



THE EMIRATES GROUP
ENVIRONMENTAL REPORT 2014-15



A close-up photograph of a palm frond, showing the intricate, parallel veins of the leaf. The frond is dark green and slightly curved, with a soft focus in the background. The lighting highlights the texture of the leaf, creating a sense of depth and natural beauty.

HH SHEIKH MOHAMMED BIN RASHID AL MAKTOUM

Vice President and Prime Minister of the United Arab Emirates
and Ruler of Dubai



We recognise that preserving our resources will be one of the greatest challenges in our drive towards sustainable development. This, however, will not materialise unless different facets of our society adopt energy conservation principles in their core values.

Emirates is a global airline, operating the world's largest fleets of Airbus A380 and Boeing 777 aircraft from its hub in Dubai, United Arab Emirates. Its main activity is the provision of commercial air transportation services.

dnata is one of the largest combined air services providers in the world and the largest travel management services company in the UAE. Its main activities are the provision of cargo and ground handling, catering, information technology and travel services.

Emirates and dnata are independent entities and do not form a group as defined by International Financial Reporting Standards. However, these entities are under common management. Therefore, in this document they are together referred to as the Emirates Group.

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ENVIRONMENTAL PERFORMANCE

Emirates Airline – Environmental Data

Metric ¹	Unit	2014-15	2013-14	% change	Verified ²
Jet fuel consumption	tonnes	8,975,666	8,141,738	10.2	◆
Carbon dioxide (CO ₂) emissions	tonnes	28,273,348	25,646,474	10.2	◆
Fuel efficiency – passenger	L/100PK	3.99 ³	3.99 ³	0.0	◆
Fuel efficiency – cargo (freighters only)	L/FTK	0.182	0.190	-4.2	◆
Fuel efficiency – combined	L/TK	0.3057	0.3089	-1.0	◆
Operational Fuel Efficiency Factor (OFEF) ⁴	TK/L	17.74	17.74	0.0 ⁴	◆
CO ₂ efficiency – passenger	g CO ₂ / PK	98.6 ³	98.6 ³	0.0	◆
CO ₂ efficiency – cargo (freighters only)	g CO ₂ / FTK	449.1	469.2	-4.3	◆
CO ₂ efficiency – combined	kg CO ₂ / TK	0.756	0.764	-1.0	◆
Nitrogen oxides (NOx) emissions	tonnes <3,000ft	11,255	10,552	6.7	
Carbon monoxide (CO) emissions	tonnes <3,000ft	7,082	6,394	10.8	
Unburnt hydrocarbon (UHC) emissions	tonnes <3,000ft	754	665	13.4	
Aircraft compliant with ICAO Annex 16 Vol II emissions Standards ⁵	%	100	100	0.0	◆
Aircraft compliant with ICAO Annex 16 Vol I Chapter 4 noise Standards ⁵	%	100	100	0.0	◆

Emirates Group – Ground Operations Environmental Data

Metric ¹	Unit	2014-15	2013-14	% change
Diesel consumption ⁷	litres	30,968,471	31,766,294	-2.5
Petrol consumption ⁷	litres	14,419,770	13,451,474	7.2
Total fuel consumption (ground) ⁷	litres	45,388,241	45,217,768	0.4
Fuel consumption per head of staff ⁶	litres/head/day	1.76	1.97	-10.7
Associated CO ₂ emissions ⁷	tonnes	116,026	115,900	0.1
Electricity consumption ⁷	MWh	1,087,180	1,185,721	-8.3
Associated CO ₂ emissions ⁷	tonnes of CO ₂	761,026	830,005	-8.3
Electricity consumption per head of staff ⁶	kWh/head/day	42.0	52.6	-20.2
Water consumption ⁷	ML	6,054	8,221	-26.4
Associated CO ₂ emissions ⁸	tonnes of CO ₂	89,726	116,470	-23.0
Water use per head of staff ⁶	litres/head/day	239.2	361.3	-33.8
Total waste (not recycled) ⁷	tonnes	214,510	210,376	2.0
Total waste (not recycled) per head of staff ⁶	kg/head/day	8.4	8.8	-4.6
Recyclables collected ⁷	tonnes	5,320.3	7,555.2	-29.6

Emirates Group – Total Carbon Dioxide Emissions

Metric ¹	Unit	2014-15	2013-14	% change	Verified ²
CO ₂ from flight operations	tonnes	28,273,348	25,646,474	10.2	◆
CO ₂ from ground operations	tonnes	1,181,288	1,272,751	-7.2	
Total Group CO₂ emissions	tonnes	29,454,636	26,919,225	9.4	

¹ For definitions of the metrics in these tables, please see The Emirates Group Environmental Report 2014-15 Reporting Guidelines and Methodology document, available on www.emirates.com/about/environment.

² The metrics marked ◆ are covered by PwC's assurance procedures (see PwC assurance report on pages 54-55).

³ The methodology for calculating passenger fuel and CO₂ efficiency was amended for the 2014-15 Environmental Report to make it more accurate; the passenger efficiency figures for 2013-14 have therefore been recalculated with the new methodology to enable comparison. Under the previously-used methodology, passenger fuel efficiency was 4.05 litres per 100 passenger kilometres, and passenger CO₂ efficiency was 100.3 grams CO₂ per passenger kilometre for 2013-14.

⁴ Unlike the other fuel efficiency metrics we report, the higher the OFEF value, the better the efficiency. A positive percentage change therefore reflects improvement over time.

⁵ Excludes wet-leased cargo aircraft.

⁶ Includes staff of Emirates, dnata and Emirates Flight Catering (EKFC) in Dubai (68,500). It excludes staff from the 29 Emirates airport lounges covered in this report (ex Dubai), Alpha Flight Group Ltd, Emirates outstations and staff of Emirates and dnata subsidiary companies.

⁷ Includes Emirates, dnata and Emirates Flight Catering (EKFC) in Dubai, five of the Emirates Group's largest outstations by headcount, 29 Emirates airport lounges (ex Dubai) and Alpha Flight Group Ltd.

⁸ For desalinated water only.

HIS HIGHNESS SHEIKH AHMED BIN SAEED AL MAKTOUM

Chairman & Chief Executive Emirates Airline & Group

The operations of the Emirates Group, comprising Emirates, the world's largest international airline, and dnata, a global air services provider, span six continents.

Each day, we proudly contribute to global trade and tourism by providing high quality air transport links, as well as catering, ground handling, and travel management services to businesses and travelers around the world.

In 2014-15, Emirates and dnata have continued to invest in business growth in tandem with customer demand and global opportunities.

As the scale of our operations expands, we are ever more conscious of our responsibility towards the environment and communities we serve. We are aware that our efforts to reduce resource use will not only reduce our environmental impact, but will also help build our business resilience.

When it comes to our environmental stewardship, the Emirates Group has core areas of focus where we believe we can make the biggest impact, but we also know that every little effort counts especially when amplified at a global scale.

In the past year we faced some significant operational challenges, including airspace closures over some countries because of safety and security risks. Although the extra flight time to route around these closed areas added to our fuel consumption, the safety of our passengers and crew is paramount.

We also saw the runway resurfacing project at Dubai International Airport last year having a major impact on our operations, as Emirates had to carry extra contingency fuel and cut back on flights. dnata also had to navigate its ground support equipment in a constrained operating environment. However, these improvements to our hub infrastructure will add to the capacity and efficiency of the airport's operations in the long-term.

dnata took delivery of 30 new electric ground handling tractors from US manufacturers for their operations at Dubai International Airport. These will reduce emissions, and help contribute to a healthier environment.

Emirates SkyCargo moved all of its freighter operations to new dedicated facilities at Al Maktoum International Airport at Dubai World Central, which has less congestion. The advanced facilities also helped enhance efficiency and service offering to customers.

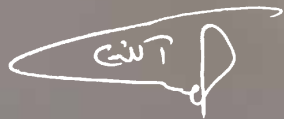
Wolgan Valley Resort & Spa, our luxury hospitality property in Australia's Blue Mountains, saw a change of management to One&Only. However, the resort will remain committed to wildlife and conservation. In collaboration with the resort, Emirates supported the University of New South Wales in a ground breaking initiative to map at-risk populations of wombats, in a community-based project where anyone with a smartphone can participate.

Looking ahead, we are sponsoring a new documentary series on the wildlife of the United Arab Emirates which will be launched in 2016. I am particularly excited at sharing the largely untold story of the UAE's rich and diverse desert and marine habitats.

partnering with United for Wildlife, a coalition of conservation organisations, to raise awareness about the illegal wildlife trade and to promote protection efforts.

In addition to our well-publicised fleet strategy of operating young and modern wide-body aircraft, Emirates also has an ongoing focus on operating our aircraft in the most efficient, responsible way possible. Our partnerships with air navigation service providers have been key to implementing fuel- and time-saving routes.

The initiatives I have highlighted may only provide a flavour of activity across our varied business operations, but I hope that it also conveys our commitment to reducing resource use, and sustainable operations. This report contains more information and data about our environmental performance and conservation efforts, and I hope you will find it an interesting read.

A handwritten signature in white ink, appearing to read "Tony Douglas", is located in the bottom left corner of the page. The signature is stylized, with the first name "Tony" written in a cursive script and the last name "Douglas" written in a more formal, blocky style.

THE LEADERSHIP TEAM

The Chairman & Chief Executive of Emirates Airline & Group is His Highness Sheikh Ahmed bin Saeed Al Maktoum. Sir Tim Clark is President of Emirates Airline. The President of Group Services and of dnata is Gary Chapman. Both presidents are supported by a senior management team, who oversee the various business units of the group.



HH Sheikh Ahmed
bin Saeed Al Maktoum
Chairman & Chief Executive
Emirates Airline & Group



Sir Tim Clark
President
Emirates Airline



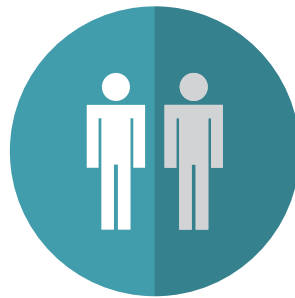
Gary Chapman
President
Group Services & dnata

A commitment to managed, responsible growth

Environmental responsibility is a core value of the Emirates Group, and underpins our vision of making the group a leader in the aviation and travel sectors. We constantly strive to make sustainability and environmental efficiency a cornerstone of all Group operations, in the air and on the ground.

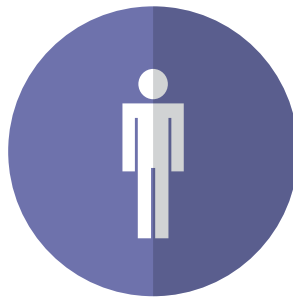
We continue to invest in the most modern, efficient aircraft and engine technology available, as well as ground equipment. We are constantly innovating, both internally and with our partners, to introduce greater improvements to our operations. In the Emirates Group's fifth Environmental Report, you will see how the Group is moving to drive future enhancements in efficiency and environmental performance, as well as the benefits now being realised from previous years of investment in programmes and initiatives.

THE EMIRATES GROUP – WHO WE ARE



84

THOUSAND STAFF



160+

NATIONALITIES



144

AIRLINE DESTINATIONS



232

AIRCRAFT



49.3

MILLION PASSENGERS
CARRIED

In 2014-15, Emirates added 24 new aircraft to our fleet, including our 50th Airbus A380 and 100th Boeing 777-300ER. We also retired 10 older aircraft, maintaining the average age of our fleet at 75 months, about half the industry average of 140 months. Investing in modern, wide-bodied aircraft has always been the cornerstone of our strategy, because these are more fuel-efficient to operate and also allow us to provide our customers with a better onboard experience.



2.4

MILLION TONNES
FREIGHT CARRIED

SKYCARGO



1.7

MILLION TONNES
FREIGHT HANDLED

dnata



298

THOUSAND AIRCRAFT
HANDLED

dnata



200+

RETAIL OUTLETS

dnata



46.6

MILLION MEALS PREPARED

dnata

Each day, dnata's employees around the globe uplift meals, service aircraft, move all types of cargo, handle baggage, help people with their travel plans, and ensure they reach their final destinations. dnata's aim is to become the world's most admired air travel services provider, and we do that by delivering on the promises that our customers make.

These figures are valid as of 31 March 2015.

OUR GROWING NETWORK

📍 DNATA PRESENCE

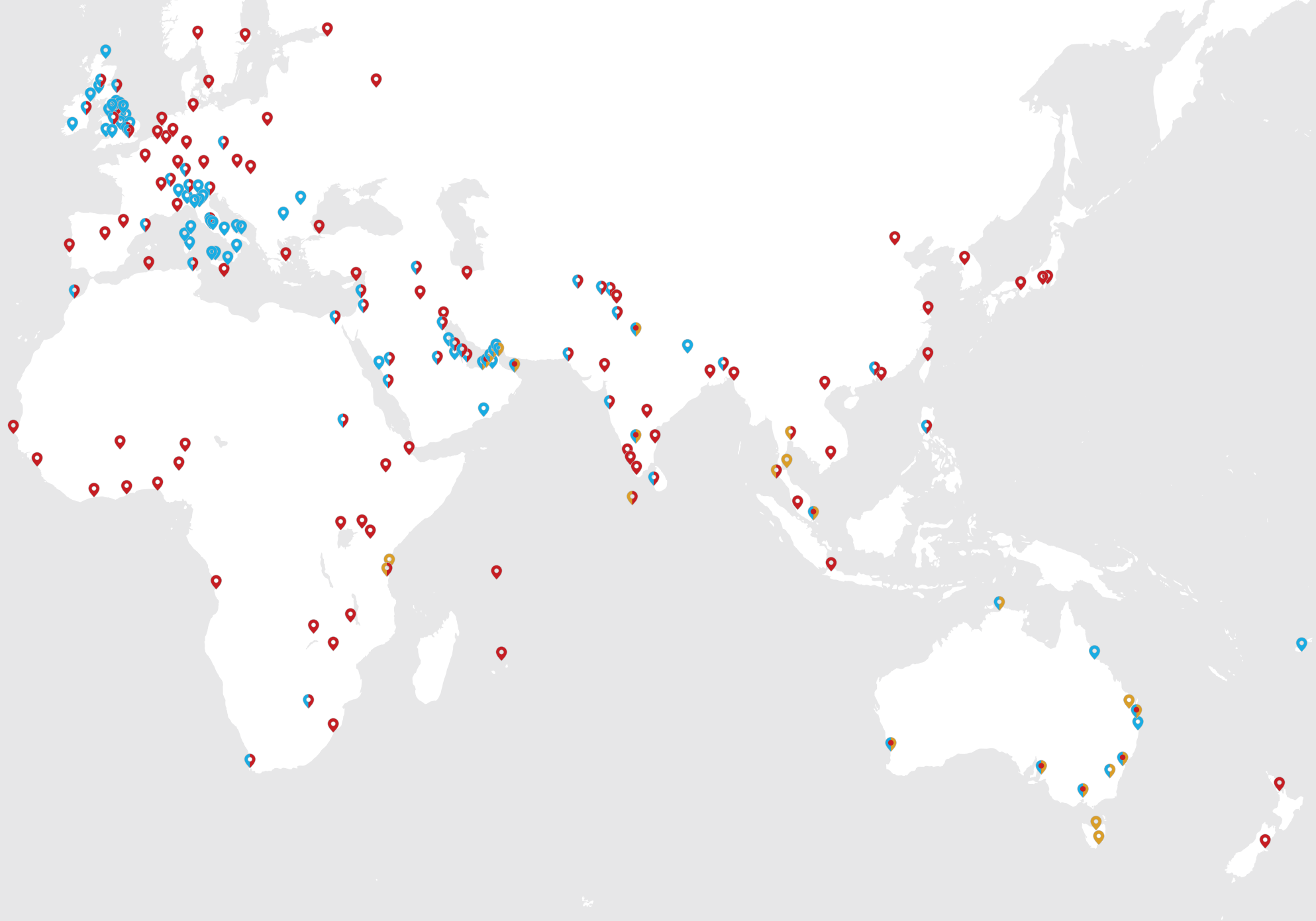
ABU DHABI	DUBAI	NEWCASTLE
ADELAIDE	EAST MIDLANDS	NOTTINGHAM
AL AIN	EDINBURGH	OLBIA
AL KHOBAR	ERBIL	PALERMO
AL MEDINAH	FLORENCE	PERTH
ALGHERO	FUJAIRAH	PESHAWAR
AMMAN (MARKA)	GENEVA	PISA
BAHRAIN	GENOVA	PRAGUE
BARCELONA	GLASGOW	PRESTON
BARI	GUANGZHOU	PRESTWICK
BEIRUT	HALIFAX	RAS AL KHAIMAH
BELFAST	ISLAMABAD	RIYADH
BENGALURU	JEDDAH	ROME (FIUMICINO
BERGAMO	JOHANNESBURG	& CIAMPINO)
BIRMINGHAM	JUBAIL	SALALAH
BOLOGNA	KABUL	SANFORD
BRINDISI	KARACHI	SHARJAH
BRISBANE	KATHMANDU	SINGAPORE
BRISTOL	KHARTOUM	SOFIA
BUCHAREST	KUWAIT	SUVA
CAGLIARI	LAHORE	SYDNEY
CAIRO	LAMEZIA TERME	TOWNSVILLE
CANBERRA	LEEDS	TRAPANI
CAPE TOWN	LIVERPOOL	TUNIS
CARDIFF	LONDON GATWICK	TURIN
CASABLANCA	LONDON HEATHROW	VENICE
CATANIA	LONDON STANSTED	VERONA
CHESTER	LUTON	YANBU
COLOMBO	MANCHESTER	ZURICH
COOLANGATTA	MANILA	
CORK	MELBOURNE	
DAMMAM	MILAN (MALPENSA	
DARWIN	& LINATE)	
DELHI	MUMBAI	
DHAKA	MUSCAT	
DOHA	NAPLES	

📍 EMIRATES PRESENCE

ABU DHABI
ADELAIDE
AJMAN
BANGKOK
BENGALURU
BRISBANE
CANBERRA
DAR ES SALAAM
DARWIN
DELHI
DUBAI
FUJAIRAH
HOBART
LAUNCESTON
MALÉ
MELBOURNE
MUSCAT
NEWCASTLE (AUSTRALIA)
PERTH
PHUKET
RAS AL KHAIMAH
SAMUI
SHARJAH
SINGAPORE
SYDNEY
WOLGAN VALLEY
ZANZIBAR

📍 EMIRATES DESTINATIONS

ABIDJAN	COLOMBO	KANO	NICE
ABUJA	CONAKRY	KARACHI	OSAKA
ACCRA	COPENHAGEN	KHARTOUM	OSLO
ADDIS ABABA	DAKAR	KOCHI	OUAGADOUGOU
ADELAIDE	DALLAS/FORT WORTH	KOLKATA	PARIS
AHMEDABAD	DAMMAM	KOZHIKODE	PERTH
AL MEDINAH	DAR ES SALAAM	KUALA LUMPUR	PESHAWAR
ALGIERS	DELHI	KUWAIT	PHUKET
AMMAN	DHAKA	LAGOS	PRAGUE
AMSTERDAM	DJIBOUTI	LAHORE	QUITO
ATHENS	DOHA	LARNACA	RIO DE JANEIRO
ATLANTA	DUBAI	LIEGE	RIYADH
AUCKLAND	DUBLIN	LILONGWE	ROME
BAGHDAD	DURBAN	LISBON	SAN FRANCISCO
BAHRAIN	DÜSSELDORF	LONDON GATWICK	SÃO PAULO
BANGKOK	ELDORÉ	LONDON HEATHROW	SEATTLE
BARCELONA	ENTEBBE	LOS ANGELES	SEOUL
BASEL	ERBIL	LUANDA	SEYCHELLES
BASRA	FRANKFURT	LUSAKA	SHANGHAI
BEIJING	GENEVA	LYON	SIALKOT
BEIRUT	GLASGOW	MADRID	SINGAPORE
BENGALURU	GUANGZHOU	MALÉ	STOCKHOLM
BIRMINGHAM	HAMBURG	MALTA	ST. PETERSBURG
BOSTON	HANEDA	MANCHESTER	SYDNEY
BRISBANE	HANOI	MANILA	TAIPEI
BRUSSELS	HARARE	MAURITIUS	TEHRAN
BUDAPEST	HO CHI MINH CITY	MELBOURNE	THIRUVANANTHAPURAM
BUENOS AIRES	HONG KONG	MEXICO CITY	TOKYO
CAIRO	HOUSTON	MILAN	TORONTO
CAMPINAS	HYDERABAD	MOSCOW	TUNIS
CAPE TOWN	ISLAMABAD	MUMBAI	VENICE
CASABLANCA	ISTANBUL	MUNICH	VIENNA
CHENNAI	JAKARTA	MUSCAT	WARSAW
CHICAGO	JEDDAH	NAIROBI	WASHINGTON
CHITTAGONG	JOHANNESBURG	NEW YORK	ZARAGOZA
CHRISTCHURCH	KABUL	NEWCASTLE	ZURICH



THE EMIRATES FLEET

Fleet numbers as of 31 March 2015



AIRBUS A380-800

Number of Aircraft: 59	Wingspan: 79.8 m
Cargo Capacity: 8 tonnes	Length: 72.7 m
Passenger Capacity: 489-517	Height: 24.1 m
Engine Type: GP7272	Max Take-Off Weight: 569.0 tonnes
Range: 15,000 km	Average Cruising Speed: 907 km/h



AIRBUS A340-500

Number of Aircraft: 1	Wingspan: 63.4 m
Cargo Capacity: 15 tonnes	Length: 67.9 m
Passenger Capacity: 258	Height: 17.1 m
Engine Type: RR Trent 553	Max Take-Off Weight: 372.0 tonnes
Range: 16,050 km	Average Cruising Speed: 874 km/h



AIRBUS A340-300

Number of Aircraft: 4	Wingspan: 60.3 m
Cargo Capacity: 13 tonnes	Length: 63.6 m
Passenger Capacity: 267	Height: 16.8 m
Engine Type: CFM56-5C4	Max Take-Off Weight: 275.0 tonnes
Range: 13,350 km	Average Cruising Speed: 874 km/h



AIRBUS A330-200

Number of Aircraft: 21	Wingspan: 60.3 m
Cargo Capacity: 17 tonnes	Length: 58.8 m
Passenger Capacity: 237-278	Height: 17.8 m
Engine Type: RR Trent 772	Max Take-Off Weight: 230.0 tonnes
Range: 12,200 km	Average Cruising Speed: 874 km/h



BOEING 777-300ER

Number of Aircraft: 103	Wingspan: 64.8 m
Cargo Capacity: 23 tonnes	Length: 73.9 m
Passenger Capacity: 354-442	Height: 18.6 m
Engine Type: GE90-115B	Max Take-Off Weight: 349.2 tonnes
Range: 14,594 km	Average Cruising Speed: 896 km/h



BOEING 777-300

Number of Aircraft: 12	Wingspan: 60.9 m
Cargo Capacity: 23 tonnes	Length: 73.9 m
Passenger Capacity: 364	Height: 18.6 m
Engine Type: RR Trent 892	Max Take-Off Weight: 299.3 tonnes
Range: 11,029 km	Average Cruising Speed: 896 km/h



BOEING 777-200LR

Number of Aircraft: 10	Wingspan: 64.8 m
Cargo Capacity: 15 tonnes	Length: 63.7 m
Passenger Capacity: 266	Height: 18.6 m
Engine Type: GE90-110B	Max Take-Off Weight: 343.4 tonnes
Range: 17,446 km	Average Cruising Speed: 896 km/h



BOEING 777-200/777-200ER

Number of Aircraft: 1/6	Wingspan: 60.9 m
Cargo Capacity: 18 tonnes	Length: 63.7 m
Passenger Capacity: 274-346	Height: 18.6 m
Engine Type: RR Trent 877	Max Take-Off Weight: 247.2 tonnes
Range: 9,649 km	Average Cruising Speed: 896 km/h



BOEING 777F

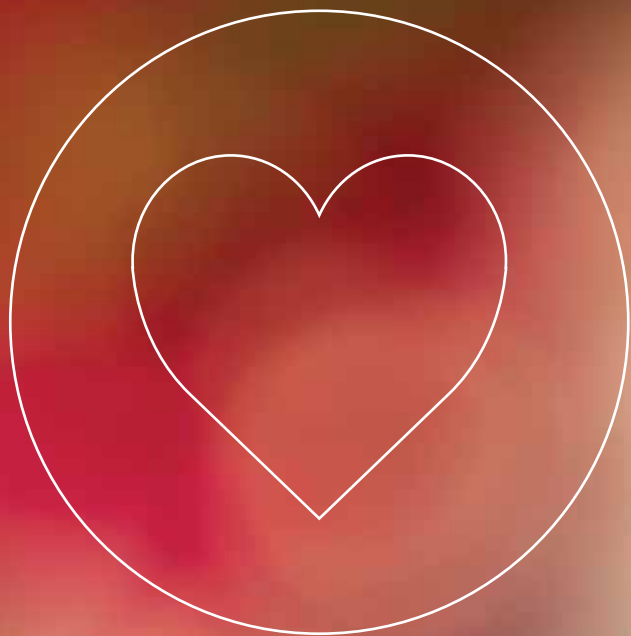
Number of Aircraft: 12	Wingspan: 64.8 m
Cargo Capacity: 103 tonnes	Length: 63.7 m
Engine Type: GE90-110B	Height: 18.6 m
Range: 9,260 km	Max Take-Off Weight: 347.5 tonnes
	Average Cruising Speed: 896 km/h



BOEING 747-400ERF

Number of Aircraft: 2	Wingspan: 64.4 m
Cargo Capacity: 117 tonnes	Length: 70.6 m
Engine Type: GE80C2B1F	Height: 19.5 m
Range: 8,232 km/9,204 km	Max Take-Off Weight: 395.9 tonnes
	Average Cruising Speed: 896 km/h

Note: One A319 aircraft is used for Executive jet charters.



OUR PRIORITIES

The Emirates Group operates globally, flying to more than 80 countries, occupying facilities around the world, and operating a large fleet of ground vehicles. All of these operations inevitably produce a range of environmental impacts, varying in scope and scale.

In this report, we focus on major environmental aspects, and have assessed each aspect for significance based on factors such as:

- net contribution to the Group environmental footprint;
- existence or pending development of significant regulatory controls; and
- public or other stakeholder interest.

Given our core business, the Emirates Group's environmental aspects are dominated by the consumption of jet fuel and the resulting emissions. Jet fuel is also Emirates Airline's single largest operating cost. Efforts to minimise fuel consumption and the resulting emissions are therefore central to our environmental programme and are at the core of our report.

Despite the new generations of aircraft being significantly quieter than their predecessors, noise also remains an issue around many airports. We report here on the performance of our fleet relative to the applicable international aircraft noise Standards.

On the ground, we concentrate on our vehicle and equipment fuel use and emissions, electricity and water consumption, and waste generation – as well as efforts to reduce impacts in these areas.

Beyond the operational environmental aspects described above, we recognise the clear link between healthy ecosystems and the health of our business. To that end, we have supported two major conservation initiatives in Dubai and Australia, as well as contributing to a number of sustainability projects in different countries through our "A Greener Tomorrow" programme.

Finally, we acknowledge the role that people play in making a better environment for us all to enjoy. Our staff contribute to a variety of initiatives in Dubai and in our locations around the world, and our passengers support children in developing countries through their generous donations to the Emirates Airline Foundation. With the launch of dnata's new programme, dnata4good, staff contribute to a select range of projects helping children and wildlife in several countries.



JET FUEL AND ENGINE EMISSIONS

Jet fuel and the resulting emissions are our most significant environmental concern, and the lower fuel prices have not altered our focus on fuel efficiency. Despite a 15% reduction in average fuel price from the previous year, jet fuel remained Emirates' single largest area of expenditure.

In 2014-15 Emirates spent nearly AED 28.7 billion (US\$7.8 billion) on jet fuel, which made up 34.6% of the airline's operating costs. Total fuel consumption reached 8,975,666 tonnes, up 10.2% on the previous year. The resulting CO₂ emissions totalled 28,273,348 tonnes, also up 10.2% as CO₂ emissions are directly related to the quantity of fuel burnt.

The increase in fuel consumption was largely driven by the strong growth in our network as we added five new passenger and four new freighter-only destinations, and our capacity increased by 8.6% in available tonne kilometres (ATK). We took delivery of 24 aircraft to service our expanding network – 10 Boeing 777-300ERs, 12 Airbus A380s, and two Boeing 777-200F freighters, maintaining our position as the world's largest Boeing 777 and Airbus A380 operator. At the same time, a number of older and less efficient Airbus A340-500s and Boeing 777-200s exited the fleet, resulting in a net increase in fleet size of 14 aircraft. These changes to our fleet contributed to us maintaining one of the youngest average fleet ages in the industry of 75 months (6.25 years).

Fuel efficiency

As Emirates primarily operates medium- and long-haul flights, fuel efficiency measures can make a significant impact on our bottom line as well as helping to reduce emissions. This is why we cooperate with aviation authorities and air traffic control organisations across the world to test and validate new fuel-saving flight procedures. During the year, our flight operations specialists worked with agencies in countries as far afield as the USA, Austria, France, Malta, the Seychelles, Ethiopia, Kenya and Pakistan – as well as Dubai's neighbouring emirate of Sharjah – to introduce or validate new performance-based navigation (PBN) procedures, which will help to both reduce fuel consumption and enhance operational safety.

We are supportive of efforts around the world to improve the efficiency of air traffic management and to provide more flexibility on flight routes. For example, a major new programme that is under way to deliver seamless, integrated 'free route airspace' across the whole of northern Europe by 2020 will help us to reduce fuel consumption and emissions on our flights traversing that region. We would encourage this kind of approach to be replicated more widely to deliver the safety and efficiency benefits that such programmes are expected to achieve.

Emirates continued its active participation in the Indian Ocean Strategic Partnership to Reduce Emissions (INSPIRE), hosting the 5th INSPIRE meeting in Dubai in November 2014. The meeting, which was attended by representatives from INSPIRE's partner air navigation service providers, airlines, and government agencies, reviewed progress on a range of efficiency initiatives that are set to benefit international flights.

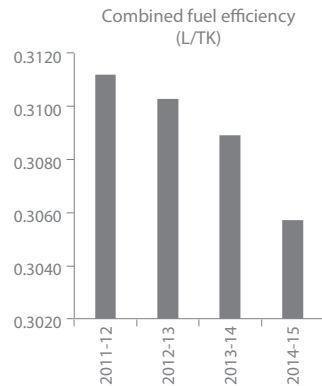
<http://www.inspire-green.com/>



5 NEW PASSENGER
DESTINATIONS



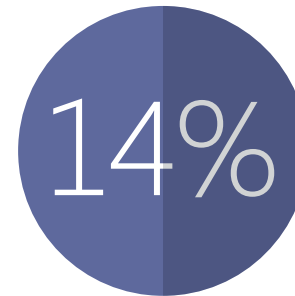
4 NEW FREIGHTER ONLY
DESTINATIONS



We have also maintained our focus on operational measures such as idle reverse thrust and engine-out taxi, which our pilots use whenever operational conditions permit. Idle reverse thrust saved 4,059 tonnes of fuel in 2014-15, equivalent to 12,786 tonnes of CO₂, while shutting down one engine while taxiing saved 2,093 tonnes of fuel over the year, or 6,593 tonnes of CO₂.

On the other hand, our efficiency levels this year were affected by airspace closures due to security concerns and instability in many parts of the world, including Ukraine, Syria, Iraq and Libya. Because the safety of our passengers and crew is of paramount concern, we re-routed flights to avoid these areas, resulting in increased fuel consumption. Emirates worked closely with the authorities in neighbouring states to ensure that the increased traffic through their airspace could be handled safely and efficiently. Iran and Saudi Arabia in particular accepted much higher volumes of our traffic through their airspace, and were very helpful in providing timely access to fuel-efficient contingency routes.

Emirates' operations were significantly impacted by the 80-day consecutive closure of each of Dubai International Airport's two runways to enable necessary improvement works. Fewer slots were available for take-off and landing, so we scheduled more aircraft for maintenance during the period. SkyCargo freighter operations were relocated permanently to Dubai's new airport, Al Maktoum International Airport at Dubai World Central (DWC).



**MORE EFFICIENT THAN
IATA FLEET AVERAGE**



**24 NEW AIRCRAFT
DELIVERED**



**10 AIRCRAFT RETIRED
FROM FLEET**

For safety reasons, flights were also required to carry more contingency fuel than usual. Despite the short-term operational impact, the long-term benefits will be substantial. This is particularly so in terms of increasing the capacity of the airport to handle more take-offs and landings in a given time period, especially in low-visibility situations. The enhancements include:

- Extended runways;
- Rapid exit taxiways to reduce the time that aircraft are on the runway after touching down;
- Upgraded runway lighting; and
- An enhanced Category III Instrument Landing System (ILS) to enable operations in low-visibility conditions.

As a result of operational challenges such as the airspace closures, passenger fuel efficiency remained at the same level as the previous year, at 3.99 litres per 100 passenger kilometres. Likewise, our payload-independent Operational Fuel Efficiency Factor showed no change between 2013-14 and 2014-15 (17.74 tonne-kilometres per litre). (Note: we changed our calculation methodology for passenger fuel and CO₂ efficiency to improve its accuracy; the figures for 2013-14 have been updated with the new methodology.)

On the other hand, cargo fuel efficiency improved 4.2% to 0.182 litres per freight tonne kilometre as more flights were undertaken by the more efficient Boeing 777-200F. This helped our overall fuel efficiency improve 1% to 0.3057 litres per tonne kilometre, 14% more efficient than the IATA fleet average fuel efficiency of 0.3553 litres per revenue tonne kilometre (IATA WATS 59th Edition).

Policy

The International Civil Aviation Organisation (ICAO) has two significant processes under way which will impact the way that CO₂ emissions from international aviation are regulated. The organisation is continuing to develop an aircraft CO₂ emissions Standard to apply to aircraft designs in the future, and discussions have been ongoing to develop a global market-based measure, which is intended to offset the industry's growth in emissions from 2020. Emirates has contributed to these discussions through the UAE delegation to the ICAO Committee on Aviation Environmental Protection (CAEP).

The European Union Emissions Trading System (EU ETS) is still in force, but its scope has been reduced to coverage of intra-European flights until the end of 2016 while ICAO is working on the global scheme. Emirates continues to comply with the EU ETS for all of our flights within the amended scope.



Emirates' fleet fuel efficiency

Metric	Unit	2014-15	2013-14	% change
Operational fuel efficiency (OFEF) ¹	TK / L	17.74	17.74	0.0
Passenger fuel efficiency ²	L / 100PK	3.99	3.99	0.0
Cargo fuel efficiency (freighters only)	L / FTK	0.182	0.190	-4.2
Combined fuel efficiency	L / TK	0.3057	0.3089	-1.0

Emirates' fleet carbon dioxide emissions efficiency

Metric	Unit	2014-15	2013-14	% change
Passenger CO ₂ efficiency ²	g CO ₂ / 100PK	98.6	98.6	0.0
Cargo CO ₂ efficiency (freighters only)	g CO ₂ / FTK	449.1	469.2	-4.3
Combined CO ₂ efficiency	kg CO ₂ / TK	0.756	0.764	-1.0

¹ Note: an increase in the OFEF implies greater efficiency, whereas a decrease in the other metrics implies greater efficiency.

² The methodology for calculating passenger fuel and CO₂ efficiency was amended for the 2014-15 Environmental Report to make it more accurate; the passenger efficiency figures for 2013-14 have therefore been recalculated with the new methodology to enable comparison. Under the previously-used methodology, passenger fuel efficiency for 2013-14 was 4.05 L / 100PK and passenger CO₂ efficiency was 100.3 g CO₂ / 100PK.



Fleet information as at 31 March 2015

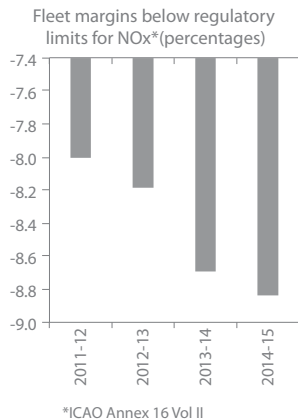
Aircraft	In operation	Change from March 2014	On firm order
A330-200	21		
A340-300	4		
A340-500	1	-8	
A380-800	59	12	81
B777-200	1	-2	
B777-200ER	6		
B777-200LR	10		
B777-300	12		
B777-300ER	103	10	49
B777-8X/9X			150
Total Passenger	217	12	280
B777-200LRF	12	2	
B747-400ERF (on wet lease)	2		
Total Cargo	14	2	
A319 ACJ	1		
Total Executive Charter	1		
Total	232	14	280

Fuel jettison events

Fuel is only jettisoned in an in-flight emergency situation when it is necessary to lower the aircraft weight to ensure a safe landing.

	2014-15
Technical Reasons	6
Medical Reasons	9
Other Reasons	0
Total Events	15
Jettisoned Fuel (tonnes)	341.3





Local air quality emissions

The most significant types of engine emissions that can impact on local air quality are internationally regulated by ICAO Standards contained in ICAO Annex 16 Volume II. These emissions are oxides of nitrogen (NOx), unburnt hydrocarbons (UHCs), carbon monoxide (CO) and smoke. All of Emirates’ aircraft are fully compliant with these Standards. In addition, our operational initiatives such as switching off one engine during taxi on the ground (where operationally possible) and using ground power when available instead of the on-board auxiliary power unit (APU) all help to reduce emissions on the ground.

We report on the emissions of NOx, UHCs and CO below 3,000 feet using ICAO’s landing/take-off (LTO) cycle. This layer of the atmosphere nearest the ground is considered to be the most relevant for emissions affecting local air quality.

NOx emissions below 3,000 feet increased 6.7% to 11,255 tonnes, in line with growth in the fleet and network. The average fleet margin below the applicable ICAO limits improved from -8.69% to -8.84% as we retired older aircraft and took delivery of newer models.

CO emissions increased 10.8% to 7,082 tonnes, again reflecting the growth in the fleet and network. The average fleet margin below the ICAO Standard decreased slightly from -60.11% to -59.70%.

UHC emissions increased 13.4% to 754 tonnes, while the average fleet margin below ICAO Standards decreased slightly from -68.09% to -67.52%.

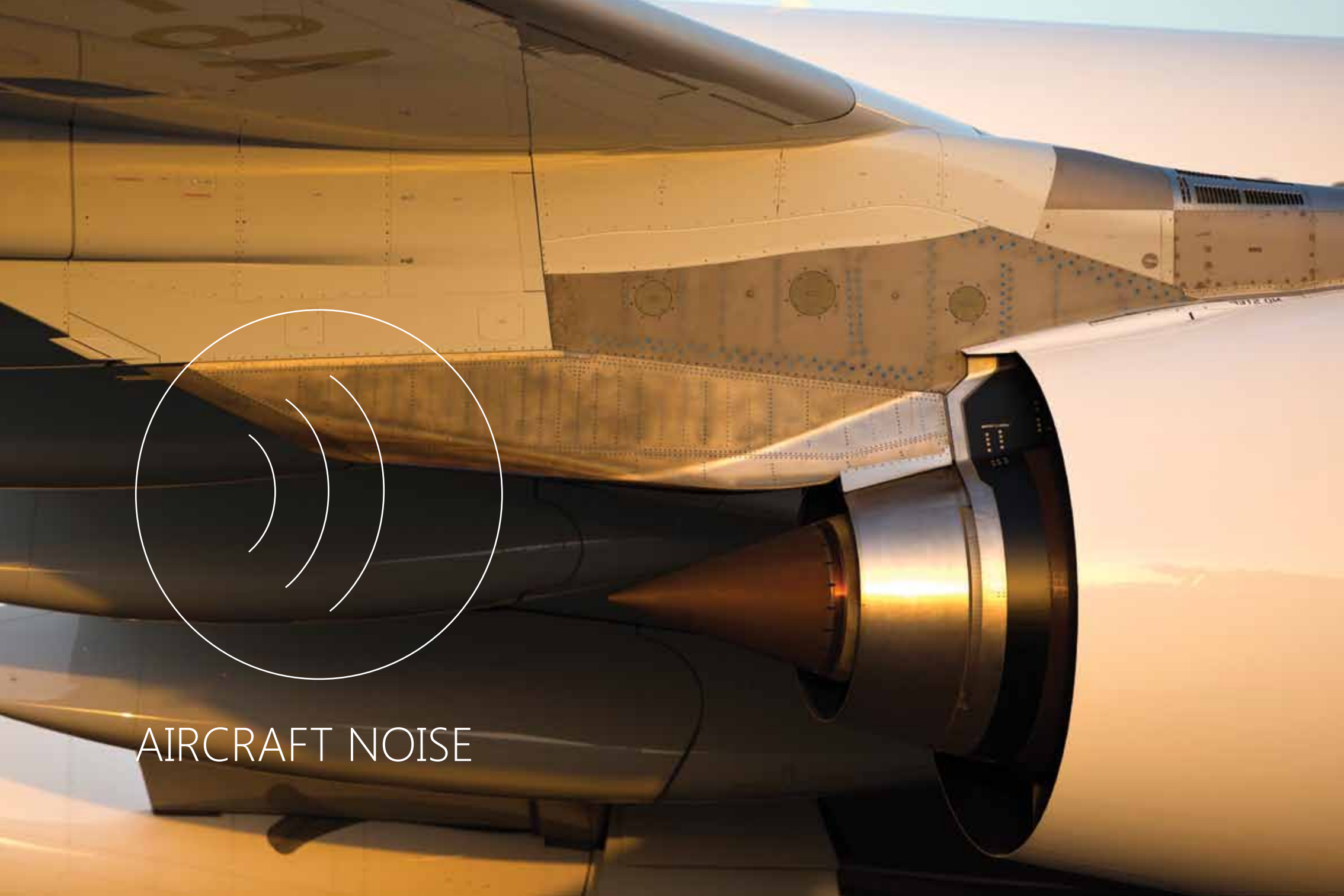
UHC and CO emissions have grown at a higher rate than CO₂ emissions because the increase in cruise fuel efficiency in newer engines has come with a trade-off of higher UHC and CO emissions during the LTO cycle. However, the margins for Emirates’ engines are still well below the applicable regulatory limits for all categories of local air quality emissions. UHC and CO emissions are mainly produced at low thrust settings, and are minimal in the cruise phase of flight.

Aircraft are not the only contributors to air quality concerns around airports – airport ground equipment, road traffic, industrial facilities and home heating can all impact on air quality. Efforts to address local air quality should therefore fully take into account the contributions of all pollution sources, and mitigation actions should be proportionate to the source of the problem.



Local air quality emissions below 3,000 feet (landing/take-off cycle) in tonnes			
Emission type	2014-15	2013-14	% change
Oxides of nitrogen (NOx)	11,255	10,552	6.7
Carbon monoxide (CO)	7,082	6,394	10.8
Unburnt hydrocarbons (UHCs)	754	665	13.4

Emirates fleet margins below regulatory limits in percentages (ICAO Annex 16 Volume II)		
Emission type	2014-15	2013-14
Oxides of nitrogen (NOx)	-8.84	-8.69
Carbon monoxide (CO)	-59.70	-60.11
Unburnt hydrocarbons (UHCs)	-67.52	-68.09

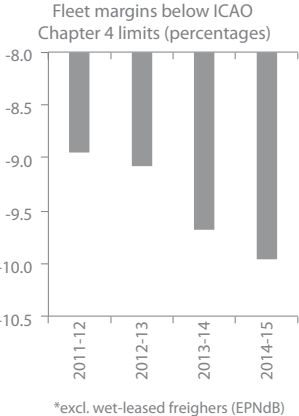


AIRCRAFT NOISE

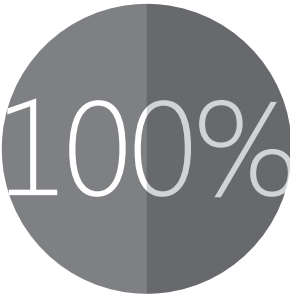
As Emirates has progressively invested in quieter aircraft, our overall noise performance has continued to improve.

All of Emirates’ aircraft meet or exceed the Chapter 4 noise Standards in ICAO Annex 16 Volume I, which are the most stringent ICAO Standards for aircraft currently in operation. The fleet’s margin below Chapter 4 limits has continued to widen, reaching 9.95 EPNdB below the limit in 2014-15. (Note: these metrics exclude wet-leased freighters.)

The backbone of our fleet, the Boeing 777 and Airbus A380, both perform exceptionally well in terms of noise. Emirates has continued to rank highly in the London Heathrow Fly Quiet Programme as a result of its selection of aircraft (exclusive A380 operations) and consistent use of noise abatement procedures, achieving 4th position overall in the Fly Quiet report covering the first quarter of 2015.



Emirates fleet margins below ICAO Chapter 4 regulatory limits			
Metric	2014-15	2013-14	Change
Margin to Chapter 4 in Effective Perceived Noise in Decibels (EPNdB)	-9.95	-9.66	-3.0%
Percentage margin below Chapter 4 (%)	-6.44	-6.36	-0.08 percentage points



AIRCRAFT COMPLIANT
WITH CHAPTER 4
STANDARDS

Excludes wet-leased freighters



FLEET MARGIN
BELOW ICAO CHAPTER 4
LIMITS (EPNdB)



GROUND OPERATIONS

The Emirates Group has substantial ground-based operations in Dubai and in many countries around the world, and efforts are made across the Group to manage their environmental impacts. This section covers the use of ground vehicles and equipment and associated emissions, electricity and water consumption, and management of materials and waste.

The Group occupied several new facilities during the year, including the SkyCargo terminal at Dubai World Central (DWC) – Al Maktoum International Airport, the Emirates Aviation University campus in Dubai’s Academic City district, and a new state-of-the-art Engine Maintenance Centre.

From 1st May 2014, all SkyCargo freighter operations moved to dedicated facilities at DWC. The move took pressure off capacity at Dubai International Airport, particularly during the runway maintenance works in summer 2014, and gives the operation room to expand. The new cargo-handling facilities feature 12 aircraft stands, which connect through the warehouse facility directly to truck loading bays to enable rapid movement and sorting of shipments. A road feeder service was inaugurated to connect the DWC operation with Dubai International Airport, where belly cargo is handled for the passenger aircraft network. The road feeder service is managed from a control room at DWC, ensuring security of the shipments and that the most time-efficient road routes are utilised between the two airports.



Fuel consumption from ground vehicle operations

Metric	Unit	2014-15	2013-14	% change
Diesel consumption (worldwide)	litres	30,968,471	31,766,294	-2.5
Petrol consumption (worldwide)	litres	14,419,770	13,451,474	7.2
Total fuel consumption (worldwide)	litres	45,388,241	45,217,768	0.4
Total fuel consumption (Dubai)	litres	44,089,152	42,249,461	4.4
Fuel consumption per head				
of staff (Dubai)	litres/head/day	1.76	1.97	-10.7

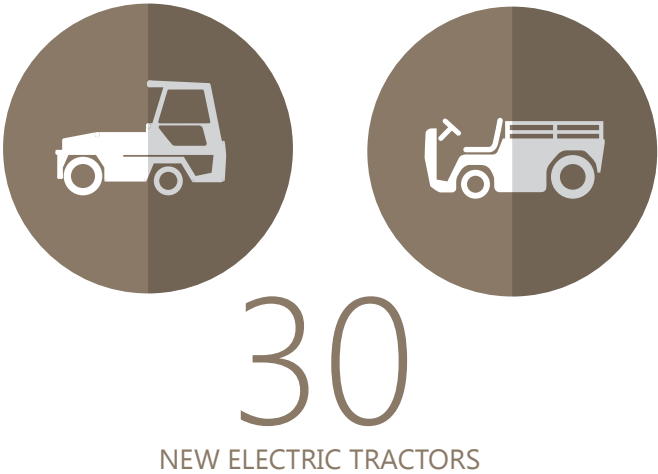


Ground Vehicles and Equipment

The Emirates Group’s ground vehicle and equipment fleet increased from 4,680 vehicles in 2013-14 to 4,812 in 2014-15. In line with this increase, fuel consumption in Dubai rose 4.4%, and 0.4% worldwide. One factor contributing to the increase in petrol consumption relative to diesel was the replacement last year of 4.2-litre diesel buses with 2.8-litre petrol buses for airside crew transfers, which also helped to reduce emissions by 70 g CO₂ / km.

An important addition to the ground transport network this year was the SkyCargo road feeder service (introduced above), providing the link between dedicated freighter operations at DWC and the majority of the Emirates fleet at Dubai International Airport. The fuel consumption figures this year include the diesel used by the service.

dnata in Dubai took delivery of 30 new electric tractors to replace diesel-powered vehicles for use at Dubai International Airport. The tractors, manufactured by TUG Technologies Corporation and Charlotte America, produce no air-polluting emissions.



A change in the UAE government’s regulations has helped to bring down the amount of pollutants produced by ground vehicles. The Group’s ground transport fleet in the UAE began using low-sulphur diesel following the government’s announcement of mandatory new fuel specifications in 2014. The fuel contains 10 parts per million (ppm) of sulphur, a considerable reduction from the previous specification of 500 ppm, and will greatly reduce levels of particulate emissions.



Emirates Group ground vehicles		
Business Unit	2014-15	2013-14
Arabian Adventures	105	108
Central Services	1,380	1,160
DDCR	8	10
dnata Airport Operations	1,791	1,684
dnata Cargo	225	190
EKFC	299	299
Emirates Engineering	393	350
SkyCargo	225	122
Sub-total (Dubai)	4,426	3,923
Outstations	87	103
Alpha Catering	299	654
Sub-total (ex-Dubai)	386	757
Total Vehicles	4,812	4,680





ELECTRICITY AND WATER

We recorded a large fall in electricity and water consumption in Dubai during the year, which can be attributed to several factors. To begin with, the new facilities occupied by Group business units during the year have been designed to optimise energy and water efficiency.

At the SkyCargo terminal at DWC, energy-saving light emitting diode (LED) lights were fitted in the warehouse, for street lights and for external lights on the building. The LED lights are expected to save over 970 MWh of electricity a year. Meanwhile, judicious use of natural lighting in the warehouse minimises electrical lighting requirements during the day. Water-cooled condensers with closed circuit chilled water connections were installed in all cold rooms in the perishable area, eliminating the need for cooling towers, and the higher performance reduces the running time of the compressors. Double shutter doors on the loading docks help to keep in temperature-controlled air.

In the Emirates Group Headquarters, the Emirates Group Facilities Department overhauled the air chillers which, together with the use of automated mode settings to switch off unnecessary air conditioning in unoccupied areas after office hours, resulted in greatly improved energy efficiency.

Some parts of our reported electricity and water use are outside our direct control. For example, a large proportion of our electricity consumption comes from the operation of the terminals and other buildings occupied by the Group at Dubai International Airport and DWC. The variation in meter reading dates at the airport facilities has an impact on final electricity consumption figures and may result in an apparent decrease in consumption.

Only three of the facilities occupied by the Emirates Group at Dubai International Airport have their own water meters. SkyCargo’s move to DWC left their previously-occupied facility at Dubai International Airport mostly vacant, resulting in a large fall in reported water consumption. As of the reporting date, the new facility at DWC is not metered by Dubai Airports. In addition, Ground Support Equipment Maintenance moved to a new facility at Dubai International Airport, where the installed water meter covers a smaller scope of operations, again resulting in a reported fall in consumption.

We will be working to gain a more detailed understanding of Group electricity and water consumption levels at our various facilities over the coming year.



Electricity consumption				
Scope	Unit	2014-15	2013-14	% change
Dubai	MWh	1,049,225	1,130,319	-7.2
Worldwide	MWh	1,087,180	1,185,721	-8.3
Per head of staff (Dubai)	kWh/head/day	42.0	52.6	-20.2



Water consumption				
Scope	Unit	2014-15	2013-14	% change
Dubai	ML	5,982	7,765	-23.0
Worldwide	ML	6,054	8,221	-26.4
Per head of staff (Dubai)	litres/head/day	239.2	361.3	-33.8



MATERIALS AND WASTE

The quantity of waste sent to landfill increased commensurate with the growth in the company's business, although the amount of landfilled waste per head of staff in Dubai decreased. We recorded a decline in the weight of recycled materials, largely as a result of the move of the Emirates Aviation University to a new campus location and a reduction in the number of locations at Alpha Flight Group. However, other items (used tyres and vehicle batteries) were not recorded in this metric because of the varying sizes and weights of the items; these are reported in a separate table. We are setting up a new recycling programme at the University to ensure that recyclable materials can be recovered from the campus.



Our teams are always on the lookout for effective ways to reuse equipment. Seats from a retired Emirates A340-500 were given a new life when the Flight Training Facilities department secured a set for their cabin simulators. The team modified the seats to fit them to two emergency evacuation cabin simulators – a Boeing 777 and an Airbus A380 – as well as on A340 Economy and Business cabin service training simulators. The simulator interiors replicate the look and feel of Emirates' aircraft, creating a realistic training environment for cabin crew. The project has extended the lifetime of the seats by another five to seven years, and saved the company the cost of 50 new seats.



Materials recycled in tonnes (all Emirates Group sites)		
Material recycled	2014-15	2013-14
Paper and cardboard	4,294.0	5,506.9
Unspecified recycling	255.3	1,134.6
Glass	190.5	324.6
Plastic - all types including plastic bottles and polycarbonate	320.2	280.6
IT and e-waste	78.4	82.2
Textiles	4.2	0.0
Cooking oil	45.1	56.2
Food	14.4	49.5
Wood	0.0	47.2
Aluminium - foil, cans, aviation grade		
2017A alloy	84.1	39.8
Steel - scrap and cans	32.2	30.6
Cartridges	1.9	3.0
Total (tonnes)	5,320.3	7,555.2

Emirates’ Zurich-based team spotted an opportunity to re-purpose a giant PVC cabin crew poster, which was originally displayed outside Zurich Airport. With the help of Feinschliff, a socially integrative company in Switzerland which supports long-term unemployed people in returning to the labour market, the 200 m² poster was ‘up-cycled’ into a limited edition line of shopping bags. Two industrial climbers worked for two days to carefully remove the enormous poster from its display wall. The poster was then sent to Feinschliff, where a team of 10 workers spent 16 days transforming the material into 300 of the attractive accessories.

The handcrafted production of a single bag took 27 minutes, involving 13 different steps, including cutting and washing the poster, sewing on straps and assembling the material. The bags were gifted to lucky audience members during an open air cinema screening in the city.

<http://youtu.be/TARcYCzo7G0>

Our staff also help with local clean-up initiatives. In January 2015, Dubai Municipality presented dnata with an award in recognition of its support for the global Clean Up the World campaign. Nearly 50 Emirates Group participants joined the dnata clean-up day on 14 November 2014 near the university district on the outskirts of Dubai. dnata has participated in Clean Up the World since its beginnings in 1993. Emirates Group staff also participated in Dubai Airports’ annual Clean-Up Day on 16 December 2014.

Waste generation				
Scope	Unit	2014-15	2013-14	% change
Dubai	tonnes	209,846	188,231	11.0
Worldwide	tonnes	214,510	210,376	2.0
Per head of staff (Dubai)	kg/head/day	8.4	8.8	-4.6



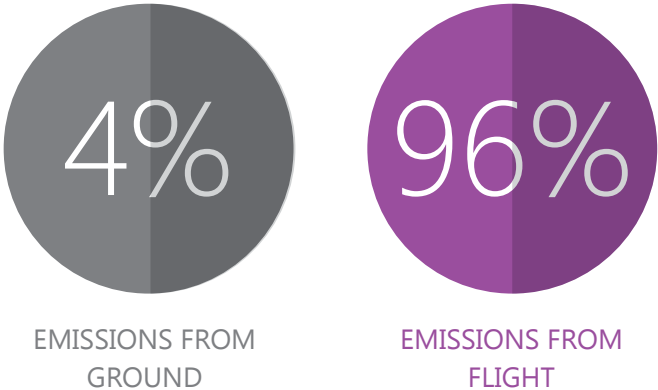
Other recycling, in number of items (where weights not available)	
Item recycled	2014-15
Used tyres	10,817
Used vehicle batteries	2,629



In 2014-15, total Emirates Group emissions considered within the scope of this report reached 29,454,636 tonnes of carbon dioxide, up 9.4% compared with the previous year consistent with the overall growth of the business.

CO₂ emissions from ground operations within the scope of this report fell 7.2%, largely as a result of the reduction in recorded electricity and water consumption discussed in the section above. The fall in recorded consumption was driven by the move of several large Emirates Group units to new purpose-designed facilities, the implementation of energy efficiency measures, and changes in metering at Dubai International Airport. As noted above, we will be working on gaining a more detailed understanding of our electricity and water usage in the coming year.

By far the largest proportion of the Emirates Group’s emissions come from the consumption of jet fuel in airline flight operations. A total of 96% of emissions were generated by flight operations and the consumption of jet fuel, while fuel consumption in ground vehicles and equipment accounted for 4% of emissions.



Carbon dioxide emissions from worldwide ground operations in tonnes, by source

Source	2014-15	2013-14	% change
Ground vehicles and equipment	116,026	115,900	0.1
Electricity	761,026	830,005	-8.3
Water (desalinated)	89,726	116,470	-23.0
Waste to landfill or incineration	214,510	210,376	2.0
TOTAL	1,181,288	1,272,751	-7.2



Emirates Group total carbon dioxide emissions in tonnes

Source	2014-15	2013-14	% change
Flight operations	28,273,348	25,646,474	10.2
Ground operations (worldwide)	1,181,288	1,272,751	-7.2
TOTAL	29,454,636	26,919,225	9.4



Emirates Group carbon dioxide emissions in tonnes, by scope

Source	Dubai (includes CO ₂ emissions from flight operations)			Worldwide		
	2014-15	2013-14	% change	2014-15	2013-14	% change
Scope 1: Aviation fuel, diesel, petrol and LPG consumption	28,385,829	25,754,655	10.2	28,389,374	25,762,374	10.2
Scope 2: Electricity and desalinated water	734,458	907,483	-19.1	850,752	946,475	-10.1
Scope 3: Waste to landfill or incineration	209,846	188,231	11.5	214,510	210,376	2.0
TOTAL	29,330,133	26,850,369	9.2	29,454,636	26,919,225	9.4



BIODIVERSITY AND CONSERVATION

Dubai Desert Conservation Reserve

Emirates helped to set up the 225 km² Dubai Desert Conservation Reserve (DDCR) in 2003, and continues to fund its operations. The DDCR is a representative inland desert ecosystem of Dubai, featuring rolling sand dunes interspersed with gravel plains.

The Reserve is the focal point for conservation programmes aimed at restoring populations of some of the UAE's desert wildlife, and also hosts low-impact desert experiences run by a small number of tour operators, including the Emirates Group company Arabian Adventures.

In January 2015, the reserve hosted its fourth volunteer programme conducted by Biosphere Expeditions. Participants on the programme help the reserve's conservation managers gather scientific data on key wildlife species, such as Arabian oryx, mountain gazelle, sand gazelle, Gordon's wildcat, and Macqueen's bustard (also known as the houbara). The data gathered on the expeditions help the conservation managers gain a better understanding of the wildlife ecology and to inform management decisions.

<http://www.ddcr.org/en/>

Emirates One&Only Wolgan Valley

Emirates has supported the protection of Australia's extraordinary wildlife and plant life since 2009, when we opened the conservation-based Wolgan Valley Resort and Spa in New South Wales.

The property was the first luxury resort in the world to receive an internationally-recognised carbon neutral certification from New Zealand-based CarboNZero. In preparation for re-certification, the resort underwent a comprehensive greenhouse gas emissions assessment during the year, covering emissions from all relevant sources – including the Sydney office and guest transportation. After successful completion of the emissions inventory, CarboNZero issued the new carbon neutral certificate on 17th April 2015, valid for another two years.



Wolgan Valley has provided a base for biodiversity and conservation research for many years. Unfortunately, some of the wildlife still face threats to their survival. One of Australia's most-loved animals, the wombat, is afflicted by a parasitic mite that causes a condition called sarcoptic mange. The condition results in unsightly and painful skin infections, and ultimately can kill the affected animal. This year, we supported a new project that will enable anyone with a smartphone to participate in wombat conservation research and monitoring.

Emirates Airline and Emirates One&Only Wolgan Valley jointly funded the development of the WomSAT app and website, which were created by the University of Western Sydney.

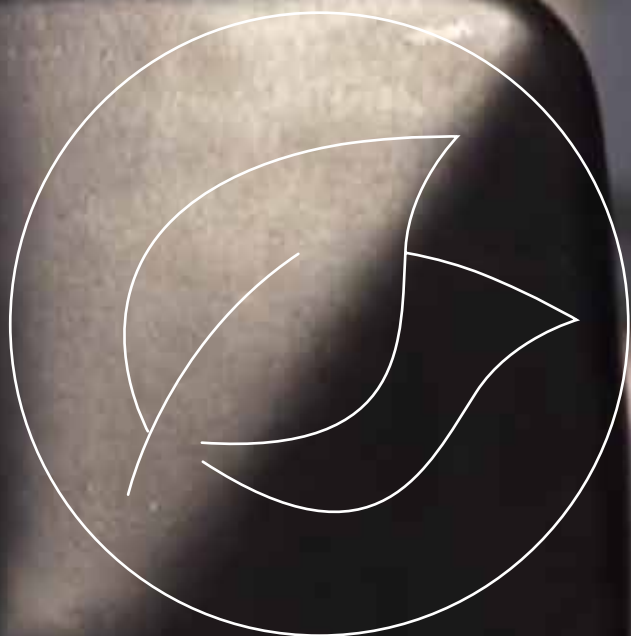
The app allows anyone to use the in-built global positioning system (GPS) of a smartphone to report wombat sightings and record the animal's health. The information is then uploaded to an online map, which will help researchers identify and treat affected wombat populations.

On 1st February 2015, Emirates began a new partnership with One&Only Resorts, a subsidiary of Kerzner International Holdings Limited, to manage the resort and expand the high quality Wolgan Valley experience. Emirates will continue to retain full ownership, and the conservation and community principles that the resort began with will stay unchanged.

<http://wolganvalley.oneandonlyresorts.com/>

<http://womsat.org.au/>





A GREENER TOMORROW

In 2013 Emirates decided to dedicate revenues raised from Group recycling programmes to support not-for profit environmental or conservation organisations in countries across our network.

'A Greener Tomorrow' resulted in over 400 applications, of which three were chosen based on merit to receive awards. This year, we report on the outcomes of those three projects.

Drawing on the success of the first round, we launched the second round of A Greener Tomorrow in March 2015. We look forward to announcing the details of the successful applications later in the year.

The Institute for Climate and Sustainable Cities (iCSC): Ejeepney project, the Philippines

RE-Charge Tacloban, a clean transportation initiative of iCSC, has a goal of creating a fleet of converted electric jeepneys and multicabs to replace Tacloban city's polluting diesel-powered public transport vehicles. Further reducing the environmental impact, the converted vehicles will be charged by a solar photovoltaic station, which in turn is tied to the geothermal-powered electrical grid of Leyte Island.

Tacloban city was severely affected by typhoon Haiyan/Yolanda in November 2013, and many public transport assets were destroyed. Using the project funding, the organisation converted two of the damaged diesel jeepneys/multicabs into cleaner, electric-powered vehicles. The renovated vehicles have already found use in responding to storm damage: in December 2014, one of the converted multicabs was used as a mobile charging station for phones and lamps after Typhoon Ruby brought down power lines.

<http://www.emirates.com/english/environment/greener-tomorrow/icsc.aspx>



The Heritage Foundation of Pakistan

Artisans and trainers from the Heritage Foundation of Pakistan worked with the community in Hashim Macchi Village in Sindh to support sustainable livelihoods. Education and training were a central part of the project, enabling the community to build their own facilities. The Foundation assisted the community to construct environmentally-friendly sanitation facilities, earthen smokeless stoves, animal enclosures and green roof gardens.

The community planted roof-top gardens with herbs and seasonal vegetables, and built animal enclosures that were designed to both protect the livestock and to cleanly collect manure for fertilizer. The project established a Literacy and Training Centre, where children attend regular classes and training materials are displayed, and the community decorated the new buildings with motifs and hand-woven mats.

<http://www.emirates.com/english/environment/greener-tomorrow/heritage-foundation.aspx>

RIPPLE Africa: The Changu Changu Moto (Fast Fast Fire) project, Malawi

RIPPLE Africa focuses on environment, education and healthcare in the Nkhata Bay District of Malawi. In Malawi, 95% of the population cook using wood or charcoal, mainly using inefficient and unhealthy open fires. This is accompanied by extensive woodcutting for firewood. RIPPLE Africa is building thousands of fuel-efficient, safer and healthier cookstoves as an alternative. The Changu Changu Moto stove (which means “fast fast fire” in the local language) is a simple, low-tech design made from 100% local-sourced and free materials.

As a result of the award from A Greener Tomorrow, over 5,000 people now have their meals cooked every day on one of 1,563 new Changu Changu Moto stoves, saving approximately 114,000 bundles of wood a year. Women have an extra six to 10 hours per week that they do not need to spend collecting firewood, and some have started attending adult literacy courses in their spare time. Kitchens are now much safer because of the reduction in open three-stone cooking fires, and mothers and children will experience fewer smoke-related illnesses.

Householders told project organisers that the new stoves cook faster; they save wood – using about a third of the amount compared with three stone fires; they are safer, reducing the chance of burn injuries; and they produce less smoke.

<http://www.emirates.com/english/environment/greener-tomorrow/ripple-africa.aspx>



1,563
NEW CHANGU CHANGU MOTO STOVES





SUPPORTING COMMUNITIES

Emirates Airline Foundation

The Emirates Airline Foundation is a non-profit charity organisation which aims to improve the quality of life for children, regardless of geographical, political, or religious boundaries.

Under the patronage of His Highness Sheikh Ahmed bin Saeed Al Maktoum, Chairman and Chief Executive, Emirates Airline and Group, the Foundation provides humanitarian and philanthropic aid and services for children in need.

The Foundation is made up of volunteer employees and friends of the Emirates Group. In the past two years, over 99% of the money raised by the Foundation has gone directly to supporting projects, with administration costs running at under 1%.

The Foundation is funded by generous monetary donations from passengers and staff, while frequent fliers can donate Skywards Miles to help the Foundation purchase air tickets for healthcare professionals and other skilled volunteers to assist in projects and humanitarian missions.



Here are just a few of the projects sponsored during the year:

- The Emirates Friendship Hospital in Bangladesh delivered healthcare services to more than 74,000 patients in 2014, increasing its reach by 27% compared with the previous year. The hospital ship is a project of the Emirates Airline Foundation and the organisation Friendship, and it travels up and down the Brahmaputra River providing healthcare to isolated communities.
- The Emirates Airline Foundation sponsored the Lifeline Express, a train which brings medical care to communities in need across India, for a third year. The team saw over 5,300 patients on the mission to the city of Sagara, in the state of Karnataka. Of those patients, more than 925 were admitted to the facilities on board the train for advanced treatment. The Lifeline Express is a project in cooperation with Indian Railways and Impact India Foundation.

- South Africa-based Singakwenza is developing a network of sustainable crèches, and hosts an innovative series of Waste2Toys workshops. By November 2014, they were working with 11 crèches in South Africa and reaching more than 400 children in their care. Singakwenza expanded internationally for the first time, taking its Waste2Toys workshop event to Malawi. The workshops teach pre-school educators how to turn everyday waste items into a range of educational toys.
- The Foundation supported Engineers Without Borders of Germany (Ingenieure ohne Grenzen e.V.) to build eight water tanks to supply water year-round in the rural regions of Laikipia, Kenya. Most of the available water in the region is seasonal, and water quality is often poor. A condition of the programme is that the beneficiary must plant 100 trees when receiving a tank, to compensate for trees cut down during construction and to provide resources for the future.
- The Foundation partnered with New Zealand-based Water For Prosperity to dig groundwater wells and bring clean water to the community of Torwood, Zimbabwe. The mission installed eight bores, opening a source of water that will benefit over 20,000 children and adults in the community. The wells will reduce pressure on the few existing water sources, and reduce the long distances travelled by the community to seek water.
- The Foundation extended its support for the Kharja Charity Society in Jordan until 2020. The Kharja Charity Society was established in 1973 to look after orphans, special needs and poor children with a community centre focusing on learning difficulties. Over the past five years, the Foundation's funding has assisted with rebuilding the Society's facilities to provide full education services and a healthcare clinic, as well as expanding their information technology centre, creating an indoor and outdoor recreation garden and providing bus transportation for the children.

<http://www.emiratesairlinefoundation.org>



dnata4good

In July 2014, dnata launched dnata4good, a new corporate giving initiative, to unite and harness the strength of our employees towards creating a bigger, more meaningful impact on children's education and wildlife conservation.

In South Africa, dnata4good supports Rhino Revolution and Saving the Survivors – two charities dedicated to preventing the extinction of the rhino as a result of poaching for their horns.

dnata4good's fundraising efforts have paid for a new 17-seater minibus for a community organisation called Green Kidz, which works in partnership with Rhino Revolution. The bus takes school children from Limpopo Province – one of the poorest areas of South Africa – to visit the reserves in Kruger National Park and other local animal rehabilitation centres, educating them about the importance of preserving wildlife.

dnata volunteers have the opportunity to help out on the Rhino Revolution reserve, both providing hands-on assistance to the organisation, and learning about the immense challenges that rhino conservation efforts face, enabling them to be champions for the cause after they return from their visit.



In the past year, dnata's donations have played a major role in constructing a new rhino orphanage facility at the Rhino Revolution reserve, which will take in the calves of female rhinos killed by poachers for their horns. The orphaned calves will be raised, weaned and at a suitable age, released back into the wild.

Donations to the organisation Saving the Survivors are helping to fund emergency treatment for rhinos left maimed by poachers. Saving the Survivors was started in 2012 by two eminent wildlife surgeons to care for rhinos that had fallen victim to poachers or other traumatic incidents. A rhino, subsequently named Hope, was rescued and received emergency surgery on-site, an effort that was made possible by the mobile response vehicle and emergency unit donated by dnata4good.

dnata4good has also partnered with the charity Dubai Cares to donate funds that help its partner, buildOn, develop schools in some of the world's poorest areas. Three new schools have been funded through the Dubai Cares Adopt a School Programme in Senegal, Malawi and Nepal. Staff volunteers can participate in buildOn's Ambassador Trip initiative, where they spend some time in the communities where the new schools are being built. Fundraising is already under way for several more new schools.





Reasonable assurance report

To: the Presidents of the Emirates Group

Engagement and responsibilities

We have been engaged by the Emirates Group to perform a reasonable assurance engagement on the following measures presented at pages 6 and 7 and marked with a ♦ (hereafter: the reported annual environmental data) in the accompanying Environmental Report 2014-2015 by the Emirates Group, Dubai:

- Total jet fuel consumption of the airline (aircraft fuel consumption only);
- Total CO₂ emissions of the airline (aircraft emissions only);
- Fuel efficiency of the airline, in terms of volume per passenger kilometre, volume per freight tonne-kilometre and volume per total tonne-kilometre (aircraft fuel consumption only);
- CO₂ efficiency of the airline in terms of CO₂ weight per passenger kilometre, CO₂ weight per freight tonne-kilometre and kilograms CO₂ per total tonne-kilometre (aircraft emissions only);
- Percentage of aircraft compliant with ICAO Annex 16 Volume II emissions standards and ICAO Annex 16 Volume I Chapter 4 noise Standards;
- Operational Fuel Efficiency Factor (OFEF).

All other information in the Environmental Report 2014-2015 was not subject to our engagement and we do not report and do not opine on this information.

The Presidents of the Emirates Group are ultimately responsible for the preparation and presentation of the Environmental Report 2014-2015. We are responsible for providing an assurance report on the reported annual environmental data presented in the Environmental Report 2014-2015.

Criteria

The reporting criteria used by the Emirates Group are described in the Emirates Group 2014-2015 Environmental Report – Reporting Guidelines and Methodology, dated 27 January 2016, available on the website of the Emirates Group. We consider the reporting criteria to be relevant and sufficient for our engagement.

CO₂ quantification is subject to uncertainty because of such things as emissions factors that are used by mathematical models to calculate emissions, and the inability of those models to precisely characterize under all circumstances the relationships between various inputs and the resultant emissions because of incomplete scientific knowledge.

REASONABLE ASSURANCE REPORT

Scope and procedures performed

We planned and performed our procedures in accordance with Dutch Law and the International Standard on Assurance Engagements (ISAE) 3000 ‘Assurance engagements other than audits or reviews of historical financial information’ and (ISAE) 3410 ‘Assurance Engagements on Greenhouse Gas Statements’. These standards require that we plan and perform our procedures to obtain reasonable assurance about whether the reported annual environmental data are free from material misstatement.

Reasonable assurance

This engagement is aimed at providing reasonable assurance. A reasonable assurance engagement involves performing procedures to obtain verification evidence about the reported environmental data in the Emirates Group Environmental Report 2014-2015. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement in the reported annual environmental data due to omissions, misrepresentations and errors. In making those risk assessments, the verifier considers internal controls relevant to the company’s preparation and fair presentation of the reported annual environmental data in order to design verification procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company’s internal controls regarding environmental reporting.

Within the scope of our work we performed, amongst others, the following procedures:

- reviewed documents to gain an understanding of the activities and structure of the Emirates Group;
- conducted interviews with Emirates Group management to understand the data collection process and to evaluate the accuracy of the quantitative and qualitative information in the reported annual environmental data;
- reconciled reported data with internal and external source documentation;
- performed analytical procedures on the reported data;
- evaluated the appropriateness of quantification methods and reporting policies used;
- assessed the data gap approach used, and the methods used to estimate missing data; and
- evaluated the overall format and presentation of the annual environmental data, as presented in the Environmental Report 2014-2015 (including an evaluation of the consistency of the information, in line with the above-mentioned reporting criteria).

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, the reported annual environmental data, as included in the Emirates Group Environmental Report 2014-2015 (pages 6 and 7) and marked with a ♦, as mentioned in the paragraph “Engagement and responsibilities”, have been prepared, in all material respects, in accordance with the Emirates Group Environmental Report 2014/15 – Reporting Guidelines and Methodology.

Amsterdam, 27 January 2016
PricewaterhouseCoopers Accountants N.V.

Original signed by

Jan van der Hilst

