10333.656 tonsCO<sub>2</sub>e.

The average figure of 2017-2018-2019 absolute carbon emissions is:

- **10197.051 tonsCO<sub>2</sub>**



Comparing 2021 carbon emissions to the three-year average carbon emission (2017-2018-2019) there is a 1% increase.



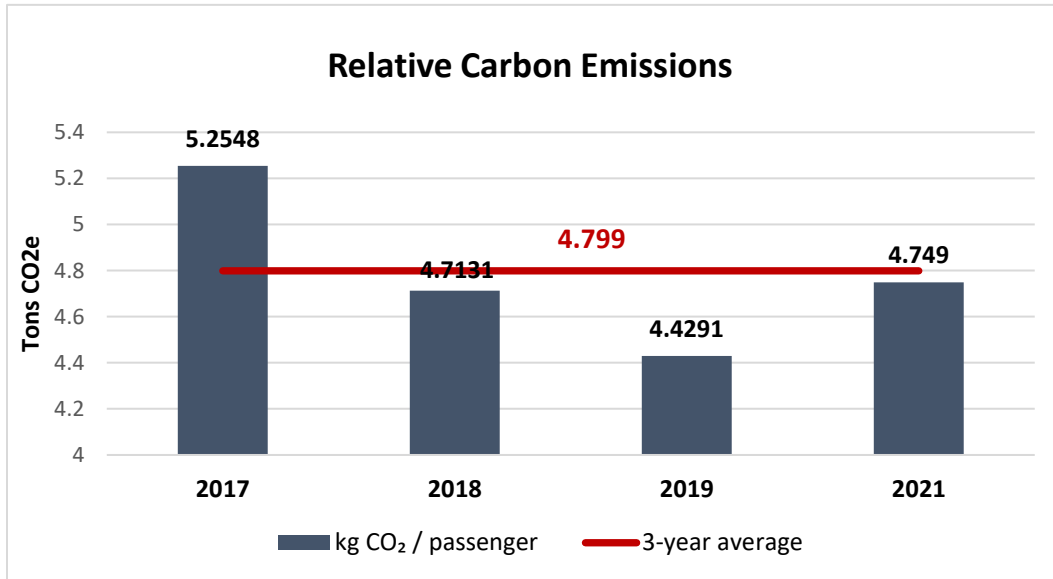
Relative carbon emissions are directly indicated by the number of passengers.

The data of relative carbon emissions for each year is:

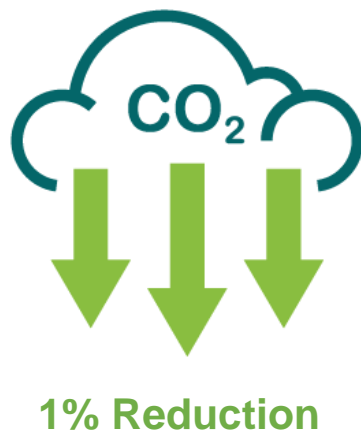
- **2017** corresponds for 5.2548 kgCO<sub>2</sub>/passenger
- **2018** corresponds for 4.7131 kgCO<sub>2</sub>/passenger
- **2019** corresponds for 4.4291 kgCO<sub>2</sub>/passenger
- **2021** corresponds for 4.7490 kgCO<sub>2</sub>/passenger

The average figure of 2017-2018-2019 relative carbon emissions is:

➤ **4.799 kgCO<sub>2</sub>/passenger**




Comparing 2021 relative carbon emission to the three-year average (2017-2018-2019) relative carbon emissions, we have a 1% reduction.



## 6. NEUTRALITY RENEWAL CERTIFICATION

One of our main objectives was to get accredited with the Level 3+ Neutrality Renewal, and we are happy to achieve it. To achieve it Limak Kosovo International Airport first had to reduce to scope 1 and scope 2 emissions as much as possible. Afterwards, we had to offset its residual emissions that cannot be reduced, alongside with scope 3 emissions from staff business travel. The credibility of the carbon neutrality status is thus depending on the quality of the offset credit used. Therefore, we selected offsets from the United Nations – Carbon Offset Platform. In total 10,498 tonCO<sub>2</sub> were voluntary offsetted.



United Nations  
Framework Convention on  
Climate Change

DATE: 22 NOVEMBER 2021  
REFERENCE: VC21369/2021

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**VOLUNTARY  
CANCELLATION  
CERTIFICATE**


Presented to  
Limak Kosovo International Airport J.S.C

Reason for cancellation  
I am offsetting greenhouse gas emissions for my company

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Number of units  
cancelled

**10,498 CERs**  
Equivalent to 10,498 tonne(s) of CO<sub>2</sub>



Start serial number: CL-5-21564765-1-1-0-4229  
End serial number: CL-5-21575262-1-1-0-4229

The certificate is issued in accordance with the procedure for voluntary cancellation in the CDM Registry. The reason included in this certificate is provided by the cancellor.

The residual emissions were offsetted by investing in a hydro project that generates electricity from flowing water. They reduce the need to burn fossils fuels to generate the power. The purpose of this project was to utilize the hydrological resources of the Tinguiririca, Portillo and Azufre Rivers in a run of river scheme to generate and supply zero emission energy to the Chilean central electricity grid (SIC). The power plant generates certified emission reductions (CERs) by displacing electricity generation from grid connected fossil fuel-fired power plants that would otherwise be generating electricity.

Some of the project benefits include:

- Preserving natural resources
- Promoting renewable energy generation
- Reducing dependency on non-renewable resources
- Helping spread green technology worldwide
- Improving health

As a result, we got certified with the Level 3+ Neutrality Renewal.

## CERTIFICATE of ACCREDITATION

Valid until the 5th August 2022

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

**PRISHTINA INTERNATIONAL AIRPORT**  
implemented by **Limak Kosovo International Airport J.S.C.**

have earned the accreditation level of **NEUTRALITY**, in recognition of the airport's exemplary work in reducing its CO<sub>2</sub> emissions, engaging other stakeholders to do the same and compensating responsibly the residual CO<sub>2</sub> emissions under its control, as part of the Global airport industry's response to the challenge of Climate Change.



  
Olivier Jankovec  
Director General  
ACI EUROPE

  
Simon Clouston  
Director  
WSP

## 7. CARBON MANAGEMENT PLAN 2021 HIGHLIGHTS

Through Airport Carbon Accreditation Guidance and Greenhouse Gas Protocol, implementing and maintaining mitigation methods within the frame work of the Carbon Management Plan, implementing environmental, energy and carbon management objectives, performing audits, identifying nonconformities regarding energy saving and efficiency as well as greenhouse gas emissions impact we monitor and keep under control our carbon emissions, electricity consumption, water consumption, fuel consumption while continuously try to raise awareness regarding environmental importance within our staff and stakeholders.

Due to the pandemic, environmental activities were limited especially joint activities.

- Continual implementation of office paper recycling program, which significantly raised our paper recycling figures
- Continual replacement of broken lamps with new energy efficient LED lamps
- Continual replacement of broken computer with new laptops in cooperation with ICT unit
- Continuously raise environmental awareness through emails, trainings and meetings, joint initiatives, awareness stickers etc
- Energy and Carbon Management System internal audits to all LKIA units
- Environmental Management System internal audits to all LKIA units
- Implement Environmental, Energy and Carbon Management Objectives

- Implement Environmental Calendar 2021 and improve it with new activities
- Recertified with ISO 50001:2018 Energy Management System
- Recertified with ISO 14001:2015 Environmental Management System
- Monitoring and implementing all requirements according to ISO 50001 and Airport Carbon Accreditation
- Stakeholder Engagement Meeting
- Get accredited with Airport Carbon Accreditation Level 3+ Neutrality Renewal



### 7.1 Activities to-do

- Continuously raise environmental awareness through email, awareness trainings and meetings, joint initiatives, stickers, etc.
- Perform site visits within LKIA area including checking water tab sensors, lightning time sensors, etc.
- Implement “Increase Lightning Efficiency” Project – which includes the change of all Apron and Airport premises lights to LED ones.
- Implementing Environmental Objective and Targets 2022
- Implementing Environmental Calendar 2022 and improving it with new activities.
- Monitoring and implementing all requirements according to ISO 50001 and Airport Carbon Accreditation.
- Apply for three-year Renewal Level +3 Neutrality