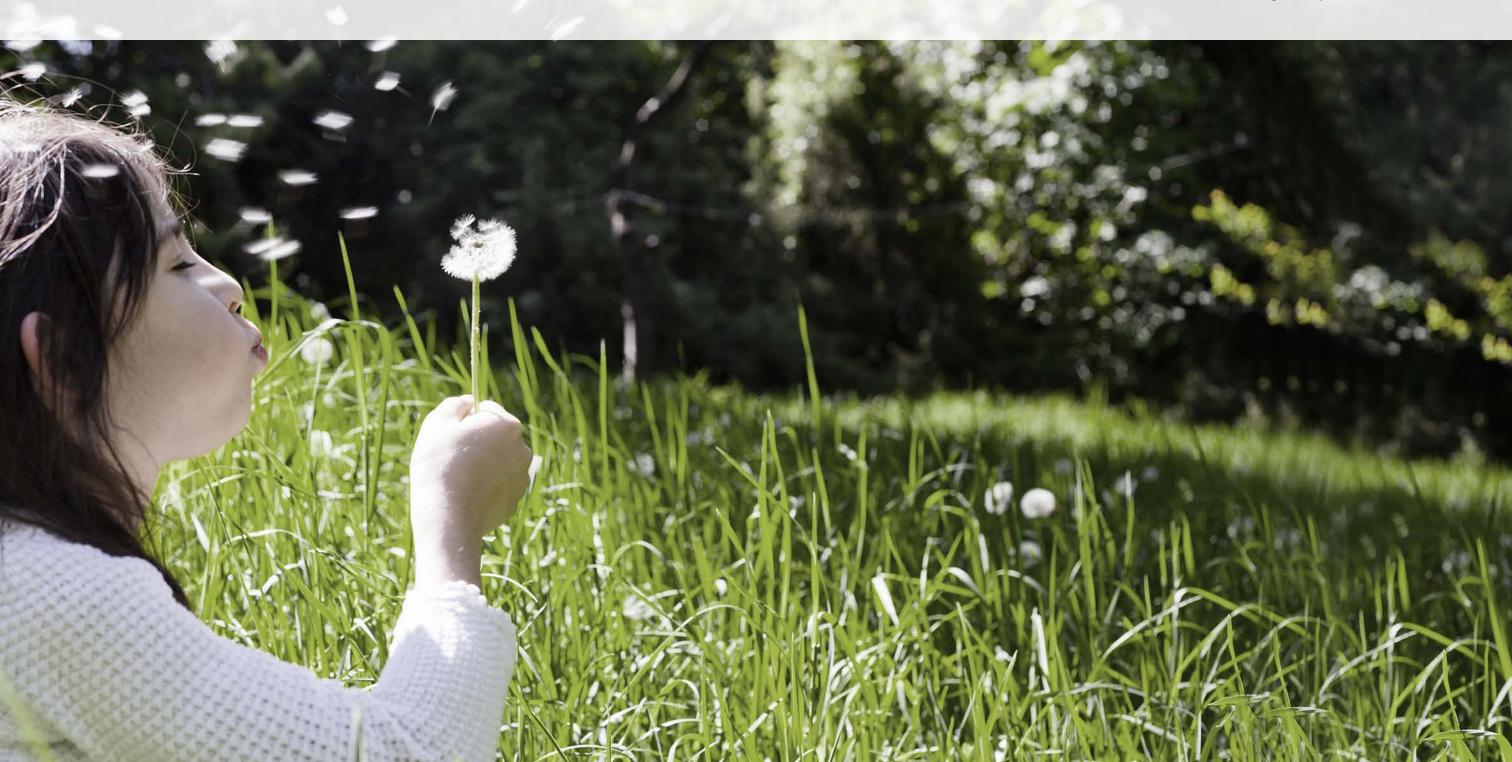


Sustainability Report 2012/13



OVERVIEW

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This Sustainability Report is published to provide stakeholders of Singapore Airlines with information about our sustainability performance in a transparent and accountable manner, covering areas including governance, stakeholder engagement, community projects and the environment.

Through this report, we also hope to identify opportunities for improvements to our sustainability management, as well as issues that are material to our business in order to address them effectively and appropriately.

REPORTING PERIOD

This report covers the Financial Year 2012/13 from 1 April 2012 to 31 March 2013.

REPORTING SCOPE

Information and figures in this report refer to the Parent Airline, excluding subsidiaries in the Singapore Airlines Group, unless otherwise stated. The '\$' sign used in this report refers to Singapore Dollars unless otherwise stated.

DATA COLLECTION PROCESS

Information for this report is collected from various departments and overseas offices. The general approach is for data owners to confirm the accuracy of their data through documentary evidence or past operational performance. We aim to improve on this process continually to ensure that our data collection is effective and robust.

More information about Singapore Airlines Limited is available through our website at: http://www.singaporeair.com/en_UK/about-us/ir-landing/ as well as in our Annual Report, which can be viewed or downloaded at: http://www.singaporeair.com/jsp/cms/en_UK/global_header/annualreport.jsp

CEO MESSAGE



"We determined that the time was right to expand the scope of the Environment Report to provide a wider range of information on our efforts that contribute towards making our operations more sustainable." This year marks the first time Singapore Airlines has produced a comprehensive Sustainability Report, detailing a wide range of initiatives and practices related to non-financial aspects of our operations. This important step forward is consistent with our longstanding efforts to be constantly developing as a responsible corporate citizen.

Reporting sustainability practices is not entirely new to us, as we had been producing an annual Environment Report since the 2001/02 financial year. For many years we have also been including selected information about sustainability practices in our Annual Report to shareholders. This year, however, we determined that the time was right to expand the scope of the Environment Report to provide a wider range of information on our efforts that contribute towards making our operations more sustainable.

It has proven to be a timely endeavour, as the Singapore Exchange recently announced that it may establish a Sustainability Index for investors to gauge how listed companies approach environmental, social and governance issues. SGX has also published a Guide to Sustainability Reporting for Listed Companies, stating that it considers sustainability reporting to be an important aspect of holistic disclosure by listed companies. We agree, and are therefore pleased to be among the early adopters in Singapore with a comprehensive Sustainability Report.

As part of our ongoing development, we have for the first time produced a Suppliers' Code of Conduct which we expect all our suppliers to adhere to. Based on the principles of the United Nations Global Compact with respect to Human Rights, Labour, the Environment and Anti-Corruption, the Code's contents were developed to be consistent with our business values. More information can be found in the section - Stakeholder Engagement: Partners.

Also in this report, you will find details of many sustainable practices in our day to day operations, encompassing environmental initiatives; community projects; governance; engagement with customers, employees and partners; and more.

We are pleased to be sharing this information in a detailed manner for the first time, and sincerely hope you enjoy reading about our initiatives and practices in the pages ahead.

GOH CHOON PHONG

Chief Executive Officer
Singapore Airlines

ABOUT SINGAPORE AIRLINES

Singapore Airlines has come a long way since our founding in 1972. Now an internationally-respected brand, we have become one of the world's leading carriers with an advanced fleet of aircraft.

With one of the world's youngest fleets in the air, a network spanning six continents, and the Singapore Girl as an iconic symbol of quality customer care and service, we have earned a reputation as an innovative market leader, combining quality products with excellent service.

We have made a habit of leading the way, and along the way developed a reputation as an industry trendsetter.

Our ever-growing list of industryleading innovations includes the following firsts:

- First to offer free headsets, a choice of meals and free drinks in Economy Class, in the 1970s.
- First to introduce satellite-based in-flight telephones, in 1991.

- First to involve a comprehensive panel of world-renowned chefs, the International Culinary Panel, in developing in-flight meals, in 1998.
- First to offer audio and video on demand (AVOD) capabilities on KrisWorld in all classes, in October 2001.
- First to fly the A380, from Singapore to Sydney, on 25 October 2007.

MISSION **STATEMENT**

Singapore Airlines is a global company dedicated to providing air transportation services of the highest quality and to maximising returns for the benefit of its shareholders and employees.

VALUES

We hold firm to our six Core Values, which we strongly believe are key to the SIA mission:

▶ PURSUIT OF EXCELLENCE

We strive for the highest professional standards in our work and aim to be the best in everything we do.

► SAFETY

We regard safety as an essential part of all our operations. We maintain and adopt practices that promote the safety | INTEGRITY of our customers and staff.

► CUSTOMER FIRST

Our customers are foremost in our minds all the time. We go the extra mile to exceed their expectations.

► CONCERN FOR STAFF

We value our staff and care for their well-being. We treat them with respect and dignity and seek to provide them with appropriate training and development so that they can lead fulfilling careers.

We strive for fairness in all our business and working relationships.

► TEAMWORK

We work with pride as a worldwide team to achieve success together.

HISTORICAL TIMELINE OF SIA

MAY

MAL, which was renamed Malaysian Airways Limited in 1963, becomes Malaysia-Singapore Airlines (MSA).



JUNE

MSA's first transcontinental flight on a Boeing 707 takes off for London.

JULY

Singapore Airlines moves to the new Singapore Changi Airport from Paya Lebar.

APRIL

KrisWorld, Singapore Airlines' advanced in-flight entertainment system, is launched across all classes.



FEBRUARY

Singapore Airlines inaugurates the world's longest non-stop commercial flights between Singapore and the US.

MARCH

Singapore Airlines launches three-times-weekly flights to Sao Paulo, its first South American destination.



1947

1966

1968

1971

1972

1981

1989

1995

1999

2004

2007

2011

2013

MAY

The maiden flight of Malayan Airways Limited (MAL), operated by an Airspeed Consul, takes off from Singapore Kallang Airport.

French couturier Pierre Balmain designs the sarong kebaya uniform for MSA air stewardesses.

MSA splits into Singapore Airlines (SIA) and Malaysian Airline System (MAS). The Singapore Girl is born.

Singapore Airlines becomes the first airline to operate a Boeing 747-400 commercial flight across the Pacific.

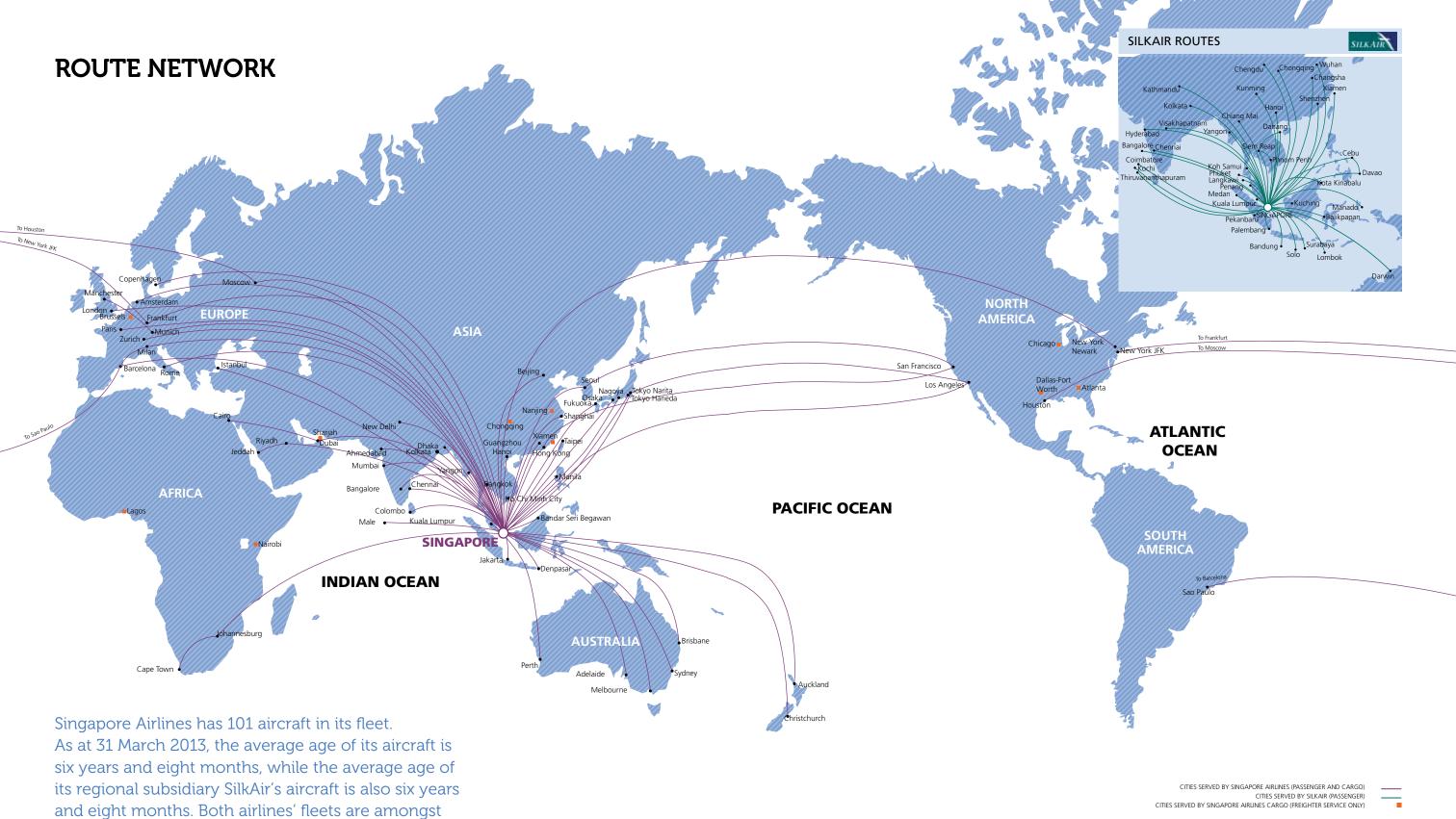


The KrisFlyer programme is launched, allowing First, Business and Economy Class customers to earn mileage credits.



Today, Singapore Airlines flies to over 100 destinations in nearly 40 countries, including services by Singapore Airlines Cargo and SilkAir.

SINGAPORE AIRLINES



The map is not drawn to scale and the lines do not indicate actual flight paths. For accurate information on flight schedules and routes, go to singaporeair.com.

Credit: © SPH Magazines Pte Ltd & Singapore Airlines Ltd

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SUSTAINABILITY REPORT 2012/13 9

the youngest and most fuel-efficient in the world.

FLEET INFORMATION

As At 31 March 2013

SINGAPORE AIRLINES PASSENGER FLEET

3 3 1 3

Cabin Configuration

First : 8

Business: 50 Economy: 226

Total : 284

Boeing 777-300R (retrofitted)

In Fleet : 7

Airbus A380-800

In Fleet : 19 On Order : 5

In Fleet : 11 Cabin Configuration 1

First : 12 (Suites)
Business : 60
Economy : 399
Total : 471

In Fleet : 8 Cabin Configuration 2

First : 12 (Suites)
Business : 86
Economy : 311
Total : 409



Airbus A340-500

In Fleet : 5 Cabin Configuration

Business: 100 Total: 100



Airbus A330-300

In Fleet : 20 Cabin Configuration
On Order : 14 Business : 30

Economy: 255
Total : 285



Airbus A350-900 XWB

On Order: 40



Boeing 777 (total)

In Fleet : 57 On Order : 8



Boeing 777-300ER

In Fleet : 19 Cabin Configuration
On Order : 8 First : 8

First : 8
Business : 42
Economy : 228
Total : 278



Boeing 777-200ER (retrofitted)

In Fleet : 2 Cabin Configuration

Business: 26 Economy: 245 Total: 271

Boeing 777-200ER

In Fleet : 9 Cabin Configuration

Business: 30 Economy: 255 Total: 285

Boeing 777-200R (retrofitted)

In Fleet : 11 Cabin Configuration

Business: 38 Economy: 228 Total: 266

Boeing 777-200

In Fleet : 2 Cabin Configuration

First : 12 Business : 42 Economy : 234 Total : 288

In Fleet : 7 Cabin Configuration 1

Business: 30 Economy: 293 Total: 323





FLEET INFORMATION (continued)

SINGAPORE AIRLINES CARGO FREIGHTER FLEET

Average age of fleet: 11 years 8 months

Average age of fleet: 6 years 8 month.

Boeing 747 - 400 Freighter

In Fleet : 12



Total: 12

SILKAIR FLEET

Airbus A320 (total)



In Fleet : 16
On Order : 2

In Fleet : 12
On Order : 2

Business : 12
Economy : 138
Total : 150

In Fleet : 4

Cabin Configuration 1

Cabin Configuration 2
Business : 16
Economy : 126
Total : 142

Airbus A319

In Fleet : 6

Cabin Configuration
Business: 8
Economy: 120
Total: 128

Boeing 737 (total)

On Order: 54



Boeing 737-800

On Order: 23 Cabin Configuration

Business: 12 Economy: 150 Total: 162



On Order: 31 Cabin Configuration

Business: 12 Economy: 150 Total: 162

CORPORATE GOVERNANCE

The Singapore Airlines Board and Management are committed to continually enhancing shareholder value by maintaining high standards of corporate governance, professionalism, integrity and commitment at all levels, underpinned by strong internal controls and risk management systems.

The Singapore Airlines Board consists of Chairman Mr Stephen Lee, CEO Mr Goh Choon Phong and eight directors from diverse backgrounds with varied expertise in finance, legal, industry, business, marketing and management fields. The Board's principal functions include charting the Group's strategic direction, reviewing and approving annual budgets and financial plans and monitoring the Group's performance; approving major acquisitions and fund-raising exercises; and reviewing the Group's compliance with laws and regulations as may be relevant to the business.

The Board currently comprises the following members:

Mr Stephen Lee Ching Yen Chairman/ Non-executive Mr Goh Choon Phong Director and CEO/ Executive Mr Gautam Banerjee Independent/ Non-executive Dr William Fung Kwok Lun Independent/ Non-executive Ms Euleen Goh Yiu Kiang Independent/ Non-executive Mr Hsieh Tsun-Yan Independent/ Non-executive Mrs Christina Ong Independent/ Non-executive Dr Helmut Gunter Wilhelm Panke Independent/ Non-executive Mr Jackson Peter Tai Independent/ Non-executive Non-independent/ Non-executive Mr Lucien Wong Yuen Kuai

LENGTH OF SERVICE

Directors are appointed for an initial term of three years, after which they are considered for re-nomination for another term(s). Their re-nominations are subject to the recommendations of the Chairman of the Board and the Nominating Committee. New Directors appointed in the year are subject to retirement and re-election by shareholders at the next Annual General Meeting after their appointment. All new appointments and re-elections require the approval of the Special Member, the Minister for Finance.

^{*}Full profiles of Directors are available on pages 6 to 9 of the Annual Report.

CORPORATE GOVERNANCE (continued)

BOARD COMMITTEES

Five Board Committees have been formed to assist the Board in the execution of its responsibilities. They comprise members of the Board delegated with authority to carry out specific functions and duties.

Audit Committee (AC)

The purpose of the AC is to assist the Board of Directors in fulfilling its oversight responsibilities by reviewing:

- Financial information disclosed to shareholders and regulatory authorities
- The Group's systems of internal controls financial, operational, compliance and risk management
- Internal and external audits, accounting and financial reporting process

Board Compensation and Industrial Relations Committee (BCIRC)

The Board Compensation and Industrial Relations Committee assumes the role of a Remuneration Committee. It has oversight for the remuneration and benefits package for key executives of the Company, including their succession planning and leadership development. The BCIRC also provides appropriate guidance to management of the company in its relations with unions, with the aim of providing a harmonious industrial relations climate.

Executive Committee (ExCo)

The ExCo oversees the execution by Management of the overall strategy, policies, directions and guidelines set by the Board for the SIA Group. It also reviews and makes recommendations to the Board on the annual operating and capital budgets and matters relating to the Group's wholly-owned subsidiaries. The ExCo is authorised to approve transactions beyond a designated materiality threshold and to make decisions on routine financial and operational matters. It also functions as the Share Buy Back Committee of the Company.

Nominating Committee (NC)

The NC considers and makes recommendations to the Board on the appointment and re-election of Directors. It also determines the independence of Directors. The NC's recommendations are endorsed by the Board before they are brought before shareholders at the Annual General Meeting.

Board Safety and Risk Committee (BSRC)

The functions of the BSRC include:

- ensuring that systems and programmes in the SIA Group comply with regulatory requirements and accord with the best practices of the aviation industry
- reviewing regular reports on safety performance
- reviewing accident investigation findings and recommendations
- advising Management and reporting to the Board on safety issues
- reviewing the effectiveness of the SIA Group's operational controls
- overseeing the risk governance framework and risk management system, including reviewing key risks and controls put in place by Management

*Details of membership in Board Committees and attendance at Board and Committee meetings can be found on pages 52 and 53 of the Annual Report.

INTERNAL CONTROLS AND INTERNAL AUDIT

SIA Internal Audit is an independent department that reports directly to the AC. It performs regular evaluations of the SIA Group's internal controls, financial and accounting matters, compliance, business and financial risk management policies and procedures, and ensures that internal controls are adequate to meet the Group's requirements. SIA Internal Audit is a member of the Singapore chapter of the Institute of Internal Auditors (IIA) and meets the Standards for the Professional Practice of Internal Auditing set by the IIA.

The Control Self Assessment (CSA) Programme established since financial year 2003-04 provides a framework for Management to obtain assurance on the state of internal controls. The CSA Programme requires operating departments' management to review and report annually on the adequacy of their respective units' control environment. Internal Audit performs independent and random reviews during the year to validate the results of these self assessments.

COMMUNICATION WITH SHAREHOLDERS

Singapore Airlines believes in timely and consistent disclosure of pertinent information to enable a transparent assessment of the Company's value. It values dialogue with shareholders. Analyst and media briefings are held when announcing half-yearly and year-end results, where senior management are present to field questions. At the Annual General Meeting and any Extraordinary General Meeting, the full Board is present to address questions and clarify issues by shareholders.

All financial results as well as price sensitive information are released in a timely manner through various media including press releases posted on the Company's website and disclosure via SGXNET. Quarterly results announcements, news releases, presentation slides, transcripts for half-year and year-end results analyst and media briefings, monthly operating statistics, annual reports, corporate data, shareholding information and information on shareholders' meetings are available on the Investor Relations website: www.singaporeair.com/investor.

The Investor Relations department meets with analysts and investors on a regular basis, through investor conferences and roadshows, as well as ad-hoc meetings and teleconferences. Lines of contact such as the investor relations email and hotline are also maintained for the investing community to reach out to the Company for gueries.

The Company's commitment to corporate transparency and investor relations approach has been recognised by the investing community. In 2012, SIA was presented with the SIAS Investor Choice Awards Hall of Fame title in the Most Transparent Company Award Category for winning the Golden Circle Award continuously in 2009, 2010 and 2011. It was also named Best in Transport Sector at the IR Magazine Awards for South East Asia.

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STAKEHOLDER ENGAGEMENT: EMPLOYEES

"Our success would not have been possible without the efforts of our people. We recruit dynamic individuals from diverse backgrounds and are committed to providing our employees with equal opportunities to achieve their full potential."



As a global airline, SIA is dedicated to providing air transportation services of the highest quality. With an unyielding commitment to fleet modernisation, product and service innovation, as well as market leadership, we are proud to be one of the world's most respected travel brands.

Our success would not have been possible without the efforts of our people. We recruit dynamic individuals from diverse backgrounds and are committed to providing our employees with equal opportunities to achieve their full potential.

OUR DIVERSE WORKFORCE

As at 31 March 2013, our employee strength was 14,339, with a 2.3 per cent increase over the previous year.

Of this, close to 30 per cent of employees are ground employees, 54 per cent are cabin crew and 16 per cent are pilots.

INDUSTRIAL RELATIONS

We work closely with the Airline
Pilots Association Singapore (ALPA-S),
Air Transport Executive Staff Union
(AESU) and Singapore Airlines Staff
Union (SIASU) to ensure that fair and
sustainable wage settlements and
employment terms are provided to
employees. We have a total of three
collective agreements in place with
the unions.

The Company also recently worked in collaboration with SIASU to launch the Workforce Productivity Initiative - Towards Optimal Productivity (TOP) programme for our Singapore-based

ground administrative employees. It puts in place a framework that embraces a performance-based culture and a developmental framework that recognises and rewards good performance.

EMPLOYEE COMMUNICATIONS AND ENGAGEMENT

We make use of multiple channels to communicate our latest news and happenings to our people. Examples of our internal communication channels include:

- Outlook, our in-house magazine, which is published on a monthly basis.
- Our corporate Intranet site which can be accessed by all employees.
 Various divisions (e.g. Cabin

Crew, Flight Operations, Sales and Marketing) have their own portals to disseminate information specific to their areas of work.

- Business meetings for employees are organised twice a year and cover a review of the Group's commercial activities and financial results.
- Other forms of employee communications include regular communication sessions, departmental debriefs, and sessions between senior managers and team members who are two or more levels below them.
- LCD TVs in employee canteens which broadcast company-related videos and news.

One of the main forms of regular feedback is the Organisational Climate Survey (OCS) that we conduct once every two years. The purpose of the survey is to gather employees' feedback on employee engagement and workplace issues. The fourth instalment of the OCS was conducted in January 2013. Towers Watson, a US-based global research and consulting company, was engaged to conduct the survey. The feedback will be used to identify areas for improvement and implement organisation-wide action plans.

TRAINING

Our people represent a key competitive advantage and we place a strong emphasis on the development of our employees.

We invest significant resources each year to train our pilots, cabin crew and ground employees.

Onboarding

New administrative officers (AOs) who join the Company attend induction and orientation programmes soon after joining. The objective of the programmes is to provide them with an overview of the Company and the functions of the various divisions. Besides learning how key policies and company strategies have developed and evolved over time, the programme provides a good opportunity for new employees to meet others in the Company.

As part of the onboarding programme for AOs, the SIA Mentorship Scheme has been ongoing and continues to stand as a unique opportunity for newly hired employees to engage with senior leaders, providing access for new employees to the rich resources and wisdom of SIA's top leadership. Through the course of a year, the AO has opportunities to ask questions, hear insightful stories and personal experiences, and become more closely integrated into the SIA family and work culture.



STAKEHOLDER ENGAGEMENT: EMPLOYEES (continued)

Technical Crew Training

We conduct all required regulatory training for our pilots and ensure that our training programmes meet not only our training objectives but are approved by the regulatory authorities.

Apart from mandated training, we conduct development training programmes for pilots of all ranks, from Cadet Pilots, Second Officers and First Officers to Captains and Instructors. During the course of their careers, continuous pilot training programmes are in place to enhance their operational and flying skills.

In addition, we offer a mentoring framework for all ranks of pilots as well as online learning programmes in our e-learning portal SKIES. This mentoring framework is an important facet of their continuing development and is another way that we invest in the careers and personal growth of our pilots. More details on our flight operations training can be found in the Operational Safety section.

Cabin Crew Training

Our cabin crew members undergo a 15-week-long basic training programme which comprises classroom and on-the-job training. It includes a wide variety of modules such as fundamentals of social etiquette, personal grooming, meal service procedures, food knowledge and wine appreciation courses.

Cabin crew are also taught passenger handling skills, including methods of handling specific customer groups such as young children, the elderly and mobility-challenged individuals, as well as techniques and skills for communicating with and relating to customers. This area of training equips cabin crew with skills to better understand and meet the needs of a wide range of customers.

In line with our focus on safety and security, cabin crew are also trained in security, safety and first aid procedures, including cardiopulmonary resuscitation (CPR), during their basic training programme.

EMPLOYEE HEALTH

To promote a healthy lifestyle and employee well-being, we have put in place several initiatives as part of the SIA Wellness & Health Programme which was officially launched in early 2012. The programme includes health talks and sports sessions. Messages on adopting healthy eating habits and a regular exercise regimen are displayed at employee canteens. In addition, free basic health screening for our employees was offered as part of the Corporate Health Screening Exercise in January 2013.

In support of the SIA Wellness & Health Programme, the Company also rolled out an SIA Sports and



Social Activities calendar for FY12/13. Employee engagement activities were organised to encourage an active and balanced lifestyle:

- SIA Group Athletics Meet
 Over two weekends in May 2012,
 the SIA Group Athletics Meet was
 held at Tampines Stadium. Events
 included traditional track and field
 events, as well as a new inter divisional relay segment in which
 employees formed teams with
 specific employee grade and gender
 requirements to foster employee
 interaction and camaraderie.
- SIA Games Festival
 For a month in September,
 employees across various divisions
 and subsidiaries had the opportunity
 to pit their skills and wits against one
 another in an array of sports and
 leisure activities during the inaugural

- SIA Games Festival. The SIA Games Festival culminated in a finale event at the end of the month at the SIA Group Sports Club.
- SIA Group Road Run
 The SIA Group Road Run 2013 was held on 16 March at the Bedok Reservoir running track. The event was promoted with the tagline 'Set Your Own Pace. Enjoy The Run.', to encourage employees of various fitness levels to take part. Top runners in each category were awarded medals.

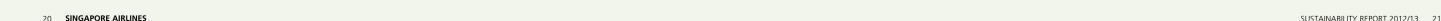
EMPLOYEE SAFETY

Safety is an essential part of all our operations. All employees are collectively responsible for safety and security. We have also put in place a wide range of policies and procedures to ensure the safety of our customers and colleagues.

SIA Safety Programme

The SIA Safety Programme serves to strengthen Safety as a core value and to promote greater understanding and awareness of safety concepts and the Company's efforts towards safety management. This gives employees a better appreciation of the roles they play, as well as the contributions they can make towards higher safety standards in the Company. The Programme covers: Introduction to Safety, Effective Safety Management, Safety Culture and Our Approach and Commitment to Safety.

Every employee is enrolled in the Safety Programme and takes a refresher assessment test every three years.



STAKEHOLDER ENGAGEMENT: EMPLOYEES (continued)



Risk Management Training Courses

One of the key components of the Workplace Safety and Health (Risk Management) Regulations is risk assessment of workplaces and the reduction of risks to an acceptable level. To equip employees with the necessary knowledge in carrying out hazard identification and risk assessment, two Risk Management training courses were organised in September 2012.

EMPLOYEE WELFARE

Flexible working arrangement – staggered hours

The Company introduced the Staggered Hours scheme for all eligible employees based in Singapore from June 2011. The scheme was implemented as part of our Flexible Work Arrangements Initiatives to achieve the following objectives:

- Take into account employees' personal responsibilities and schedules.
- Provide flexibility and convenience.
- Reduce the strain of long travelling time by employees during peak periods.
- Raise employee morale and improve productivity.

Cabin Crew

Career Transition Programme

The Career Transition Programme aims to ease cabin crew employees into another job area post-retirement. It comprises the following modules which will commence at different phases of their career with us:

Financial Planning Course - Implemented

- Objective: To equip crew with financial management skills that will help in career planning.
- Applicable to crew who have completed eight years of service with the Company.
- Topics covered include cash flow management, retirement needs, CPF withdrawal and investment products.

Personal Profiling Tools -To be launched

- Objective: To help crew understand their strengths and weaknesses and thereby suggest alternative careers they might wish to consider after retirement.
- Applicable to crew who have completed their second five-year term with SIA.

Career Transition Course - Implemented

- Objective: To prepare crew for an effective job search.
- Applicable to crew approaching retirement.

Topics covered include writing resumes and presenting themselves at job interviews. A three-hour individual

coaching and consultation session by a personal career coach and three months of active job search help are also incorporated in this module.

Returning Crew Scheme
Crew who become pregnant are
not permitted to fly for safety
reasons, however we actively
encourage crew to return to flying
after delivering their child under
the Returning Crew Scheme. This
scheme enables crew who meet
criteria under the Returning Crew
Scheme to return to flying with
minimal disruption to their careers,
with the crew's previous years of
service retained, hence aiding in
their career progression.

Crew welfare

We ensure that our technical and cabin crew members are given sufficient rest during layovers and after flights.

Cabin crew are also encouraged to participate in extra-curricular activities which are put in place to provide them with a holistic work experience and opportunities to interact with colleagues. We offer over 20 extracurricular activities to cabin crew within the categories of outdoor sports, indoor sports, lifestyle, and arts and technology.

STAKEHOLDER ENGAGEMENT: CUSTOMERS

SIA'S SAFETY PERFORMANCE

	Targets	Actual
Accidents	0	0
High Risk or Severe Incidents	0	0
Flight Incident Report Rates (per 1,000 flights)	below 1.72	1.55 (March 2013)
IATA Operational Safety Audit (IOSA)	Υ	The 5th IOSA was completed in Jan 2012 with NIL findings
Lost time injury frequency rate (LTIFR)	-	i) SIA ground injury = 1.0 per million manhours
		ii) Cabin Crew inflight injury = 10.1 per million manhours
Line Operations Safety Audit (LOSA) by TLC (The LOSA Collaborative), Klinect Group L.L.C.	Every 4 years	3rd LOSA commenced in March 2013
Departmental & Corporate Risk Register (Operations)	Quarterly	Reviewed quarterly
Accident Crisis Management Exercise	1	Crisis exercise carried out in November 2012

Safety is one of SIA's core values. In our daily operations, the safety of our customers and employees is our first and foremost priority. We believe that it is every employee's responsibility to work towards a strong and positive safety culture and we have put in place Flight Safety and Safety and Health policies to achieve that goal.

SIA's Flight Safety policy is founded on the premise that:

- We will consistently provide quality training to our employees.
- Our employees are proficient and comply with applicable regulations and standards.
- Our equipment and operating systems are well-maintained and in good working condition.

 We support and promote a strong safety culture and continuous improvement in terms of safety management.

We subscribe to the Just Culture principles when handling reported incidents and accidents. This refers to a way of safety thinking in which there is an atmosphere of trust for incidents and safety-related information to be reported freely so that lessons can be learnt and improvements made. The culture supports learning and sharing, and is necessary to ensure safe operations.

 Our safety management systems deal with safety issues in a comprehensive and responsive manner, and are able to inform, educate and strengthen our safety values effectively.

SAFETY & HEALTH POLICY

We place the greatest importance on the safety of our customers and employees and will do our utmost to provide and maintain a safe and healthy work environment.

We:

- Strive to anticipate and eliminate hazards that may result in personal injury or illness and/or loss or damage to property and equipment.
- Take responsible steps to provide the best possible care in the maintenance of equipment and facilities.
- Instil and promote safety consciousness among our employees to prevent accidents and injuries.



"The key safety programmes are carried out according to three main thrusts. We run a series of programmes under each thrust to manage safety actively as part of the SIA Safety Management System."

SIA SAFETY PROGRAMMES

We run programmes to train our employees effectively, collect feedback and monitor our safety performance continually. The key safety programmes are carried out according to three main thrusts. We run a series of programmes under each thrust to manage safety actively as part of the SIA Safety Management System.

Education and promotion

Our aim is to educate all employees regarding safety and encourage sharing of safety information within the organisation. We provide different levels of safety training to suit the needs of various groups of employees.

Recurrent training is also conducted to enhance our competencies. Some of the safety management programmes we have put in place include our Annual Safety & Security Week, Annual Safety Awards, Crew Resource Management (CRM) or Threat and Error Management (TEM) training for cabin crew and technical crew, Flight Operations Safety and Security Symposiums, as well as fleet meetings or instructors' meetings for technical crew.

We disseminate the results of safety investigations and analysis actively and share safety lessons learnt with employees. On an annual basis, we present awards to recognise employees' efforts towards safety.

Oversight

SIA focuses on addressing safety hazards and monitoring safety performance in the organisation through various means such as audits, incident/accident reports, surveys and aircraft flight monitoring systems. We analyse our performance data to establish trends and implement corrective measures to prevent incidents or accidents.

We have also completed our 5th IOSA (IATA Operational Safety Audit) and are in the process of carrying out our 3rd LOSA (Line Operations Safety Audit).



Ground/Ramp Incident Prevention (GRIP) programme

The SIA Ground Ramp Incident Prevention (GRIP) programme focuses on preventing ground/ramp incidents at our stations.

The objective of the GRIP programme is to:

- Raise awareness of safety practices on the ground.
- Reduce ramp incidents.
- Raise safety competency levels.
- Measure safety performance standards for continual improvement.

Through the GRIP programme, observations are carried out during ramp operations to review compliance with ramp safety regulations and practices without imposing punitive action on offenders. The aim of these observations, carried out by supervisory employees, is to identify weak and unsafe practices for effective correction through focused education and safety promotion. It also serves to measure our safety levels on the ramp.

The observations help identify common safety lapses to allow corrective action

to be taken early. The GRIP programme has helped to inculcate a higher level of safety awareness among employees.

Flight Data Analysis Programme (FDAP)

Flight data is captured in Quick
Access Recorders (QAR) in aircraft.
This data, capturing much of
the aircraft's flight and systems
performance, is downloaded from
the QAR and used by engineering
maintenance colleagues, as well as
flight crew, to support safe operations.
The data for every flight is screened,
focusing on any deviations from

the norm. Where such deviations are identified, the data is further analysed and, where necessary, corrective and/or preventive measures are taken.

Cabin Safety Observations (CSO)

The CSO programme was put in place to allow us to have a better understanding of the level of cabin safety on our flights. This also allows us to assess and review the effectiveness of the safety procedures currently in place. Employee observers from selected departments go on board flights to observe how crew perform their safety duties. The observations are then collated and shared with Cabin Crew Management and crew members. Action plans, where appropriate, are followed up on.

Safety surveys

SIA carries out a company-wide online Safety Survey with air crew every two years. The Safety Survey assesses a number of areas, such as safety management, violations observed during operations and readiness of our crew to report safety occurrences or issues. It provides an overall assessment of the safety climate and culture in our operational environment, as well as any safety concerns of our aircrew.

Employee feedback

We place emphasis on using employee feedback to improve the safety

environment in the workplace and encourage employees to identify hazards and report incidents, no matter how minor, to create awareness and highlight risks. Procedures are put in place for employees to report such incidents for both flight and occupational safety.

Safety governance structure

SIA's safety governance structure consists of five groups to guide safety management:

- Board Safety and Risk Committee (BSRC).
- Occupational Safety, Health and Environment Committee (OSHE).
- Air Safety Committee (ASC).
- Safety, Security & Environment (SSE).
- Divisional safety departments/Safety Action Groups (SAG).

We also have a comprehensive list of quantitative and qualitative performance indicators to measure the effectiveness of our efforts. These indicators are reviewed on a quarterly basis and are benchmarked against industry standards.

SIA Safety Programme

The SIA Safety Programme serves to strengthen Safety as one of our core values and to promote greater understanding and awareness of the safety management concepts and our efforts towards safety management. The purpose is to give employees a better appreciation of the roles they

play as well as the contributions they can make towards higher safety standards in the Company. The Programme covers: Introduction to Safety, Effective Safety Management, Safety Culture, and Our Approach and Commitment to Safety.

Every employee undergoes the Safety Programme and takes an assessment every three years to refresh their awareness.

Risk Management Training Courses

One of the key components of the Workplace Safety and Health Act and Regulations is the risk assessment of workplaces and the reduction of risks to an acceptable level. To equip employees with the necessary knowledge in carrying out hazard identification and risk assessment, two risk management training courses were organised in September 2012.

Crisis Management Workshop for Customer Care Representatives (CCR)

The aim of the course is to ensure that employees are trained as SIA Customer Care Representatives (CCR) and are able to deliver SIA's personalised care, concern and assistance to affected passengers, crew and family members should an incident occur.

"To equip employees with the necessary knowledge in carrying out hazard identification and risk assessment, two risk management training courses were organised in September 2012."

They are activated to provide support to those affected, assisting them to bear with the initial shock, reduce discomfort and cope with bereavement or grief. CCRs are also taught how to deal with their own feelings on their return to work.

Safety & Security Week, 2012

Safety and security is an everyday concern for everyone in SIA. This was highlighted in a series of activities held during the week from 24 to 28 September 2012 dedicated to the subject.

"Increasing Your Safety and Security Quotient" was the theme of our Safety and Security Week, stressing the importance of heightened awareness among employees of their roles and responsibilities in ensuring safety and security at their workplaces.

The involvement of every employee is the cornerstone of our Integrated Safety Management System. We believe that all employees have a role to play to ensure safety and security in the workplace.

At the launch event, awards and citations were presented to individuals and teams displaying an outstanding safety and security quotient in the course of their work. The event included a safety and security forum where speakers shared insights and challenges. During the week, other promotional and awareness activities were held for Cabin Crew, Engineering and Flight Operations to drive home the Safety and Security message among employees.

OPERATIONAL SAFETY

For our pilots, operational safety is key.

To ensure the highest standards of flight operations, our pilots undergo rigorous training with continuous refresher courses to ensure they are at the top of their game.

Initial Pilot Training:

 Ab-initio pilot training conducted by Singapore Flying College: Training cadet pilots with no flying experience to achieve an ATPL (Airline Transport Pilot's Licence) rating.

- Second Officer training to qualify as First Officers: Cadet pilots who complete their initial pilot training undergo a conversion training programme to qualify to fly the A330 or B777. They then undergo a structured Second Officer training programme. On successful completion, they are appointed as First Officers in SIA, after which they operate as qualified co-pilots.
- Initial Command Training for
 First Officers to become qualified
 Captains: First Officers who
 meet the standards to qualify
 for command are put through a
 rigorous training programme before
 they are promoted to Captains.
- Conversion training to qualify pilots for an aircraft rating: Any pilot who moves to a different fleet must undergo conversion training.
- Initial CRM (Crew Resource Management) training is required for all pilots.
- Initial SEP (Safety and Emergency Procedures) training is required for all pilots.

Recurrent Training:

Recurrent Training for pilots:
 Conducted twice a year in the full-flight simulator, the recurrent training programme enhances the proficiency of our pilots in handling and managing abnormal and

- emergency situations. Recurrent training also allows our pilots to practice manual flying of aircraft under different situations and environmental conditions. Manual flying is a key skill for pilots in the face of increasing automation in modern flight decks.
- Recurrent SEP Training: Conducted every year, the training ensures our pilots' knowledge is refreshed and tested. It also ensures they remain competent in aircraft and cabin safety and emergency procedures.
- Recurrent CRM Training: This is conducted for pilots once every two years. In addition, there is annual recurrent CRM training conducted jointly for pilots and cabin crew.
- Recency Training: This is conducted for any pilot who has been absent from flying for more than 35 days.

Developmental Training

SIA has a Pilot Development Unit that takes charge of development training programmes for pilots. Most of these courses are conducted by in-house presenters and facilitators, with some courses run by external consultants. We also conduct Instructor Pilot Training Programmes for instructor candidates.

Other Training

Within the framework of mandatory training, SIA also conducts other training for pilots, deemed useful or necessary in light of our operating experience or recent events or incidents by other airlines (evidence-based training). Every year our colleagues from Flight Crew Training attend major pilot training conferences and seminars held by industry organisations and aircraft manufacturers to gain insight into new and innovative training methodology and to share training experiences within the industry.

In addition to recurrent training and developmental training, every pilot undergoes a minimum of three checks a year - two Base Checks in the full-flight simulator to demonstrate competency in manual flying and in handling and managing irregular abnormal and emergency procedures, as well as one Line Check in the aircraft to assess competency in operating a regular flight in accordance with company policies and standing operating procedures.

This continues throughout the pilot's career and a pilot will visit the full-flight simulator at least once every three months either for a training session or a check. This ensures that a pilot's knowledge, flying skills and cockpit management skills are continuously practiced, refreshed and updated.

Another key initiative in our pilot development is the launch of the pilot mentoring programme in 2012. This mentoring framework aims to further improve our pilots' performance through teaching, coaching and role modelling. It also supports the transition of our pilots in their new roles as they advance through the ranks, from cadet pilots to instructors. In addition, this mentoring framework provides opportunities for our senior pilots to develop their coaching, mentoring and communication skills.



The goal of the mentoring programme is to develop our pilots to their full potential, enhance safety attitudes and behaviours by building on their professional values, and propagate SIA's organisational core values.

Fatigue Risk Management System (FRMS)

SIA is an active participant in this programme, which looks at issues related to pilot fatigue to enhance safety and ensure optimal operating levels of our crew. Crew rest facilities on our aircraft are carefully evaluated to ensure proper rest is available for our crew who are on duty.

AIRCRAFT MAINTENANCE

SIA complies with recommended
Safety Management System (SMS)
practices by the Civil Aviation Authority
of Singapore (CAAS). The CAAS SMS
elements mirror those prescribed
by the International Civil Aviation
Organization (ICAO) in the ICAO
Safety Management Manual.

Additionally, our Engineering division has been accredited by TUV SUD PSB Pte Ltd, a global testing, certification, inspection and training provider, in the following aspects:

ISO 9001:2008 Quality
 Management System for the
 Provision of Technical Support for SIA's Aircraft Acquisition and Disposal, Aircraft Maintenance Activities, and Engineering and Spares Management;

- ISO 14001:2004 Environmental Management System for the Provision and Management of Aviation and Engineering Support Services to SIA; and
- BS OHSAS 18001:2007
 Occupational Health & Safety
 Management System for
 Provision and Management of
 Aviation Engineering Support
 Services to SIA.

PASSENGER SAFETY

All cabin crew undergo training courses that inculcate safety and security awareness and focus on safe work habits. From the earliest stages of their flying career, cabin crew are educated on the importance of balancing service with safety and security. They also learn

about the importance of situational and safety awareness, as well as teamwork and effective communication. Cabin crew undergo Safety and Emergency Procedures (SEP) training, which our pilots undergo as well, and are involved in the Fatigue Risk Management System (FRMS) programme to enhance safety and ensure optimum rest is available for our crew. Resources such as videos, circulars, campaigns and various communication sessions are used to inculcate safe work habits and increase crew awareness on workplace safety.

FOOD SAFETY

SIA is committed to serving in-flight meals that meet the highest levels of food safety and hygiene. We have a policy of not using Monosodium



"All cabin crew undergo training courses that inculcate safety and security awareness and focus on safe work habits. From the earliest stages of their flying career, cabin crew are educated on the importance of balancing service with safety and security."

Glutamate (MSG) in our freshly prepared meals as far as possible - although traces of MSG may be found in commercially available, pre-packaged food products. Our caterers ensure that food sources are certified by accredited sources, from factories with Good Agricultural Practice (GAP), Good Manufacturing Practice (GMP), Hazard Analysis and Critical Control Points (HACCP), International Organization for Standardization (ISO) and/or Health certifications

Locally-manufactured items are procured only from suppliers with an AVA Factory Grading B and above (in the case of Singapore), or the equivalent (in the case of overseas countries). The Quality Assurance team conducts factory audits, especially for high risk food materials, apart from regular sampling laboratory tests and random quality checks on incoming raw materials.

Customer Service and Engagement

The proliferation of digital media, especially social media, has changed the way our customers consume information. The speed at which

customers have access to information has also lifted public expectations. Increasingly, we are finding that customers now expect real-time customer service recovery and quick responses to their online feedback.

In response, SIA launched its official Facebook and Twitter channels in September 2011 to provide additional points of contact for greater online customer engagement, to communicate important travel information to customers as well as to obtain more feedback to improve our products and services.

Customer service excellence is one of three main pillars on which our brand promise is built. We believe in listening to our customers and we do so via various means such as focus groups, surveys and feedback letters. We receive a monthly average of over 6,000 customer feedback comments through channels such as our website, comment forms and letters. Our dedicated Customer Affairs team looks into all feedback and conducts investigations into issues which require follow-up and service recovery. All feedback is used to improve our services and processes.



We rely on external expertise in some areas to help us pinpoint trends that may impact our customers' tastes and preferences, such as in the area of inflight dining, where we have the help of our International Culinary Panel and Wine Panel

In addition, we conduct surveys and focus group studies to measure customer satisfaction via on-board and on-ground customer points of contact. The relevant departments will then work to improve any services that have declined or address areas of weakness. We are also unstinting in our investment in training programmes for our service employees to meet the needs of our increasingly sophisticated customers.

We launched a new Transforming Customer Service (TCS) theme in May 2012, 'Creating Extraordinary Moments', at the CEO TCS Awards, which is an

annual programme that recognises exemplary individuals and teams whose outstanding TCS performance has contributed significantly to SIA's service excellence. TCS has defined SIA's service culture since its inception 14 years ago. Implicit in this is an attitude of constant reinvention of service, to serve the ever-changing needs of our customers. TCS has evolved over the years, and SIA has increasingly anchored our strength in customer service through TCS. 'Creating Extraordinary Moments' starts with recognising and discovering each customer as an individual with unique needs and expectations. This is followed by designing opportunities to personalise the service just for the individual, which is a delight to any customer.

All these measures ensure we do not deviate from our objective since founding - which is to provide air transportation services of the highest quality.



STAKEHOLDER ENGAGEMENT: PARTNERS

In line with our focus on sustainability, SIA has adopted the following best practices in our engagement with suppliers:



SUPPLIERS' COMPLIANCE WITH APPLICABLE LAWS

We have provisions in our purchasing contracts that require our suppliers to commit and warrant that the items supplied are in compliance with all applicable laws and related requirements, including but not limited to labour laws, employment laws and industrial laws.

BIO-DEGRADABLE MATERIAL

We welcome proposals from suppliers that include bio-degradable/recyclable materials as alternatives to more commonly-used raw materials such as plastics and aluminium.

SOURCING OF SUPPLIERS WITH SUSTAINABLE BUSINESS PRACTICES

We encourage participation from suppliers who are actively engaged in environmentally-friendly activities. For instance, paper-product suppliers which are Forest Stewardship Council (FSC)-certified may be in a more competitive position for contract award consideration, assuming all other factors such as cost, product quality and delivery performance are on par.

The FSC is an international non-profit, multi-stakeholder organisation established in 1993 to promote responsible management of the world's forests. Its main tools for achieving this are standard setting, independent certification and labelling of forest products.

ENVIRONMENTAL MANAGEMENT

Environmental management is one of the key parameters in our assessment of suppliers. Some of the considerations which we look at include the supplier's policy on environmental management, whether the supplier has a formalised environmental management system such as ISO 14001 in place, whether the supplier has set environmental performance goals, whether the

supplier has received any awards or commendations related to environmental performance, as well as whether the supplier has been fined or prosecuted for environmental non-compliance in the last three years. We conduct visits to potential new suppliers' factory sites, when required, to assess their suitability and capabilities.

CLEANER PRODUCTION/ MANUFACTURING TECHNOLOGIES

We are constantly seeking suppliers who are capable of adopting cleaner manufacturing processes. We recently participated in a trial with a mill for the printing of batik fabric used in the design of our iconic cabin crew uniform. The mill uses a pigment print technique that consumes a smaller volume of water during production compared to the traditional reactive dyeing technique.

STAKEHOLDER ENGAGEMENT: PARTNERS (continued)

LIGHTWEIGHT DESIGN

We are constantly exploring lighterweight designs of in-flight items, as this helps reduce the amount of fuel needed for flights.

RECYCLING OF OBSOLETE/ SCRAP PRODUCTS

We work with suppliers to collect obsolete products for recycling purposes where possible.

ENGINEERING SPARES

Engineering spares are sourced from Original Equipment Manufacturers (OEMs) and their accredited agents. For engineering components, repair organisations are required to be certified and approved by their respective authorities from ICAO contracting states before any procurement is carried out.

We also put in place key performance indicators (KPIs) for warehousing operations to monitor their performance in all aspects, including safety, health and environment. SDV, a supply chain company which we have outsourced our warehouse operations to, has also incorporated our Workplace Health and Safety programme in its operations and our Engineering division chairs the joint monthly Warehouse Safety Committee to track compliance.

BASIC REQUIREMENTS FOR CATERING AND HANDLING SERVICES

Our caterers, in the provision of service, must comply with local laws and regulations strictly with regard to hygiene, safety and security. They must ensure that their facilities used for storage, preparation, production and transportation of our meals and beverages meet all the standards as set by the International Air Transport Association (IATA), ICAO and the Hazard Analysis and Critical Control Points (HACCP) concept developed and administered by the International Flight Catering Association (IFCA)/International Flight Safety Association (IFSA).

In addition, as safety is of utmost importance in aircraft handling, we require all contracted catering and ground handling companies to adhere to the standards of the IATA Aircraft Handling Manual (AHM). All catering and ground handling staff shall receive adequate training in operating our aircraft. Examples of such training include opening of aircraft doors, Ground Support Equipment (GSE) driving, handling catering equipment in high lifts and IATA dangerous goods awareness.

ANTI-CORRUPTION PRACTICES

We have included clauses on "anti-corruption/anti-bribery practices" in all our new contracts from June 2012.

Our handling agents must agree to comply with all local laws where they operate, including, but not limited to, acceptance of offers made in the form of payments, gifts or other transfers





of value, directly or indirectly, to any government official or private person in order to secure any improper advantage or to influence any decision or act, directly or indirectly.

SUPPLIERS' CODE OF CONDUCT

Starting this year, we will be publishing a Code of Conduct on our website which we expect all our suppliers to comply with. Based on the principles of the United Nations Global Compact related to Human Rights, Labour, the Environment and Anti-Corruption, and taking into account operational, social and environmental issues, the Code of Conduct was developed in accordance with our business values and with the intention of promoting sustainable development. The Code can be found on pages 36 and 37 of this report.

MITIGATING FOOD WASTAGE

We engage caterers in some of our newer contracts to provide assessments of the type and quantity of food that is unconsumed on flights so as to review the quantity that is uplifted and thereby minimise wastage.

A major sustainability initiative undertaken by SATS, our inflight caterer in Singapore, is identification of pre-preparation areas for fruits and vegetables where organic waste could be segregated from inorganic waste. About three tonnes of organic waste is collected daily with about 99.7 per cent purity. For its efforts in organic waste recycling, SATS was awarded a token of appreciation at the National Environment Agency Recycling Week 2010. Overseas caterers make similar efforts in line with their respective local requirements.

IMPROVING QUALITY OF SERVICE TO OUR CUSTOMERS

As part of the Service Level Agreements (SLA) in our contracts, we also collect feedback from our customers on a quarterly basis with regard to the quality of meals served on board, as well as cabin and ground handling services.

STAKEHOLDER ENGAGEMENT: PARTNERS (continued)

SIA SUPPLIERS' CODE OF CONDUCT

COMPLIANCE WITH LAWS AND REGULATIONS

- Accounting practices
- Competition compliance
- Intellectual property
- Disclosure

Suppliers' business operations, as well as all products and services suppliers' operations are based as well as where goods and services

All financial and business records must be accurately maintained in and regulations, as well as generally accepted accounting principles.

in accordance with local laws, and must be avoided. Commercial decisions, including prices, terms of sale, division of markets and allocation of customers,

ETHICS AND CONFLICT OF

- Anti-corruption
- Financial integrity
- Confidentiality
- Relationship of business partners with company

- Health and safety

SAFETY AND QUALITY

- Quality of products and services

- Compliance with laws and regulations
- Engagement in environmental management processes

LABOUR STANDARDS

- Equal opportunity
- Non-discrimination
- Minimum age/child labour/ forced labour
- Working hours
- Wage standards

SUBCONTRACTORS AND OTHER SERVICE PROVIDERS

- Compliance with Code of Conduct
- On-time payment

COMMUNICATION. DOCUMENTATION AND INSPECTION

- Employee awareness of Code of Conduct
- Language translation

and honesty. No form of fraud, or potential conflict of interest must

> Any information used in the business relationship with Singapore Airlines infringement. Any form of disclosure

Airlines and should demonstrate high standards of ethical

Health and safety protection must be in place by suppliers and tools must be provided and

services must be ensured through appropriate policies,

must be developed to ensure that the quality of all products and services are as specified in the supply agreement.

Local environmental laws and practices such as those pertaining to waste disposal, air emissions

parameter that Singapore Airlines

Employees must not be subjected

- indentured, involuntary prison labour or otherwise must not be used.
- and/or national laws.
- Salaries must not be less than

Subcontractors and service providers must also adhere to the principles set out in this Code of Conduct. providers must be paid accurately

requirements of this Code of

This Code of Conduct does not create any binding obligations on Singapore Airlines. It may be amended from time to time. The



COMMUNITY ENGAGEMENT

"As a longstanding supporter of Community Chest, a non-profit organisation that channels funds to assist the less-advantaged in the community, SIA continued to contribute towards the annual "Give A Hand!" campaign, which raises funds for various beneficiaries under its care."

SIA believes that operating a successful airline involves contributing actively to the communities in which we work and live. SIA has for many years been a fervent supporter of various charitable organisations, as well as educational, arts, sports and heritage institutions. Our support is in the form of complimentary and rebated air tickets, cash contributions as well as staff involvement.

In FY 2011-12, Médecins Sans
Frontières (MSF) was incorporated
as one of the organisations that SIA
supports on a recurring basis. Also
known as Doctors Without Borders,
MSF is a leading international
humanitarian aid organisation that
provides emergency medical assistance
to populations in distress or danger
in more than 70 countries, including
people affected by armed conflict,
epidemics, natural or man-made
disasters or exclusion from healthcare.

In the area of the Arts, we maintained our longstanding support for institutions such as the Singapore Symphony Orchestra (SSO), the Singapore Dance Theatre (SDT), the Singapore Lyric Opera (SLO) and the National Arts Council (NAC), among others.

As a longstanding supporter of Community Chest, a non-profit organisation that channels funds to assist the less-advantaged in the community, SIA continued to contribute towards the annual "Give A Hand!" campaign, which raises funds for various beneficiaries under its care.

In the educational sector, we continued to support the JY Pillay Global-Asia Programme, which raises local levels of research and fieldwork, as well as the Lee Kuan Yew Fund for Bilingualism, which spearheads initiatives to teach children their Mother Tonque and English.

In FY 2013-14, SIA will be adding to our portfolio Make-A-Wish Foundation Singapore (MAW), an affiliate of Make-A-Wish International, which grants wishes to children aged between three and 18 with life-threatening medical conditions. MAW is the largest wishgranting organisation in the world

and can be found in 36 countries on five continents. The Singapore affiliate, which is a member of the National Council of Social Services, was launched in 2003.

Since 2010, we have been donating items left behind by our customers and uncollected for more than four months to The Salvation Army Singapore. These items are re-sold at affordable prices through a network of Family Thrift Stores to raise funds for the charity's social and community programmes. Through work-therapy programmes integrated with the Family Thrift Stores, employment opportunities are also created for under-privileged people to help them earn a living and integrate into society. Between 1 January and 31 December 2012, The Salvation Army collected nearly \$45,000 from the sale of SIA's donated items.

SINGAPORE AIRLINES CHARITY DAY IN SUPPORT OF CHILDREN WITH SPECIAL NEEDS

Last year, SIA raised more than \$400,000 for Community Chest through a pair of limited edition female and male panda toy collectibles which were clad in our signature batik motif.

Fundraising began with a charity drive on 8 September 2012, when staff members of the Singapore Airlines Group were stationed at six locations across Singapore to give away pandas to donors who contributed \$20 or more. The toy collectibles were then made available for donations on board selected flights through KrisShop.

All funds raised were donated to Community Chest in support of programmes that benefit children with special needs.



COMMUNITY ENGAGEMENT (continued)

HARAPAN RAINFOREST INITIATIVE

Since August 2010, SIA has committed to be the exclusive airline partner for the Harapan Rainforest Initiative, a large-scale green project aimed at restoring ecosystems threatened by deforestation, as well as conserving and protecting one of the most biodiverse rainforests in the world.

Straddling Indonesia's Jambi and South Sumatra provinces, the Harapan Rainforest spans almost 100,000 hectares – an area nearly one-and-a-half times the size of Singapore. It is one of the few remaining tracts of lowland rainforest in Indonesia, which could otherwise face illegal logging or be converted to either oil palm or timber plantations. Over 300 bird species and 55

mammals, including the critically-endangered Sumatran tiger, the clouded leopard, Malayan tapir and Asian elephant, call the rainforest their home. The Initiative also plays a significant role in engaging the local indigenous Bathin Sembilan community by providing social development and employment opportunities.

SIA's contribution towards the protection and restoration of one of the most extensive tracts of lowland rainforest left in Indonesia reflects our strong belief that environmental efforts must focus on making a real and direct difference to the well-being of our planet, and sustain our shared environment for future generations.



COMMUNITY PROJECTS AROUND THE WORLD

"As a global airline operating to more than 60 destinations in over 30 countries, Singapore Airlines is acutely aware of the importance of building strong relationships with the local communities that we serve. Many of our overseas offices work with local charities in support of various initiatives and causes."



In addition, SIA has appointed The Smith Family, which supports disadvantaged children through education, and Lille Fro Foundation, which is committed to providing education and training to children and families from small communities difficult to reach due to their geographic isolation and circumstances, as our two official charities in Australia, providing support across their programmes and fundraising drives.

AUSTRALIA



In Australia, SIA remains committed to making a positive contribution to the community by supporting the Arts and local charities dedicated to making a difference to children in need. In addition to sponsoring the West Australian Ballet since 1972, we have

been the official airline partner of Arts Exhibition Australia (AEA) since 1988, as well as a major sponsor of Sydney Dance Company since 2011. During the year in review, we were the principal donor of the Portrait of Spain - Masterpieces from the Prado exhibition at the Queensland Art Gallery and principal sponsor of Turner from the Tate: The Making of a Master at the Art Gallery of South Australia. SIA was also the official airline sponsor of the Indian Film Festival and the Spanish Film Festival.

We have also supported a number of specific charity projects and non-profit organisations on a goodwill basis, principally through flight auctions, discounted travel and excess baggage waivers. This support included: the Western Australian Police Service's landmine clearing efforts as well as its relief fund for an orphanage in Cambodia; the filming of a documentary for CARE Australia in Cambodia; and travel for Artisans of Fashion in support of its mission to create sustainable livelihoods for vulnerable communities and rural artisans in India.

COMMUNITY PROJECTS AROUND THE WORLD (continued)

INDONESIA



In Indonesia, SIA has contributed consistently to educational efforts. Since 1997, we have supported thousands of students through scholarships and school visits to Singapore in collaboration with the WIPARA Foundation. In 2012 alone, 144 Indonesian students benefited from scholarship funds used to pay their school fees. Between 2000 and 2007, SIA also ran a scholarship programme named Singapore Airlines untuk Pendidikan (SIA for Education) which provided financial help to more than 2,500 elementary school students and nearly 500 university students to help them continue their education. These students were forced out of school due to financial constraints but demonstrated the potential and willpower to continue with their education. In 2009, we launched a mobile library named "Books on Wheels" in collaboration with Forum Warga Kota Jakarta's (the Jakarta City Resident Forum) education programme for underprivileged children and children who spend their time wandering the streets. For the project, the interior of a van was modified to become a library, with books and magazines donated by our staff members.



KOREA



In Korea, SIA staff volunteers took students from the Seoul National School for the Blind and their siblings on a visit to the National Folk Museum of Korea on 21 July 2012. The National Folk Museum is dedicated to traditional Korean experiences. The students enjoyed getting a feel of kitchen items like millstones and iron pots, as well as listening to the sounds they produced. In an activity named "Slicing of the Huge Gourd", which is based on Korean folklore of a poor family blessed with treasures for its warmhearted nature, the children listened keenly to the abundant sounds and explored the "treasures" with their hands as the gourd opened and its contents spilled out. They also enjoyed trying on the traditional Korean hanbok costume and playing the xylophone.

At the end of the visit, the children received presents such as Braille story books and headphones to aid them in their studies, while their siblings received science books.

JAPAN



In Japan, SIA ensured that children at Narita Red Cross Hospital did not miss out on the fun and festivities of the Christmas season with a surprise visit by "Santa", Customer Services Agent Tashima Masanori, as well as Japanese flight stewardess Mae Yuki. The duo visited the children with Christmas presents including SIA aircraft models, drawing sets, children's amenity kits and spent time with the children and their parents. We began this annual tradition of Santa's Surprise Visit at the Narita Red Cross Hospital in 2006.







COMMUNITY PROJECTS AROUND THE WORLD (continued)

PHILIPPINES



In the Philippines, SIA has provided more than 1,000 scholarship grants through the Singapore Airlines Scholars programme since 2003, in partnership with the Bantay Edukasyon Program. The scholarship recipients are elementary school students between six and 12 years of age from various areas in the Philippines. During the school year 2012-13, 130 students were supported through the programme, which provided them with school supplies, clothing, shoes, food and transportation allowances. Our Filipino staff members meet with the Singapore Airlines scholars thrice a year at the

beginning and end of the school year as well as during Christmas to interact with and find out more about them. During these sessions, the students and staff take turns to perform song and dance numbers as well as skits. The progress of these students is tracked and awards are given out at the end of every school year to deserving students.

In addition, SIA supports the Pasig River Project by providing air tickets for fundraising and donating in-flight toys to the children of residents who had to relocate. The Project aims to clean up the riverbank settlements where there is a lack of proper sanitation facilities and an excess of waste dumped into the water daily. It has built concrete embankments, provided running water and installed septic tanks to improve the hygiene and living standards of the residents living by the Pasig River.

RUSSIA



In Russia, SIA sponsors a team of young budding talents in the Moscow Youth Soccer League. The annual tournament, a highlight for hundreds of boys and girls aged three to 18 years, has been held in Moscow for more than 15 years. It is run entirely by volunteers on a non-profit basis.

UNITED KINGDOM

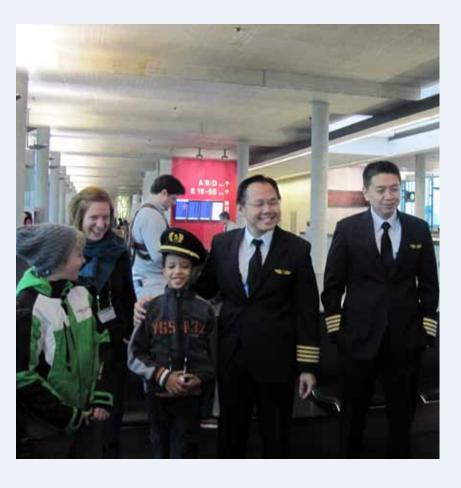


In the UK, SIA supports a community project named Chiswick Pensioners Alone At Christmas. The 28-year-old initiative features an annual Christmas party for about 60 senior citizens to

SWITZERLAND



In Switzerland, SIA supports "With Me", a project that finds godfathers and godmothers to spend time with children from difficult family backgrounds, to provide encouragement and support. Along with Zurich Airport, we invited 12 children and 10 accompanying parents and godparents for a day event which included a walk-through tour of the A380-800 aircraft, a guided airport tour, a special lunch treat as well as a Grittibänz baking lesson. The children enjoyed a sneak peek of the cockpit, posed with SIA pilots, watched the superjumbo's take-off at close range, as well as enjoyed a surprise visit by Airport Santa.







MANAGING OUR ENVIRONMENTAL IMPACT



ENVIRONMENTAL POLICY

SIA is dedicated to safely and reliably flying passengers and freight around the world. We also take a long-term view towards the sustainable development of the environment in which we operate our air transportation and related businesses. As part of our commitment to environmental conservation, we:

- communicate the importance of respecting the environment to staff and provide training where applicable to ensure they fulfil their environmental responsibilities.
- monitor changes in environmental legislation, regularly assess our level of compliance and cooperate

fully with environmental regulatory authorities.

- have established an environmental action programme to manage environmental issues relating to the use of energy and resources, atmospheric emissions, effluent discharge, waste management, noise, as well as relations with suppliers.
- are transparent about our environmental policies and action plans.

ENVIRONMENTAL MANAGEMENT SYSTEM

Environmental Management Systems (EMS) certified according to the ISO 14001:2004 standard have been

implemented in the Engineering and Flight Operations divisions, as well as in SIA Engineering Company. Objectives and measurable targets are set for the environmental action programmes under the EMS. These are reviewed and updated periodically to ensure legal compliance and consistency with our commitment to reducing pollution.

Operations that have a significant environmental impact are regularly monitored. Measurements are also taken to ensure that the applicable controls are documented and implemented in compliance with the EMS. One way in which environmental awareness messages are broadcast to staff is through regular dissemination of electronic bulletins.

ENERGY AND RESOURCE CONSERVATION MEASURES

With an emphasis on optimal usage of resources and environmental protection, a wide spectrum of measures have been put in place under the new Office Management System (OMS) rolled out across offices in all SIA premises. The OMS features state-ofthe-art designs and best office practices that maximise space utilisation and energy conservation. Besides providing a flexible workplace that supports different work styles and operational requirements, the OMS incorporates many environmentally-friendly features that focus on resource conservation and waste minimisation.

Some of the key features of the OMS include:

- More efficient lighting and controls such as:
 - use of energy-saving T5 tubes with reflector covers to increase illumination.
- exit lights that use low-energy light-emitting diode (LED) technology.
- use of motion sensors to activate toilet lightings.
- a smart lighting management system for offices and meeting rooms that is programmed to switch off after 6.30 pm.
- a zonal lighting system.

- An air-conditioning system that:
 - uses variable speed controlled chiller plants with environmentally friendly refrigerants.
 - uses pre-cooled coils and variable speed motors for Air Handling Units that result in energy saving and better humidity control.
- Emulsion paints that emit less volatile organic compounds used for internal walls.
- The use of carpet tiles with a high content of recycled materials.
- The use of ceiling and partition boards made from recycled materials.

Improvements have also been made to the air-conditioning system, cooling tower system, chiller system, lighting system, indoor air quality system and variable air volume system in Air Handling Units to enhance energy savings.

Water consumption is conserved through the installation of flow restrictors and dual flush valves in toilets. Recycled water is used in cooling towers of buildings and for watering of landscapes. No chemicals are discharged from the cooling towers. A special rainwater collector located at the rooftop of our headquarters building collects rainwater which is used for watering of plants and flushing of toilets.

The use of natural light is preferred in building design. For example, glass panels are installed with solar films to reduce heat transmitted into buildings. Natural ventilation replaces mechanical ventilation and vegetation and open spaces help to reduce "urban heat island" effects. In addition, the new chiller system and fire-protection system use non-ozone depleting substances.

In line with SIA's focus on resource utilisation and environmental protection, we choose to use green materials with low volatile organic compounds (VOC) and high recycled content wherever possible.

WASTE MANAGEMENT – THE 3RS (REDUCE, REUSE, RECYCLE) APPROACH

SIA supports the National Environment Agency's 3R (Reduce, Reuse, Recycle) approach to prolong the lifespan of our incineration plants and landfill site. For example, to reduce paper consumption, an electronic version of SIA's monthly in-house magazine is available as an alternative to the traditional printed copy.

Off-site segregation and recycling of materials from general waste collected from SIA premises are conducted by the appointed waste collectors.

MANAGING OUR ENVIRONMENTAL IMPACT (continued)

RECYCLING

To maximise efficient use of limited resources, staff members are encouraged to carry out good office practices, including:

- printing double-sided documents when needed.
- storing documents, files and archives electronically.
- using electronic methods of communication where possible.
- using envelopes designed for multiple use for internal correspondence.
- sending and receiving fax messages electronically.
- re-using paper that has been printed on a single side for notetaking or drafting purposes.



Recycling bins are conveniently located in offices and canteens for waste with recyclable value such as paper, magazines, newspapers and aluminium cans. The general waste generated at our premises is also sorted off-site by the appointed waste collectors for recycling purposes.

SIA's intranet is used as a platform for regular updates to staff. It also provides informative environmental articles on topics such as waste minimisation.

TOXIC WASTE MANAGEMENT

Toxic industrial waste (TIW) generated mainly from our aircraft maintenance activities is labelled and segregated from general waste. A licenced TIW collector is engaged to remove and treat the waste before final disposal.

ENVIRONMENTAL PERFORMANCE ON THE GROUND

In line with SIA's ongoing efforts to conserve and optimise usage of resources, overall electricity, water and paper consumption has improved over the years. Details are available in the following summary of environmental statistics:

ENVIRONMENTAL RESPONSIBILITY

Resource Utilisation	2012-13	2011-12	2010-11
Water Consumption (,000 m3)	268.3	222.9	253.6
Electricity Consumption (Gwh)	56.9	60.5	59.9
Petrol (,000 litres)	228	288	280
Diesel (,000 litres)	3,161	3,309	3,376
Paper Consumption – A4 paper (ream)	64,900	66,753	58,820

Carbon Emissions - Ground Operations	2012-13	2011-12	2010-11
From Fossil Fuel (tonnes)	8,744	9,266	9,423
From Electricity Used (tonnes)	29,284	31,705	31,370

Waste Generated in SIA Group *	2012-13	2011-12	2010-11
General Waste (tonnes)	5,082	5,990	5,981
Toxic Waste (litres)	55,200	69,000	72,000

Recyclables *	2012-13	2011-12	2010-11
Used Cooking Oil (kg)	14,160	18,636	19,750
Used Carton Boxes (kg)	562,000	569,220	612,640
Used Magazine (kg) estimates	134,155	137,089	141,854
Old Newspapers (kg) estimates	490,941	316,193	327,183
Glass Bottles (kg)	208,630	186,102	159,918

^{*} Figures are from SIA's operations in Singapore

FUEL EFFICIENCY PROGRAMME

The UN Intergovernmental Panel on Climate Change (IPCC) estimates that global CO₂ emissions from the aviation industry will grow from 2 per cent today to 3 per cent by 2050. SIA has put in place a comprehensive fuel efficiency programme to mitigate the rising CO₂ emission levels.

FLEET MODERNISATION PROGRAMME

During the year, SIA took delivery of one A330-300, bringing the total to 20. One B777-200 was decommissioned.

SIA's passenger aircraft fleet had an average age of 6 years and 8 months in March 2013, compared to the industry average* of 12 years and 4 months.

^{*}Source: Flightglobal, ACAS (Aircraft information and forecast data system) [April 2013]

ENVIRONMENTAL RESPONSIBILITY (continued)

Average Age of Aircraft (months), 31 March 2013	2012-13	2011-12	2010-11	2009-10
SIA Passenger Fleet	80	74	75	75
SIA Cargo Freighters	140	135	110	98
SilkAir	80	75	71	73
Industry-wide*	148	163	163	162

^{*}Source: Flightglobal, ACAS (Aircraft information and forecast data system) [April 2013]

FUEL PRODUCTIVITY

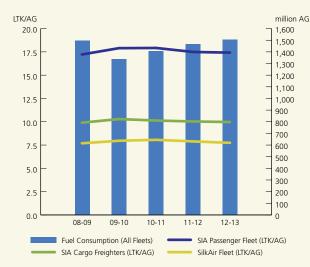
Singapore Airlines is committed to reducing the impact of climate change brought about by increased green house gases (GHG) in the atmosphere by improving the fuel productivity of our aircraft operations.

Key initiatives in our fuel productivity improvement programme include:

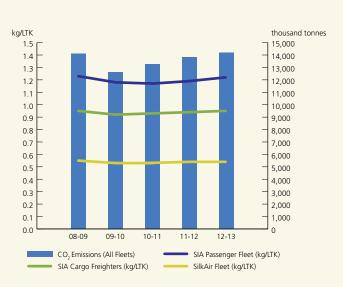
- Continual renewal of our aircraft fleet to ensure that the aircraft in operation are as technologically advanced and fuel efficient as possible.
- Participating in the ASPIRE programme (more information on the ASPIRE programme is available in the subsequent section).
- Adopting flight operation procedures that reduce fuel burn for A380s at Heathrow Airport.
 SIA's A380 aircraft departing Heathrow now use less power when taking off, saving fuel and emitting less CO₂ and NOx while remaining within the airport's strict noise procedure guidelines.

- Adopting other improvements in flight operation procedures, such as tailored arrivals and continuous descent operations that minimise fuel use without compromising safety.
- Engaging route-planning procedures that determine the most fuel-efficient routes possible.
- Actively participating in international discussions on routerestructuring to establish new airways for more efficient routings.
- Developing performance improvement packages for airframes and engines to reduce airframe drag, thereby improving engine fuel efficiency.
- Using lightweight crockery, cargo containers and reducing operating items such as potable water uplifted to minimise the weight of aircraft.
- Employing mobile ground power units and pre-conditioned air units during long transits and nightstops to reduce usage of auxiliary power units.

FUEL PRODUCTIVITY



CO₂ EMISSIONS



Figures as at March 2013

AIRCRAFT ACTIVITIES

Airframe and engine maintenance programmes are in place to enhance operational and fuel efficiency. Regular engine wash programmes also improve fuel efficiency.

EMISSIONS AND WASTE MANAGEMENT

Aircraft gas emissions

ICAO sets the international standards for levels of NOx, CO₂, hydrocarbons and smoke from aircraft engine emissions under ICAO Annex 16, Volume II. The NOx emission standard has been tightened several times over the past decade to ensure that the

best low-emission technologies are used in new engines. A new standard was endorsed in 2004, applicable to new engines from 2008, which is 12 per cent lower than the previous standard and will provide a 40 per cent reduction in NOx emissions compared to the first standard. SIA's passenger fleet, SIA Cargo freighters and SilkAir aircraft meet the stringent 2004 ICAO CAEP/6 Emission Standards for NOx.

Aircraft noise emissions

Today's aircraft are 50 per cent quieter compared to 10 years ago. Research initiatives target a further 50 per cent reduction by 2020.

The noise certification standard in ICAO Chapter 4 that was introduced on 1 January 2006 for new aircraft designs is more stringent. It is about one third or 10 EPNdB quieter than the Chapter 3 standard. SIA's A380-800s and B777-300ERs are certified with the ICAO Chapter 4 noise standard. Our A330-300s, A340-500s, B777-200s and B777-300s are certified with the ICAO Chapter 3 standard for noise, but they also meet the more stringent Chapter 4 requirements.

ENVIRONMENTAL RESPONSIBILITY (continued)

Ground emissions

All new diesel-powered vehicles operating in Singapore must follow National Environmental Agency (NEA) requirements to meet the Tier 3 diesel engine standard. Some of our diesel-powered vehicles meet the more stringent Tier 4 standard. Likewise, new petrol-powered vehicles are required to meet the Euro II exhaust emission standard and must be equipped with the three-way catalytic converter as part of the NEA's motor vehicle requirements.

For our existing fleet of vehicles, an annual inspection is conducted by an external party to verify that exhaust and sound emission levels meet the local standards.

ASPIRE PROGRAMME

The Asia and Pacific Initiative to Reduce Emissions (ASPIRE) programme is a partnership of air navigation service providers focused on environmental stewardship in the region. Under the 'ASPIRE-Daily City Pair' programme, regular 'green' flights are conducted between pairs of airports throughout the Asia-Pacific region, one of the fastest growing aviation markets in the world.

The first multi-sector demonstration green flight under the ASPIRE programme was SQ11 which was operated from Los Angeles to Singapore via Tokyo on 31 January 2010. Efficiency measures such as using a User Preferred Route (UPR) generated by a flight planning system were employed. The aviation authorities in Singapore, the United States and Japan also worked together to ensure optimal air traffic conditions. In total, 6 per cent less fuel was used compared to a similar flight - 10,686 kg of fuel was saved, corresponding to 33,769 kg of carbon emissions.

On 16 May 2011, the first regular 'city pair' flight between Los Angeles and Singapore, SQ37, was launched. The non-stop flight employs enhanced gate-to-gate air traffic management operational procedures to reduce fuel burn and carbon emissions. Best practices in air traffic management such as UPRs, Dynamic Airborne Reroute Procedures, 30/30 Reduced Oceanic Separation, Time-Based Arrival Management and Arrival Optimisation which significantly reduce fuel burn and carbon emissions are also utilised on the flight.

SIA is pleased to take another step towards greener skies by implementing these flight procedures on a regular basis. An average carbon emissions saving of 3.8 tonnes is achieved for each Los Angeles-Singapore flight sector.

COMMITMENT TOWARDS A SUSTAINABLE FUTURE



ENVIRONMENTAL PLANNING

Risks and Challenges

The airline industry is increasingly exposed to physical risks, including extreme weather conditions such as severe snowstorms and volcanic eruptions. Such events can cause flight diversions and cancellations that result in inconvenience to passengers and financial losses to airlines.

The growing awareness of the impact of climate change and pressure to curb GHG emissions continue to pose a constraint to industry growth. The imposition of environmental taxes and levies, including schemes such as the European Union's Emissions Trading Scheme, would add to the financial burden of airlines and their customers.

The EU's approach offers carriers operating through hubs closer to Europe an unfair advantage. As aviation is a global business, a global solution is needed under which all airlines are treated fairly. SIA shares the widely held view that policy measures on emissions from international aviation should be developed at a global level through ICAO.

Restrictions on GHG emissions can also provide an impetus for the industry to look towards new technologies that improve fuel consumption and accelerate the development of alternative fuels such as biofuels.

SAFUG

SIA believes the use of lower carbon renewable fuels derived from environmentally and socially sustainable sources have the potential to meet the industry's carbon neutral growth goals as well as lessen the dependence on fossil fuels. We are a member of the Sustainable Aviation Fuel Users Group (SAFUG) which advances the use of sustainable biofuels for the

aviation sector. The group is focused on accelerating the development, certification, and commercial use of sustainable aviation biofuels.

Currently, SAFUG represents approximately 32 per cent* of commercial aviation fuel demand.

SIA has pledged to advance and adopt aviation biofuels produced in a sustainable manner that: do not displace or compete with food crops; do not threaten biodiversity; do not cause deforestation; minimise the impact of land, water and energy use; meet or exceed jet fuel standards; have lower carbon emissions over their production lifecycle; and deliver positive socio-economic impacts.

Despite overcoming some of the preliminary technical challenges, the industry faces the challenge of producing aviation biofuels sustainably on a commercial basis and at competitive costs. In addition, the competitive usage of biofuels with other modes of transport must be considered.

SIA is committed to working in partnership with government agencies, biofuel producers and suppliers, and other stakeholders to overcome these hurdles. We proactively engage these stakeholders to keep abreast of the latest developments in sustainable biofuels.

*Source: Sustainable Aviation Fuel Users Group website [April 2013] URL: http://www.safug.org/safug-pledge/

COMMITMENT TOWARDS A SUSTAINABLE FUTURE (continued)



IATA'S FOUR-PILLAR STRATEGY

SIA supports IATA's Four-Pillar Strategy which promotes and drives efforts towards carbon neutral growth from 2020:

Pillar 1 – Technology

Technology has the best long-term prospects to reduce aviation emissions. Examples of recent advances include: revolutionary aircraft designs; new composite lightweight materials; engine advances; and the development of sustainable alternative jet fuels. Modifications to the existing fleet using current technologies, such as winglets and drag reduction, could result in a reduction of 1 per cent in emissions by 2020.

Sustainable aviation biofuels are among the promising solutions to meet IATA's carbon emissions reduction goals. Currently, the primary focus is on biofuels from second generation feedstock crops that do not compete with food production and fresh water requirements, or cause deforestation and threaten biodiversity. Examples of second generation feedstock crops are jatropha, camelina and algae. Test flights have demonstrated that the use of biofuel from these sources as "dropin" fuels is safe and technically sound. Biofuels can be blended with existing jet fuel in increasing quantities as they become available.

Pillar 2 – Operations

Improved operational practices, including reduced auxiliary power

unit usage, more efficient flight procedures, and weight reduction measures, could achieve further reductions in CO₂ emissions of up to 3 per cent by 2020.

Pillar 3 – Infrastructure

Infrastructure improvements present a major opportunity for CO₂ reductions in the near term. Full implementation of more efficient air traffic management and airport infrastructure could provide substantial emissions reductions through measures such as the Single European Sky and the Next Generation Air Traffic Management System in the United States.

Pillar 4 – Economic Measures

Combining the first three pillars is critical in meeting the industry's climate change objectives in the long run. However, due to the time required for new technologies and infrastructure to be developed, a cost-effective economic measure is needed to bridge the gap. For example, the marketbased measure (MBM) can be applied at a global level to prevent a patchwork of individual and uncoordinated policies that could be duplicative in nature and result in market distortions and carbon leakage. Economic measures should be used to boost research and development as well as the deployment of new technologies, rather than being utilised in ways that suppress demand.

SUMMARY OF ENVIRONMENTAL STATISTICS

Operating Statistics	2012-13	2011-12	2010-11
SIA Group			
Total Group Revenue (\$ million)	15,098.2	14,857.8	14,524.8
Average Number of Employees	23,189	22,514	21,997
Singapore Airlines, SilkAir and SIA Cargo			
Overall Load (million tonne-km)	16,047.3	15,898.8	15,576.3
Overall Capacity (million tonne-km)	23,188.4	23,378.6	22,515.1
Overall Load Factor (%)	69.2	68.0	69.2
Singapore Airlines			
Passenger Carried (thousand)	18,210	17,155	16,647
Revenue Pax-km (million)	93,765.6	87,824.0	84,801.3
Available Seat-km (million)	118,264.4	113,409.7	108,060.2
SilkAir			
Passenger Carried (thousand)	3,295	3,032	2,764
Revenue Pax-km (million)	5223.1	4,469.4	4,039.6
Available Seat-km (million)	7,096.3	5,904.8	5,285.1
SIA Cargo			
Cargo and Mail Carried (million kg)	1,144.6	1,205.8	1,156.4
Cargo Load (million tonne-km)	6,763.6	7,198.2	7,174.0
Cargo Capacity (million tonne-km)	10,661.0	11,286.5	11,208.5
Fuel Productivity & CO₂ Emissions	2012-13	2011-12	2010-11
SIA & SilkAir Fleet and Freighters			
Fuel Consumption (million AG)	1,506.58	1,465.20	1,407.85
Fuel Productivity (LTK/AG)	10.60	10.85	11.06
CO ₂ emissions (thousand tonnes)	14,207.55	13,817.34	13,276.85
CO ₂ emissions (kg/LTK)	0.89	0.87	0.85
SIA Passenger Fleet			
Fuel Consumption (million AG)	1,293.51	1,232.24	1,175.83
Fuel Productivity (LTK/AG)	9.97	10.03	10.13
CO ₂ emissions (thousand tonnes)	12,198.24	11,620.46	11,088.45
CO ₂ emissions (kg/LTK)	0.95	0.94	0.93
SilkAir Fleet			
Fuel Consumption (million AG)	65.54	55.63	50.00
Fuel Productivity (LTK/AG)	7.74	7.89	8.06
CO ₂ emissions (thousand tonnes)	618.11	524.58	471.53
CO ₂ emissions (kg/LTK)	1.22	1.19	1.17
SIA Cargo Freighters			
Fuel Consumption (million AG)	147.52	177.33	182.02
Fuel Productivity (LTK/AG)	17.42	17.49	17.92
CO ₂ emissions (thousand tonnes)	1,319.19	1,672.30	1,716.87
CO ₂ emissions (kg/LTK)	0.54	0.54	0.53
Resources *	2012-13	2011-12	2010-11
Water Consumption (,000 m3)	268.3	222.9	253.6
Electricity Consumption (Gwh)	56.9	60.5	59.9
Petrol (,000 litres)	228	288	280
Diesel (,000 litres)	3,161	3,309	3,376
CO ₂ emissions (Ground Operations) (tonnes)	38,028	40,971	40,793
Paper Consumption – A4 paper (reams)	64,900	66,753	58,820

^{*} Figures are from SIA's operations in Singapore







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