



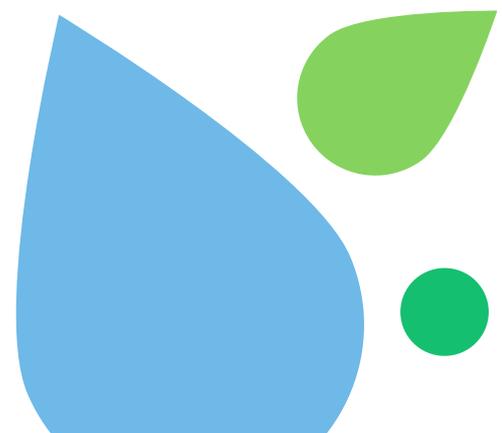
# ANNUAL REPORT

2013-2014 | June 14



airport  
carbon  
accreditation

MAPPING | REDUCTION | OPTIMISATION | NEUTRALITY





---

**HELPLINE: +44 845 868 2708**  
**[aca@wspgroup.com](mailto:aca@wspgroup.com)**

# Contents

	<b>Highlight</b>	5
<b>1</b>	<b>Airport Carbon Accreditation – An Overview</b>	7
<b>2</b>	<b>Participation</b>	13
<b>3</b>	<b>Carbon Performance of Accredited Airports</b>	21
<b>4</b>	<b>Case Studies</b>	31
<b>5</b>	<b>Programme developments during Year 5</b>	37
<b>6</b>	<b>Looking ahead to Year 6</b>	41
	<b>Participation list</b>	43



# Highlights

**This annual report reflects the developments of the Airport Carbon Accreditation programme in its fifth year 2013-2014 but also provides some historical context since the programme's inception in June 2009, and moving forward to 2014-2015.**

The inaugural annual report of **Airport Carbon Accreditation** covered the year 2009-2010 as evidence of the Airports Council International (ACI) EUROPE commitment to publically report on how airports are measuring, managing, and continuously reducing their carbon and energy emissions. Firstly, emissions under the direct control of an airport, and then progressively on a wider airport basis. The report provided a detailed introduction to the programme requirements and management structure, as well as programme uptake and achievements in Year 1. It also showcased examples of airport experiences in the accreditation process and best practice in airport carbon management. (This feature has continued with every subsequent report).

A second annual report followed for the year 2010-2011. It focussed on how **Airport Carbon Accreditation** is based on current international conventions in greenhouse gas (GHG) emissions reporting and how the institutional endorsement behind the programme from key European and international intergovernmental bodies was a key factor to the programme's success. It also outlined the benefits of participation and the participation trends. During the second reporting year, the number of certified (accredited) airports more than doubled with a wide range of some of the busiest airports in Europe. The report carried the bottom line message that ambitious carbon and energy management is essential to delivering efficient and sustainable airport operations.

By the time the third annual report was issued for the year 2011-2012, it had become clear, with the extension of the programme to ACI Asia-Pacific airports, that **Airport Carbon Accreditation** was successfully providing a common framework through which airports could reduce their climate change impacts, reduce their operational costs and improve efficiencies. Again, airport participation in the programme increased significantly and a number of airports upgraded from the level achieved in Year 2, thereby demonstrating that airports were moving through the four performance levels of the programme (Mapping, Reduction, Optimisation and Neutrality).

The fourth annual report for 2012-2013 established that **Airport Carbon Accreditation** had reached a defining moment, and had become the industry reference standard for airport carbon mapping and management. The fourth report also showed that year-on-year participation growth remained strong. With all ten airports of the Swedavia airport group reaching the highest level of certification (carbon neutrality), and the environmental performance of the programme overall equating to a carbon reduction of 6.5% per passenger world-wide (140.009 tCO<sub>2</sub> from airports Scope 1 and 2 emissions) in Year 4, the programme was delivering on its initial aspiration to be the only industry specific performance based, voluntary and institutionally-endorsed carbon and energy certification label.

With this, the fifth report, participation in **Airport Carbon Accreditation** has reached its century. Now covering ACI member airports in three ACI regions, Europe, Asia-Pacific, Africa, it is poised to move to Latin America and North America in the coming years.

The number of airports participating in the programme has grown from 17 in Year 1 (2009-2010) to 102 at the end of Year 5 – an increase of 85 airports or 500% in participation. **Airport participation in the programme now covers 23.2% of world passenger traffic.**

This report was prepared by the **Airport Carbon Accreditation** Administrator (WSP) and was reviewed and approved by the **Airport Carbon Accreditation** Advisory Board on 6th May 2013.



# 1 AIRPORT CARBON ACCREDITATION – AN OVERVIEW

## 1.1 Origins

The catalyst for the development of **Airport Carbon Accreditation** derived from the aero-political environment in Europe and the recognised need to take climate change seriously. This led ACI EUROPE to take a strategic view of its environmental strategy and to identify the key emerging issues. This review established that GHG emissions from aviation were considered a significant contributor to climate change and were attracting considerable regulatory attention.

ACI EUROPE therefore reviewed their member airport's operational activities and development in terms of carbon management and decided that there was a need to assist them in assessing and reducing their carbon footprints. ACI EUROPE engaged a leading environmental consultancy, WSP, to help them work with their member airports, key institutional aviation bodies, the environmental community and others to develop and launch **Airport Carbon Accreditation**.

The programme was built on existing airport practices; a rigorous scoping and design, including the development of detailed technical guidance; existing international standards in the reporting and accounting of GHG emissions, and the generation of institutional recognition at the highest level. It was pilot tested with the airports developing the programme.

Until the launch of the programme, airports had no standard to follow and airports generally relied on how other industries and businesses had undertaken similar efforts or started from the beginning.

## 1.2 Aims and scope

The underlying aim of the programme is to encourage and enable airports to implement best practice carbon and energy management processes and to gain public recognition of their achievements. It requires airports to measure their CO<sub>2</sub> emissions in accordance with the World Resources Institute and World Business Council for Sustainable Development GHG Protocol and to get their emissions inventory assured by an independent third party.

The verifier carrying out this assurance has to meet certain minimum threshold qualifications, fully understand the programme requirements as outlined through webinar training, and pass an associated on-line examination, before they can be accepted by the Programme Administrator, as an approved verifier. Approved verifiers are listed individually at [www.airportcarbonaccreditation.org](http://www.airportcarbonaccreditation.org).

The rationale for the mandatory reporting of CO<sub>2</sub> (as opposed to all Kyoto Protocol gases) is that CO<sub>2</sub> emissions account for 95% of all GHG emissions from airports and are the focus of most regulatory action. Other Kyoto Protocol gases may be reported voluntarily. Airports contribute around 5% of the CO<sub>2</sub> emissions from aviation.



Once an airport has completed its carbon footprint, airports must address the on-site operational activities that contribute the most to carbon emissions by putting in place suitable management processes that enable emissions reductions to be identified and achieved. Airports set their own carbon reduction targets, which may be absolute (tonnes of CO<sub>2</sub>) or relative (tonnes of CO<sub>2</sub> per passenger or traffic unit). The programme facilitates airport efforts to incentivise activities and efficiencies that help reduce the impact from infrastructure and operational energy use and reduce or mitigate emissions from airside and landside operational activities.

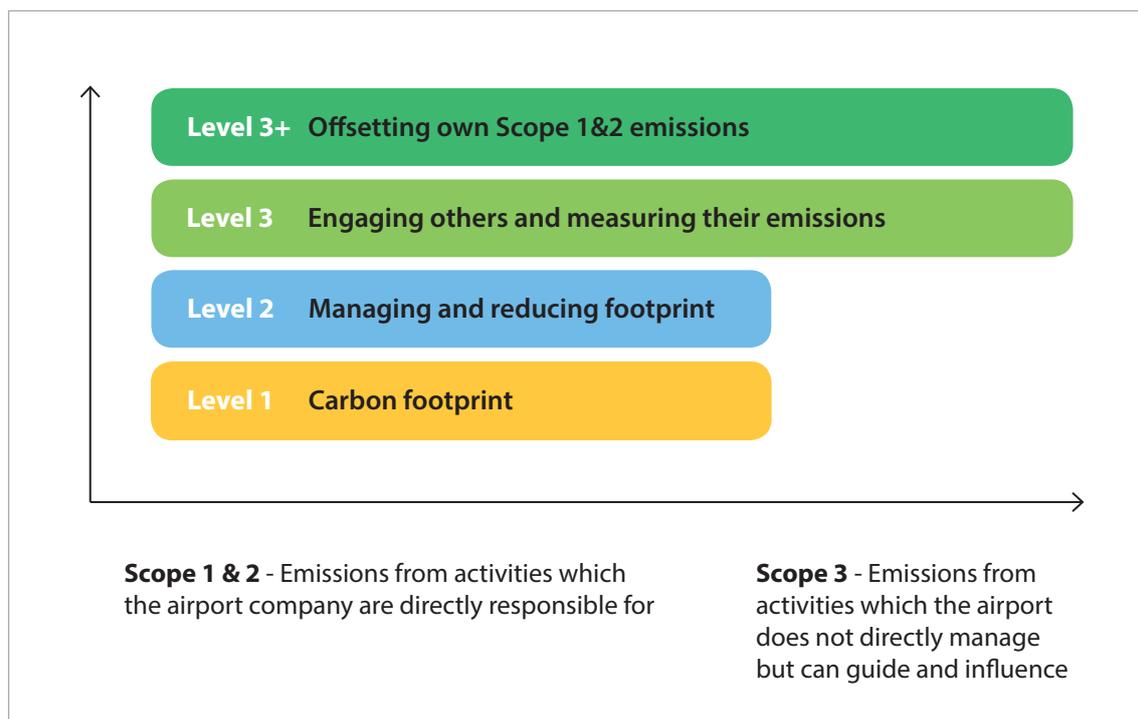
This is achieved through the use of a common framework which is universal to all airports but is site specific in its application. In the first instance, airports address CO<sub>2</sub> emissions from the activities which the airport company is directly responsible for. These are the GHG Protocol Scope 1 and 2 emissions. Airports then address emissions from activities which the airport does not directly manage, but which it may guide or influence – GHG Protocol Scope 3 emissions.

### 1.3 Levels of certification

Airports are certified under **Airport Carbon Accreditation** at four progressively stringent levels of participation with recognition of improvements at each stage. They may then use the programme logo appropriate to the level of certification achieved and publicise their achievement in various ways.

A distinguishing feature of the programme is that the certification is independent of the airport community and of the programme ownership and is determined by the Programme Administrator who ensures compliance with the programme requirements (see Governance structure).

As is shown in the charts below, the first stage, Level 1 Mapping, requires airports to produce an externally verified Scope 1 and 2 carbon footprint for the airport, along with evidence of a publically available environmental / carbon policy endorsed at the highest level of airport management. Independent verification of an airport's carbon footprint is required on entry into the programme, every two years on renewal at the same level, and on each upgrade. This is a further distinguishing aspect of the programme compared to other systems.



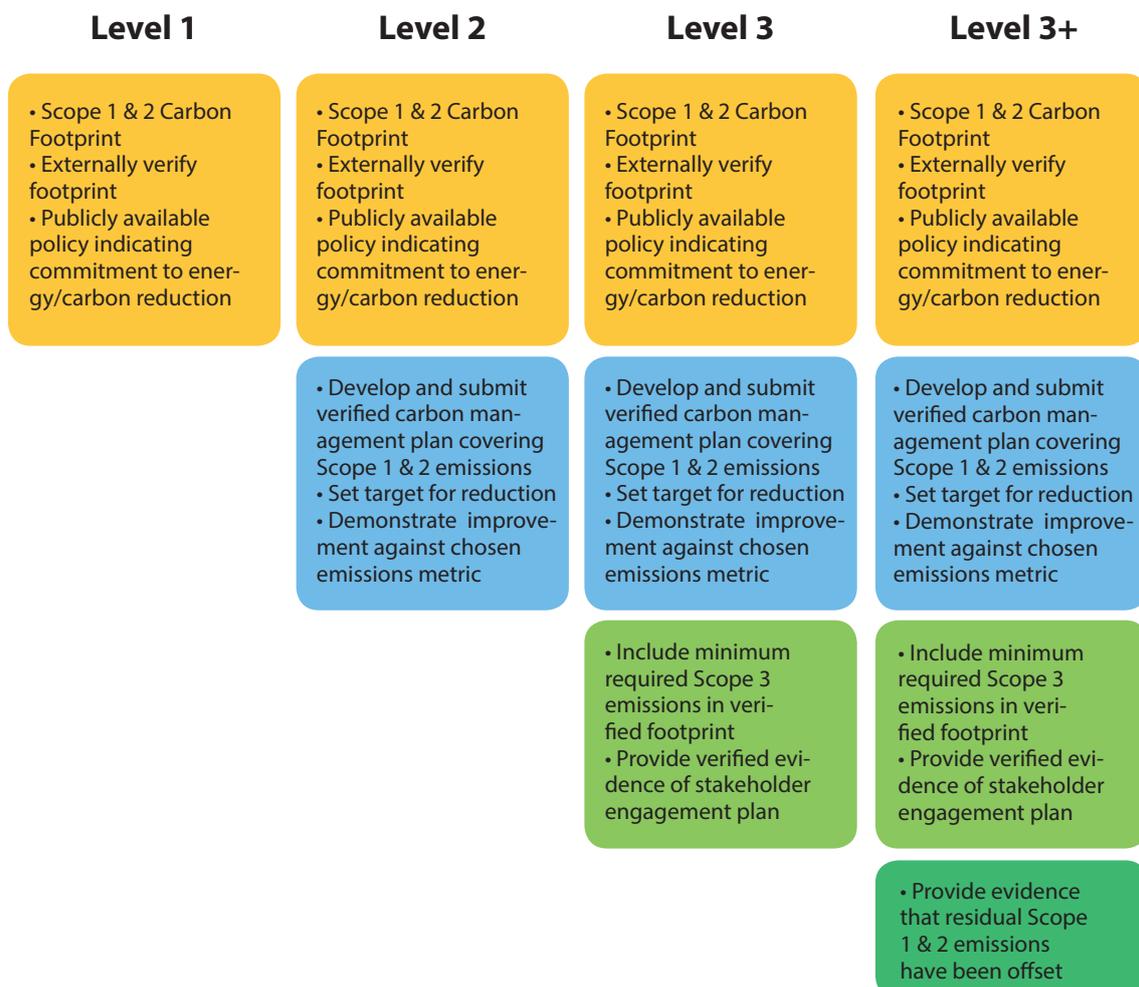
The carbon footprint serves as the basis for developing carbon management and engagement plans (Level 2 Reduction and Level 3 Optimisation) through which an airport commits to reduce its carbon footprint year on year. If so desired an airport may then seek to achieve carbon neutrality for the CO<sub>2</sub> emissions under its direct control (Scope 1 and 2) by offsetting its residual emissions which it cannot reduce by other means (Level 3+ Neutrality).

Currently, 16 airports have reached carbon neutrality status for the activities within their direct control. Ten of these airports (Stockholm Arlanda, Stockholm Bromma, Göteborg, Malmö, Lulea, Umeå, Åre Östersund, Visby, Ronneby, and Kiruna) are from the same airport group, Swedavia, which is the world's first carbon neutral national airport group. Their airports range in size from 164,000 passengers per annum to 21 million. The other 6 airports (Trondheim, Oslo, Amsterdam Schiphol, Eindhoven, Milan Malpensa and Milan Linate) which have reached the highest level of accreditation are airports with annual passenger traffic of between 3.5 million to 52.5 million.

## 1.4 Requirements at each level

Airports may enter the programme at any level provided they meet the requirements of each level and progress through the programme at their own pace. Certification is valid for one calendar year from the date of entry into the programme, when it must be renewed. An airport may upgrade to a higher level at any point in a calendar year.

As is shown in the chart below, the requirements at each level are progressively more difficult to achieve. The requirements at each stage build on the requirements of the previous level.



## 1.5 Governance and Management Structure

The governance and management structure of the programme reflects an independent and interactive management and financial structure. The **Airport Carbon Accreditation** programme is owned by ACI EUROPE, but an independent Advisory Board determines policy direction, oversees the programme Administrator and encourages external recognition and support. The Advisory Board is comprised of independent experts from the fields of aviation and the environment, including those from the institutions that have formally endorsed or supported the programme.

The Advisory Board membership is comprised of:

- Mr Frank Brenner, Director General EUROCONTROL
- Mr Patrick Gandil, ECAC Focal Point for Environment (European Civil Aviation Conference)
- Mr Jacob Fleischmann, UNEP (United Nations Environment Programme)
- Mr Matthew Baldwin, Director of Air Transport (DG MOVE), European Commission
- Mr Damien Meadows, Adviser (Directorate B), DG Climate Action
- Professor Callum Thomas, Professor of Sustainable Aviation, Manchester Metropolitan University
- Mr Tim Johnson, Director, Aviation Environment Federation
- Focal Point: Ms Jane Hupe, Head of Environment ICAO (International Civil Aviation Organization)

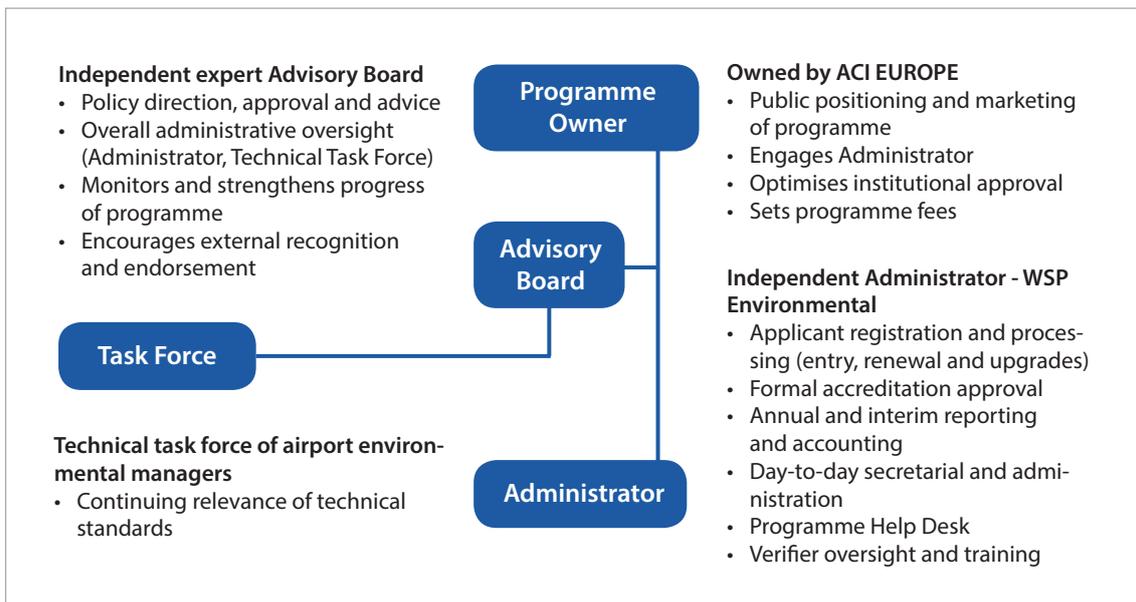
In Year 5 the Advisory Board met twice in December 2013, and May 2014.

There is an independent Administrator (WSP) who is appointed by ACI EUROPE to assist airports with their participation and to ensure the smooth running of the programme. The Administrator has the power to grant or refuse an airport's certification under the programme and is also responsible for verifier oversight and training.

There is also an airport Task Force, whose role is to ensure the continuing relevance of the programme standards. The Task Force is comprised of airport environmental managers from a selection of participating airports and meets twice yearly to review the technical issues arising during the accreditation process and to ensure that the programme guidance remains relevant.

In Year 5, for instance, the Task Force and Administrator worked to ensure that proposed changes to the GHG Protocol standards yet to come into force would continue to be consistent and compatible with the **Airport Carbon Accreditation** requirements. These changes will affect how airports report under the programme and are expected to be implemented later in 2014.

The chart below summaries the governance and management structure of the programme.



## 1.6 Benefits of participation

Through certification to **Airport Carbon Accreditation**, an airport is able to attenuate its exposure to climate change regulatory risk. Airports are also able to achieve compatibility and compliance with national or international environmental or sustainability goals, whether or not aviation specific, as well as with relevant energy and other reporting standards.

For example, the majority of carbon emissions at an airport come from energy use, from fuel burnt in boilers, generators and vehicles and power imported from external sources. Carbon emissions reductions are most commonly delivered through energy reduction and with that comes energy cost reductions. Under **Airport Carbon Accreditation**, easily accessible savings could amount to 10% of total energy costs.

4 airports (Brussels, Rome, Milan Malpensa, Lanzarote) are accredited under **Airport Carbon Accreditation** and ISO 50001. From the information available it would see that the award of ISO 50001 was made after their accreditation under **Airport Carbon Accreditation**, suggesting that the programme is facilitating attainment of the ISO 50001 Standard. ISO 50001 was first published as an ISO Standard in 2011 as a new standard for energy management.

Benefits of participation fall broadly into two categories, hard and soft benefits, as shown below.

### HARD BENEFITS FROM PARTICIPATION

- Reduced operating costs, improved energy efficiencies
- Designed by airports for airports
- Better carbon management
- Improved understanding of emissions sources and potential for emissions reduction
- Positive stakeholder engagement
- Helps secure development consents
- Increased shareholder value, brand reputation and stakeholder support
- Access to other airport experience
- Consistent, compatible & compliant with carbon emissions standards

### SOFT BENEFITS FROM PARTICIPATION

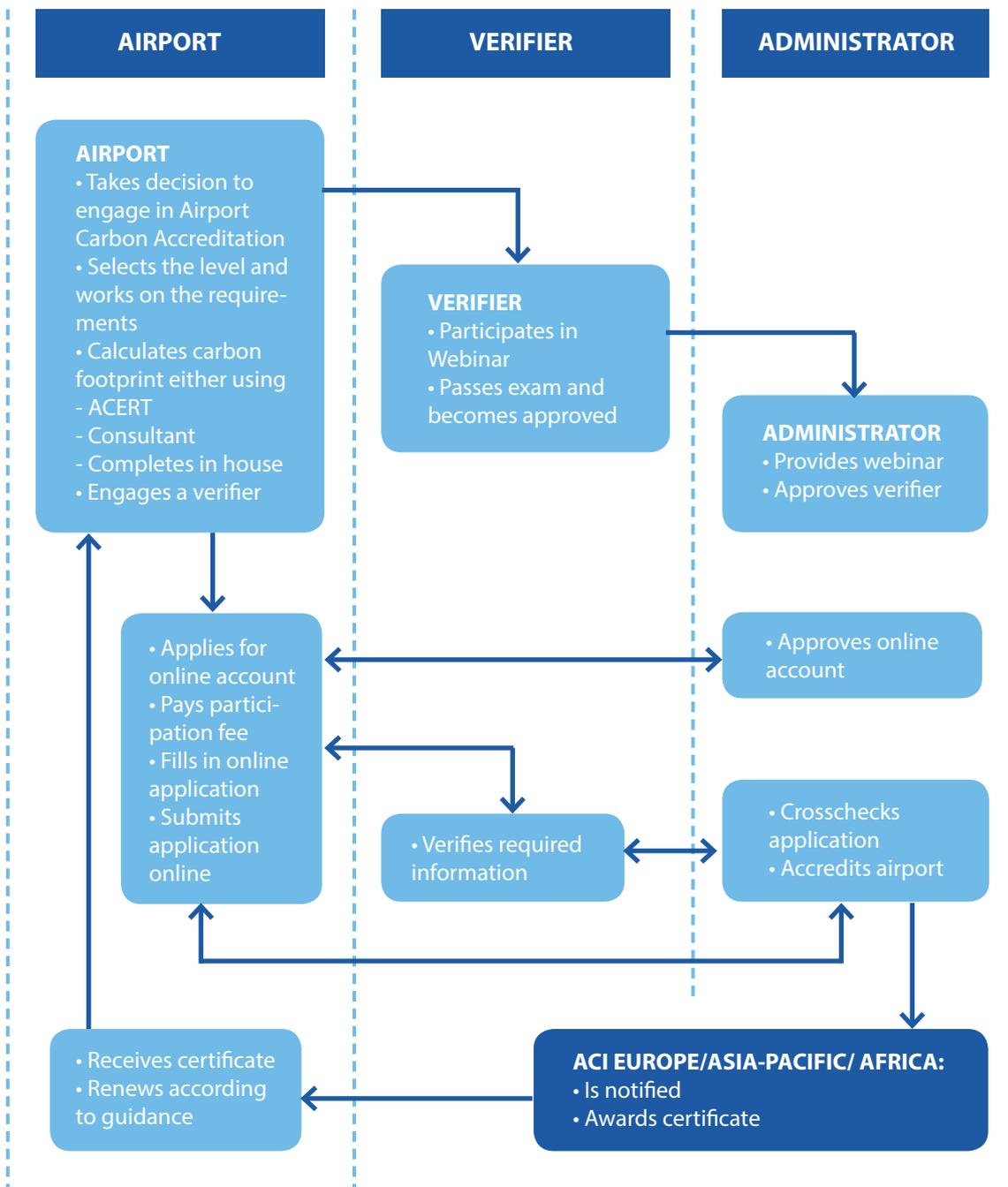
- Able to promote proactive action
- Improved internal coordination
- Supports stakeholder engagement
- Enhances public image of airport
- Reduces regulatory and litigation risks
- Helps the delivery of better passenger service
- Excellent communications opportunities

## 1.7 How to become accredited

An airport wishing to achieve certification at any Level in the programme should follow the path set out in the chart below.

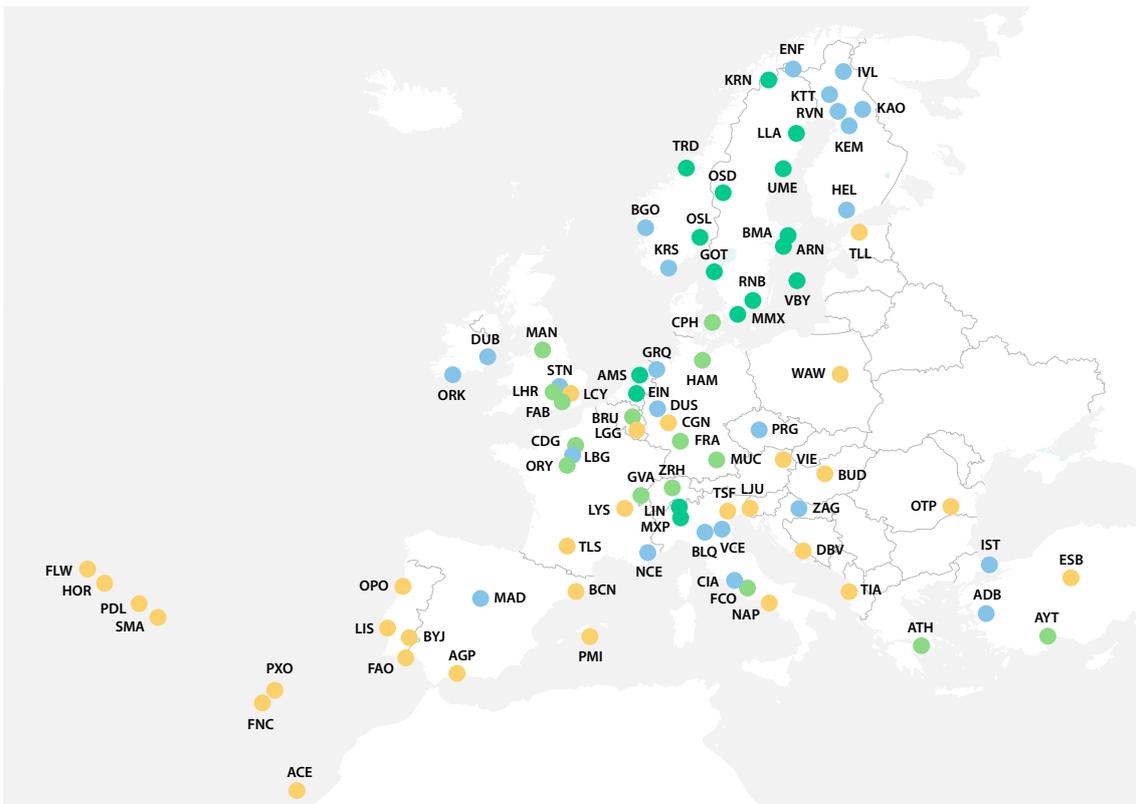
In this process, airports are encouraged to make early contact with the Programme Administrator to ensure that the application process is as smooth as possible.

It is important to note that the entire application process, including verification, is carried out on line through [www.aca-application.org](http://www.aca-application.org). All intending applicants must register their application on this site and follow the instructions therein.



# 2 PARTICIPATION

## 2.1 ACI EUROPE REGION

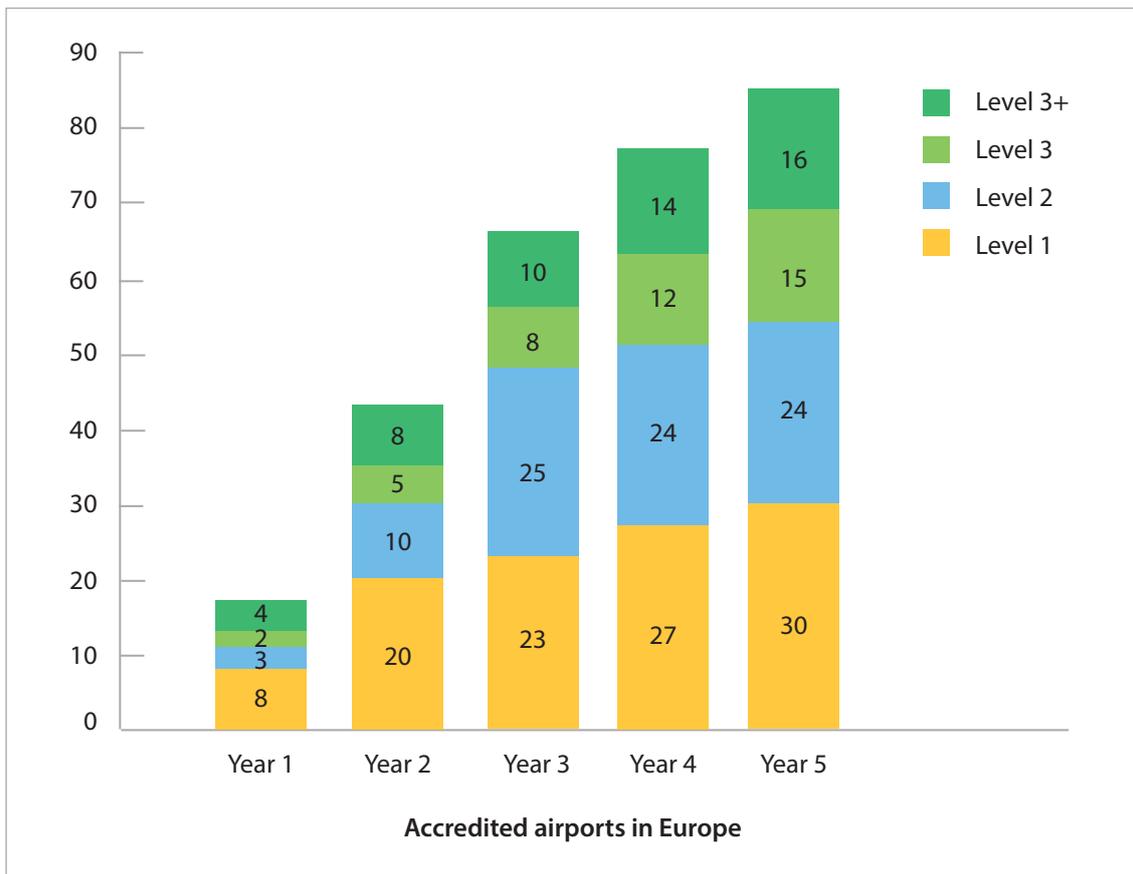


In Europe, participation in the programme has increased from 17 airports to 85 today, an increase of 68 airports or 400 % since the end of Year 1. The participating European airports represented 20.5% of European air traffic in 2009-2010 and now represent **62.8%** of such traffic.

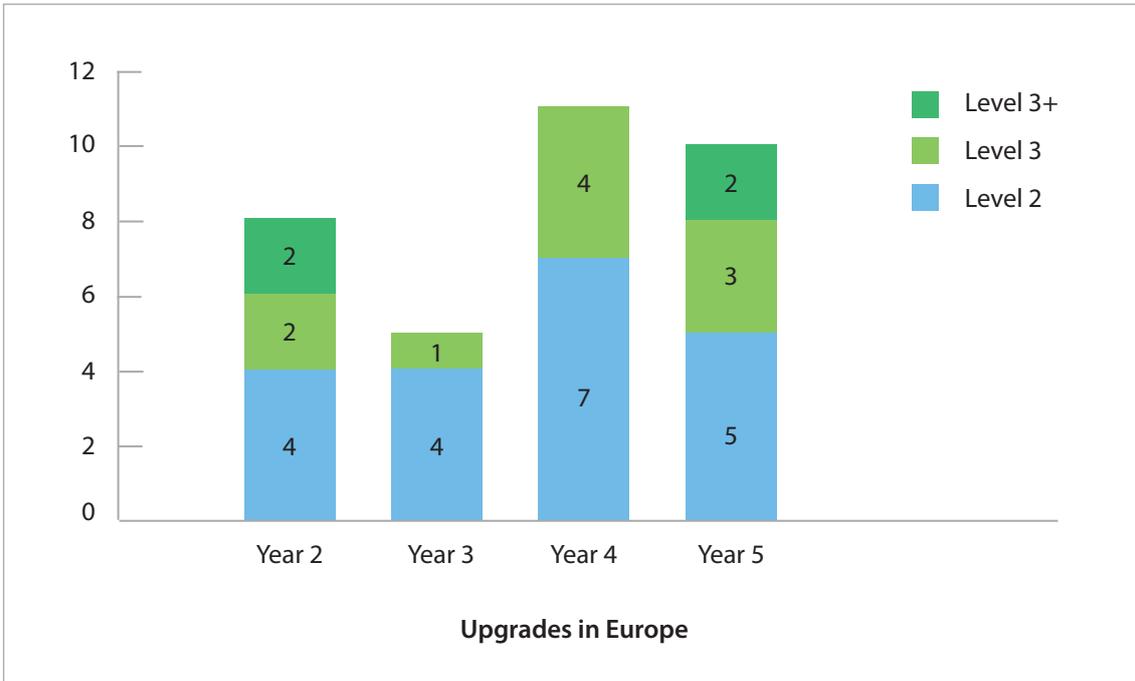
### 2.1.1. Historical trends

Historical trends are shown in the two charts below. The average annual increase in participation from European airports has been 17%. European accredited airports are now 62.8% of European air passenger traffic. Airport certification is in all airport bands from under 1 million passengers per year to over 20 million. The smallest European airport in the programme (which is not part of an airport group) is Groningen Airport Eelde with around 200,000 passengers and the largest is London Heathrow with 72 million passengers.

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Number of airports	17	43	59	75	85
Percentage of European air traffic	20.5%	43%	52.8%	58.6%	62.8%

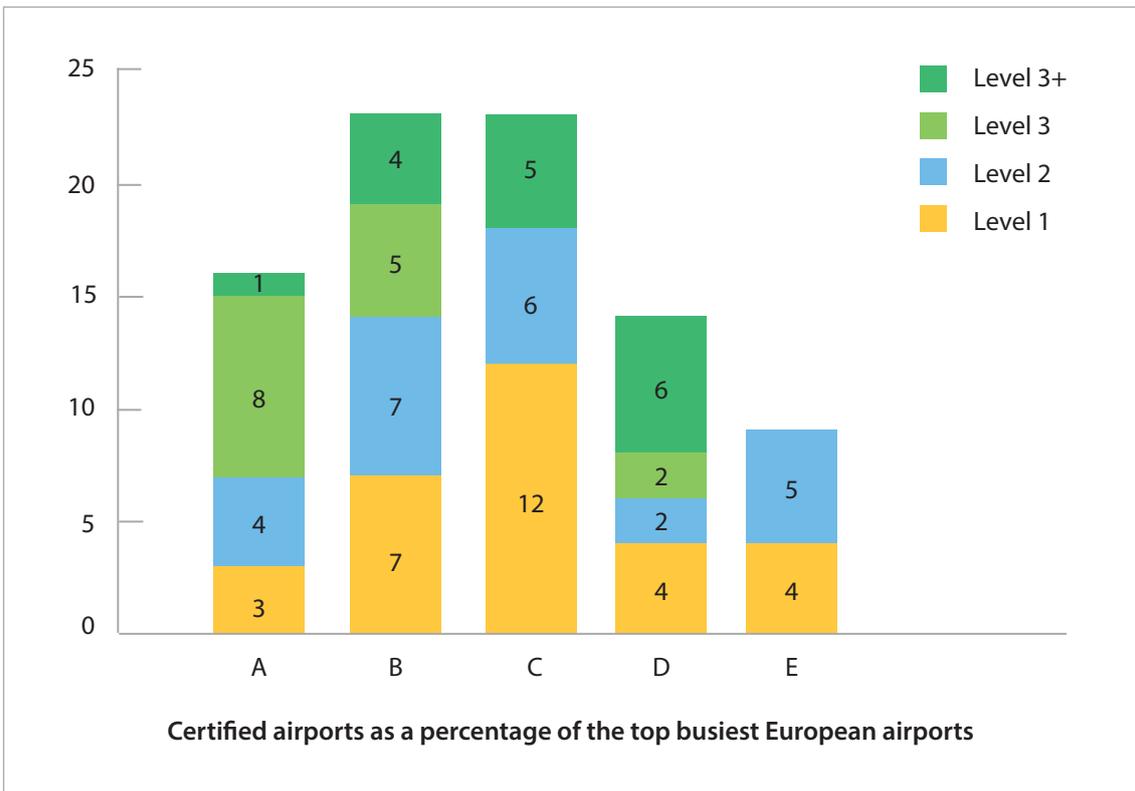


- ➔ Year-on-year programme growth remained strong this year in Europe, with 11 newly certified airports.
- ➔ New airports entering the programme were:
  - Level 1: Bucharest, Ljubljana, Treviso, Madeira, Porto Santo, Groningen Eelde and Naples
  - Level 2: Venice Marco Polo, London Stansted, Bergen
  - Level 3: Copenhagen
- ➔ There were 10 upgrades:
  - To Level 2: Izmir, Zagreb, Lyon, London City and Rome Ciampino
  - To Level 3: Hamburg, Athens and Farnborough
  - To Level 3+: Eindhoven and Amsterdam Schiphol
- ➔ 64 airports renewed at the same level.
- ➔ One airport – Shannon – withdrew from the programme, bringing the total number of programme withdrawals in Europe since the programme launch in 2009 to a total of 3 (London Gatwick and Chisinau being the other two).
- ➔ There were no downgrades during the year.

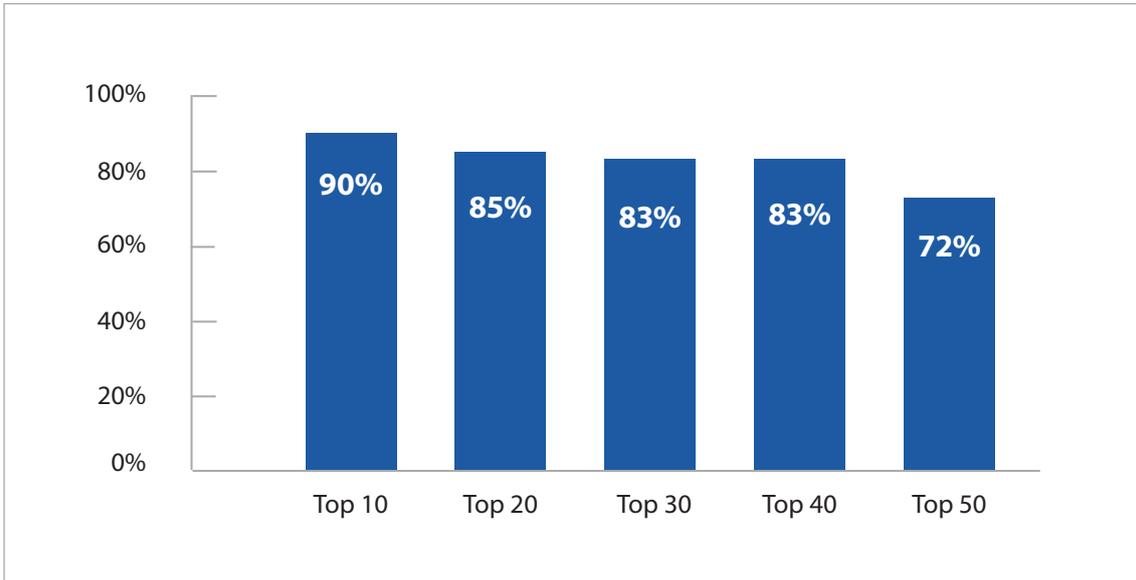


### 2.1.2 Participation by airport band and level

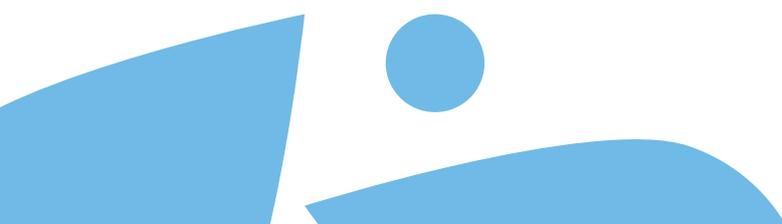
There is now sufficient critical mass in participation to show certification by airport band and level. As is shown in the two charts below the total number of airports in each of Bands C through A is broadly similar. The split in band levels for Level 3+ is largely due to the Swedavia situation as its airport group covers small to large airports. Band E airports – small airport groups – are mostly comprised of the Finavia Lapland and ANA (Portugal) small airports. 8 out of the 11 new entries in Year 5 were at Level 1.



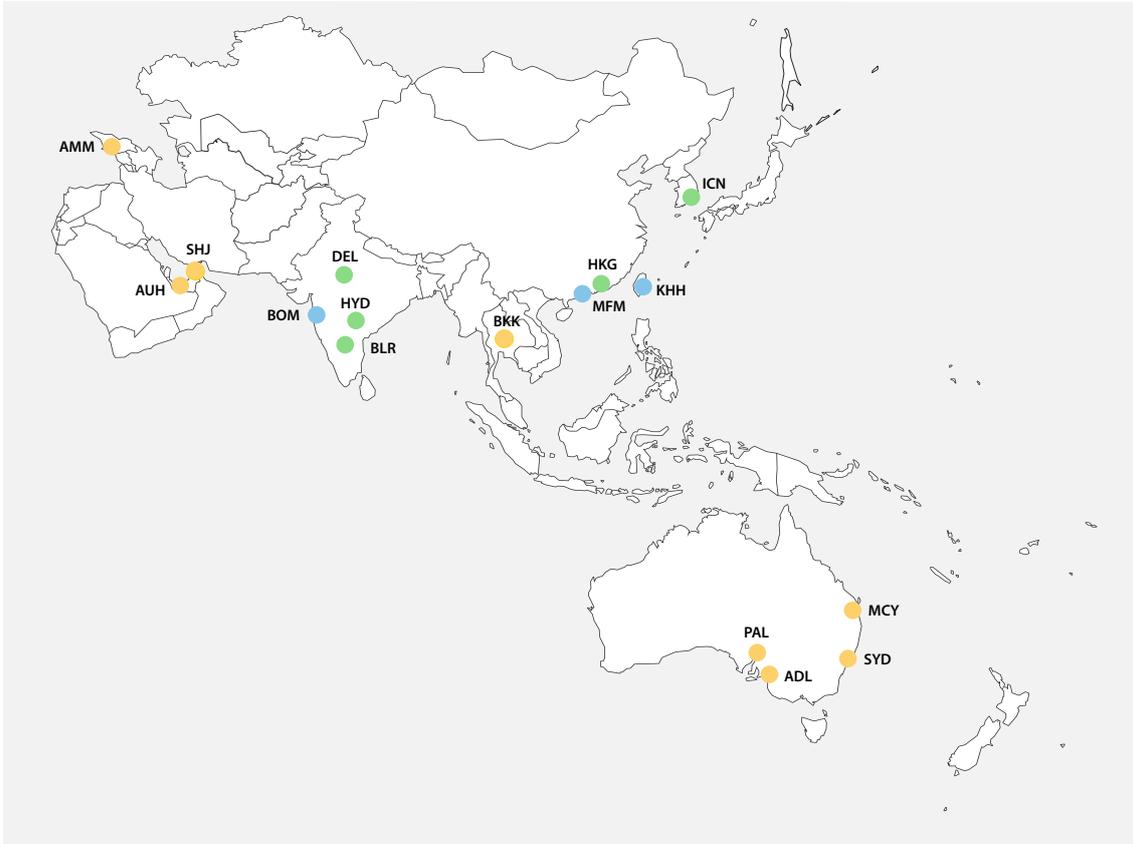
As is shown below the uptake from Europe's busiest airports in the programme is significant. Certified airports make up 90% of the top 10 busiest airports and 72% of the top 50.



Olivier Jankovec, Director General ACI EUROPE, with Jorge Ponce de Leão, Chairman and CEO of ANA, Dinarte Rodrigues, Environmental and Quality Manager at Madeira Airport, and Mário Gil Fernandes, Operations Manager at Madeira Airport, receiving the Mapping certificate of Madeira Airport and Porto Santo Airport in Funchal.



## 2.2 ACI ASIA-PACIFIC REGION

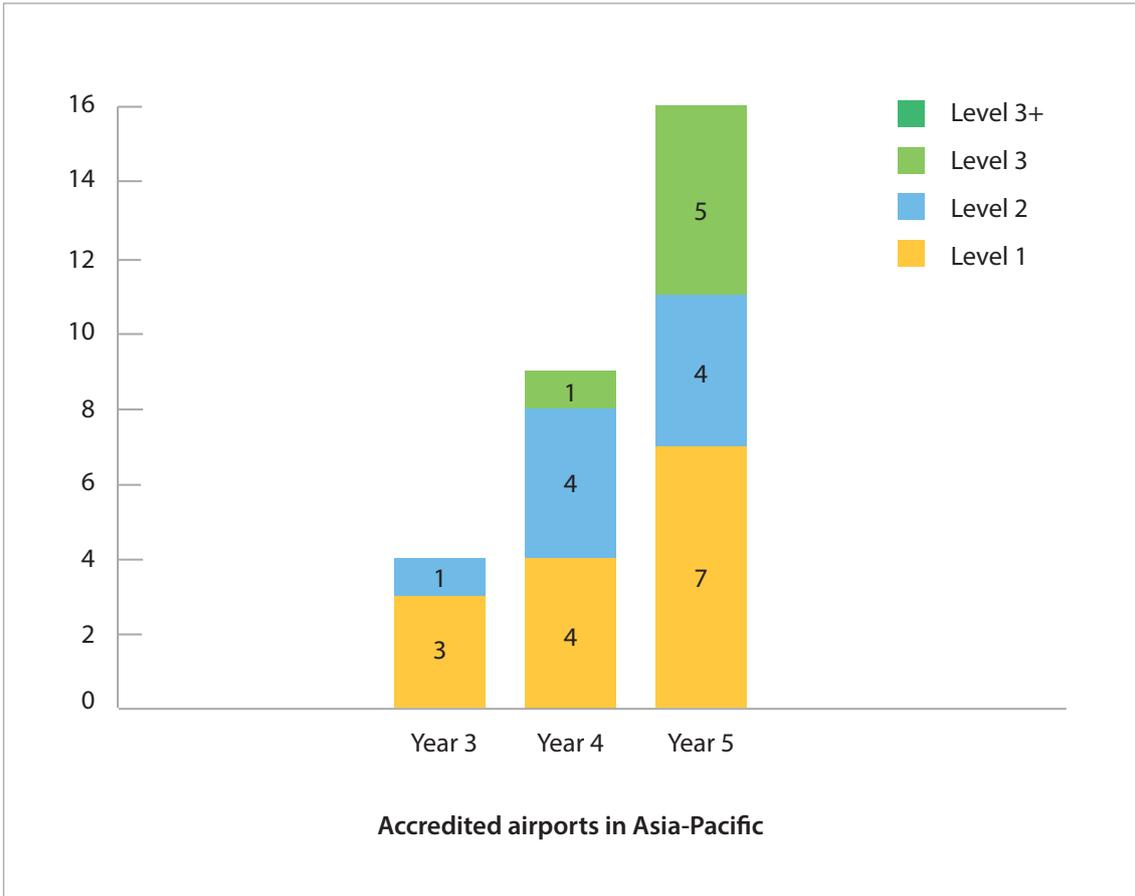


Airports in the ACI Asia-Pacific region have participated in the programme since November 2011. Participation in the programme has increased from 4 airports to 16 today, an increase of 11 airports since the end of Year 3. The participating Asia-Pacific airports represented 6% of Asia-Pacific air traffic in 2011-2012 and now represent **18.5%** of such traffic.

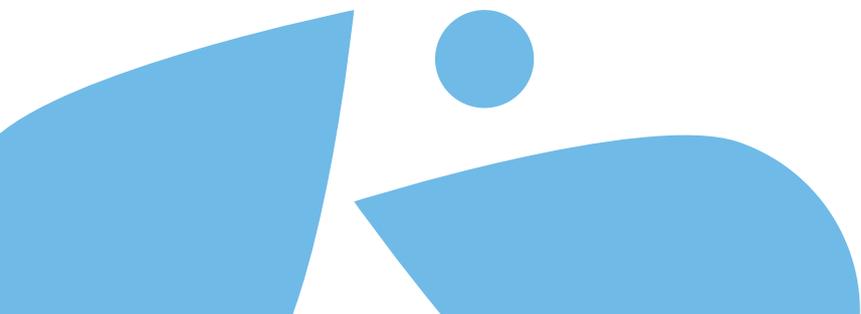
### 2.2.1. Historical trends

Historical trends are shown in the two charts below. The average annual increase in participation from Asia-Pacific airports has been 13% with Asia-Pacific accredited airports making up 18.5% of Asia-Pacific air traffic. The smallest Asia-Pacific airport in the programme (which is not part of an airport group) is Sunshine Coast, Australia with around 800,000 passengers per annum and the largest Asia-Pacific accredited airport is Hong Kong with 60 million passengers.

	2011-2012	2012-2013	2013-2014
Number of airports	4	9	16
Percentage of Asia-Pacific air traffic	6%	15%	18.5%

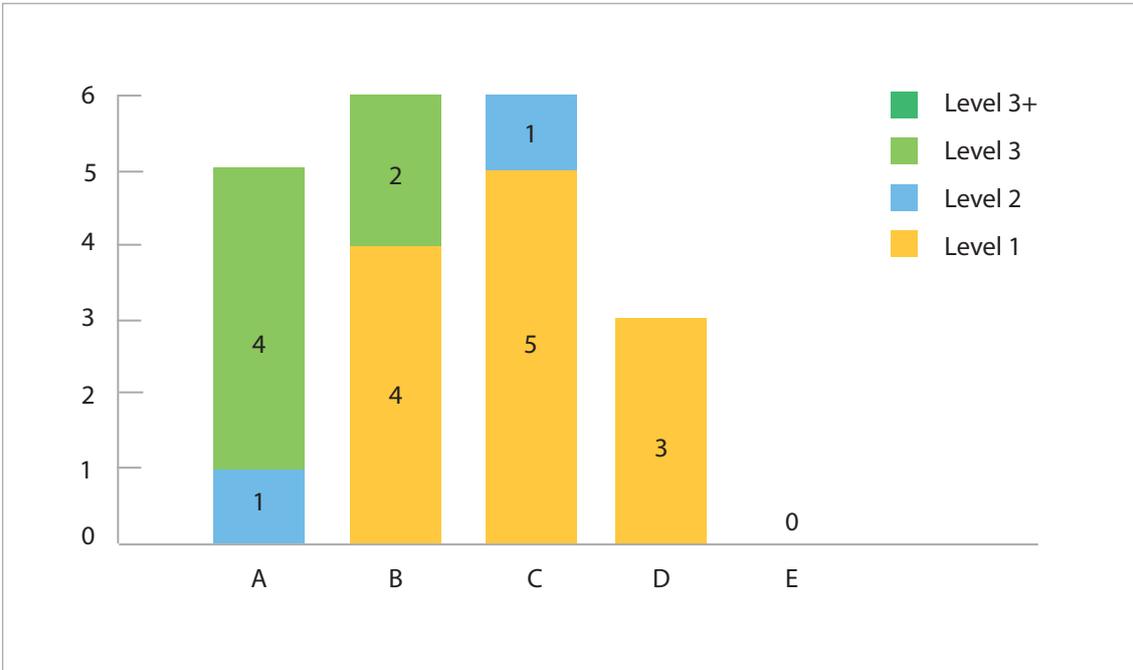


- ➔ Year-on-year programme growth continued this year in Asia-Pacific, with 8 newly certified airports.
- ➔ New airports entering the programme were:
  - Level 1: Adelaide, Parafield, Sunshine Coast, Sharjah, Sydney
  - Level 2: Macau, Kaohsiung
  - Level 3: Incheon
- ➔ There were 4 upgrades:
  - To Level 2: Bangkok Suvarnabhumi
  - To Level 3: Hyderabad, Delhi, Bangalore
- ➔ One airport – Singapore Changi – withdrew from the programme.
- ➔ 4 airports renewed at the same level.
- ➔ There were no downgrades during the year.
- ➔ 16 airports in the ACI Asia-Pacific region have now been accredited.



### 2.2.2 Participation by airport band and level

As is shown in the two charts below airports in Band A (over 20 million passengers per year) make up half of the total number of accreditations. There are no small airport groups (Band E) currently participating.



Hong Kong International Airport is actively engaged in reducing its CO<sub>2</sub> emissions.

## 2.3 ACI AFRICA REGION



Participation in Year 5 was status quo with only one airport certified – TAV Enfidha. Although there has been some interest in the programme, both knowledge base and cost appear to be barriers to accreditation. This situation will be addressed in Year 6 through contact at the ACI Africa Annual Assembly and with airports on a one-to-one basis.



# 3 CARBON PERFORMANCE OF ACCREDITED AIRPORTS

## 3.1 Aggregate carbon footprint and emissions reduction figures

This section outlines the aggregate carbon (CO<sub>2</sub>) footprint and reduction figures achieved by the airports listed above. These figures derive from individual airports' applications, as verified externally according to **Airport Carbon Accreditation** requirements. European, Asia-Pacific and African emissions are reported separately.

Every attempt has been made to provide an accurate quantification of the actual emissions reductions achieved, with emissions compared on a like-for-like basis against a three year rolling average of emissions. Whilst this data is presented in aggregate format, it is worth noting that there are a number of reasons why direct comparisons between individual airports, and between reporting years, are not possible. These issues include:

- Newly accredited airports may not have three years of historical data available. The programme therefore recognises that until such data is available, airports can measure reductions against either one or two years of data.
- Operating conditions of each airport differ significantly due to the varying ownership structures and activity scopes. As **Airport Carbon Accreditation** requires participants to report on emissions from sources under the airports direct control, each airport's operational boundary is unique to that airport.
- Reductions must be achieved on a like-for-like basis, meaning that new facilities at airports may not be included in the operational boundary for the purposes of demonstrating a reduction in emissions.
- The use of the three year rolling average means that it is not possible to aggregate the total emissions reductions between years, as this will lead to the double counting of some emissions reduction.

Under the terms and conditions of participation in **Airport Carbon Accreditation**, the details of airports' individual carbon footprints are not published here, although an airport may choose to do so itself.

**Airport Carbon Accreditation** requires that airports report on CO<sub>2</sub> emissions only. Under the programme, airports may report voluntarily on other greenhouse gases, and this is considered as best practice.

The reductions achieved by the airports participating in **Airport Carbon Accreditation** are genuine quantified reductions in CO<sub>2</sub> emissions achieved when comparing emissions on a like-for-like basis, despite traffic trends. They show a general downward trend and should be regarded as quantified and qualitative evidence of improved carbon management practices by the airports concerned. The aggregated emissions from all participants together with their supporting data has been examined and approved by the Advisory Board and are presented below.

### 3.2 European airports performance

#### 3.2.1 Emissions reduction highlights

	2012-2013	2013-2014
Total aggregate Scope 1 & 2 reduction (tCO <sub>2</sub> )	140,009	129,937
Total aggregate Scope 3 reduction (tCO <sub>2</sub> )	30,155	223,905



TAV Airports promoting its accreditation at the airport.

### 3.2.2 Emissions performance summary

Variable	Year 4		Year 5	
	Emissions	Number of airports	Emissions	Number of airports
<b>TOTAL SCOPE 1 &amp; 2 EMISSIONS</b>				
Aggregate carbon footprint for 'Year 0' <sup>1</sup> for emissions under airports' direct control (all airports)	2,553,869 tCO <sub>2</sub>	75	2,044,683 tCO <sub>2</sub>	85
Carbon footprint per passenger	2.75 kgCO <sub>2</sub>		2.01 kgCO <sub>2</sub>	
<b>SCOPE 1 &amp; 2 EMISSIONS REDUCTION<sup>2</sup></b>				
Aggregate reduction in emissions from sources under airports' direct control (Level 2 and above)	158,544 tCO <sub>2</sub>	43	87,449 tCO <sub>2</sub>	56
Carbon footprint reduction per passenger	0.22 kgCO <sub>2</sub>		0.11 kgCO <sub>2</sub>	
<b>TOTAL SCOPE 3 EMISSIONS<sup>3</sup></b>				
Total carbon footprint for 'Year 0' for emissions sources which an airport may guide or influence (Level 3 and above)	12,176,083 tCO <sub>2</sub>	26	12,777,994 tCO <sub>2</sub>	31
<b>SCOPE 3 EMISSIONS REDUCTION</b>				
Aggregate reductions from emissions sources which an airport may guide or influence	30,155 tCO <sub>2</sub>	26	223,905 tCO <sub>2</sub>	31
<b>TOTAL EMISSIONS OFFSET</b>				
Total emissions offset (Level 3+)	66,724 tCO <sub>2</sub>	15	181,496 tCO <sub>2</sub>	16

<sup>1</sup> 'Year 0' refers to the 12 month period for which an individual airport's carbon footprint refers to, which according to the **Airport Carbon Accreditation** requirements must have been within 12 months of the application date.

<sup>2</sup> This figure includes increases in emissions at airports that have used a relative emissions benchmark in order to demonstrate a reduction.

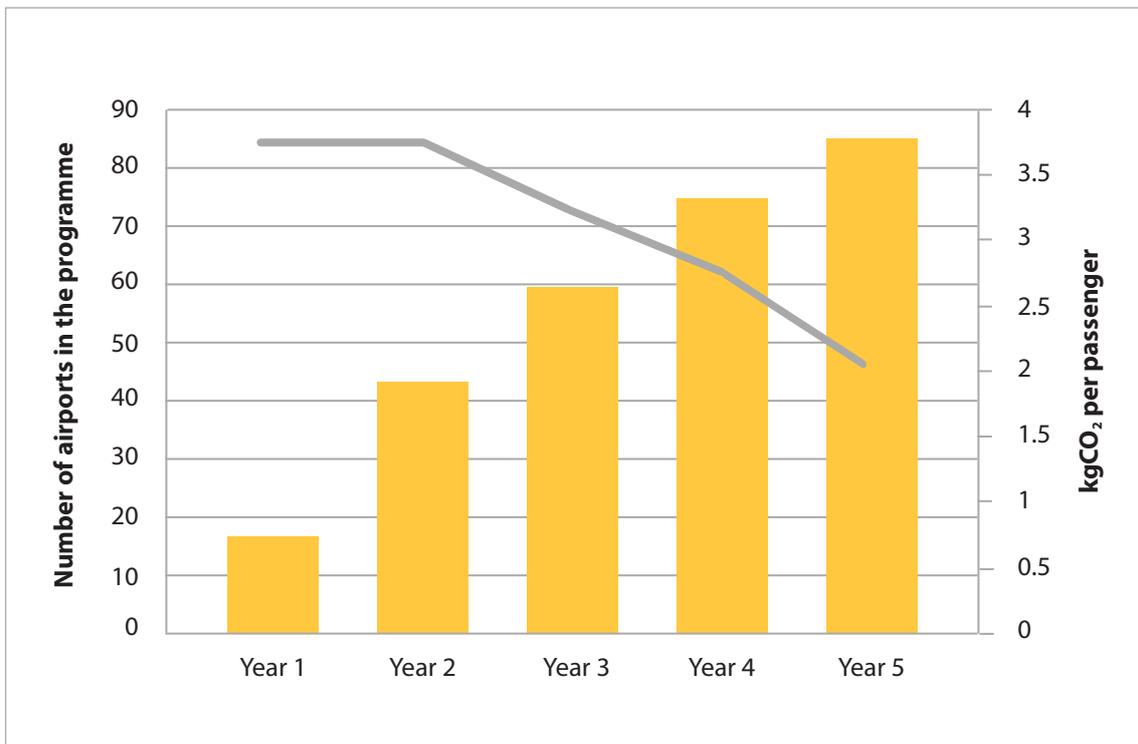
<sup>3</sup> These emissions sources are those detailed in the guidance document, plus any other sources that an airport may wish to include.

### 3.2.3 Scope 1 and 2 emissions reductions in Year 5

#### All levels

Absolute Scope 1 and 2 emissions reduction (Level 2 and above)	129,937 tCO <sub>2</sub>
Average % reduction in CO <sub>2</sub> across all airports	5.98%
Relative emissions reduction	0.24 kgCO <sub>2</sub> / per passenger

The graph below looks at the Scope 1 and 2 emissions per passenger for all of the European airports. It demonstrates the growth in the programme and how airports have reduced their per passenger CO<sub>2</sub> emissions across the whole programme, in absolute and relative terms.

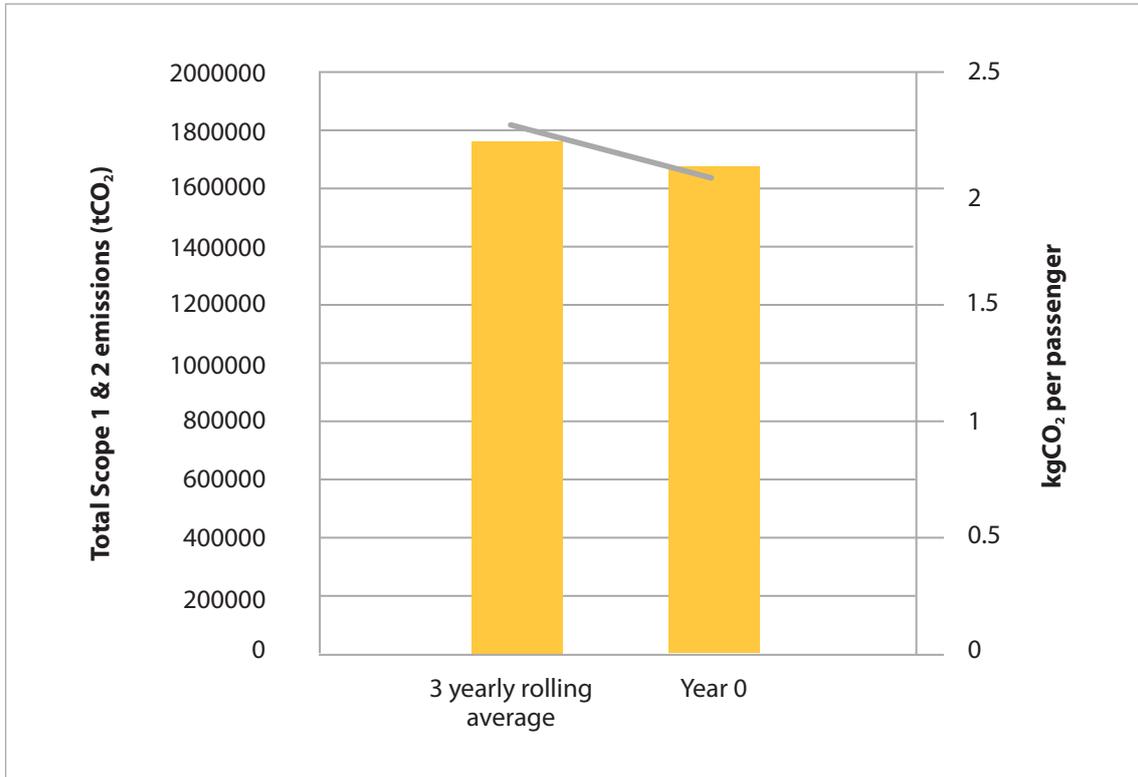


#### Level 2 and above

Absolute Scope 1 and 2 emissions reduction (Level 2 and above)	87,449 tCO <sub>2</sub>
% Reduction in emissions per passenger	4.9%
Relative emissions reduction	0.21kg CO <sub>2</sub> / per passenger

The graphs below show the performance of those airports at Level 2 and above of the programme, i.e. those which have to demonstrate a reduction to achieve accreditation. The total Scope 1 and 2 emissions are shown for Year 0 and the 3 year rolling average, against which the reduction is measured. In addition, the reduction per passenger is demonstrated in kgCO<sub>2</sub>.

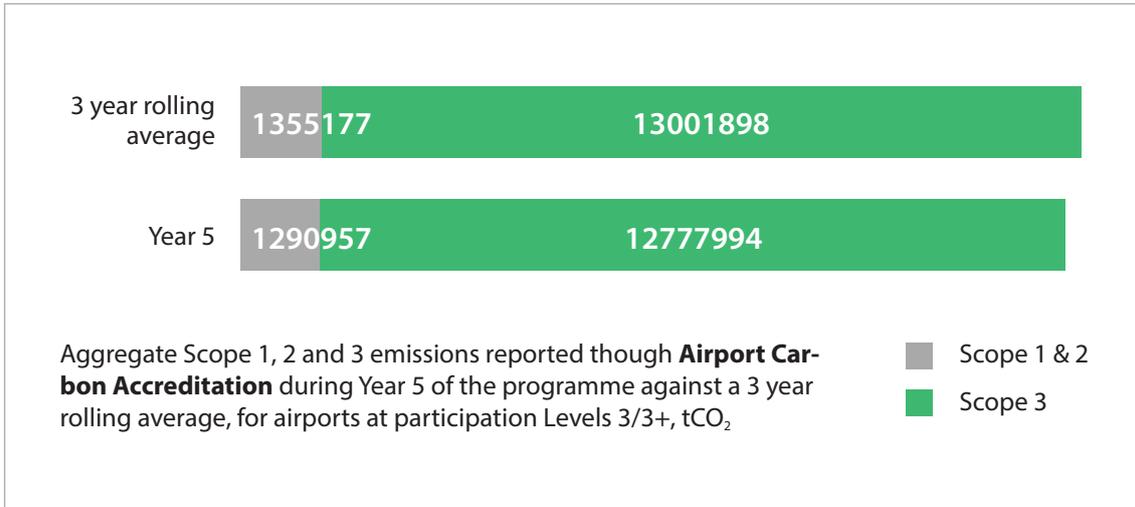
The 56 airports at Reduction, Optimisation and Neutrality levels of the programme have made a 4.9% reduction in their Scope 1 and 2 emissions this year.



Budapest Airport promoting its accreditation to passengers.

### 3.2.4 Scope 3 emissions

Scope 3 emissions are only reported at Levels 3/3+ of the programme, and include a number of minimum emissions sources, such as the Landing Take-Off cycle and staff business travel. However, airports can report any other emissions they wish to in this category, for example from offsite waste disposal and in-flight emissions. The graph below shows the aggregate Scope 3 emissions that were reported through **Airport Carbon Accreditation** in Year 5 of the programme for European airports at Levels 3/3+, against a three year rolling average. The Scope 1 & 2 emissions for those airports are also shown to give an idea of the relative size of the Scope 3 emissions.



Demonstrating a reduction in Scope 3 emissions is not a requirement for accreditation at Levels 3 and 3+. However, the graphs below show that airports are using their ability to guide and influence these emissions to drive reductions in this area as well, both in absolute and per passenger terms relative to the three-year rolling average. Airports at the highest levels of the programme are not only reducing their total Scope 1 and 2 emissions, but have also reduced their Scope 3 emissions by 2%.

Scope 3 emissions reduction	223,905 tCO <sub>2</sub>
% Reduction in emissions per passenger	2%
Relative emissions reduction	1.36kg CO <sub>2</sub> / per passenger



### 3.3 Asia-Pacific airports performance

Variable	Year 4		Year 5	
	Emissions	Number of airports	Emissions	Number of airports
<b>TOTAL SCOPE 1 &amp; 2 EMISSIONS</b>				
Aggregate carbon footprint for 'Year 0' <sup>4</sup> for emissions under airports' direct control (all airports)	984,886 tCO <sub>2</sub>	9	850,017 tCO <sub>2</sub>	16
Carbon footprint per passenger	3.91 kgCO <sub>2</sub>		2.69 kgCO <sub>2</sub>	
<b>SCOPE 1 &amp; 2 EMISSIONS REDUCTION<sup>5</sup></b>				
Aggregate reduction in emissions from sources under airports' direct control (Level 2 and above)	-4423 tCO <sub>2</sub>	5	-2333 tCO <sub>2</sub>	9
Carbon footprint reduction per passenger	-0.03 kgCO <sub>2</sub>		-0.01 kgCO <sub>2</sub>	
<b>TOTAL SCOPE 3 EMISSIONS<sup>6</sup></b>				
Total carbon footprint for 'Year 0' for emissions sources which an airport may guide or influence (Level 3 and above)	cannot disclose	1	6,689,731 tCO <sub>2</sub>	5
<b>SCOPE 3 EMISSIONS REDUCTION</b>				
Aggregate reductions from emissions sources which an airport may guide or influence	cannot disclose	1	-622,385 tCO <sub>2</sub>	5

<sup>4</sup> 'Year 0' refers to the 12 month period for which an individual airport's carbon footprint refers to, which according to the **Airport Carbon Accreditation** requirements must have been within 12 months of the application date.

<sup>5</sup> This figure includes increases in emissions at airports that have used a relative emissions benchmark in order to demonstrate a reduction.

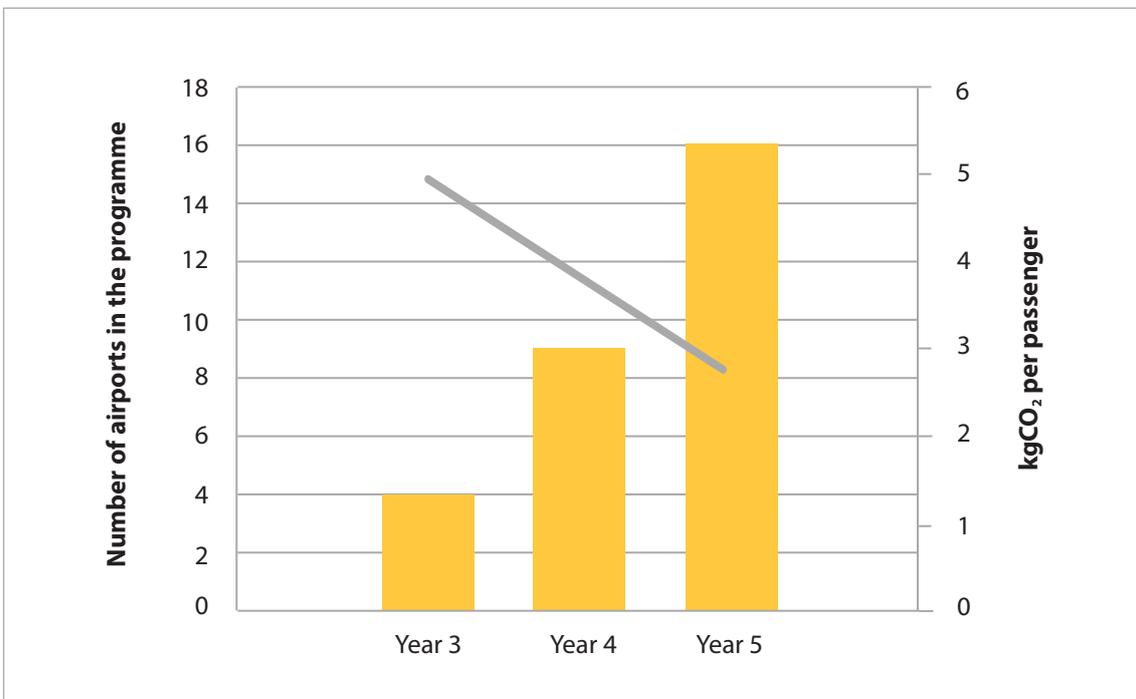
<sup>6</sup> These emissions sources are those detailed in the guidance document, plus any other sources that an airport may wish to include.

### 3.3.1 Scope 1 and 2 emissions reductions in Year 5

#### All levels

Absolute Scope 1 and 2 emissions reduction	2,039 tCO <sub>2</sub>
Average % reduction in CO <sub>2</sub> across all airports	1.2%
Relative emissions reduction	0.36 kg CO <sub>2</sub> / per passenger

The graph below looks at the Scope 1 and 2 emissions per passenger for all of the Asia-Pacific airports. It demonstrates the growth in the programme and the trends in airports per passenger CO<sub>2</sub> emissions across the whole programme, as well as relative emissions reduction.



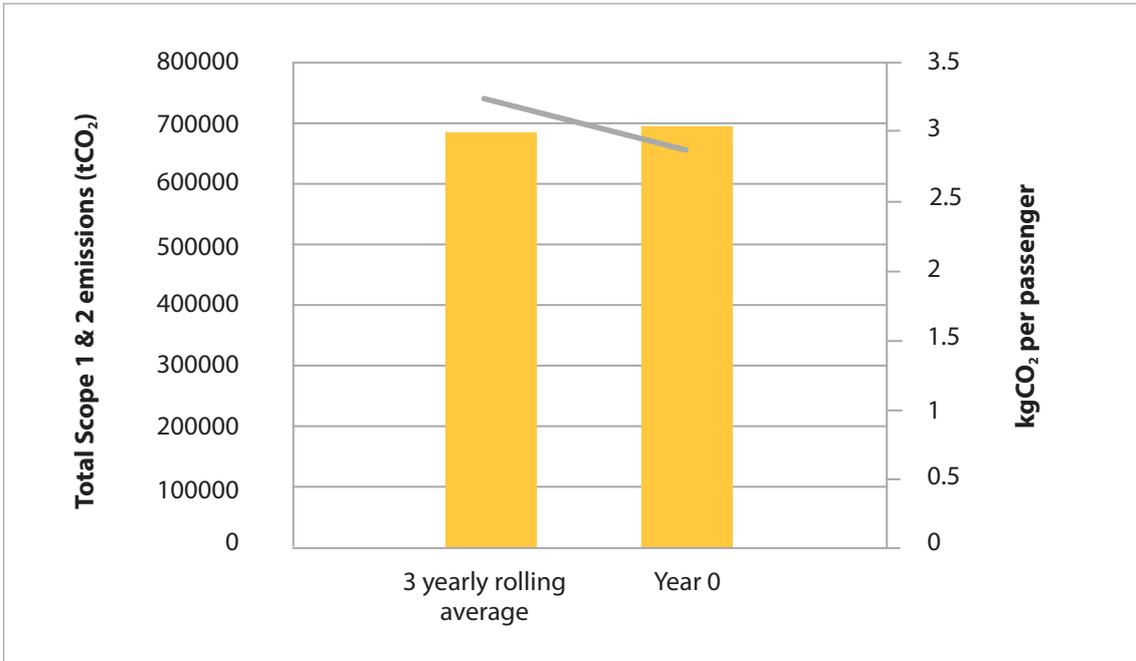
#### Level 2 and above

Absolute Scope 1 and 2 emissions reduction	-2,333 tCO <sub>2</sub> *
% Reduction in emissions per passenger	-0.3%*
Relative emissions reduction	0.38 kg CO <sub>2</sub> / per passenger

\*These are negative figures as the airports at Level 2 and above have increased their absolute Scope 1 and 2 emissions.

The 9 airports at Reduction, Optimisation and Neutrality levels of the programme have made a minus 0.3 reduction in their Scope 1 and 2 emissions this year.

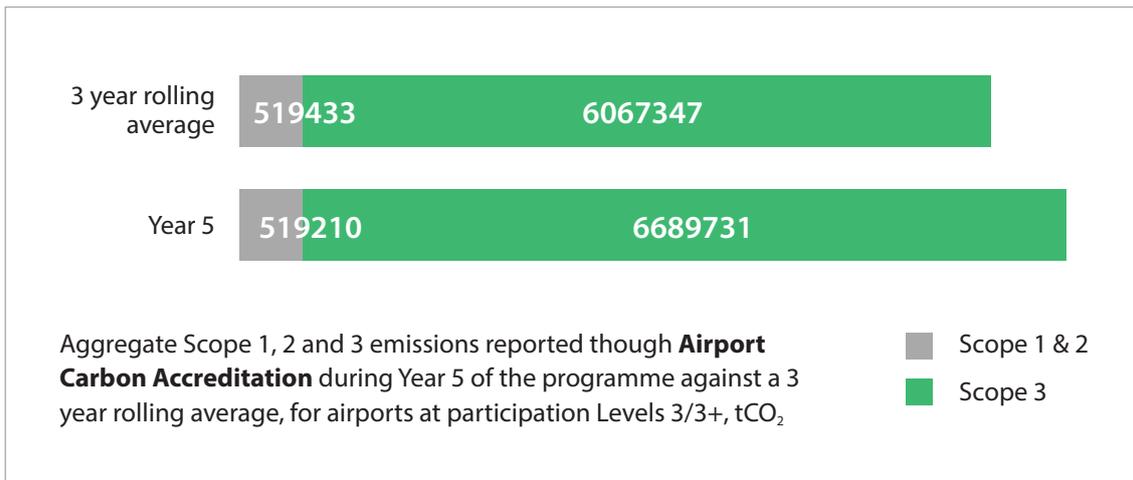
The graphs below show the performance of those airports at Level 2 and above of the programme, i.e. those which have to demonstrate a reduction to achieve accreditation. The total Scope 1 and 2 emissions are shown for Year 0 and the 3 year rolling average, against which the reduction is measured. In addition, the carbon footprint per passenger is demonstrated in kgCO<sub>2</sub>.



Asia-Pacific airports receiving their certificate at ACI ASIA-PACIFIC/WORLD Annual General Assembly in Seoul: Kerrie Mather, Chief Executive Officer at Sydney Airport, Abdul Khaliq Abdulla, Director Engineering & Development at Sharjah Airport Authority, Sasisubha Sukontasap, Senior Executive Vice President at Airports of Thailand Plc., Patti Chau, Regional Director ACI ASIA-PACIFIC, Tan Sri Bashir Ahmad, President ACI ASIA-PACIFIC, Young-Ung Kim, Vice President of Facility Division at Incheon Airport, Peter Yaw-Guang Ju, Director at Kaohsiung International Airport and Suning Liu, President of the Board of Directors, ADA – Administration of Airports Ltd.

### 3.3.2 Scope 3 emissions

Scope 3 emissions are only reported at Levels 3/3+ of the programme, and include a number of minimum emissions sources, such as the Landing Take-Off cycle and staff business travel. However, airports can report any other emissions they wish to in this category, for example from offsite waste disposal and in-flight emissions. The graph below shows the aggregate Scope 3 emissions that were reported through **Airport Carbon Accreditation** in Year 5 of the programme for Asia-Pacific airports at Levels 3/3+, against a three year rolling average. The Scope 1 & 2 emissions for those airports are also shown to give an idea of the relative size of the Scope 3 emissions.



Demonstrating a reduction in Scope 3 emissions is not a requirement for accreditation at Levels 3 and 3+ and in Asia-Pacific the absolute emissions from Scope 3 sources have increased by 10%. This is because the reduction in Scope 3 emissions sources has been overshadowed by the rapid traffic growth trends in the region. Despite this, Asia-Pacific airports have managed to reduce their Scope 3 per passenger emissions by 1%\*.

(\*This is the total Scope 3 emissions reduction divided by the number of passengers).

Scope 3 emissions reduction	-622,385 tCO <sub>2</sub> *
% Reduction in emissions per passenger	-4.1%*
Relative emissions reduction	0.55 kg CO <sub>2</sub> / per passenger

\*These are negative figures as the airports have increased their absolute Scope 3 emissions.

## 3.4 African airports performance

There is currently only one airport in the region participating in the programme, at Level 1 Mapping therefore no carbon performance is disclosed.

# 4

## CASE STUDIES

This section illustrates some of the work that participating airports are doing in the field of carbon management, as well as some of the experiences of the accreditation process. Four examples are provided here from airports at a range of levels and geographies. An historical set of case studies is available on the programme website at [www.airportcarbonaccreditation.org](http://www.airportcarbonaccreditation.org) supporting the process of information exchange that has been established already.



### 4.1 MANCHESTER AIRPORT

Manchester Airport is the UK's third largest airport, connecting 20.7 million passengers and around 100,000 tonnes of air cargo with 200 global destinations. Manchester Airport has implemented energy efficiency schemes that have reduced absolute gas consumption by 39% and electricity consumption by 21% since 2006. Manchester Airport holds **Airport Carbon Accreditation** at Level 3 Optimisation.

#### **CARBON NEUTRAL ASPIRATIONS**

In 2007 Manchester Airport committed to achieve carbon neutral ground operations by 2015. The Airport's Environment Plan enshrined the principles of a carbon hierarchy, first reducing the need for energy or fuel, before improving energy efficiency, sourcing renewable energy and fuels and then compensating for residual emissions through the purchase of carbon offsets. In working towards this goal, the airport has significantly reduced energy consumption and only used electricity sourced from renewable supplies.

#### **LOW ENERGY LIGHTING AND BUILDING CONTROL SYSTEMS**

LED lighting technologies have provided the airport with a range of opportunities to reduce electricity demand. More than 10,000 LED lights have now been deployed across the airport's three terminals. LED solutions have been created for specific installations, designed by the airport's Utilities and Energy Department and developed by local and global companies.

Replacing existing lighting with LED technologies has saved more than 2,600 tonnes CO<sub>2</sub> in the

airport's terminals. LED lighting has also been installed on the airfield. Manchester Airport was the first UK airport to trial LED lighting on runways.

Intelligent building controls are currently being installed. These will enable additional reductions of 3,000 tonnes CO<sub>2</sub> by lowering gas and electricity consumption. These controls link the airport's flight and building management systems to control lighting and ventilation to either 'vacant', 'staff' or 'passenger' modes to reflect activity within areas of the terminals.

## THE BENEFIT OF AIRPORT CARBON ACCREDITATION

As the first UK airport to achieve **Airport Carbon Accreditation**, Manchester Airport is clear about the benefits accreditation brings. In addition to validating efforts to reduce emissions within the airport's direct control, **Airport Carbon Accreditation** considers indirect (Scope 3) emissions which account for 85% of emissions at the airport.

Scope 3 emissions, particularly from airfield and aircraft operations, are at the forefront of public perception about airport related emissions. **Airport Carbon Accreditation** provides a platform to review these emissions and from which to launch engagement with business partners, forging the necessary links to collaboratively reduce emissions.

## THE FUTURE

*"Manchester Airport has made significant progress towards our target of achieving carbon neutral ground operations. The replacement of lighting with vast numbers of LEDs is one of our greatest successes and has reduced carbon emissions, improved lighting quality and of course reduced costs. Manchester Airport has always placed a high priority on collaborative working - whether through the Greater Manchester Low Carbon Hub, Sustainable Aviation, or with our business partners. The joined-up approach promoted by **Airport Carbon Accreditation** is particularly important to help the airport deliver ongoing reductions in greenhouse gas emissions." -- Andrew Cowan, Chief Operating Officer, M.A.G.*



Brian Simpson MEP presenting the Manchester's airport's Environment team with the 'Optimisation' certificate.



## 4.2 KAOHSIUNG INTERNATIONAL AIRPORT

Kaohsiung International Airport (KIA), an important southern Taiwan international Airport, is one of Asia's most dynamic international airports. In the last three years, the annual passenger volume (domestic and international) has increased from 3.6 million passengers to over 4.6 million passengers, representing annual average growth of about 8%. Currently, KIA serves 121 flights to and from 11 cities in Southeast and Northeast Asia and 21 cities in China each week, and expects passenger growth to continue in 2014. Kaohsiung International Airport holds **Airport Carbon Accreditation** at Level 2 Reduction.

### SUSTAINABLE CIVIL AVIATION SERVICE

Kaohsiung International Airport's environmental policy recognises the impact of GHG emissions on the deterioration of the global climate and the environment. The airport seeks full compliance with the international regulations set out by the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. KIA has committed to achieve a 1% annual GHG reduction target and to pursue the goal of becoming a carbon neutral Green Airport. It is working towards this goal by putting in place appropriate GHG reduction policies and action plans and by improving its environmental and climate change management systems.

### CARBON MANAGEMENT

In 2009 KIA established a carbon reduction working group. This comprises all Division Managers and is led by the Director of the Airport. Division Managers are responsible for the carbon reduction tasks within their division and review related data periodically. The airport periodically organises internal and external carbon reduction related training courses. Division Managers and associated employees have obtained internal GHG verification certificates issued by international certification organisations. Airlines will also be given training and carbon reduction guidance in the future to enable them to play their part in fulfilling KIA's carbon mitigation plan. KIA has carried out an airport GHG inventory since 2009. Following international GHG inventory standards and data requirements, division managers supervise the collection of relevant activity data, emission coefficients and supporting information.

Meanwhile, the Airport plans its GHG reduction tasks annually using a rolling base-year methodology, and has successfully achieved its reduction goals and **airport carbon accreditation**. This activity is supported by continuing internal and external verification and management review. KIA's carbon reduction working group has, since 2009, been performing internal verification, and has backed this up with external verification by a recognised certification organisation.

Furthermore, GHG management and verification results have been incorporated into KIA's annual management review meetings in order to achieve better management performance. KIA has also implemented an energy saving and reduction planning management system. This is an Airport GHG cloud management system for multi-target GHG management, applying a rolling base-year

methodology for comparing the annual GHG emissions. Following the Taiwan government's official policies, KIA has implemented a special energy and resource management project, with impressive mitigation results, and has established an annual reduction plan. KIA also follows international and domestic energy standards for achieving better energy management performance.

## THE BENEFIT OF AIRPORT CARBON ACCREDITATION

Becoming accredited to **Airport Carbon Accreditation** has helped to give KIA the incentive to continue to implement airport GHG reduction policies, minimise environmental impact surrounding the airport, fulfil social and environmental responsibility standards and pursue the goal of becoming a carbon neutral Green Airport. It has also reinforced KIA's carbon management structure and carbon management program.

## THE FUTURE

*"KIA will maintain its Level 2 accreditation, will implement more energy saving and carbon reduction management measures, and aggressively encourage airlines and passengers to participate in energy saving and carbon reduction activities. KIA will pursue the goal of becoming a carbon neutral airport."*

Mr. Peter Yaw-Guang Ju, Director, Kaohsiung International Airport



Tan Sri Bashir Ahmad, President ACI ASIA-PACIFIC, giving the certificate at the Reduction level to Peter Yaw-Guang Ju, Director at Kaohsiung International Airport.



### 4.3 AÉROPORTS DE PARIS

Aéroports de Paris (ADP) is one of the world's leading airport operators. World-wide it manages 37 airports, directly or indirectly and in 2012. ADP owns, operates and develops the three main airports in the Paris area- Paris-Charles de Gaulle (61.6 million passengers in 2012), Paris-Orly (27.2 million passengers in 2012) and Paris-Le Bourget - as well as 10 general aviation aerodromes located in the Île-de-France region and the heliport at Issy-les-Moulineaux. All three airports are ISO 14001 certified and ADP is the only airport operator in the "Global 100 Most Sustainable Corporations in the World". Paris-Charles de Gaulle and Paris-Orly airports hold **Airport Carbon Accreditation** at Level 3 Optimisation and Paris-Le-Bourget is accredited at Level 2 Reduction.

#### ENERGY CONSUMPTION GOALS

By 2015 Aéroports de Paris aims to reduce internal energy consumption by 12.5% per square metre, and CO<sub>2</sub> emissions by 25% compared with 2009. ADP also aims to supply at least 15% of its internal energy consumption from renewable sources by 2015.

#### REDUCING ENERGY CONSUMPTION

ADP's HQE® approach, under which 148,000 square metres was delivered in 2012, its development of renewable energy and its lighting, air conditioning and heating optimisation programmes contribute considerably to achieving these goals. ADP uses precise calibration, centralised building management and the elements of the ISO 5001 Standard on which it aims to be certified.

Since 2007, ADP has designed and built new buildings – terminals, offices, and warehouses – with high energy performance ratings. The new satellite 4 at Paris-Charles de Gaulle consumes 30% less energy than the average for the existing terminals.

Action has been taken to reduce the energy performance of equipment in computing rooms. In 2012 ADP successfully optimised the air conditioning system for a server and network equipment room. Electricity and cold water consumption was significantly decreased and equipment lifetime was increased through the use of more efficient and more homogenous cooling. This approach is now being progressively applied to the main computer rooms. ADP is also continuing to renew PC's, with the systematisation of automatic standby mode and virtualisation of servers. ADP is also testing a method for switching off display screens remotely at the airport after closing.

Owing to the installation of energy saving work-stations, automatic stand by procedures, reconfigured computer rooms and new air conditioning technology, the IT departments have reduced their electricity consumption by 25% in the space of one year.

## RENEWABLE ENERGY SOURCES

With the commissioning of the geothermal power plant at Paris-Orly, in 2011, and the biomass power plant at Paris-Charles de Gaulle in 2012, ADP has increased its production of renewable energies. In future, these 2 facilities will eliminate nearly 27,000 tonnes of CO<sub>2</sub> emissions per year. To date, the geothermal energy plant at Paris-Orly has enabled ADP to reduce GHG emissions by 9,000 tonnes of CO<sub>2</sub> per year and the biomass plant by 18,000 tonnes of CO<sub>2</sub>.

Among other initiatives, solar powered water heaters have been used on the roof of the intercompany cafeteria at Paris-Orly since 2006 and at the Paris-Le Bourget fire station since 2011. A ground-based solar power 190 kWp generator installed in 2013 at Paris-Charles de Gaulle is expected to cover the energy needs of the ADP Environmental and Sustainable Development Resource Centre. ADP is currently investigating the use of solar power on other airport sites.

ADP has entered into an electric power contract guaranteeing that 30% of the electricity supplied will derive from renewable sources.

## GROUND OPERATIONS

ADP has committed to reduce the CO<sub>2</sub> emissions of its fleet of light utility vehicles by 10% between 2010 and 2015. Nearly 200 electric vehicles have been ordered and 70 electric vehicle charging terminals were installed at the Paris airports at the end of 2013.

All terminal aircraft stands at Paris-Orly and at Terminal 2 at Paris-Charles de Gaulle have been equipped with ground-level, electrical outlets and ground-level air conditioning is provided at the Satellite 4 contact stands at Paris-Charles de Gaulle.

In conjunction with the French Civil Aviation Authority and Air France, an IT system for local management of departures (GLD) has been introduced at Paris-Charles de Gaulle. This system was created as a result of Collaborative Decision Making (CDM) and aims to reduce aircraft taxiing time between the aircraft stand and take-off. Around 17,000 tonnes of CO<sub>2</sub> are saved each year and taxiing time has been lowered by 10% since 2007.

## THE BENEFIT OF AIRPORT CARBON ACCREDITATION

Becoming accredited to **Airport Carbon Accreditation** rewards ADP for several years of effort to understand and reduce its GHG emissions. Obtaining Level 3 accreditation means that ADP has a management system for its direct GHG emissions, that it has reduced these emissions, and that it has identified and attempted to reduce its indirect emissions. It also means that ADP is acting with its partners to limit their emissions.



## 5

## PROGRAMME DEVELOPMENTS DURING YEAR 5

### 5.1 Key Participation and Performance Highlights

In its 5th year of operation, **Airport Carbon Accreditation** continued to grow in both Europe and Asia-Pacific with 19 new airports becoming accredited for the first time. There were also 14 upgrades and 68 renewals. Two airports, Shannon in Europe, and Singapore in Asia-Pacific withdrew from the programme.

In Asia-Pacific, 3 airports in India upgraded to Level 3. Incheon airport became accredited for the first time at Level 3 and Sydney was a first time entry at Level 1. Participation has now reached 16 airports, or 18.5% of the regions passenger traffic. 8 airports in all were newly accredited.

In Europe, 11 airports were newly accredited, increasing the proportion of Europe's passengers passing through accredited airports to 62.8%. There were 10 upgrades. Accredited European airports account for 90% of the top ten busiest airports in Europe, and 72% of the top 50 busiest. Around 25% of accredited airports are from airports with less than 6 million passengers.

There are now 6 airports at Level 3 and above who have moved to the 3-yearly renewal schedule, introduced in year 4 for the first time. These are: London Heathrow, Manchester, Zurich (at Level 3) and Stockholm Arlanda, Stockholm Bromma and Umea, all airports of the Swedavia group (Level 3+). This means that these airports will have to provide evidence of on-going stakeholder engagement over their next three years period as well as demonstrating a reduction in at least one scope 3 emissions source for which they have active carbon management policies in place. This is the only point in the programme at which an airport has to demonstrate a reduction in Scope 3 emissions.

The environmental performance of the programme continued to be strong, with a reduction of 133,599tCO<sub>2</sub> from all airports Scope 1 and 2 emissions. Airports participating in the programme now account for 23.2% of world passenger traffic. In relative terms, the Scope 1 and 2 emissions reduction per passenger amounts to 0.26kg CO<sub>2</sub> for all airports certified in the programme, 0.23kg CO<sub>2</sub> for airports certified at Level 2 and above. For Scope 3 emissions, CO<sub>2</sub> emissions were reduced by 0.96 kg per passenger for airports certified at Level 3 and Level 3+.

During the year the **Airport Carbon Accreditation** website [www.airportcarbonaccreditation.org](http://www.airportcarbonaccreditation.org) and brochure were updated. These are the first ports of call for anyone interested in the programme and contain essential information about the latest accreditations and who is accredited, programme history and requirements, communication initiatives, and verifier listings.

The application process was moved to an entirely online portal [www.aca-application.org](http://www.aca-application.org). This is aimed at making the application, renewal, upgrading and verification processes more cost-effective and less time consuming. Experience to date has shown that it has eased the process for both airports and third party verifiers. All applications and verifications are now processed through this portal.

## 5.2 Approved verifiers and verifier training

With the introduction last year of new verifier requirements, there has been an increased uptake in potential verifiers undertaking the mandatory webinar training, including written examination, in order to be listed as an approved verifier under the programme. In Year 5, there were 12 such webinars with a total of 115 participants. The number of new verifiers participating came to 73 plus 2 existing verifiers of which 39 were from Asia-Pacific, 34 from Europe. Airports too can attend these webinars and 33 airports chose to do so.

Training webinars are run in principle every 4 to 6 weeks throughout the year. Details of the upcoming dates are posted on the **Airport Carbon Accreditation** website at [www.airportcarbonaccreditation.org](http://www.airportcarbonaccreditation.org).

Approved verifiers are now listed individually and by organisation for a period of two calendar years following their acceptance as an approved verifier. If, during this period, they have not undertaken any airport verification under the programme, they must take refresher training if they wish to remain as approved verifiers as the programme requirements develop over time.

All new verifiers must also provide their credentials for carrying out ISO 14064-3 verifications as well as evidence of any work carried out for airports specifically.

## 5.3 Revision of the GHG Protocol

The World Resources Institute is currently consulting on proposed changes to the GHG Protocol and has issued a draft Guidance Document for comment. In line with this process various consultations have been held with interested parties, in which the Administrator and ACI have participated. The Task Force has reviewed the proposed revised Guidance, and submitted formal comments. The new GHG Protocol Guidance is expected to become effective and therefore applicable to the programme in Year 6 (2014-2015).

The changes in the Guidance have come about because the electricity supply market (renewables in particular) has dramatically changed since the original standard was issued around 10 years ago. It would seem that in future airports in the programme will need to disclose emissions from both a market based and location based mix but can choose which of the two can be used in its carbon inventory.

## 5.4 The “A World You Like” Competition

In 2013, the European Commission launched an EU campaign to combat climate change and promote a low carbon society – “A World You Like, with a Climate You Like”. This was a competition in which businesses, NGO’s and local authorities could showcase their climate-friendly solutions. Competition entrants had to rally support from the public in order to be voted in amongst the top ten, before final judging by a high level panel, including the EU Commissioner for Climate Change. 269 projects were submitted from all over Europe, with **Airport Carbon Accreditation** being one of them. After a 6 week public vote, the programme succeeded in securing a place in the top 10 and was ultimately shortlisted by the jury, as one of the Top 3 low carbon initiatives in Europe.



Olivier Jankovec, Director General ACI EUROPE receiving Airport Carbon Accreditation’s Top 3 Finalist Award in the EU World You Like Contest, with EU Climate Action Commissioner Connie Hedegaard and ACI EUROPE’s Head of Environment, Chrystelle Damar

## 5.5 Airport Carbon and Emissions Reporting Tool (ACERT)

This do-it-yourself airport greenhouse gas inventory tool, developed by ACI World, was approved for use in Year 4 by potential applicants for **Airport Carbon Accreditation**, especially to help small airports with few resources, meet the programme requirements at Levels 1 and 2 of the programme.

A number of airports in Asia-Pacific are known to be using the tool to develop their carbon footprints, but so far, only one airport, Groningen Eelde, in Europe, has used it for the purpose of achieving first time certification at Level 1.

## 5.6 Ongoing review of Airport Carbon Accreditation Technical Requirements

Changes in Year 5 to the requirements of **Airport Carbon Accreditation** and therefore in the supporting documentation, including the Guidance, are summarised in the table below.

ISSUE / DESCRIPTION	RESPONSE
Increase in emissions over several years	The Guidance was amended to allow a limited deviation from meeting the annual requirement for an increase in emissions over several years in specific situations where an airport was unable to do so because of climatic reasons outside their control.
Mandatory submission of carbon footprint	Since the use of ACA online became mandatory not all airports uploaded their carbon footprint, even if verified. Changes to the Guidance and to the ACA online application site were made to ensure that all airports upload their footprints, as these are the basis for the carbon management and stakeholder plans.
Calculation of certification fees	The Guidance Document was updated to ensure that airports indicate which Band the airport falls into, based on official passenger figures for the purposes of invoicing participation fees. The passenger figures reported are based on figures for Year -2, where Year 0 is the current year, Year-1 is last year and Year -2 is the previous year. The methodology for the calculation of the certification fees is the same as for calculation of ACI membership fees.
Temporary, irregular electricity production at the airport	The investment/divestment section of the Guidance document will apply in this instance.
Proof of offset purchase in a non-verification year	The Guidance document was updated to make clear that proof of offset purchase in a non-verification year should be supplied within 3 months of purchase.
Aggregate carbon numbers	For the purpose of the Annual Report it was decided to calculate aggregate carbon numbers based on traffic unit (TU) as of Year 6.

# 6

## LOOKING AHEAD TO YEAR 6

There have been significant accomplishments over the past five years, not least of which is that **Airport Carbon Accreditation** is fully recognised as the industry reference standard for airport carbon mapping and management. It has attracted some 102 airports from the very small to the very large across 3 ACI regions and is poised to expand into others. To ensure that this remains the case, a key focus will be on consolidating and continuing the growth in participation during 2014-2015.

Key aims for Year 6 include:

- Continue to ensure the continuing relevance of the programme to airports as a vehicle for mitigating and reducing their carbon impact.
- Continue the verifier training programme to improve understanding of the programme and its verification requirements to help keep the application process cost effective.
- Extend the programme to the Latin American region of ACI.
- Monitor the outcome of the GHG Protocol revision process and adapt the outcome to the programme requirements.
- Ensure the programmes' supporting tools (website, online application portal, marketing material) remain fit for purpose.
- Investigate how the barriers to participation in Africa might be overcome.
- Better explain and promote the programme in all ACI member regions.
- Cooperate with ACI Global Training Hub.
- Where applicable, encourage ICAO States developing State action plans on climate change to include / refer **Airport Carbon Accreditation** in the list of actions proposed.



## PARTICIPATION LIST - EUROPE

LEVEL	ORGANISATION	AIRPORT
1 Mapping	AENA	Malaga-Costa del Sol
1 Mapping	AENA	Palma de Mallorca
1 Mapping	AENA	Barcelona El Prat
1 Mapping	AENA	Lanzarote
1 Mapping	ANA	Faro
1 Mapping	ANA	Flores
1 Mapping	ANA	Horta
1 Mapping	ANA	Lisbon
1 Mapping	ANA	Oporto
1 Mapping	ANA	Ponta Delgada
1 Mapping	ANA	Beja
1 Mapping	ANA	Santa Maria
1 Mapping	Budapest Airport Zrt.	Budapest
1 Mapping	Dubrovnik Airport	Dubrovnik
1 Mapping	Köln-Bonn Airport	Köln-Bonn Airport
1 Mapping	Liege Airport	Liege
1 Mapping	Tallinn Airport	Tallinn
1 Mapping	TAV	Ankara
1 Mapping	Tirana International Airport	Tirana
1 Mapping	Toulouse Airport	Toulouse
1 Mapping	Vienna Airport	Vienna
1 Mapping	Warsaw Chopin Airport	Warsaw
1 Mapping	Bucharest Airport	Bucharest (New Entry)
1 Mapping	Ljubljana Airport	Ljubljana (New Entry)
1 Mapping	Naples Airport	Naples (New Entry)
1 Mapping	Save S.p.A.	Treviso (New Entry)
1 Mapping	ANA	Porto Santo (New Entry)
1 Mapping	ANA	Madeira (New Entry)
1 Mapping	Groningen Airport Eelde	Groningen (New Entry)

## PARTICIPATION LIST - EUROPE

LEVEL	ORGANISATION	AIRPORT
2 Reduction	AENA	Adolfo Suárez Madrid-Barajas
2 Reduction	Avinor	Kristiansand
2 Reduction	Zagreb Airport	Zagreb (Upgrade)
2 Reduction	TAV	Izmir (Upgrade)
2 Reduction	ADR	Rome Ciampino (Upgrade)
2 Reduction	Aéroports de Paris	Le Bourget
2 Reduction	Bologna Guglielmo Marconi Airport	Bologna
2 Reduction	DAA	Cork
2 Reduction	DAA	Dublin
2 Reduction	Flughafen Düsseldorf GmbH	Düsseldorf
2 Reduction	Finavia Corporation	Helsinki
2 Reduction	Finavia Corporation	Enontekio
2 Reduction	Finavia Corporation	Ivalo
2 Reduction	Finavia Corporation	Kemi-Tornio
2 Reduction	Finavia Corporation	Kittila
2 Reduction	Finavia Corporation	Kuusamo
2 Reduction	Finavia Corporation	Rovaneimi
2 Reduction	Nice Côte d'Azur Airport	Nice
2 Reduction	Ruzyne-Prague Airport	Prague
2 Reduction	TAV	Istanbul Ataturk
2 Reduction	Save S.p.A.	Venice Marco Polo (New Entry)
2 Reduction	London City Airport	London City (Upgrade)
2 Reduction	Aéroports de Lyon	Lyon (upgrade)
2 Reduction	Manchester Airport Group	Stansted (New Entry)
2 Reduction	Avinor	Bergen (New Entry)

## PARTICIPATION LIST - EUROPE

LEVEL	ORGANISATION	AIRPORT
3 Optimisation	Aéroports de Paris	Charles de Gaulle
3 Optimisation	TAG	Farnborough (Upgrade)
3 Optimisation	Hamburg Airport GmbH	Hamburg (Upgrade)
3 Optimisation	Aéroports de Paris	Orly
3 Optimisation	Aeroporti di Roma	Rome Fiumicino
3 Optimisation	Antalya Airport	Antalya
3 Optimisation	BAA Heathrow	London Heathrow
3 Optimisation	Brussels Airport	Brussels
3 Optimisation	Fraport AG	Frankfurt
3 Optimisation	Genève Aéroport	Geneva
3 Optimisation	Manchester Airport Group	Manchester
3 Optimisation	Munich Airport GmbH	Munich
3 Optimisation	Zurich Airport AG	Zurich
3 Optimisation	Athens International Airport	Athens (Upgrade)
3 Optimisation	Copenhagen Airports	Copenhagen (New Entry)
3+ Neutrality	Avinor	Oslo
3+ Neutrality	Eindhoven Airport	Eindhoven (Upgrade)
3+ Neutrality	Avinor	Trondheim
3+ Neutrality	SEA Milan	Linate
3+ Neutrality	SEA Milan	Malpensa
3+ Neutrality	Swedavia	Åre Östersund
3+ Neutrality	Swedavia	Gothenburg
3+ Neutrality	Swedavia	Kiruna
3+ Neutrality	Swedavia	Lulea
3+ Neutrality	Swedavia	Malmö
3+ Neutrality	Swedavia	Ronneby
3+ Neutrality	Swedavia	Stockholm-Arlanda
3+ Neutrality	Swedavia	Stockholm-Bromma
3+ Neutrality	Swedavia	Umeå
3+ Neutrality	Swedavia	Visby
3+ Neutrality	Schiphol Group	Schiphol (Upgrade)

## PARTICIPATION LIST - ASIA-PACIFIC

LEVEL	ORGANISATION	AIRPORT
1 Mapping	Abu Dhabi Airports Company	Abu Dhabi International Airport
1 Mapping	Airport International Group	Queen Alia International Airport
1 Mapping	Adelaide Airport Limited	Adelaide Airport (New Entry)
1 Mapping	Adelaide Airport Limited	Parafield Airport (New Entry)
1 Mapping	Sunshine Coast Regional Council	Sunshine Coast Airport (New Entry)
1 Mapping	Sharjah Airport Authority	Sharjah International Airport (New Entry)
1 Mapping	Sydney Airport	Sydney (New Entry)
2 Reduction	Kaohsiung International Airport, CAA	Kaohsiung International Airport (New Entry)
2 Reduction	Airports of Thailand Public Co. Ltd.	Suvarnabhumi Airport (Upgrade)
2 Reduction	Macau International Airport	Macau (New Entry)
2 Reduction	Mumbai International Airport Pvt. Ltd	Chhatrapati Shivaji International Airport
3 Optimisation	Airport Authority Hong Kong	Hong Kong International Airport
3 Optimisation	Bangalore International Airport Ltd	Kempegowda International Airport (Upgrade)
3 Optimisation	GMR Hyderabad International Airport Ltd.	Rajiv Gandhi International Airport (Upgrade)
3 Optimisation	Delhi International Airport (P) Ltd	Indira Gandhi International Airport (Upgrade)
3 Optimisation	Incheon International Airport Corporation	Incheon International Airport (New Entry)

## PARTICIPATION LIST - AFRICA

LEVEL	ORGANISATION	AIRPORT
1 Mapping	TAV	Enfidah (New Entry)



**Airport Carbon Accreditation** has received formal endorsement from the European Civil Aviation Conference (ECAC) and the European Organisation for the Safety of Air Navigation (EUROCONTROL)



To find out more about **Airport Carbon Accreditation**, including an up-to-the minute list of participating airports, please visit our website at:

**[www.airportcarbonaccreditation.org](http://www.airportcarbonaccreditation.org)**

For application & technical queries,  
telephone: **+44 845 868 2708**  
or email: **[aca@wspgroup.com](mailto:aca@wspgroup.com)**

follow us on Facebook



@AirportCO2

