



BALANCING OUR PERFORMANCE

THE EMIRATES GROUP 2011-2012 ENVIRONMENTAL REPORT



HIS HIGHNESS 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 the fastest growing airline in the world. Its impact on aviation continues to reshape the dynamics of global travel, tourism and trade. It operates the industry's largest fleet of advanced, eco-efficient Airbus A380s and Boeing 777s. A pioneer in eco-tourism, its projects include the Wolgan Valley Resort and Spa in Australia, which is located on a 1,680 hectare wildlife conservancy, adjacent to the World Heritage-listed Blue Mountains National Park. Emirates was also responsible for the establishment of the 225 km² Dubai Desert Conservation Reserve (DDCR).

dnata is one of the largest combined air services providers in the world and the largest travel management company in the United Arab Emirates (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, they are together referred to as the 'Emirates Group' or the 'Group' in this document.

THE EMIRATES GROUP

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FINANCIAL PERFORMANCE

Emirates Group

Financial Highlights		2011-12	2010-11	% change
Revenue and other operating income ¹	AED m	67,394	57,224	17.8
Operating profit	AED m	2,606	5,943	(56.2)
Operating margin	%	3.9	10.4	(6.5) pts
Profit attributable to the Owner	AED m	2,310	5,951	(61.2)
Profit margin	%	3.4	10.4	(7.0) pts
Cash assets	AED m	17,586	16,056	9.5
Total assets ²	AED m	84,127	71,402	17.8

Emirates

Financial Highlights		2011-12	2010-11	% change
Revenue and results				
Revenue and other operating income	AED m	62,287	54,231	14.9
Operating profit	AED m	1,813	5,443	(66.7)
Operating margin	%	2.9	10.0	(7.1) pts
Profit attributable to the Owner	AED m	1,502	5,375	(72.1)
Profit margin	%	2.4	9.9	(7.5) pts
Return on shareholder's funds	%	7.2	28.4	(21.2) pts
Financial position and cash flow				
Total assets	AED m	77,086	65,090	18.4
Cash assets	AED m	15,587	13,973	11.6
Employee data				
Average employee strength	number	42,422	38,797	9.3

2010-11 figures have been re-classified to conform with the current year's presentation.

¹ After eliminating inter company income/expense of AED 1,893 million in 2011-12 (2010-11 : 1,413 million).

² After eliminating inter company receivables/payables of AED 78 million in 2011-12 (2010-11 : 88 million).

Percentages and ratios are derived based on the full figure before rounding.

dnata

Financial Highlights		2011-12	2010-11	% change
Revenue and results				
Revenue and other operating income	AED m	7,000	4,406	58.9
Operating profit	AED m	793	500	58.6
Operating margin	%	11.3	11.3	.
Profit attributable to the Owner	AED m	808	576	40.3
Profit margin	%	11.5	13.1	(1.6) pts
Financial position				
Total assets	AED m	7,119	6,400	11.2
Cash assets	AED m	1,999	2,083	(4.0)
Employee data				
Average employee strength	number	20,275	17,971	12.8

OPERATIONAL PERFORMANCE

Emirates operating statistics

		2011-12	2010-11	% change
Passengers carried	number '000	33,981	31,422	8.1
Cargo carried	tonnes '000	1,796	1,767	1.6
Passenger seat factor	%	80.0	80.0	.
Overall capacity	ATKM million	35,467	32,057	10.6
Available seat kilometres	ASKM million	200,687	182,757	9.8
Aircraft	number	169	148	14.2

dnata Operating Statistics

		2010-11	2011-12	% change
Aircraft handled	number	253,434	232,585	9.0
Cargo handled	tonnes '000	1,543	1,494	3.3
Meals uplifted	number '000	52,186	11,743	344.4

ENVIRONMENTAL PERFORMANCE

Emirates Airline – Environmental Data

Metric ¹	Unit	2011-12	2010-11	% change ⁹	Verified ²
Jet fuel consumption	tonnes	6,145,434	5,619,791	9.4	✓
Carbon dioxide (CO ₂) Emissions	tonnes	19,358,116	17,702,341	9.4	✓
Fuel efficiency	L/100PK	4.11	4.07 ⁴	1.0	✓
	L/FTK	0.224	0.225	-0.3	✓
	L/TK	0.31	0.30	2.8	✓
CO ₂ efficiency	gCO ₂ /PK	101.60	100.57 ⁴	1.0	✓
	gCO ₂ /FTK	555	556	-0.2	✓
	kgCO ₂ /TK	0.770	0.749	2.8	✓
Nitrogen oxides (NO _x) emissions	tonnes <3,000ft	7,863	7,252	8.4	
Unburnt hydrocarbon (UHC) emissions	tonnes <3,000ft	451	445	1.3	
Aircraft compliant with ICAO CAEP/6 emissions standards	%	100	100	0.0	✓ ³
Noise Efficiency Factor – Takeoff (NEF-T)	dBkm ² /TK	2.237	1.985	12.7	
Noise Efficiency Factor – Landing (NEF-L)	dBkm ² /TK	0.633	0.572	10.7	
Aircraft compliant with ICAO Chapter 4 noise standards	%	100	100	0.0	✓ ³
Fuel jettison events	number	18	14 ⁵	28.6	
Fuel jettisoned	tonnes	338	306 ⁵	12.2	

Emirates Group – Total CO₂ Emissions

CO ₂ from Flight Operations	tonnes	19,358,116	17,702,341	9.4	✓
CO ₂ from Ground Operations	tonnes	1,004,629 ⁶	698,265	43.9	
Total Group CO₂ Emissions	tonnes	20,362,743 ⁶	18,400,606	10.7	

¹ For definitions of the metrics in these tables, please see The Emirates Group Environmental Report 2011-12 – 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 page 54-55).

³ Verification of these metrics by PwC is new to this year's report.

⁴ Corrected and re-verified due to a refinement in the calculation methodology.

⁵ Corrected.

Emirates Group – Ground Operations Environmental Data

Metric ¹	Unit	2011-12 ⁶	2010-11	% change ⁹
Electricity consumption	MWh	970,981	612,917	58.4
Associated CO ₂ emissions	tonnes of CO ₂	681,404	429,042	58.8
Electricity consumption per head of staff ⁷	kWh/head/day	48.7	41.7	16.7
Water consumption	ML	6,091	5,267	15.6
Associated CO ₂ emissions ⁸	tonnes of CO ₂	85,013	79,014	7.6
Water use per head of staff ⁷	litres/head/day	305	358	-14.7
Waste to landfill	tonnes	142,656	100,984	41.3
Associated CO ₂ emissions	tonnes of CO ₂	142,656	100,984	41.3
Special wastes	tonnes	6,326	not reported	-
Associated CO ₂ emissions	tonnes of CO ₂	6,326	not reported	-
Total waste	tonnes	148,981	100,984	47.5
Total waste per head of staff ⁷	kg/head/day	7.5	6.8	9.8
Recyclables collected	tonnes	7,364	4,917	49.8
Recycling rate (compared to total waste)	%	4.94	4.87	1.5
Recycling per head of staff ⁷	kg/head/day	0.4	0.3	23.0

Emirates Group – Ground Transportation

Diesel consumption	litres	25,144,459	24,460,932 ⁵	2.8
Petrol consumption	litres	9,531,863	10,349,521 ⁵	-7.9
LPG consumption	litres	197,600	not reported	-
Total fuel consumption (ground)	litres	34,873,922	34,810,453 ⁵	0.2
Fuel consumption per head of staff ⁷	litres/head/day	1.75	2.37 ⁵	-26.3
Associated CO ₂ emissions	tonnes	89,229	89,225	0.005

⁶ Same scope as last year's report plus Emirates Group's 12 largest outstations (by headcount), 26 Emirates airport lounges ex-Dubai and Alpha Flight Group Ltd.

⁷ Includes staff of Emirates, dnata and Emirates Flight Catering (EKFC) in Dubai (48,802), Emirates Group's 12 largest outstations by headcount (1,523), 26 Emirates airport lounges ex-Dubai (356) and Alpha Flight Group Ltd (exactly 4,000), as of 31 March 2012. The total number of Group staff covered by this report equals 54,681 (as of 31 March 2012). It excludes staff of Emirates and dnata subsidiary companies.

⁸ For desalinated seawater only.

⁹ Percentages and ratios are derived based upon the full figure before rounding.

Seeking more balance

Although aviation accounts for only two percent of all greenhouse gases created by humankind, we recognise that we have a role to play to minimise our effects on climate change. As a responsible corporate citizen and a global leader in aviation, logistics and travel, the Emirates Group is committed to managing the environmental impact of our operations and implementing measures to reduce the effect they have on our planet.

This report is a testament to that commitment. It compares the Group's environmental performance in financial year 2011-12 with the baseline data we collected the previous year. More than that, it documents the importance of environmental responsibility and continuous improvement in how we operate.

About our second environmental report

This is the Emirates Group's second annual environmental report. For the basic framework, we used Global Reporting Initiative (GRI)-G3 principles for defining report content (materiality; stakeholder inclusiveness; sustainability context; and completeness). This is not a full corporate sustainability report. Rather it focuses on the Group's environmental performance, with additional information on conservation, community and workplace environmental projects. The report was prepared by environmental and aviation professionals, using established methods of analysis. Supporting details for data analysis and calculations are available separately in a document called 'The Emirates Group Environmental Report 2011-12 – Reporting Guidelines and Methodology,' available on the Environment page of the Emirates Group website.


Independent assurance of key metrics

To promote transparency and to provide further confidence in the information presented in this report, the Emirates Group engaged the internationally renowned accounting firm PwC to provide an assurance report on the following key metrics of Emirates airline:

- Total fuel consumption
- Total CO₂ emissions
- Fuel efficiency
- CO₂ emissions efficiency
- Percentage of aircraft compliant with ICAO CAEP/6*
- Percentage of aircraft compliant with ICAO Chapter 4*

* New for the 2011-2012 report

The selection of all metrics was based on their materiality in relation to the Group's overall environmental



footprint. We intend to include additional environmental performance parameters in the independent assurance process in subsequent reporting years.

Measuring up to industry standards

Different countries have different regulations governing aviation within their borders and airspace. The policy of the Emirates Group is to comply with all relevant regulations in all territories in which it operates; including compliance with emissions standards as well as reporting requirements.

Comparison with the Emirates Group Annual Report 2011-12

There may be slight differences between the overall passenger numbers and cargo payloads reported in this report compared to the Emirates Group Annual Report 2011-12.



HIS HIGHNESS SHEIKH AHMED BIN SAEED AL MAKTOUM

CHAIRMAN & CHIEF EXECUTIVE EMIRATES AIRLINE & GROUP

Emirates and dnata do business on six continents and in 77 countries. We are, unquestionably, a global enterprise. With that, we accept our global responsibility for economic, social and environmental sustainability.

I am proud to say this is the Emirates Group's second annual environmental report. Last year's report established important baseline values for us. Using this baseline, our progress will be measurable as well as transparent.

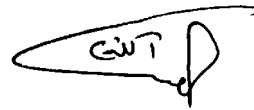
Our commitment to creating a sustainable future based on balanced performance is both a corporate initiative and a shared vision of how, working together, all of us at the Emirates Group can affect change. The Emirates Group companies have always led the way with innovative initiatives and our approach to the environment is no different – from recycling tonnes of

obsolete chinaware into an oyster bed, to testing new air traffic management practices that reduce fuel burn and carbon dioxide emissions, to conserving natural habitats in Dubai and Australia, our responsibility towards balance is proven.

In the air or on the ground, our most significant impact on the environment is the emissions from our aircraft. The steps Emirates and dnata are taking to lessen this are impressive and very deliberately driven and focused. Our leading initiative is our fleet of modern Airbus A380 and Boeing 777 aircraft. With 69 Airbus A380s still to be delivered, 84 Boeing 777s, (including our order for 50 Boeing 777s placed at the 2011 Dubai Air Show) we will continue to have one of the youngest fleets in the skies going forward. Underlying all of our sustainability programmes is the concept of "eco-efficiency" – doing more with less.

For us, it means doing more business with less paper, flying more passengers and cargo using less fuel and providing more ground services with fewer vehicles. Many of our staff volunteer their own time and resources to help in this endeavour.

At the Emirates Group, there are no limits to improving our environmental performance. There will always be new challenges ahead. Based on our past performance and the on-going enthusiasm and support of our worldwide staff, we will continue to work towards balancing our business with the environment.



Ahmed bin Saeed Al Maktoum



Widening our scope

This report covers the Emirates Group's financial reporting year (1 April 2011 to 31 March 2012). As of the end of this financial year, the Emirates Group operated in 77 countries, with over 60,000 staff. The scope of this year's report was expanded to cover more of the Group's operations.

We addressed the environmental impacts of the following:

- Emirates fleet operations (passenger and cargo, the latter flown under the Emirates SkyCargo brand).
- dnata operations in Dubai (aircraft ground handling, cargo and travel services).
- Emirates and dnata commercial buildings in Dubai; including offices, training colleges, flight catering, laundry services, warehouses, IT and engineering services.
- The Emirates Group staff accommodation buildings in Dubai (apartment buildings and houses).
- The top 12 Group offices outside of Dubai (outstations), by headcount.*

- Alpha Flight Group Ltd operations (63 sites in 11 countries, including the UAE).*
- 26 Emirates airport lounges (outside of Dubai).*

* New for the 2011-2012 report

Environmental impacts associated with the following activities of the Emirates Group were not included in this report:

- Emirates Leisure Retail (ELR) and Emirates consumer goods businesses in the UAE and other countries.
- Partly-owned Emirates companies in the UAE and other countries.
- Remaining outstations, the airline's offices and activities outside of the UAE.
- Partly-owned dnata travel service companies in the UAE and other countries.
- Partly-owned dnata freight-forwarding and security companies in the UAE.

It is intended to progressively include the environmental impacts of these activities in subsequent reporting years.





OUR LEADERSHIP

THE CHAIRMAN & CHIEF EXECUTIVE OF EMIRATES AIRLINE & GROUP IS HIS HIGHNESS (H.H.) SHEIKH AHMED BIN SAEED AL MAKTOUM. 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.



**H.H. Sheikh Ahmed
bin Saeed Al Maktoum**
Chairman & Chief Executive
Emirates Airline & Group



Tim Clark
President
Emirates Airline



Gary Chapman
President
Group Services & dnata

Environmental responsibility is everyone's responsibility

At the Emirates Group, we have made environmental responsibility one of the foundations of our core values. Our vision is to make the Group an environmental leader in the aviation and travel industries. Our goals are to make sustainability and eco-efficiency the cornerstones of all Group operations – both in the air and on the ground.

We back our commitment with multi-billion dollar investments in the most modern, eco-efficient technology available: in aircraft, engines and ground equipment. The environmental programmes and initiatives we have put in place ensure healthy sustainable growth of our planet as well as our business.

**Boeing 777-300ER**

Number of Aircraft: 67
 Cargo Capacity: 23 tonnes
 Passenger Capacity: 354-442
 Engine Type: GE90-115B
 Range: 14,594 km

Wingspan: 64.8 m
 Length: 73.9 m
 Height: 18.6 m
 Max Take-Off Weight: 349.2 tonnes
 Average Cruising Speed: 896 km/h

**Boeing 777-300**

Number of Aircraft: 12
 Cargo Capacity: 23 tonnes
 Passenger Capacity: 364
 Engine Type: RR Trent 892
 Range: 11,029 km

Wingspan: 60.9 m
 Length: 73.9 m
 Height: 18.6 m
 Max Take-Off Weight: 299.3 tonnes
 Average Cruising Speed: 896 km/h

**Boeing 777-200LR**

Number of Aircraft: 10
 Cargo Capacity: 15 tonnes
 Passenger Capacity: 266
 Engine Type: GE90-110B
 Range: 17,446 km

Wingspan: 64.8 m
 Length: 63.7 m
 Height: 18.6 m
 Max Take-Off Weight: 343.4 tonnes
 Average Cruising Speed: 896 km/h

**Boeing 777-200/777-200ER**

Number of Aircraft: 3/6
 Cargo Capacity: 18 tonnes
 Passenger Capacity: 274-346
 Engine Type: RR Trent 877
 Range: 9,649 km

Wingspan: 60.9 m
 Length: 63.7 m
 Height: 18.6 m
 Max Take-Off Weight: 247.2 tonnes
 Average Cruising Speed: 896 km/h

**Boeing 777F**

Number of Aircraft: 4
 Cargo Capacity: 103 tonnes
 Engine Type: GE90-110B
 Range: 9,260 km

Wingspan: 64.8 m
 Length: 63.7 m
 Height: 18.6 m
 Max Take-Off Weight: 347.5 tonnes
 Average Cruising Speed: 896 km/h



Airbus A380-800

Number of Aircraft: 21
 Cargo Capacity: 8 tonnes
 Passenger Capacity: 489-517
 Engine Type: GP7272
 Range: 15,000 km

Wingspan: 79.8 m
 Length: 72.7 m
 Height: 24.1 m
 Max Take-Off Weight: 569.0 tonnes
 Average Cruising Speed: 907 km/h



Airbus A340-500

Number of Aircraft: 10
 Cargo Capacity: 15 tonnes
 Passenger Capacity: 258
 Engine Type: RR Trent 553
 Range: 16,050 km

Wingspan: 63.4 m
 Length: 67.9 m
 Height: 17.1 m
 Max Take-Off Weight: 372.0 tonnes
 Average Cruising Speed: 874 km/h



Airbus A340-300

Number of Aircraft: 8
 Cargo Capacity: 13 tonnes
 Passenger Capacity: 267
 Engine Type: CFM56-5C4
 Range: 13,350 km

Wingspan: 60.3 m
 Length: 63.6 m
 Height: 16.8 m
 Max Take-Off Weight: 275.0 tonnes
 Average Cruising Speed: 874 km/h



Airbus A330-200

Number of Aircraft: 26
 Cargo Capacity: 17 tonnes
 Passenger Capacity: 237-278
 Engine Type: RR Trent 772
 Range: 12,200 km

Wingspan: 60.3 m
 Length: 58.8 m
 Height: 17.8 m
 Max Take-Off Weight: 230.0 tonnes
 Average Cruising Speed: 874 km/h

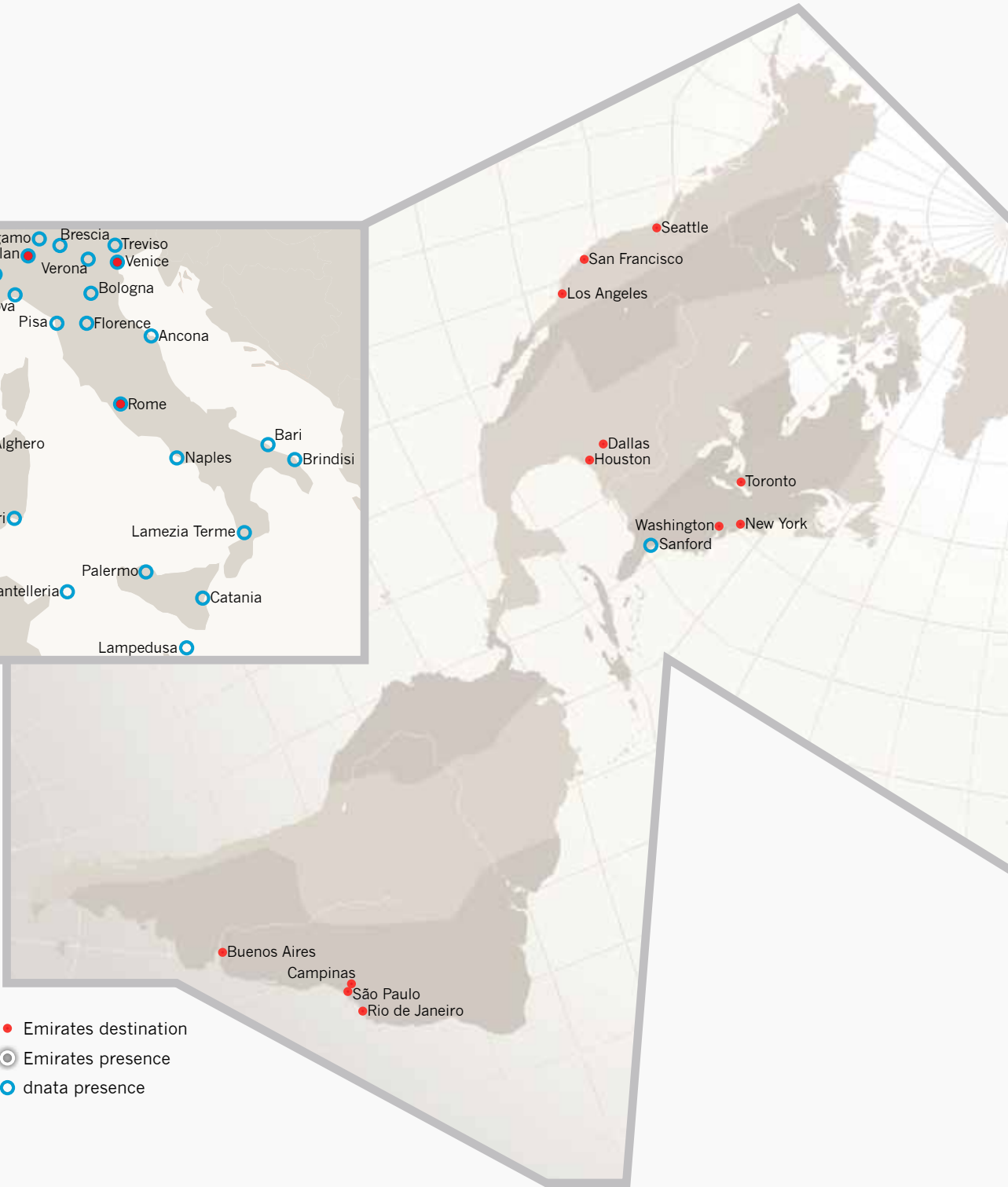


Boeing 747-400F/747-400ERF

Number of Aircraft: 2/2
 Cargo Capacity: 117 tonnes
 Engine Type: GE80C2B1F
 Range: 8,232 km/9,204 km

Wingspan: 64.4 m
 Length: 70.6 m
 Height: 19.5 m
 Max Take-Off Weight: 395.9 tonnes
 Average Cruising Speed: 896 km/h

OUR WORLD TODAY
THE EMIRATES GROUP



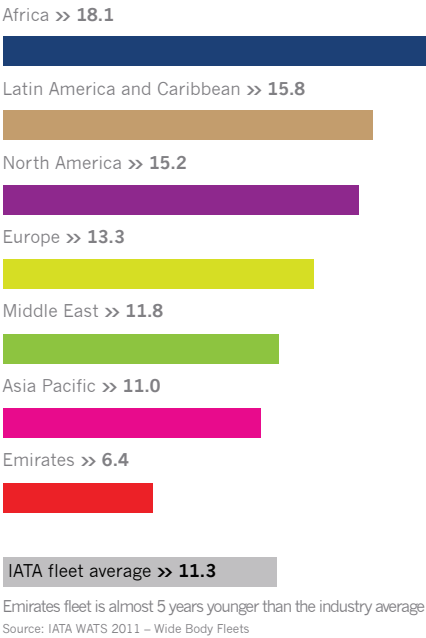
- Emirates destination
- Emirates presence
- dnata presence



A BALANCED FLIGHT PATH

MANAGING OUR IMPACT IN THE AIR

Average Fleet Age (Years)



Emirates Fleet (as of 31 March 2012):			
Aircraft	Current Fleet	Change from March 2011	On Order
A330-200	26	-1	
A340-300	8		
A340-500	10		
A350-900/1000XWB			70
A380-800	21	6	69
B777-200	3		
B777-200ER	6		
B777-200LR	10		
B777-300	12		
B777-300ER	67	14	84
Total Passenger Aircraft	163	19	223
B777-200F	4	2	
B747-400F ²	2	-1	
B747-400ERF ¹	2	0	
Total Freighter Aircraft	8	1	0
Total Aircraft	171	20	223

¹ Dry lease aircraft
² Wet-leased aircraft



This is the Emirates Group’s second environmental report and the first to compare our annual performance to baseline data. Several factors impacted the Group’s performance in 2011-12, creating a different operating context than in the previous financial year. Adding 22 new aircraft, opening 11 new destinations and adding nearly 6,000 new staff, increased our scope. In addition, Alpha Flight Group Ltd, acquired by dnata in December 2010, contributed a full 12 months of data to dnata’s performance.

Minimising our impact

The Emirates Group’s environmental programme is a comprehensive one, addressing virtually every impact between our business operations and the environment. Notwithstanding that, we realise the area in which we can exert the most control for the most return is emissions – both in the air and on the ground.

A closer look at emissions

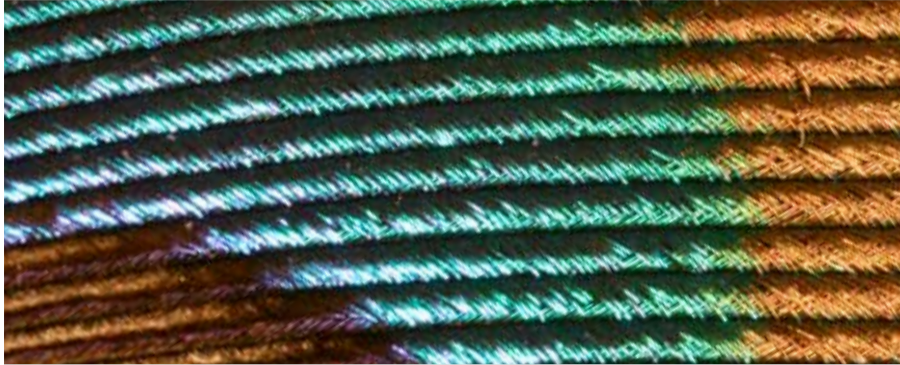
Total jet fuel consumption rose by 9.4% from 5,619,791 tonnes in the 2010-11

financial year to 6,145,434 tonnes in this reporting period. Factor in our growth of 6 new Airbus 380s, 14 new Boeing 777s, 2 new freighters, 11 new passenger destinations and an increase in capacity on existing routes, the reasons for the increase become clearer. Simply, as our fleet grows, our fuel consumption and emissions grow relatively. The statistics clearly illustrate this direct relationship.

Fuel efficiency drives environmental performance

No other area of our organisation provides as large an opportunity to reduce our environmental impact as fuel efficiency. Emirates fuel efficiency for 2011-12, as measured in litres/100 passenger-kilometres flown, totalled 4.11 L/100PK, up 1% on the previous reporting period.

Note: The Emirates fuel efficiency figure of 4.12 L/100PK reported last year has been corrected and re-verified as 4.07 L/100PK, due to a refinement in the calculation methodology.



In 2011-12, Emirates SkyCargo's fuel efficiency for freighter transportation, as measured in litres/freight tonne kilometres flown, was 0.224 L/FTK, down slightly by 0.3% year over year.

Emirates' overall fuel efficiency for all freight and passenger flights flown during the reporting period, as measured in total tonne-kilometres flown, was 0.31 L/TK, an increase of just 2.8% over last year's total figure of 0.30 L/TK.

This was in part due to the impact of deploying aircraft optimised for long-range and ultra-long range on short- and medium-range routes. However, despite this slight increase, our total fuel efficiency for 2011-12 is still 22.5% lower than IATA's forecast 2011 industry average of 5.3 L/100PK and ahead of other airlines (IATA 2010).

4.11 L/100PK

Emirates passenger fuel efficiency (2011-12)

Passenger fuel efficiency in 2011-12 (L/100PK)

Cathay Pacific and Dragonair >> 4.75



Finnair >> 4.62



United Continental >> 4.25



Lufthansa Group >> 4.20



Emirates >> 4.11



IATA forecast global fleet average >> 5.3



Metric	Unit	2010-11	2011-12	% change
Emirates total fuel consumption	tonnes	5,619,791	6,145,434	9.4
Emirates total passenger-kilometres flown	PK	155,737,363,711	170,028,553,587	9.2
Emirates passenger fuel efficiency	litres per 100PK	4.07	4.11	1.0
Emirates SkyCargo freight tonne-kilometres flown (freighters only)	FTK	1,890,817,717	2,406,121,356	27.3
Emirates SkyCargo fuel efficiency (freighters only)	litres per FTK	0.225	0.224	-0.3
Emirates total tonne-kilometres flown	TK	23,639,925,398	25,152,742,704	6.4
Overall Emirates fleet fuel efficiency	litres per TK	0.30	0.31	2.8

Source: Emirates Airline Flight Operations Database



CO₂ emissions

Total CO₂ emissions from Emirates passenger and cargo operations rose 9.4% from 17.7m tonnes CO₂ in the 2010-11 period to 19.4m tonnes CO₂ in this reporting period. This again, is a reflection of Emirates' growth. Emirates' CO₂ emissions efficiency for passenger flights rose from 100.57 gCO₂/PK (corrected)* in 2010-11 to 101.60 gCO₂/PK this financial year, a 1% increase. Even with that, Emirates' performance was still lower than the IATA global fleet average by a significant

18.1% and considerably lower than many other airlines.

Emirates SkyCargo's CO₂ emissions efficiency for freight transportation in 2011-12, was 555 gCO₂/FTK, down slightly by 0.2% on the previous year's figure of 556 gCO₂/FTK for freighters. It's a small improvement, but it demonstrates how our continual search for more efficiency pays off. The decrease is attributable to the introduction of two more Boeing 777F freighters to the fleet. These high-efficiency aircraft are gradually

taking over operations from our fleet of Boeing 747-400F and Boeing 747-400ERF freighters.

Although many carriers do not report CO₂ emissions efficiency exclusively for freight transportation, in 2011-12 Emirates was one of the lowest amongst those carriers that did.

* Last year's reported carbon dioxide efficiency figure – 101.83 gCO₂/PK – has been corrected and re-verified as 100.57 gCO₂/PK due to a refinement in the calculation methodology.

555 gCO₂/FTK

Emirates SkyCargo CO₂ per FTK
CO₂ efficiency (2011-12)

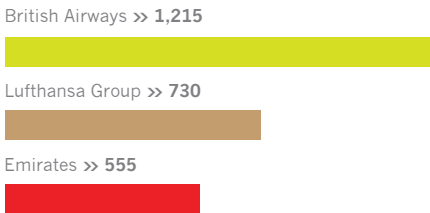
0.770 kgCO₂/TK

Emirates overall CO₂ efficiency
(2011-12)

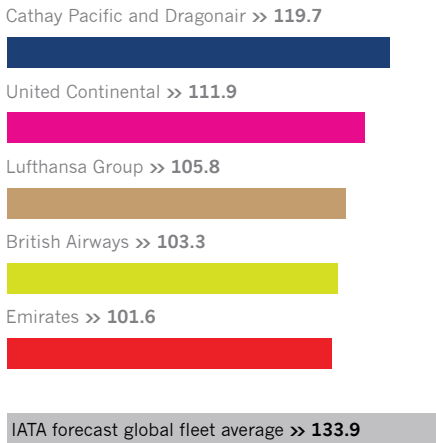
101.60 gCO₂/PK

Emirates CO₂ efficiency
(2011-12)

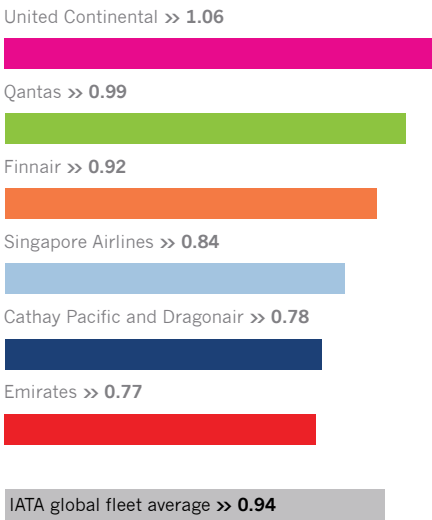
Cargo CO₂ Efficiency in 2011-12
(gCO₂/FTK)



Passenger CO₂ Efficiency in 2011-12
(gCO₂/100PK)



Overall CO₂ Efficiency in 2011-12
(kgCO₂/TK)



Case Study:

A test for eco-efficiency

SITUATION

Emirates flies one of the youngest, most advanced international jet fleet in the world, with an average age of 6.4 years (the industry average is 11.3 years). From a performance standpoint, this translates into an extremely fuel-efficient fleet. But how you fly an aircraft can also increase fuel efficiency. Emirates participates in the INSPIRE Programme (Indian Ocean Strategic Partnership to Reduce Emissions), a partnership created in March 2011 between air navigation service providers and a select group of airlines with the aim of using Air Traffic Management best practices to reduce the fuel burn and carbon emissions associated with aviation.



SOLUTION

Emirates conducted three test flights over the financial year – Dubai to Brisbane, Perth to Dubai and Dubai to Durban. On the last INSPIRE test flight to Durban, South Africa, in December 2011, Emirates carried a delegation of representatives from the UAE to attend the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC).

Using a Boeing 777-300ER, our most fuel-efficient aircraft, the flights involved a number of operational and navigational efficiency improvements – minimising on-ground delays, utilising expedient taxi-and runways, conducting gradual ascent and descent paths, flying the most direct and adaptable path, employing ground power where possible.

RESULTS

The first two test flights produced a combined total fuel saving of over five tonnes of fuel and 16 tonnes of CO₂. The third flight to Durban resulted in savings of nearly two tonnes of fuel and six tonnes of CO₂ emissions.

Case Study:

Kevlar lightens the load

SITUATION

Unit Loading Devices (ULDs) contain the freight and baggage that is loaded into the hold of an aircraft. Our most common ULD, the AKE, weighed 79kg and is made from aluminium. Reducing that weight would pay off in fuel savings and CO₂ emissions.



SOLUTION

Emirates switched to ULDs made from Kevlar®, a synthetic material with a high tensile strength-to-weight ratio. By the end of the 2011-12 financial year, Emirates had replaced 40% of the heavier aluminium ULDs with lightweight Kevlar units.

RESULTS

Kevlar AKE units only weigh 56 kilograms, a weight saving of 23 kilograms over the aluminium model. To maximise the fuel savings and emissions reductions, we currently use Kevlar lightweight ULDs on our ultra-long range routes across the world.

Over the 2011-12 reporting year, using the lightweight ULDs saved 4,207 tonnes of fuel and almost 19,000 tonnes of carbon dioxide emissions. When complete in 2013, the upgrade to 100% Kevlar ULDs will save Emirates 14,475 tonnes of fuel and 45,595 tonnes of carbon dioxide emissions per year (based on our 2011-12 fleet size).

Fuel jettison events

A fuel jettison event is a safety procedure used to lighten an aircraft's weight, allowing it to turn back or make an unscheduled landing. Technical issues and medical emergencies are the most common reasons for this procedure.

The number of fuel jettison events in 2011-12 totalled 18, four more than were reported last year. The quantity of fuel jettisoned rose 12% to 338 tonnes.

Fuel Jettison Events ¹	09-10	10-11	11-12
Technical Reasons	3	9	10
Medical Reasons	0	3	6
Environmental Reasons ²	0	2	2
Total Events	3	14	18
Jettisoned Fuel (tonnes)	32	306	338

¹ Includes wet-leased freighters
² This category was shown as 'Other Reasons' in previous report

Nitrogen oxides (NOx) emissions

Nitrogen oxides (NOx) are greenhouse gas of concern. Emitted at higher rates during the landing and take-off (LTO) cycle, NOx can affect local ground level air quality. For these reasons, NOx are typically measured at an altitude of below 3,000 feet. Emissions of nitrogen oxides measured below 3,000ft from all Emirates fleet operations increased 8.4% to 7,863 tonnes from 7,252 tonnes the previous year.

NOx emissions from aircraft engines are directly related to fuel efficiency and the quantity of jet fuel consumed. The increase is in line with Emirates increased operations and the associated 9.4%

increase in jet fuel consumption. However, NOx emission levels from all aircraft types in the Emirates fleet were well below the stringent ICAO CAEP 6 regulatory limits.

Emissions of unburnt hydrocarbons (UHCs)

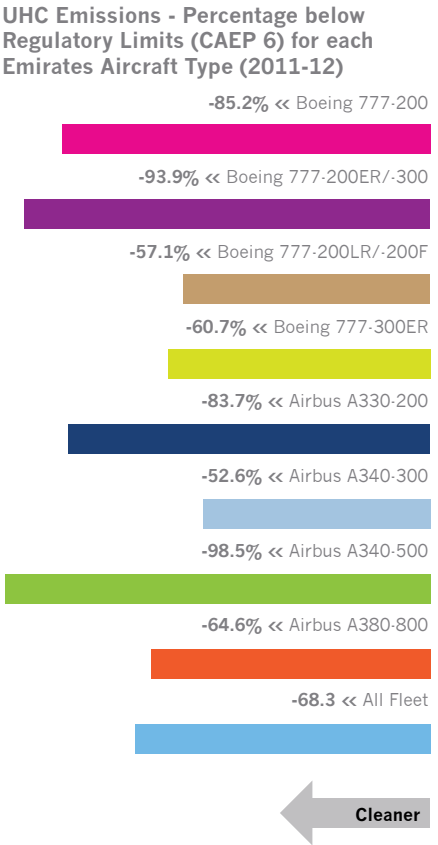
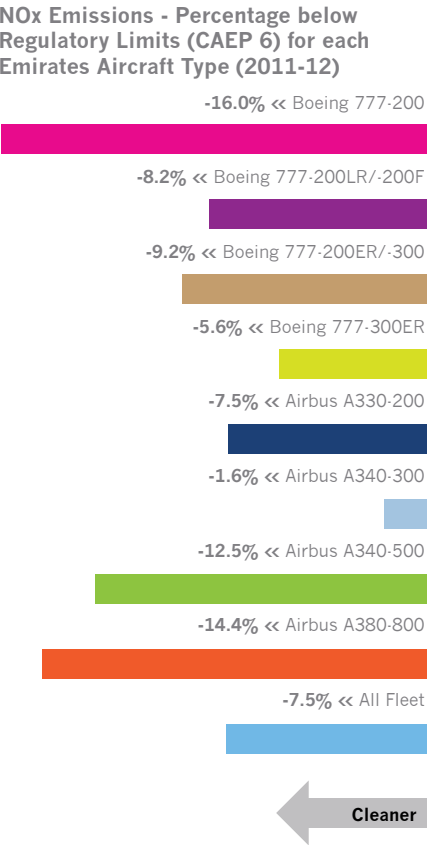
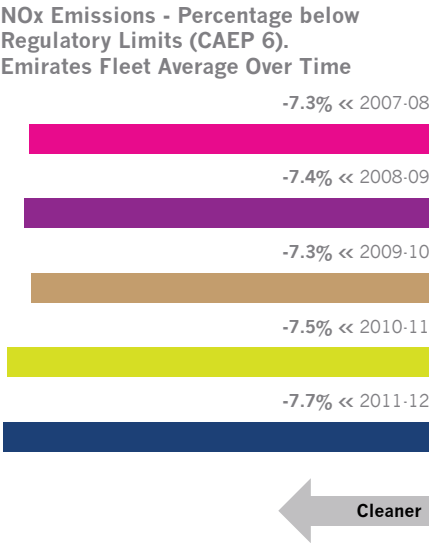
Along with NOx emissions, unburnt hydrocarbons (UHCs) can affect ground-level air quality, but are of less

concern as a potential greenhouse gas. Emissions of UHCs are greatest during the LTO cycle, as the engines are performing at greater thrust. They too, are measured below 3,000 feet.

Emissions of UHCs below 3,000 feet from all Emirates fleet operations rose from 445 tonnes last financial year to 451 tonnes this year, a 1.4% increase.

Again, UHC emission levels from all aircraft types in the Emirates fleet were well below the stringent ICAO CAEP 6 regulatory limits.

Like NOx emissions, UHC emissions are related to the type and age of an aircraft's engines and are expected to decrease as Emirates introduces more new aircraft into service.



Noise efficiency factors for take-off (NEF-T) and landing (NEF-L)

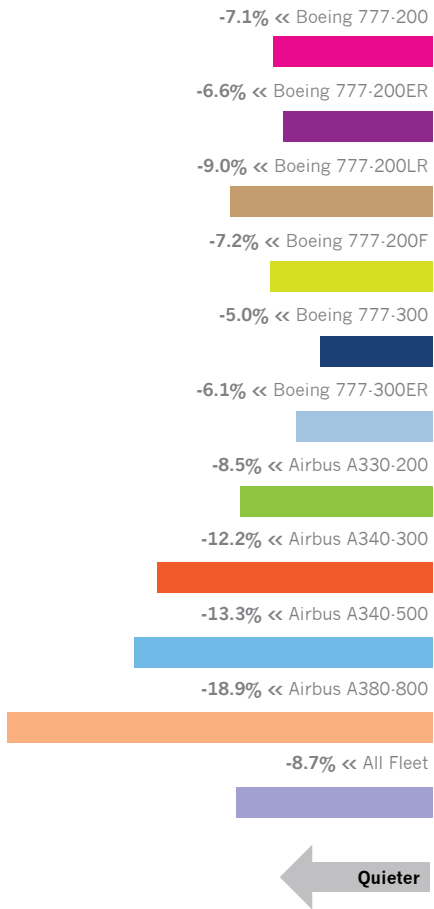
All jet aircraft generate noise on take-off and landing. How much noise depends on the type of aircraft, engine design and weight. In last year's report, Emirates presented new 'noise efficiency factors' for landing and take-off that demonstrate the relative noise performance of modern, wide-bodied aircraft. Aircraft with lower noise efficiency factors have less of an impact on surrounding communities. Emirates believes that noise efficiency factors, such as the ones presented here, should be adopted as an industry standard. This would clearly show all affected stakeholders which airlines are performing more efficiently than others, in terms of overall landing and take-off events, based on aircraft types.

The Emirates' Noise Efficiency Factor for Take-Off (NEF-T) for the 2011-12 financial year was 2.237 dBkm²/TK, a 12.7% increase over last year. The Noise Efficiency Factor for Landing (NEF-L) for 2011-12 increased 10.7% to 0.633 dBkm²/TK.

A significant cause of our increase was the expanded noise impact area generated by the increased Airbus A380 and Boeing 777-300ER fleet. Although these aircraft are considered to be 'quieter,' their increased use on medium-range routes resulted in higher NEF-T and NEF-L values. The contribution from these aircraft affected the weighted-average noise efficiency factor for the entire Emirates fleet. In spite of this, all aircraft in the Emirates fleet were compliant with the noise limit of ICAO Chapter 4 (excluding wet-leased Boeing 747-400F and 747-400ERF freighters).

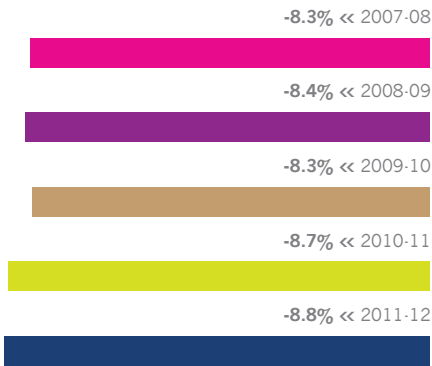


Noise Emissions - Percentage Below Regulatory Limits (ICAO Annex 16, Ch4) for each Emirates Aircraft Type (2011-12)



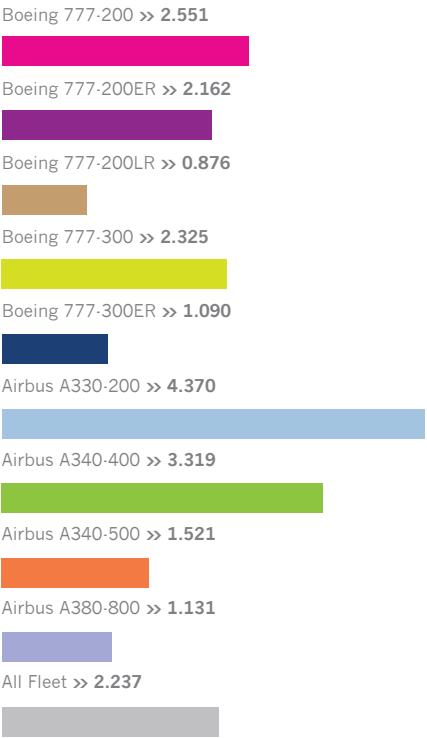


Noise Emissions - Percentage Below
Regulatory Limits (ICAO Annex 16, Ch4)
Emirates Fleet Average Over Time

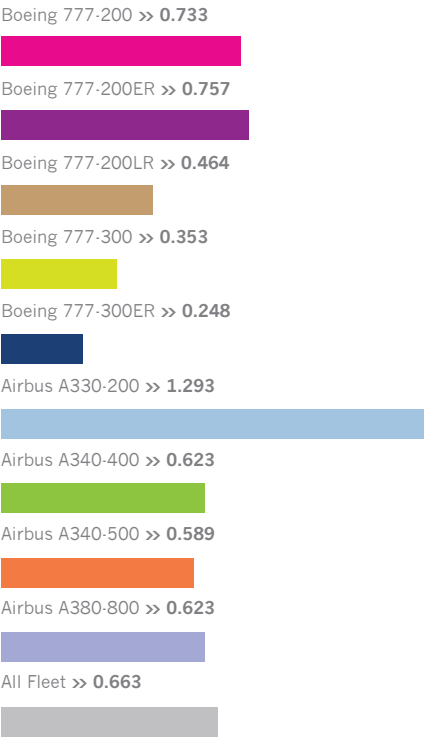


← Quieter

Emirates Aircraft Noise Factors - Take-off
in dBkm²/TK (2011-12)



Emirates Aircraft Noise Factors - Landing
in dBkm²/TK (2011-12)





Case Study:

A clean engine is more efficient

SITUATION

Jet engine core washing is part of Emirates Engineering's routine maintenance programme. But increasing the frequency of engine washing (above that specified by the manufacturer) is also beneficial. It lowers the engine's operating temperature, which extends engine life and reduces its fuel consumption.



SOLUTION

Emirates Engineering developed a 30-minute wash for each engine, which it performs at the Engineering Facility in Dubai. The engine is rotated, using the electric starter motor, to about 20% of its idle speed and a mist of water is sprayed into the inlet to clean the turbine blades and the core. This removes carbon build-up and maximises operating efficiency. No detergents are used and all run-off water is captured for treatment and re-use. Over a thousand engines washes are performed each year in this way.

RESULTS

According to impact studies conducted by Emirates Engineering and Flight Operations, the specific range of a Boeing 777-300ER aircraft improves by 0.2% to 0.3% after each engine wash. On an ultra-long-haul flight, this represents savings of approximately 300kg to 500kg of fuel and up to 1,500 kilograms of CO₂ emissions. During the 2011-12 financial year, 10 individual Boeing 777-300ER aircraft flying on ultra-long-haul routes regularly took part in the engine washing programme resulting in total fuel and CO₂ emissions savings of 314 tonnes and 989 tonnes, respectively.

BALANCING GROUND OPERATIONS

OPERATING EFFICIENTLY ON THE GROUND



The scope of this report

Many of the Emirates Group's activities are ground-based. Some, like baggage and cargo handling, support the airline's operation. Others generate revenue on the ground, such as dnata's travel business and Emirates' eco-resort, Wolgan Valley. Regardless of their role, our ground operations create environmental impacts by generating and recycling waste and consuming electricity, water and fuel.

This report encompasses a wider scope than the previous report. In Dubai, it includes Emirates Group commercial premises (e.g., offices, warehouses, training centres, catering facilities, engineering workshops, hangars and Dubai Airport buildings where Emirates and dnata have major activities). This covers 63 individual premises, including seven at Dubai Airport which are new to this report, but excludes most joint venture companies, as described in the 'Widening our scope' section.

It also covers residential premises for more than 20,000 staff living in

company accommodation in Dubai, including some 80 apartment buildings and nearly 3,000 villas. The number of Dubai staff climbed to over 48,802 in 2011-12, a 21.2% increase.

Added to this report are several operations outside of Dubai. This includes: 63 Alpha Flight Group Ltd facilities, located in 11 countries (including the UAE); the top 12 Emirates Group outstations by headcount; and 26 Emirates airport lounges outside of Dubai.

Key trends in electricity, water and waste

More buildings and more people mean more consumption and waste. This financial year, we added data from seven key buildings at Dubai Airport, including the dedicated Emirates Terminal 3 and Concourse 2 buildings. Other added data came from Alpha Flight Group Ltd, the top 12 outstations and Emirates airport lounges, as mentioned above.

Not surprisingly, electricity

consumption rose dramatically in 2011-12, increasing 58.4% over the previous year. Significantly, data from the Dubai Airport buildings accounted for 49.6% of this increase. The remainder was contributed by the operations outside of Dubai.

Water consumption increased moderately by 15.6% compared to the previous year. Water consumption by commercial and residential facilities in Dubai accounts for almost half of the 7.6% increase, on track with the Group's growth in staff and new residential and commercial properties. The increased scope of the report, as referenced previously, made up the remaining eight percentage points.

As one might expect, waste generation also grew in 2011-12, rising 47.5% over the previous year. The reason is two-fold. Dubai staff, as well as ground and air operations, grew considerably, contributing a 26.5% increase in waste generated. As with water consumption, the remainder was due to the increased scope of the report.

Metric	Unit	Emirates Group (Dubai)	Emirates Group (Dubai)	% Change	Emirates Group (All sites) ¹	% Change
		2010-11	2011-12		2011-12	
Electricity Use	MWh	612,917	916,909	49.6	970,981	58.4
Water	ML	5,267	5,668	7.6	6,091	15.6
Total Waste	tonnes	100,984	127,707	26.5	148,981	47.5
Recyclables collected	tonnes	4,917	5,340	8.6	7,364	49.8

¹ Includes Alpha Flight Group Ltd, top 12 outstations and 26 Emirates airport lounges

Emirates Group Buildings (2011-12)	Water Consumption (ML)	Electricity Consumption (MWh)	Total Waste Generation (tonnes)
Commercial (Dubai)	3,281	641,635	110,019
Staff Accommodation (Dubai) ¹	2,809	275,275	17,689
Sub-total (Dubai)	6,091	916,909	127,707
Alpha Flight Group Ltd	367	42,767	20,663
Top 12 Outstations	15	7,034	343
Emirates Airport Lounges (26) ²	42	4,271	268
Sub-total (ex-Dubai)	423	54,071	21,274
Total	6,514	970,981	148,981

¹ Emirates, dnata and Emirates Flight Catering staff based in Dubai – excludes subsidiary companies

² Outside of Dubai

Water Consumption in 2011-12 (ML)

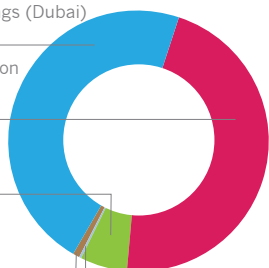
Commercial Buildings (Dubai)
46.9%

Staff Accommodation
(Dubai)
46.1%

Alpha Flight Group
LTD (ex-Dubai)
6.0%

Top 12 Outstations
(ex-Dubai)
0.7%

26 Emirates Airport Lounges
(ex-Dubai)
0.2%



Electricity Consumption in 2011-12 (MWh)

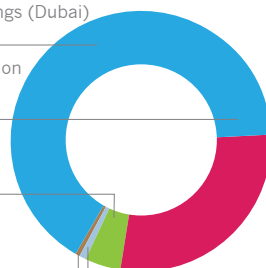
Commercial Buildings (Dubai)
66.1%

Staff Accommodation
(Dubai)
28.4%

Alpha Flight Group
LTD (ex-Dubai)
4.4%

Top 12 Outstations
(ex-Dubai)
0.7%

26 Emirates Airport Lounges
(ex-Dubai)
0.4%



Total Waste Generation in 2011-12 (tonnes)

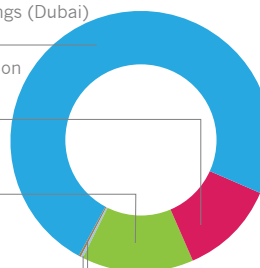
Commercial Buildings (Dubai)
73.9%

Staff Accommodation
(Dubai)
11.9%

Alpha Flight Group
LTD (ex-Dubai)
13.9%

Top 12 Outstations
(ex-Dubai)
0.2%

26 Emirates Airport Lounges
(ex-Dubai)
0.2%





Key performance indicators for ground operations

Key Performance Indicators (KPIs) for the Emirates Group’s Dubai operations were identified and compared with published data available for the UAE. The Group selected the following KPIs to be used as metrics for measuring and comparing performance:

- Electricity use per head of staff (in kWh per head per day).
- Water use per head of staff (in litres per head per day).
- Waste generation per head of staff (in kilograms per head per day).
- Recycling quantity per head of staff (in kilograms per head per day).
- Vehicle fuel consumption per head of staff (in litres per head per day).

With its severe desert climate, limited natural resources and accelerated urban development, the UAE has the third largest per-capita ecological footprint of any country in the world (WWF Living Planet Report, 2012). Great efforts are being made to reduce the country’s overall environmental impacts – these include major investments in public transport, infrastructure, technology and renewable energies. The Emirates Group is also playing its part to reduce its impact.

The Environmental Performance page at the beginning of this report summarises these KPIs for all business units covered in this report.

Key Performance Indicator	Emirates Group Dubai (2010-11)	Emirates Group Dubai (2011-12) ²	% change	UAE (2010) ¹
Electricity use (kWh/head/day)	41.7	51.5	23.5	54
Water use (litres/head/day)	358	318	-11.1	970
Waste generation (kg/head/day)	6.8	7.2	5.5	4.2
Recycling quantity (kg/head/day)	0.3	0.3	0.0	NA ¹
Fuel consumption (litres/head/day)	2.37	1.83	-22.8	NA ¹

¹ See references section in supporting methodology document.
² Does not include Alpha Flight Group Ltd, top 12 outstations and Emirates airport lounges

The KPIs for our Dubai operations show the following results:

- Electricity consumption per head of staff in Dubai has increased by 23.5% to 51.5 kWh/head/day versus the UAE average of 54 kWh/head/day. As mentioned, the addition of previously unavailable data from 7 key buildings at Dubai International Airport as well as expansions in staff, operations and facilities drove this increase.
- Water consumption per head of staff in Dubai has decreased slightly by 11.1% to 318 litres/head/day, well below the UAE average figure of 970 litres/head/day, showing a more efficient use of our water resources.
- Waste generation per head of staff in Dubai increased slightly by 5.5% to 7.2 kg/head/day, above the UAE average figure of 4.2 kg/head/day. Again, this is due to related increases in staff and operations plus the increasing number of commercial and residential buildings needed to support company

growth. This figure includes waste generated by the commercial activities of the company, as well as waste from company-provided accommodation buildings.

- Recycling quantities per head of staff in Dubai have remained constant at 0.3kg/head/day.
- Vehicle fuel consumption per head of staff decreased significantly by almost 23%, as a result of the rationalisation of ground vehicle services in Dubai.

The Emirates Group intends to refine these KPIs in future reporting years and develop suitable performance metrics to allow comparisons between similar facilities in different geographic locations and between similar residential and office locations both in Dubai and in other countries.

The methodology used to calculate these KPIs is outlined in the companion document The Emirates Group 2011-12 Environmental Report – Reporting Guidelines and Methodology available on the Environment page of the Emirates Group website.





Case Study:

Used clothing gets a new life

SITUATION

Recycling used clothing is nothing new, but Emirates does it on a global scale. In partnership with BCR Global Textiles, a leading textile recycler, the Emirates Group launched a new initiative in 2010, asking staff based in Dubai to recycle their used clothing. They were only too happy to help.



SOLUTION

Over 20 blue steel 'clothes banks' were placed at the Emirates Group headquarters, Emirates Aviation College, Emirates Engineering, other office buildings and across numerous staff accommodation locations. It is all for a good cause. BCR collects donated clothes and shoes every few weeks and sells them to international wholesalers, who distribute the clothes to small retailers – usually small cottage industries and family-run businesses in developed and developing countries. Local communities get an economic boost and the money paid to the Emirates Group for the clothes goes directly to the Emirates Airline Foundation to fund humanitarian projects across the world.

RESULTS

The clothing recycling program is more popular than ever. Over 33.7 tonnes of used clothing and shoes were collected in 2011-12, up 40% from the 24 tonnes collected in 2010-11. To date, the recycling project has raised over AED 18,000 for the Emirates Airline Foundation.

Case Study:

Recycled office paper saves more than just trees

SITUATION

The Emirates Group adopts paperless procedures whenever possible. For example, SkyChain, the IT system developed for our SkyCargo team, is an end to end paperless supply chain system for air cargo. In some situations, however, there is still the need to produce paper documents. For this, the Emirates Group came up with an environmentally-responsible solution.

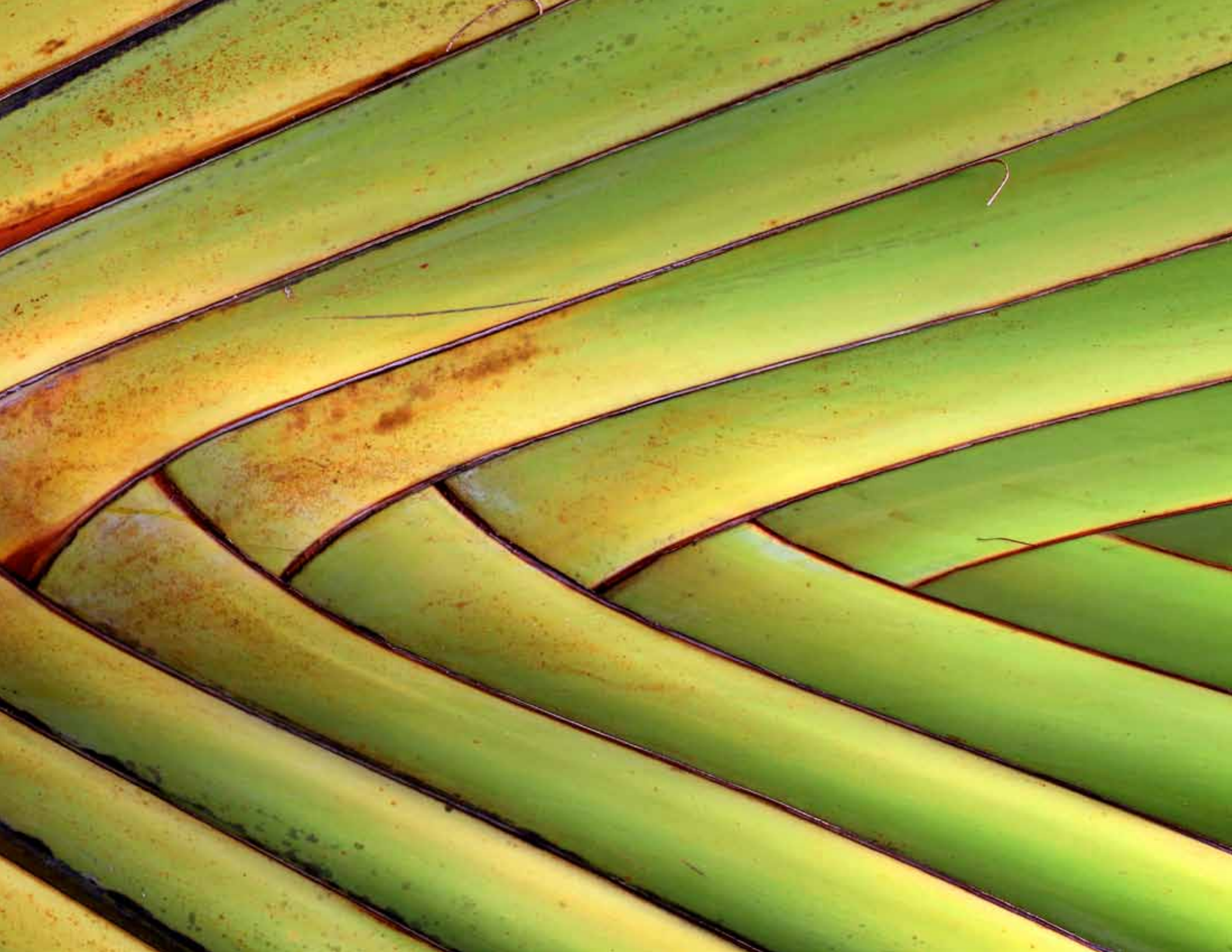


SOLUTION

Dubai offices made the switch to recycled A4 office paper. The Emirates Group undertook a thorough investigation of suitable and sustainable recycled paper products, deciding on a paper made from 100% post-consumer recycled paper and produced without chlorine or acid.

RESULTS

Compared to regular A4 paper, each ream of recycled A4 paper saves five kilograms of wood, 536 litres of water, three kilograms of solid waste and three kilograms of greenhouse gases. In one year, the savings for the Emirates Group add up to approximately 1,700 trees, more than 400,000 kWh of electricity, 3.3 million litres of water and 250 tonnes of CO₂ emissions. It also diverts 100 tonnes of waste paper from landfills.





MULTIPLE RECYCLING PROGRAMMES

The Emirates Group recycling programmes target a diverse range of waste streams. In 2011-12, over 5,340 tonnes of waste were recycled by the Emirates Group's Dubai activities, up 8.6% from last year's figure of 4,917 tonnes. A further 2,024 tonnes of recyclables were collected by the additional overseas business units included in the expanded scope of this report, with Alpha Flight Group Ltd contributing 94%.

Our catering facilities recycled the most waste material. Alpha Flight Group Ltd facilities worldwide, recycled 1.9 million kilograms of mixed plastics, paper and cardboard, glass containers, aluminium cans and foils. Emirates Flight Catering (EKFC) facilities in Dubai (including EKFC1 and 2, Foodpoint and Linencraft) recycled 1.7 million kg of mixed plastics, aluminium cans and foils,

paper, cardboard, wooden pallets, cooking oil and steel coat-hangers.

Recycling is part of the culture at Emirates Group offices in Dubai. In 2011-12 they kept 435,680 kg of paper/ cardboard, aluminium cans and plastic bottles from ending up in landfills. Emirates Engineering recycled 226,255 kg of aviation-grade aluminium, steel, seat covers, polycarbonate plastic, paper, cardboard and plastic containers, including 96,749 kg from our Boeing 777 aircraft interiors recycling programme and 1.2 million kg of used engine oil.

dnata's Airport Operations team in Dubai recycled 672,830 kg of used tyres, engine oil, vehicle batteries and paper waste. Their Aircraft Appearance team added another 452,902 kg of newspapers, magazines and cardboard collected when cleaning aircraft at Dubai International Airport.

Waste Material Recycled by the Emirates Group	Quantity Recycled in	Quantity Recycled in	% change
	2010-11 (tonnes)	2011-12 (tonnes) ¹	
Paper and Cardboard	3601.0	3,226.4	-10.4
Timber	336.6	1,365.0	305.5
Unspecified recycling	not reported	1,346.3	
Engine Oil	not reported	561.0	
Plastic - all types including plastic bottles and polycarbonate	697.8	380.6	-45.5
Textiles, leather, carpet and used clothing	26.7	92.4	246.0
Cooking Oil	115.1	86.2	-25.1
Steel - scrap and cans	30.2	80.2	165.5
Tyres	not reported	72.0	
Aluminium - foil, cans, aviation grade 2017A alloy	108.1	70.3	-34.9
IT and e-Waste	not reported	42.5	
Car Batteries	not reported	30.0	
Printer cartridges	not reported by weight	4.1	
Glass	not reported	2.5	
Food	not reported	2.2	
Electric Motors	0.8	1.8	119.1
Cables	1.1	0.6	-49.1
Total (tonnes)	4917.4	7,363.9	49.8

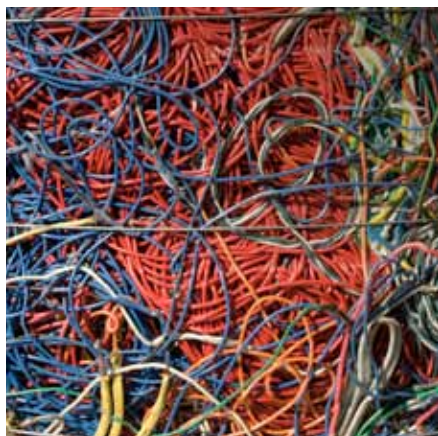
¹ Includes Alpha Flight Group Ltd, top 12 outstations and 26 Emirates airport lounges (ex-Dubai).

Case Study:

Keeping e-waste out of landfills

SITUATION

Emirates Group IT (EGIT) strives for zero e-waste going to landfills. All corporate IT and e-waste must be safely and securely re-used or recycled. Re-use and recycling eliminates the health and environment hazards associated with disposing untreated e-waste in landfills. Such waste contains significant quantities of non-biodegradable, toxic substances – such as mercury, lead, barium, arsenic, antimony and cadmium.



SOLUTION

EGIT partnered with a Dubai-based recycler to ensure that all e-waste is handled properly. Depending on their condition, products are either sent to accredited technicians for raw materials extraction or they are restored for re-use.

RESULTS

In 2011-12, EGIT collected more than 40 tonnes of corporate e-waste across the Group. The bulk of the waste was made up of obsolete PCs, monitors, laptops and printers.

The Emirates Group donates all revenue from e-waste recycling to the Emirates Airline Foundation to help with their environmental and humanitarian projects around the world. In 2011-12, the Group raised AED 70,000 through their corporate e-waste recycling program.

Another 1,800 kg of IT and e-waste was collected from staff, using a series of dedicated collection boxes and cages located in the Emirates Group offices in Dubai. In all 1,600 items were collected, including mobile phones, laptops, printers, PCs, monitors, fax machines and printers. All items were either re-used or recycled, with zero waste going to landfill. This effort raised over AED 3,500. That too, was donated to the Emirates Airline Foundation.

Additionally, 4,300 used printer and toner cartridges were recycled during the reporting period, resulting in another AED 5,200 donated to the Emirates Airline Foundation.

REDUCING EMISSIONS FROM GROUND VEHICLES AND EQUIPMENT

The Emirates Group ground fleet covered by this report includes 4,104 vehicles and diesel-fuelled equipment, such as generators and ground-power units. Even with the expanded scope of this year's report, there was an 8.2% drop in vehicle numbers over the previous reporting period – primarily due to significant rationalisation of the vehicle fleet in Dubai and the out-sourcing of key ground-transportation activities.

Lowering emissions from ground vehicles and equipment

Total fuel consumption during the 2011-12 reporting period was more

than 9.5 million litres of petrol and over 25 million litres of diesel. Overall diesel consumption increased by 2.8% due to the first-time inclusion of Alpha Flight Group Ltd's 696 diesel vehicles. Associated CO₂ emissions were 89,229 tonnes, an increase of only 0.005% over last year, due to the rationalisation of the vehicle fleet in Dubai by the Group's Central Services team. This fleet rationalisation resulted in significant decreases in diesel and petrol consumption by ground vehicles in Dubai (1.13m litres and 1.08m litres, respectively), with an associated reduction of 5,528 tonnes of CO₂ emissions during this reporting period.



This is an excellent result and is due to taking 1,062 light and heavy-duty vehicles off Dubai's roads in the last year.

Ground transport efficiency initiatives for the reporting period included continuation of the crew transport optimisation project by the Central Services team and replacement of chauffeur-drive vehicles with more efficient models of the same type.

The emissions were calculated from direct fuel consumption (diesel and petrol) and standard emissions conversion rates for petrol and diesel combustion engines. However, actual fuel consumption information was not available for a subset



of vehicles (1,128 vehicles, or 27.5% of the total). For this subset, carbon dioxide emissions and fuel consumption was calculated using engine manufacturers' standard emissions rates for specific engine types – based on known engine drive cycles and the kilometres travelled for each vehicle type. Fuel consumption data for these vehicles will be recorded in the next report.

SkyCargo trucking services, vehicle fleets operated in smaller outstations and those operated by Emirates and dnata subsidiary companies (in the UAE and overseas) were not included in this report.

Business Unit	No. of vehicles
Emirates Flight Catering	175
Foodpoint	7
Linencraft	6
Arabian Adventures	147
dnata Cargo	164
dnata Airport Operations	1,544
Dubai Desert Conservation Reserve	8
Emirates Engineering	242
Central Services	1,115
Sub-total (Dubai)	3,408
Outstations (including Wolgan Valley)	86
Alpha Flight Group Ltd	610
26 Emirates Airport Lounges (ex-Dubai)	0
Sub-total (ex-Dubai)	696
Total Vehicles	4,104

Metric	Unit	Emirates Group (Dubai)	Emirates Group (Dubai)	% Change	Emirates Group (All sites) ¹	% Change
		2010-11	2011-12		2011-12	
Diesel consumption	litres	24,460,932 ²	23,334,072	-4.6	25,144,459	2.8
Petrol consumption	litres	10,349,521 ²	9,263,191	-10.5	9,531,863	-7.9
LPG consumption	litres	not reported			197,600	
Total fuel consumption (ground)	litres	34,810,453 ²	32,597,263	-6.4	34,873,922	0.2

¹ Includes Alpha Flight Group Ltd, top 12 outstations and 26 Emirates airport lounges (ex-Dubai).

² Corrected to include fuel consumption from 879 vehicles (19.7% of total) not included in last year's report.



In 2011-12, the Emirates Group activities addressed in this report generated 20,362,743 tonnes of carbon dioxide equivalent (CO₂e) emissions. This is up 10.7% on the total emissions of 18,400,606 tonnes CO₂e reported in the previous period. This was mainly due to the planned growth in the operations of Emirates airline and increased overall jet fuel consumption (with a corresponding 9.3% growth in Scope 1 emissions).

Scope 1 emissions:

Scope 1 emissions measured by this report include CO₂ emissions generated by jet fuel consumption by the Emirates airline fleet (passenger and cargo operations), plus diesel, petrol and liquefied petroleum gas consumption by vehicle fleets, ground equipment and building plant (boilers and generators). As shown in the CO₂ emissions table, overall Scope 1 emissions measured by this report increased by 9.3% to 19,447,345 tonnes of CO₂; largely as a result of a 9.4% increase in jet fuel consumption and associated CO₂ emissions. Overall emissions associated with vehicle fuel

use remained steady despite the increase in scope. This was due to significant reductions in use of diesel fuel and petrol by ground vehicle fleets in Dubai (4.6% and 10.5% respectively) and associated emissions reductions, as reported in the previous section of this report.

Scope 1 emissions associated with storage, use and leakage of refrigerants (in stationary and mobile equipment) were not included in this report, nor were Scope 1 emissions associated with site-based wastewater treatment plants. It is intended to include these emissions in future reporting periods; however, their overall contribution to the Group's overall carbon footprint is likely to be relatively small, in terms of materiality.

Scope 2 emissions:

Scope 2 emissions measured include emissions associated with purchased electricity (in Dubai and other locations covered by the scope of this report) and desalinated potable water (in Dubai only). As described in the Emirates Group Environmental Report 2011-12 –



Reporting Guidelines and Methodology document, an appropriate published emissions factor was applied to purchased electricity consumed by Group operations in Dubai (typically supplied by gas-fired power stations), while appropriate country-specific emissions factors were applied to electricity consumption by Alpha Flight Group Ltd facilities, the top 12 outstations and the 26 Emirates airport lounges (outside of Dubai). As most potable water consumed in Dubai is produced through desalination of seawater, the CO₂ emissions associated with the multi-stage flash desalination process were included in the Group's tally for Scope 2 emissions, by applying an appropriate published emissions factor.

The table shows that there was a significant 50.1% year on year increase in Scope 2 emissions from electricity and water consumption, up from 508,056 tonnes CO₂e to 766,417 tonnes CO₂e. This was partly due to normal business growth and the increased scope of the report, but mainly due to the inclusion of electricity consumption data from seven

major buildings at Dubai International Airport, where Emirates and dnata have significant activities. This information was not available and therefore not included during the previous reporting period.

Scope 3 emissions:

Scope 3 emissions covered in this report include the CO₂e emissions associated with waste sent to landfill (as a result of the decomposition process) and special wastes treated by incineration (hazardous, medical and quarantine wastes). The table below shows that there was a significant year on year increase of 47.5% in emissions associated with waste generation and treatment, from 100,984 tonnes CO₂e in 2010-11, to 148,981 tonnes CO₂e in

2011-12. This was largely due to a 26.5% increase in waste generation from Dubai operations, as well as the increased scope of the report to include waste generation by Alpha Flight Group Ltd, the top 12 outstations and 26 Emirates airport lounges (outside of Dubai.)

Scope 3 emissions associated with staff travel were not included in this reporting period; however, it is intended to include these emissions in future reporting periods.

Split of CO₂ emissions between flight operations and ground operations
95.1% of the Group's CO₂ emissions, or 19,358,116 tonnes, were from the

consumption of jet fuel for Emirates' flight operations (passenger and cargo services), as shown in the pie charts below. This relative contribution is down slightly from 96.2% in 2010-11, largely due to the increased contribution from emissions associated with ground operations, as described below.

4.9% of the Group's CO₂ emissions, or 1,004,629 tonnes, were produced by the Group's ground operations, including 938,243 tonnes (or 4.6% of the total) from Emirates' and dnata ground operations in Dubai and 60,670 tonnes (or 0.3% of the total) from Alpha Flight Group Ltd, the top 12 outstations and 26 Emirates airport lounges

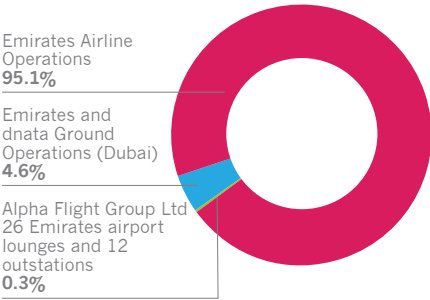
(outside of Dubai). This overall figure of 1,004,629 tonnes included 89,229 tonnes of CO₂ emissions from diesel and petrol consumption by ground vehicles and equipment in Dubai and ex-Dubai (representing 8.9% of total ground operations emissions). The relative contribution from all ground operations to the Group's overall carbon footprint (as measured in this report) increased slightly from 3.8% to 4.9%, due to the increased scope of the report to include emissions from Alpha Flight Group Ltd, the top 12 outstations and 26 Emirates airport lounges (outside of Dubai) and due to the inclusion of electricity consumption data from seven major buildings at Dubai International Airport.

CO2e Emissions	Sources	Tonnes of CO2 emissions				
		Emirates Group (Dubai)	Emirates Group (Dubai)		Emirates Group (All sites) ¹	
		2010-11	2011-12	% change	2011-12	% change
Scope 1	Aviation fuel, diesel, petrol and liquefied petroleum gas consumption	17,791,566	19,441,813	9.3	19,447,345	9.3
Scope 2	Electricity and water consumption	508,056	726,850	43.1	766,417	50.9
Scope 3	Waste to landfill or incineration	100,984	127,707	26.5	148,981	47.5
Total		18,400,606	20,296,370	10.3	20,362,743	10.7

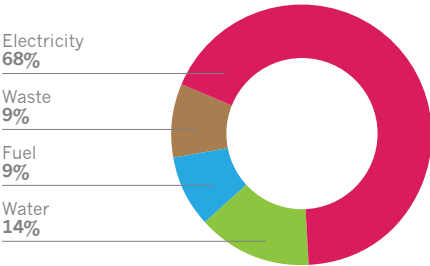
¹ Includes Alpha Flight Group Ltd, top 12 outstations and 26 Emirates airport lounges (ex-Dubai).

The charts below show the breakdown of overall Group emissions considered by this report during the 2011-12 reporting period.

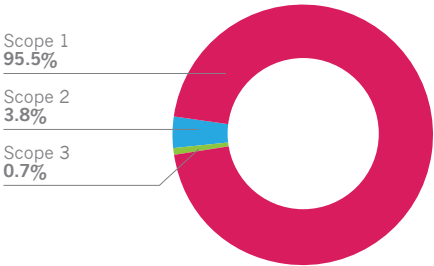
Emirates Group - Total CO₂ Emissions 2011-12

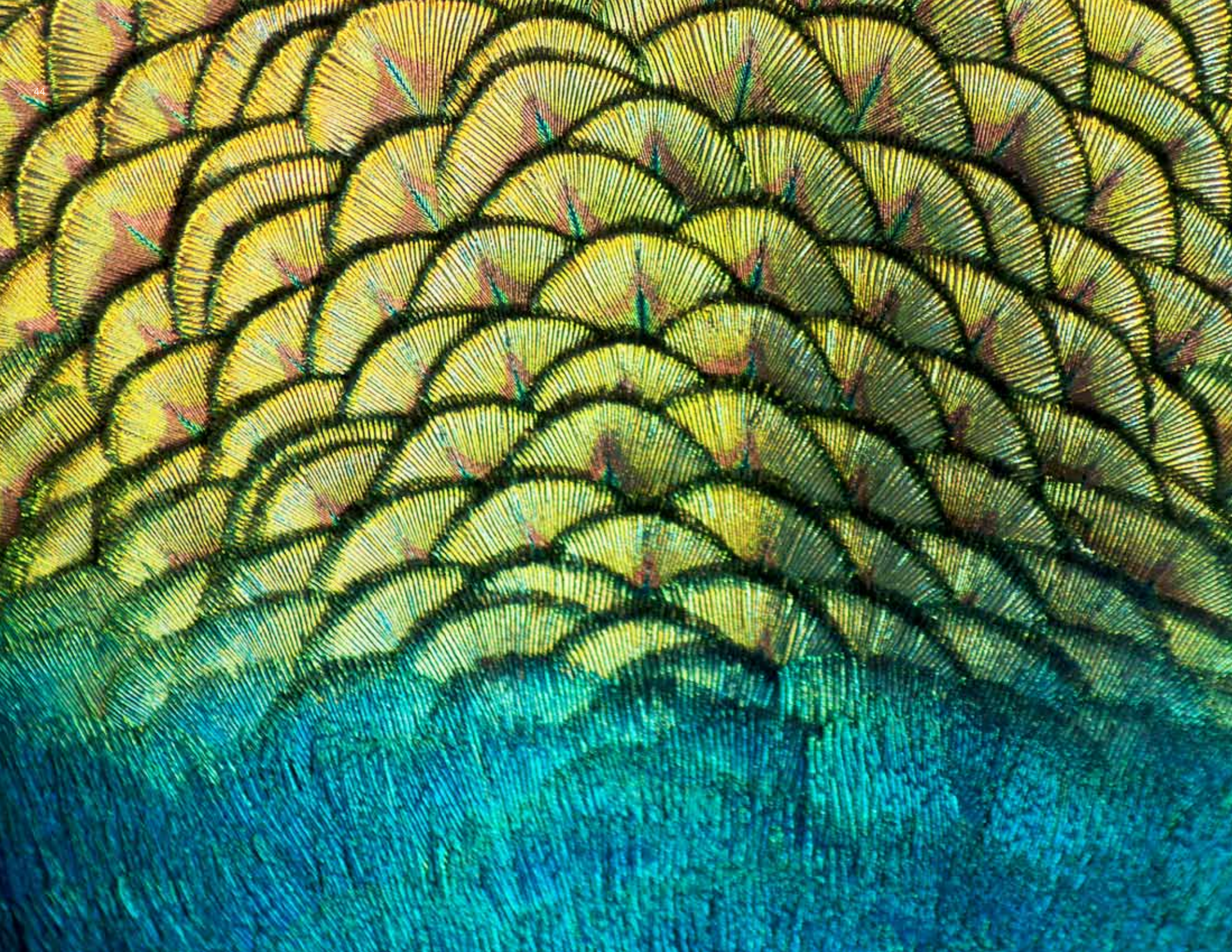


CO₂ Emissions - Ground Operations 2011 - 12



CO₂ Emissions by Scope 2011 - 12





Case Study:

Alpha Flight Group Ltd – a strong environmental record

SITUATION

The financial year 2011-12 marked Alpha Flight Group Ltd's first full year as a wholly-owned subsidiary of dnata. With more than 60 operations in 11 countries, Alpha Flight Group Ltd is dedicated to providing the highest standards of service for inflight catering. Like the Emirates Group itself, Alpha Flight Group Ltd is focused on continual improvement of its environmental performance.



SOLUTION

Alpha Flight Group Ltd UK operations have established solid environmental performance credentials. For example, Alpha Flight Group Ltd UK is a signatory of the Food and Drink Federation Climate Change Agreement. Through this agreement, it is committed to industry targets for reducing carbon emissions per tonne of food production. Alpha Flight Group Ltd UK is also engaged in the CRC Energy Efficiency Scheme involving the reporting of its energy consumption in line with UK legislation.

RESULTS

Alpha Flight Group Ltd has recycling programmes in place across all Alpha Flight Group Ltd locations. In the 2011-12 financial year, over 19,000 tonnes of materials were recycled. Alpha Flight Group Ltd's Townsville (Australia) Flight Kitchen led the way in recycling with 343 tonnes, followed by Sydney North with 218 tonnes and then Edinburgh with 151 tonnes. Its UK operation alone recycled or re-used (waste to energy) 58% of its waste.

Alpha Flight Group Ltd UK Manchester received a Bronze Award for exemplary Environmental Management Performance from Manchester City Council. The award recognised some of its in-house efficiency programmes, including energy surveys and a carbon footprint study.

THE RIGHT POLICIES

SETTING INDUSTRY TARGETS



Thoughts on international aviation and environmental policy

Every stakeholder has an opinion about aviation and its effect on sustainability and the environment. This is how Emirates sees it:

- The aviation industry is only responsible for approximately two percent of global greenhouse gas emissions from human activity.
- At present, there is intense scrutiny of our industry's greenhouse gas emissions.
- At Emirates, the principles of eco-efficiency enable us to fly more passengers and cargo further on less fuel.
- The true definition of sustainability encompasses economic, social and ecological considerations.
- The true definition of sustainability is often overshadowed by purely environmental concerns.

Regardless of these debates, we recognise the importance of reducing our environmental impacts and we are committed to managing our emissions in

order to minimise potential impacts on both local air quality and climate change.

Our place in the regulatory framework

The International Civil Aviation Organisation (ICAO) is a specialised agency of the United Nations. Since 1944, it has promoted the safe and orderly development of international civil aviation throughout the world. It sets standards and regulations necessary for aviation safety, security, efficiency and regularity, as well as for aviation environmental protection.

The Emirates Group encourages ICAO to work together with all of its 191 member states to implement a global scheme for reducing aviation emissions. Emirates believes market-based measures (MBMs), such as emissions trading and emissions offsetting, should only be considered as a last resort. MBMs should recognise “early movers” and reward the most fuel efficient operators, ensuring that funds raised are directed back into aviation efficiency and environmental projects and replace any existing over-lapping ‘environmental’ taxes or charges.

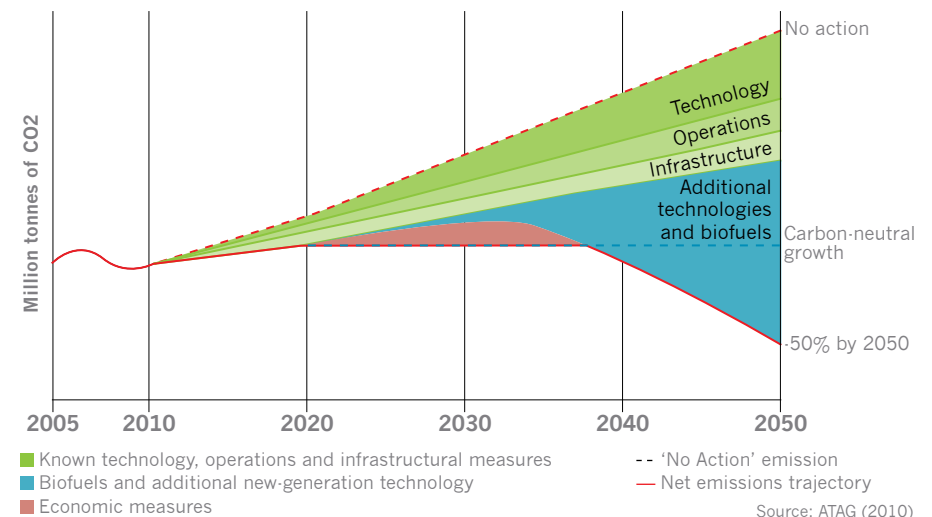
International Air Transport Association (IATA)

For more than 60 years, IATA has developed the commercial standards that helped build the global aviation industry. Today, IATA's mission is to represent, lead and serve the airline industry. Its members comprise some 240 airlines, including the world's leading passenger and cargo airlines. Together they account for 84% of total air traffic.

In 2009, IATA adopted three ambitious environmental targets:

- A cap on aviation CO₂ emissions from 2020 (carbon-neutral growth).
- An average improvement in fuel efficiency of 1.5% per year from 2009 to 2020.
- A 50% reduction in CO₂ emissions by 2050, relative to 2005 levels.

Emissions Reduction Roadmap (Schematic, Indicative Diagram)



TOWARDS SUSTAINABLE AVIATION

Aviation brings enormous benefits to communities and economies around the globe. It is a key enabler of economic growth, social development and tourism providing connectivity and access to markets. Air transport, currently supporting 56.6 million jobs and over \$2.2 trillion of global GDP with a strong track record of fuel efficiency and CO₂ emissions savings, is a strategic contributor to sustainable development.

Our goals and achievements to date

As leaders of the aviation industry, we signed a Declaration in 2008 committing ourselves to action on climate change. Since then we have put forward a set of ambitious goals and implemented initiatives to meet them. We are delivering already on our short-term promises for fuel efficiency of 1.5% per annum improvement through to 2020 and are firmly on track to meet our longer term commitments.

Now, we, the undersigned aviation industry companies and organisations, broaden our commitment to advancing and strengthening the interdependent pillars of sustainable development – economic growth, social development and environmental stewardship – at the local, national, regional and global levels. We will continue to:

- » provide an air transport sector that is a key socio-economic contributor to the world economy and catalyst for growth, building connectivity to enhance trade, tourism, personal opportunity and mobility to all people everywhere;
- » provide high value jobs, innovative partnerships with the communities we serve and investment in skills and training, whilst maintaining a high level of investment in research and development around the world; and
- » demonstrate environmental leadership by delivering on our goal to cap net aircraft carbon emissions from 2020 and work to achieve our ambitious goal of a 50% reduction in net carbon emissions by 2050 compared to 2005 levels.

We believe that our commitments to work in partnership with governments, other industries and civil society will deliver an efficient aviation sector, fit to meet the needs and provide the services required by the world economy.

We strongly encourage others to join us in this endeavour.

Our request to governments worldwide

As one of the most highly-regulated global sectors, we cannot continue to deliver these benefits alone. We commit to show leadership and work with governments to pursue our common goal of economic prosperity and sustainable development through:

1. continued investment in academic and international collaborative research for the development and implementation of new green technologies and operational practices;
2. urgent action for advancement of a highly-efficient air traffic control capacity;
3. encouraging the use of alternative renewable energy by providing appropriate policies and incentives to facilitate the timely, cost-effective and sustainable development of aviation biofuels;
4. continued development of sustainable airport infrastructure to meet the anticipated future demand for aviation services within the context of the economic, social and environmental needs of society;
5. providing a positive regulatory environment that encourages aviation development as part of a broader government economic growth policy, co-ordinated across national borders; and
6. urging governments to reach agreement at the International Civil Aviation Organization (ICAO) for a global framework for reduction of emissions from aircraft operations using technology development, efficient operations and infrastructure, and the use of international multilateral market-based measures to address any remaining emissions gap.

Signed on Thursday 22 March 2012, at Geneva, Switzerland by:

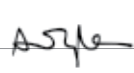

Angela Gittens
Director General




Paul Riemens
Chairman of the Executive Committee



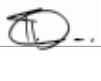

Tony Tyler
Director General and CEO




Marion C. Blakey
Chair





Thomas Enders
President and CEO



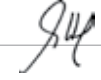

Jim Albaugh
President and CEO




Filippo Bagnato
Chief Executive Officer



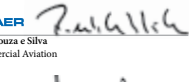
BOMBARDIER
Guy Hachey
President and COO
Bombardier Aerospace



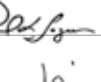

Jean-Paul Ebanga
President and CEO



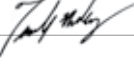

Paulo Cesar de Souza e Silva
President Commercial Aviation



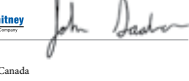

David Joyce
President and CEO
GE Aviation



Honeywell
Tim Mahoney
President and CEO
Honeywell Aerospace



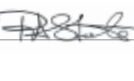

John Saabas
President
Pratt & Whitney Canada




Eric Schulz
President – Civil Large Engine Programmes




Paul Steele
Executive Director



6th Aviation & Environment Summit, 22 March 2012

IATA also adopted a four-pillar strategy to achieve these targets:

1. Investment in improved technology
2. Effective operations
3. Efficient infrastructure
4. Positive economic measures

The Emirates Group supports IATA's continuing efforts in reducing emissions, including the signing of the recent declaration "Towards Sustainable Aviation" at the 6th Aviation and Environment Summit in Geneva, on 22 March 2012.

UAE – General Civil Aviation Authority (GCAA)

The United Arab Emirates GCAA is the country's federal regulator for civil aviation and is responsible for formulating and implementing the UAE's policies on aviation and environmental issues. The GCAA chairs the UAE Aviation Environmental Working Group (AEWG), which is made up of numerous stakeholders in the UAE aviation industry. The UAE is a member of the ICAO Council.

In March 2012, the GCAA, working with the AEWG and its stakeholders, finalised the UAE's Aviation Environmental Policy. The policy states that "the UAE aviation sector will strive to ensure that it continues to grow in a sustainable manner in order to support the economy of the country and to support the UAE's aviation initiatives to reduce its environmental impact."

Key policy objectives include:

- Recognition of ICAO's leadership on international aviation and climate change.
- Support of ICAO's work on aviation emissions reductions.
- Encouraging all UAE stakeholders to report their environmental performance.
- Encouraging investment and funding for the most modern technology available to reduce the environmental impacts of aviation.
- Encouraging all stakeholders to work jointly to improve the efficiency of aircraft operations in UAE airspace.

The UAE has also led discussions through ICAO working groups on Market Based Measures (MBMs) and has made significant contributions (through the Arab Civil Aviation Committee, ACAC) to ICAO's CAEP process to determine a suitable CO₂ emissions standard for new aircraft.



European Union Emissions Trading System (EU ETS)

Created in 2005, the EU ETS is the world's largest 'cap and trade' emissions reduction scheme. In 2012, it was extended to include international aviation, covering all major international and domestic airlines operating flights to, from and within the European Union. More than 24% of Emirates' passenger and cargo operations fly to and from the EU. Rather than face substantial financial penalties, Emirates has, under protest, fully complied with the EU ETS by submitting its 2010 and 2011 monitoring reports. Our current estimations indicate that our compliance costs will be well over €10 million in 2012 and hundreds of millions of euros over the first nine years of the programme through to 2020.



UK APD and other European environmental taxes

The United Kingdom Air Passenger Duty (APD) came into effect in 1994. Since then, France, Ireland, Austria, the Netherlands, Belgium and Germany have also attempted to implement a passenger tax, passing it off as an "environmental" tax. Emirates believes the UK Government's current approach to aviation and its punitive levels of 'environmental' taxation threaten economic growth and Britain's position in the global market place. The truth is in the statistics. The UK has experienced three consecutive years of falling passenger numbers at its airports, with 2011 passenger numbers at the same level as 2004. In a report for the World Travel & Tourism Council, Oxford Economics, one of the world's foremost global forecasting and research consultancies, calculated that eliminating the APD could generate up to 91,000 jobs in the UK and pump £4.2 billion into the economy.

A photograph of a desert landscape featuring sand dunes and several green bushes. The dunes are in the foreground and middle ground, with some bushes scattered across them. The sky is not visible, and the overall scene is brightly lit, suggesting a sunny day.

RESTORING THE BALANCE

PROTECTING AND CONSERVING NATURAL ENVIRONMENTS

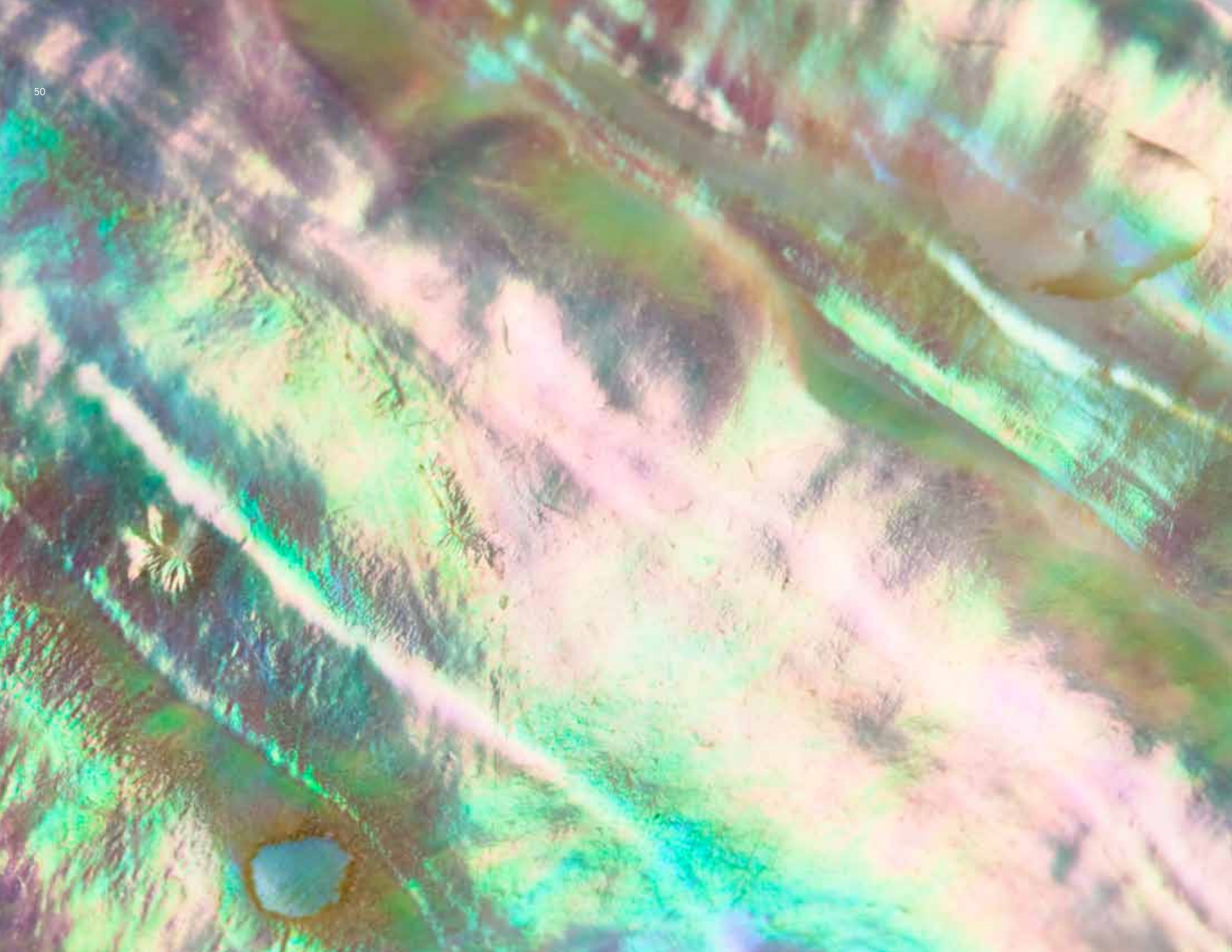
Dubai Desert Conservation Reserve (DDCR)

Established as a conservation reserve in 2003, DDCR covers 225 km², nearly 5% of the Emirate of Dubai.

In 2011-12, DDCR partnered with Biosphere Expeditions, an international, non-profit wildlife volunteer organisation that hosts conservation expeditions for environmental volunteers around the world.

In January 2012, volunteers from Europe, United States and Australia participated in DDCR's first expedition to work with three species on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species: the Oryx, Gordon's Wildcat and MacQueen's Bustard.

DDCR also launched a major campaign to plant thousands of indigenous ghaf and acacia trees. These trees will provide a valuable habitat for the more than 44 species of mammals, reptiles and 120 species of birds that have been recorded in DDCR.



Case Study:

A new habitat for Gulf oysters

SITUATION

Reducing the weight of an aircraft helps save fuel and reduces greenhouse gas emissions. Even changing the on-board china can make a difference. So, when Emirates airline removed more than 115 tonnes of obsolete chinaware from First Class and Business Class service (the equivalent to approximately four and a half million individual pieces of china), we replaced it with new, lighter weight china. This left a big question: what to do with the old crockery?



SOLUTION

After investigating various recycling options, Emirates decided on a dual strategy:

A. Use a portion of the obsolete chinaware to create an artificial bed for the restoration of Gulf pearl oyster populations off the coast of Dubai. The smooth hard surface of the china has similar physical characteristics to oyster shells and provides a suitable substrate for the larvae of pearl oysters (known as spats) to establish themselves.

In cooperation with Emirates Marine Environment Group (EMEG), a Dubai based marine non-governmental organisation, Emirates placed 18 tonnes of crushed china on the seabed 2km off the coast of Dubai in January 2012 to help create a 10,000m² bed.

B. Recycle the remaining 97 tonnes of obsolete chinaware through the Emirates Recycling crushing plant in Dubai to use as construction aggregate.

RESULTS

The first oysters are expected to become visible after 10 to 12 months, although microscopic colonisation occurs within four to six weeks after placement of the material. EMEG and volunteers from the Emirates Group's 'Environment Champions' staff programme will monitor the results.

Emirates opened the 1,600-hectare Wolgan Valley Resort & Spa in October 2009; one of Australia’s first luxury conservation resorts. It was the first carboNZero ©™ certified hotel in the world and the first carbon neutral resort in the world to be certified through an internationally-accredited greenhouse gas programme.

In 2011-12, Wolgan Valley underwent a recertification audit to maintain its carbon neutral states. In addition, the audit showed that the resort is also acting as a carbon sink, which helps reduce the total carbon footprint of the Emirates Group. Wolgan Valley continues to explore new ways to decrease its carbon footprint and the operational costs of the resort.

Wolgan Valley Resort also announced a variety of new conservation activities during the reporting period. An army of international volunteers took part in a massive winter tree planting, during which

approximately 25,000 native trees (tube stock) were planted around the wetland and dam area. Wolgan Valley Resort also began a discussion with the local Catchment Management Authority and the Department of Soil Conservation about preserving the resort’s peat swamps and Wolgan River peat beds.

Wombats are one of the indigenous fauna species found in the region, with populations under threat from health issues. Phase 1 of the Wombat Health Programme was completed in 2011-12, documenting the condition of wombats living on the property and included an interim solution for treating their health issues. The next phase will improve the method of treating ill wombats with a food-based dosing system.

Wolgan Valley also continues to work with universities to offer PhD students the resources needed to complete their thesis work.

Wolgan Valley Resort Industry Awards: 2011-12

Year	Presenter	Award
2011	Hotel Management Awards for Hotel and Accommodation Excellence	Best Regional Property and Best Environmental Programme
2011	Hotel Management Awards for Hotel and Accommodation Excellence	Highly Commended in Australian Lodge and Resort categories
2011	Condé Nast Traveller	Runner Up, Favourite Overseas Leisure Hotel, Australasia & the South Pacific
2011	AsiaSpa Magazine Awards	Winner, Eco-Spa of the Year
2011	Condé Nast Traveller World Savers Award	Winner, Wildlife Conservation Category
2011	Condé Nast Traveller World Savers Award	Runner up in the Environmental Preservation category
2011	Condé Nast Traveller	2011 UK Gold List
2012	Andrew Harper’s Hideaway Report	Grand Award winner





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 page 7 and marked with a ✓ (hereafter: the reported annual environmental data) in the accompanying Environmental Report 2011-2012 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 the ICAO CAEP/6 Emissions Standards and ICAO Chapter 4 Noise Standards.

All other information in the Environmental Report 2011-2012 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 2011-2012. We are responsible for providing an assurance report on the reported annual environmental data presented in the Environmental Report 2011-2012.

Criteria

The reporting criteria used by the Emirates Group are described in the Emirates Group 2011-2012 Environmental Report – Reporting Guidelines and Methodology, dated 5 June 2012, 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.

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'. This standard requires 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 2011-2012. 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 2011-2012 (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 2011-2012 (page 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 2011-12 – Reporting Guidelines and Methodology.

Amsterdam, 5 June 2012

PricewaterhouseCoopers Accountants N.V.

Original signed by
Peter Eimers

Glossary

L/100PK	litres per 100 passenger kilometres
L/FTK	litres per freight tonne kilometre
L/TK	litres per tonne kilometre
gCO ₂ /PK	grams of CO ₂ per passenger kilometre
gCO ₂ /FTK	grams of CO ₂ per freight tonne kilometre
kgCO ₂ /TK	kilograms of CO ₂ per tonne kilometre
GHG	Greenhouse Gas Emissions
NO _x	Nitrogen Oxides Emissions
UHC	Unburnt Hydrocarbon Emissions
EPNdB	Effective Perceived Noise Level
ICAO	International Civil Aviation Organisation
CAEP	Committee on Aviation Environmental Protection
IATA	International Air Transport Association
GCAA	General Civil Aviation Authority
INSPIRE	Indian Ocean Strategic Partnership to Reduce Emissions
ASPIRE	Asian and South Pacific Initiative to Reduce Emissions
EU ETS	European Union Emissions Trading Scheme
AEWG	Aviation Environmental Working Group
ULR	Ultra Long Range
LTO Cycle	Landing and Take-Off Cycle
ULD	Unit Loading Device
DDCR	Dubai Desert Conservation Reserve
EMEG	Emirates Marine Environment Group

References

- Beginner’s Guide to Aviation Efficiency, Air Transport Action Group (ATAG), June 2010.
- Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4): Climate Change 2007, IPCC, 2007.
- The Kyoto Protocol, United Nations Framework Convention on Climate Change (UNFCCC), 2007.
- Agreements from Conference of the Parties (COP16), Cancun, Mexico, UNFCC, December 2010.
- Resolution A37-19: Consolidated statement of continuing ICAO policies and practices related to environmental protection – climate change, ICAO General Assembly November 2010.
- Convention on International Civil Aviation, United Nations, Chicago, 1944.
- World Wildlife Fund, Living Planet Report, 2012.
- A global approach to reducing aviation emissions, IATA, August 2009.
- Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008, Official Journal of the European Union, 2008.
- IATA forecast fuel efficiency data (per passenger), IATA (pers comm), 23 November 2009.
- IATA forecast carbon dioxide efficiency data (overall global fleet average), IATA (pers comm), 9 May 2011.
- World Air Transport Statistics (WATS), 55th Edition, IATA, June 2011.
- Report of the Committee on Aviation Environmental Protection, Sixth Meeting, Montréal, 2–12 February 2004 (Doc 9836, CAEP/6), ICAO, 2004.



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