



SAS Group

SAS Sustainability Report November 2012–October 2013

# TOWARDS LONG-TERM SUSTAINABILITY



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## About this Sustainability Report

This is the 18th SAS Sustainability Report, which has been subject to third-party review since 1997.

This Sustainability Report describes SAS' most essential environmental and societal aspects during fiscal year 2013 (FY2013). SAS has self-declared the Annual and Sustainability Report FY2013 to be Application Level A+, in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines version 3.0. PwC has reviewed the Sustainability Report FY2013 and has confirmed it to be Application Level A+. The UN Global Compact, ISO 14001 and the Carbon Disclosure Project have been taken into consideration in the preparation of this Sustainability Report.

SAS Annual Report with sustainability overview and the separate Sustainability Report January–October 2012 were published in February 2013.

### Readers guide to this Sustainability Report

- SAS Group is referred to as SAS in this Sustainability Report.
- FY2013 comprises November 2012 through October 2013.
- FY2012 comprises November 2011 to through October 2012.
- SAS consists of Scandinavian Airlines (incl. SAS Technical Operations, SAS Cargo Group A/S and Blue1), SAS Ground Handling and for the first 11 months of the fiscal year 2013, Widerøe.
- Blue1 is disclosed as a part of Scandinavian Airlines as of this Sustainability Report.
- Widerøe was sold during the fiscal year and its sustainability KPIs are disclosed without external review on **page 45**.

The KPI's reported in this Sustainability reports in general covers (if not specifically stated):

- Financial KPI's: SAS incl. Widerøe for 11 months.
- Environmental KPI's: Flight related: Flights flown on SK flight number. Ground related: SAS excl. Widerøe.
- Social KPI's: SAS excl. Widerøe. (For Sick leave, Blue1 is reported separately from Scandinavian Airlines)

### External review: Material sustainability information and EU-ETS

All material sustainability information in the Annual- and Sustainability Reports for FY2013 has been reviewed by PwC. The Auditor's report of the Sustainability Report can be found on **page 44**.

PwC has verified systems and reports regarding the EU trading scheme for emission allowances for Scandinavian Airlines.

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# Letter from the President

The past year has certainly entailed substantial changes. The airline industry continued to be characterized by intensifying competition and increasing price pressure. At the same time we initiated a radical restructuring program and aggressive investments and as a result, SAS stands significantly better equipped to meet the future.

During the year, the market was affected by intensifying competition, price pressure and swings in demand. Toward the end of the year, the climate became even harsher with a decline in business travel and growth in capacity among European airlines. These developments were particularly perceptible in our Scandinavian home market in the fourth quarter.

Despite market trends, SAS delivered, as promised, positive earnings for the full 2012/2013 fiscal year. Income before tax amounted to MSEK 433. Read more about the financial results in the SAS Annual report.

Regardless of the turmoil in the airline industry, and the implications this has had on SAS, it is our firm belief that our long-term competitiveness will only be secured if we continue to act responsibly. SAS' work on sustainable development is always based on securing societal, environmental and financial responsibility as well as ensuring continuous ongoing improvement efforts.

The global transformation of the airline industry has fundamentally redefined the way airlines operate and compete, demanding a constant focus on increased efficiency. SAS has responded by implementing an aggressive restructuring program to secure an operating platform that makes it possible for us to compete on this new playing field. Despite the major and widely felt changes SAS has, essentially, kept the same high level of customer satisfaction, which underlines the incredible professionalism of the Group's employees.

Environmental responsibility is also central to SAS business, with a commitment to continuous reductions of climate-impacting emissions sharply in focus. SAS supports IATA's vision to make it possible to fly without greenhouse gas emissions by about 2050. Our milestone target is to reduce emissions by 20% in 2015 compared with 2005. And it looks as if we are well on our way.

During the fiscal year SAS climate index improved by 2 percentage points, and carbon emissions per passenger kilometer decreased to 113 grams, a 3.2 percent reduction. The improvement is primarily due to the fleet renewal and more efficient ways of operating existing aircraft. Throughout the year 21 more efficient and quieter aircraft replaced 26 older aircraft. When such an exchange is made from a MD80 to an A320, the total carbon emissions are reduced by about 20% in parallel



SAS  
Environmental Program

This is the symbol for the SAS environmental program, which comprises all the environmental measures contained in the SAS environmental management system. One of the areas where the symbol can be found is on the engines of the SAS Boeing 737NG fleet.



with 18 additional seats being added for a typical short haul route. Furthermore, takeoff noise is substantially reduced.

However, environmental gains are not all about newer aircraft. A structured way of working with continuous improvements in everyday operation is crucial if we are to develop as a sound business in a sustainable society. During the year, SAS recertified its environmental management system according to ISO14001.

SAS has taken many important steps in terms of sustainable development in the past year. We have created a more competitive operating platform and we are investing in our future. We are focusing efforts on increasing job satisfaction and reducing sick leave by looking forward; through leadership initiatives and by stabilizing and standardizing new processes. Our efforts will continue within the environmental programs established in ISO14001. Prioritized activities are fleet renewal, fuel & energy efficiency activities, and preparation for the new reporting standard within Global Reporting Initiative.

As we enter a new fiscal year, we are well aware that in terms of securing the long-term competitiveness of SAS we have only just begun. But we are equally aware that active and structured sustainability initiatives are the very foundation for our future success – in terms of customer loyalty, employee preference and operational efficiency.

**Rickard Gustafson**  
President and CEO

# This is SAS

SAS consists of Scandinavian Airlines (incl. SAS Technical Operations, SAS Cargo Group A/S and Blue1), SAS Ground Handling and for the first 11 months of the fiscal year, Widerøe. Scandinavian Airlines, Widerøe and Blue1 have their own Air Operations Certificates (AOC). Scandinavian Airlines and Widerøe have their own commercial functions and Sales & Marketing. The staff units, such as purchasing, human resources, finance, legal, environment and CSR, etc. are shared centralized functions within SAS.

## Passenger transport

SAS primarily conducts passenger transport and related services in its main market, the Nordic region, through the airline Scandinavian Airlines. Scandinavian Airlines' share of total traffic in its home market was 29% in FY2013.

Scandinavian Airlines is the largest airline in the Nordic region in terms of revenue, passengers and flights. Its network is mainly dimensioned according to business travelers' needs, but leisure travel is an expanding segment and represents a growing share of revenue. The main bases are Copenhagen–Kastrup, Oslo–Gardermoen, Stockholm–Arlanda and Helsinki–Vaanta. The airline's head office is located at Stockholm–Arlanda Airport. Flights are operated with aircraft and crew on SK flight numbers within the organization, as well as in wet lease operations with internal and external suppliers. As of FY2013, Blue1 only operates SK flight numbers and is reported as Scandinavian Airlines in this Sustainability Report.

80% of Widerøe was sold in September 2013 and sustainability-related data is disclosed without review on [page 45](#). Widerøe conducts regional, domestic and international traffic and is based in Norway.

## Cargo handling

SAS' airlines provide freight and mail services within the framework of each respective airline's operations. At Scandinavian Airlines, these services are provided by the wholly owned subsidiary, SAS Cargo Group A/S (SCG). SCG is managed from Copenhagen and includes an independent full-service provider of freight forwarding services, Trust Forwarding. The actual handling of freight and mail is carried out by Ground Handling Agents (GHA). SCG's subsidiary, Trust Forwarding, is 100% owned by SCG and its environmental data and results are included in SCG's data and results.

## Ground handling

SAS Ground Handling (SGH) operates at airports in Norway, Sweden and Denmark. Customers include airlines within SAS as well as SAS' partners and external customers. SGH includes, for example, passenger and lounge service, loading and unloading, de-icing and towing of aircraft. In October 2013, 10% of SGH was sold to Swissport as planned within 4XNG.

## Technical maintenance

SAS' airlines have their own technical maintenance where appropriate and profitable. SAS Technical is part of Scandinavian Airlines and conducts technical maintenance at Scandinavian Airlines' home bases. Widerøe and Blue1 have their own technical maintenance. Each organization has its own airlines as the largest customers but also offers their services to external airlines. The respective airlines also buy technical maintenance services from other suppliers.

## Scandinavian Airlines aircraft fleet

Scandinavian Airlines has a network of destinations with varied passenger volumes and distances, which requires with a fleet of aircraft of varying sizes and range to make the offering attractive to business and leisure travelers. Scandinavian Airlines (incl. Blue1) had 139 aircraft in its own operations at year-end and the fleet comprised 11 long-haul aircraft, 116 short-haul aircraft, and 12 regional jets. There are also 12 aircraft on wet lease. The average age of the aircraft fleet was 11.0 years. Scandinavian Airlines has renewed its fleet by introducing 21 B737NG and phasing out 26 MD80 and Boeing 737 Classic aircraft.



# Sustainability work in brief

- SAS was recertified according to ISO 14001.
- Scandinavian Airlines introduced 21 new aircraft and retired 26 older aircraft in its fleet.
- Scandinavian Airlines' relative CO<sub>2</sub> emissions decreased during the period to 113 grams (117) per passenger kilometer compared with FY2012.
- Scandinavian Airlines' total CO<sub>2</sub> emissions from flight operations increased 1.7% during the fiscal year, while the total number of passenger kilometers increased 5.1% compared with FY2012.
- Scandinavian Airlines reduced its total CO<sub>2</sub> emissions from flight operations by 14.1% in FY2013 compared with the full-year 2005. One of the main targets in 4XNG is to reduce total emissions by 20% by 2015 compared with 2005.
- The rolling 12-month Fuel Efficiency Index improved by 1.6% compared with FY2012.
- Energy consumption in SAS facilities was reduced by 13.2% compared with FY2012.
- Fossil fuel consumption by ground vehicles decreased by 9.0% compared with FY2012.
- All of the airlines complied with the regulations regarding EU-ETS regarding 2012.
- Job satisfaction at SAS decreased. The index decreased by six units to 57 (63).
- Sick leave rose to 8.0% (7.1) in Scandinavian Airlines and to 5.6% (4.7) in Blue1.

## Sustainability-related KPIs<sup>1</sup>

	Nov 2012– Oct 2013	Nov 2011– Oct 2012	2011
Revenue, MSEK	42,182	42,419	41,412
EBT before nonrecurring items, MSEK	775	21	94
EBIT margin, %	3.3	-1.6	1.6
Number of passengers, millions	28.1	28.2	27.2
Average number of employees <sup>4</sup> ,	14,127	14,897 <sup>2</sup>	15,142
of whom women, %	39	38 <sup>2</sup>	38
Sick leave, % <sup>3</sup>	8.0	7.1 <sup>2</sup>	7.0
Total number of occupational injuries	280 <sup>5</sup>	257 <sup>2</sup>	272
Climate index	96 <sup>5</sup>	98	100
CO <sub>2</sub> emissions, 000s tonnes	3,815 <sup>5</sup>	3,919	3,863
NO <sub>x</sub> emissions, 000s tonnes	16.2 <sup>5</sup>	15.9	15.6
CO <sub>2</sub> gram/passenger kilometer	113 <sup>5</sup>	119	122
Fuel consumption airline operations, 000s tonnes	1,211 <sup>5</sup>	1,244	1,226
Fuel consumption ground operations, 000s liters	2,068 <sup>5</sup>	2,396	3,160
Water consumption, 000s m <sup>3</sup>	99 <sup>5</sup>	155	161
Energy consumption, ground, GWh	149.3 <sup>5</sup>	182	194
Unsorted waste, 000s tonnes	0.4 <sup>5</sup>	0.7	0.8
Hazardous waste, 000s tonnes	0.2 <sup>5</sup>	0.2	0.2
External environment-related costs, MSEK	313 <sup>5</sup>	275 <sup>2</sup>	407

1) Accounting Principles on page 40.  
 2) Pertains to January–October 2012.  
 3) Pertains only to Scandinavian Airlines excl Blue1.  
 4) Source: Note 3 on page 54 in SAS Annual Report with sustainability overview November 2012–October 2013.  
 5) Scandinavian Airlines excl. Widerøe.

# 2%

Commercial air transport's account of global CO<sub>2</sub> emissions.

# 21

New aircraft phased into Scandinavian Airlines fleet.

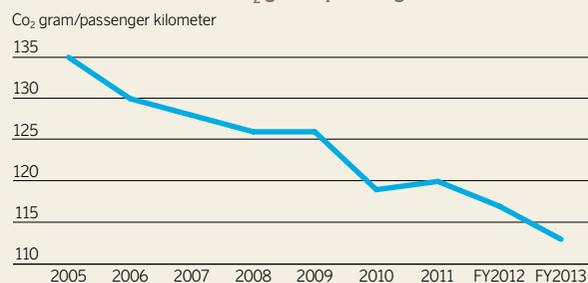
# 113

Scandinavian Airlines CO<sub>2</sub> emissions per passenger kilometer FY2013.

## Scandinavian Airlines climate index



## Scandinavian Airlines CO<sub>2</sub> gram/passenger kilometer



Climate index consists of emissions of carbon dioxide (2/3) and nitrogen oxides (1/3) related to traffic measured in passenger kilometers with full-year 2011 set as Index 100.

# SAS' view on Sustainability

## Responsibility for sustainable development

For SAS, sustainable development implies a simultaneous focus on sustainable profitability and financial growth, gradual environmental improvements and social responsibility.

SAS is convinced that financially sustainable operations require social and environmental responsibility, and that, in various ways, work on sustainability issues contributes to value growth and competitiveness.

SAS has a considerable social impact, both as a major employer and contractor, and by maintaining infrastructure for society. At the same time, aircraft operations in particular have an adverse environmental impact, primarily through emissions of greenhouse gases and noise around airports.

SAS takes its responsibility seriously and despite the turbulent civil aviation market of recent years, SAS has chosen to maintain its commitment to sustainability-related issues.

SAS' sustainability work is based on its policies, structured business processes and the commitment to adhere to the principles of the UN Global Compact, the SAS Code of Conduct, SAS' priorities and promise, Care.

Work is focused on minimizing sustainability-related risks and capturing potential opportunities to avoid unnecessary cost and secure potential savings. A well-structured sustainability effort creates value and supports our customers' purchasing behavior.

## Environmental Responsibility

Civil aviation's environmental impact primarily comprises emissions from consumption of non-renewable fuels and noise. Aircraft operations often account for more than 95% of the total environmental impact of an airline.

SAS' environmental responsibility is to comply with relevant legislation as well as to ensure as low as possible total long and short term emissions and other environmental impact.

## "Polluter pays" principle

SAS fully endorses the "polluter pays" principle and is prepared to take responsibility for its share. This assumes that any charges imposed on it are based on scientific findings and that the total climate impact of competing modes of transport is taken into consideration.

## CO<sub>2</sub> vs. nitrogen oxides

To date, the climate impact of air transport has focused on CO<sub>2</sub> emissions. However the focus is shifting to also include other climate effects, primarily nitrogen oxides and water vapor. SAS and the airline industry recommend the ECAC's model of differentiated landing fees based on nitrogen oxide emissions.

## Biodiversity

Biological diversity is affected by airline operations in different ways. Flight in itself affects biological diversity to a limited extent through emissions, primarily of nitrogen oxides. Other aspects include facilities and the use of airports, which, depending on geographic location and by utilizing large areas, can affect water, flora, fauna and nearby residents.

Airlines purchase services from airports with private or public investors. Every new construction or other change in ground use requires authorization from local authorities. Biological diversity is normally an approval aspect. Biodiversity, airport concessions and other environmental aspects regarding airport operations are reported in each respective airport's own sustainability reports.

## Aviation industry moving towards zero emissions

SAS fully supports IATA's vision that, by 2050, it will be possible to fly commercially without climate impact. This vision is to be realized through a combination of new technology, more efficient air traffic management, new fuels and coordinated actions to improve the infrastructure and the conditions under which air transport operates.

To achieve this vision, IATA and other areas of the airline industry have agreed on a joint target, which will subsequently be adopted by the entire airline industry and is now set to be further developed by ICAO:

- Improvement of fuel efficiency by an average of 1.5% annually until 2020
- Carbon-neutral growth from 2020
- 50% reduction in greenhouse CO<sub>2</sub> emissions by 2050, compared with 2005 levels

Source: [www.enviro.aero](http://www.enviro.aero)

## Social Responsibility

SAS' social responsibility primarily encompasses its own employees and the environment that is dependent on and impacted by SAS' operations in a number of countries, mainly in the Nordic region. Competition in the airline business in Europe is fierce. Employees play a key role when creating added value to the customer offering.

As an employer, SAS' responsibility is to ensure decent work conditions and work environment. SAS is also responsible for providing development opportunities as professionals and as human beings.

As a buyer, SAS uses the services of a number of subcontractors, thereby contributing to economic and social welfare in the countries and societies where its businesses operate.

As a supplier, SAS has a responsibility to deliver products and services that ensure consumer health and safety, and are reliable, environmentally adapted, produced under decent conditions, etc.

## Financial Responsibility

Every corporation has a responsibility to fulfill legal requirements and to maintain a high standard of business ethics as well as ensuring compliance with national policies and laws regarding financial responsibility.

An analysis of SAS' statement of income reveals that major portions of revenue and expenses, and essential industry-specific earnings measurements are items relevant from an environmental and/or social perspective. In brief, the highest possible financial return is generated by the best possible resource utilization and management of the company's assets, both human and financial. Optimal resource utilization means flying fuel-efficiently and making the most of capacity for carrying passengers and freight. Lower fuel consumption leads to lower fuel costs and at the same time reduces the charges SAS pays for emissions. The same applies to all other activities that, in addition to environmental considerations, have strong financial incentives to reduce consumption of energy and other resources.

## Business relations

Anti-trust issues are always in focus for the airline industry. The SAS Competition Law Compliance Program encompasses all employees concerned and is designed to ensure that SAS complies with laws, regulations and practices in its area of operation. Regulations relating to bribery and other improper actions are especially strict.

## The framework for civil aviation

### Competition

The market is characterized by fierce competition that is constantly increasing and rising price pressure, affecting margins and profitability for the entire industry. The outlook for the global market is uncertain and susceptible to effects from different world events. The European market is expected to be weak in the short term. SAS has competition from low-service airlines on most short-haul routes and the competition is increasing on long haul. Although there are varying views regarding the future performance of air transport, according to industry organizations, the Middle East and Asia appear to show the fastest growth—especially China and India—while mature markets in the industrialized West will show lower growth figures. In addition, primary growth is expected to be on longer routes that offer no other real alternative to air transport.

### Labor

The trend within the civil aviation industry is moving towards employment models with complex multinational agreements in order to create lower cost and increased flexibility. This trend will possibly lead to reduced employer responsibility and weaker employee rights. SAS' position in this matter is clear. Employees should be employed on local terms where based. When based in Scandinavia, employees should be covered by Scandinavian employment terms, work legislation and tax regimes.

### Sustainability-related, market-based measures, taxes and charges

Civil aviation pays the costs of the infrastructure it needs and uses to conduct flights, i.e., airports and air traffic control. The cost of security is also financed within the industry.

There are various environmental taxes and charges related to noise, emissions or number of passengers. One example of a market-based measure is the EU Emissions Trading Scheme regulations (EU-ETS), by which civil aviation pays for its carbon emissions within the EU through an established market-based measure.

SAS' opinion is that market-based measures should not distort competition, and should address the emissions targeted for reduction needs and create an incentive for continuous improvement.

SAS has supported the development of a global, market-based solution for airline emissions for a long time. In October 2013, the UN aviation organization ICAO agreed on a process to create such a solution before 2020. The key elements of a global solution are not to distort competition and to incorporate the UN's CBDR principles (Common But Differentiated Responsibility).

### Environmental compliance and permits

Airline operations are subject to environmental policies set by each airport. These usually involve noise, rules for using deicing fluids and limits on emissions to air, soil and water.

In general, there is a trend towards introducing tougher restrictions regarding permitted approach and takeoff paths. Deviations generally result in fines for the airline. Also, the general trend is towards a greater use of environment-related surcharge systems and operational limits. The twofold purpose is to reduce local environmental impact and create incentives for airlines to use aircraft with the best available technology from an environmental perspective.

Airline operations have no separate licenses or environmental permits for operation; instead, they depend on permits held by the airport owner. However, environmental approval is part of the process to certify aircraft in the three Scandinavian countries, as well as in the terms of technical aircraft maintenance. Airline operations have a legal dispensation for the use of halogen and submit annual reports to the authorities on consumption, including leakage and storage. The reason for the dispensation is that there is no certified alternative to halon for extinguishing fires in aircraft engines, cabins and aircraft toilets.

Read more about environmental compliance and permits in the Report by the Board of Directors [pages 42–43](#), in the SAS Annual Report with sustainability overview FY2013.



# Management System

## SAS Governance

### Board of Directors

The Board of Directors consists of six to eight members elected by the shareholders' meeting. There are also three employee representatives who are appointed by SAS' employee groups in Denmark, Norway and Sweden.

The Board's work is governed by the Swedish Companies Act, the Articles of Association, the Code and the formal work plan adopted by the Board each year. The Board's work follows a plan intended, among other things, to ensure the Board receives all necessary information. At its meetings, the Board discussed the regular business items presented at the respective meetings including business and market conditions, financial reporting and follow-up, the company's financial position, and investments. The Board also discussed any sustainability-related information of material importance.

## Group Management

The Board appoints the President of SAS AB, who is also Group CEO.

The Board has delegated responsibility for the day-to-day management of company and Group operations to the President. Group Management comprised eight members, including the President. Group Management normally has minuted meetings every week. Group Management's management and control of operations are based on a number of guidelines and policies regarding financial management and follow-up, communication issues, human resources, legal issues, the Group's brands, business ethics and environmental matters.

## Management CSR Development

### Board of Directors

- Follows the Swedish model for Code of Corporate governance, "Hållbart företagande"
- Sets guidelines for SAS' CSR agenda, policies, strategies and goals
- Conducts internal control to ensure that the Code of Conduct is implemented
- Submits the annual report and reviews the sustainability report

### Group Management

- Sets the framework and decides on the CSR agenda, policies, strategies and goals
- Responsible for the Corporate Manual which comprises the basis for SAS work with CSR
- Assesses risk and opportunities related to CSR issues
- Responsible for the implementation of the Code of Conduct

### Commercial, Operations and Sales & Marketing

- Responsible for integrating the CSR agenda, policies, strategies and activities in the everyday business
- Responsible for the work on following up and reporting on safety, quality and other CSR issues
- Responsible for dialog with internal and external stakeholders

### Environment & CSR

- Supports and consults the management on CSR issues with focus on environmental responsibility
- Prepares, coordinates and develops the CSR agenda
- Ensures compliance with legislation and own commitments
- Conducts sustainability reporting and dialog
- Maintains the Environmental Management System
- Coordinates established CSR-related networks and forums

### Human Resources, Finance & Legal

- Supports and consults the management and organization on Social and Financial Responsibility issues
- Develops the work with Social and Financial Responsibility and contributes to sustainability reporting and dialog

## Environment & CSR work within SAS

SAS has a central department for Environment & CSR that reports to senior management. The task of Environment & CSR is to support management in CSR-related matters, both internally and externally. In addition to its supporting role, Environment & CSR has responsibility for maintaining and developing the CSR Agenda, fuel-saving activities, compliance with EU-ETS/MRV, ISO14001 certification, coordination of alternative fuel activities and support for the organization in CSR issues.

The department channels and collects information through a network in SAS called "the Sustainability Network" and groups within the

environmental management system. Their tasks include conducting internal sustainability self-assessments.

## SAS' CSR Agenda

SAS is constantly reviewing its CSR agenda with respect to priorities, activities, progress, etc. During FY2014 the CSR agenda will be adjusted to the organization implemented in 2013/2014 as well as the new GRI guidelines regarding sustainability reporting (G4). This will be reflected in the FY2014 Sustainability Report.

# SAS Corporate Social Responsibility (CSR) Agenda

- Legal Requirements
- Own Vision / Strategies / Goals
- Compliance / Due Diligence
- Stakeholder dialog
- Monitoring / Reporting

## Environmental Responsibility

- ISO 14001
- Environmental Programs

## Financial Responsibility

- Profitable Business
- Anti-Corruption
- Business Ethics

## Social Responsibility

- Labor Practices & Decent Work
- Human Rights
- Diversity & Equality
- Product Responsibility
- Social Involvement

## Code of Conduct

To summarize and clarify SAS' stated priorities, promises, policies and other regulations, the SAS Board of Directors has issued a Code of Conduct that applies for all SAS employees. To underscore the Code's importance, there are clear rules and structures for reporting and addressing suspected violations. Supervisors and other managers play a key role in the implementation and follow-up of the Code. An extensive training program supports the Code and the goal is for all personnel to participate in the program. The Code's whistleblower function was used in three cases. One case was dismissed without further action, one was dismissed after investigations and one led to some action after investigations.

## Environmental Management System

SAS' environmental management system encompasses all activities in SAS. The system focuses on activities around the main bases (Stockholm, Copenhagen, Oslo and Helsinki), but also includes other geographical areas through follow-up programs and contracted services.

The system is based on shared environmental and sustainability policies, the Code of Conduct, the UN Global Compact, airline operational standards and ISO 14001. It provides guidelines for a continuing cycle of planning, implementation and evaluation, as well as the improvement of processes and activities to meet operational and environmental targets. SAS has a review process that also integrates environmental reports and the most important aspects of CSR in existing quality/security inspections. This is part of our endeavor to achieve constant improvement.

SAS was certified according to ISO 14001 in 2010 and during FY2013, SAS was successfully re-certified.

## UN's Global Compact, GRI and CDP

SAS joined the Global Compact in 2003 and participates in the Global Compact's Nordic Network. One criterion for publishing company information on the Global Compact website is an annual update of the material, the Communication On Progress (COP). The most recent update of SAS' information was completed in April, 2013. The UN Global Compact is a pivotal component of the SAS' Code of Conduct and the requirements imposed on the company's suppliers. SAS' sustainability reporting observes the guidelines of the Global Reporting Initiative (GRI) and is reviewed by an external auditor. GRI is a framework designed for sustainability-related information and performance. SAS reports to the CDP (Carbon Disclosure Project).

## Sustainability-related business opportunities and risks

Management of sustainability-related risks is integrated with SAS' comprehensive risk management. In general, it can be concluded that risks are reduced – and, indeed, certain opportunities offer tangible business potential – by having proactive and effective sustainability programs. Proactively working with its environmental impact in a structured environmental management system offers a company control and the capacity to deal rapidly with changing requirements in the business environment and those demanded by certain customer groups. Another example is the ability to impose demands on product and service suppliers, where, thanks to favorable insight and monitoring, there is the potential to contribute to exerting positive influence on developments at individual suppliers.

## Managing sustainability-related data

The various operations in SAS report once a year on measures for the purpose of improving the sustainability work through internal self-assessment. Reporting covers such areas as community involvement, supplier contacts, cooperation with internal and external stakeholders, work environment, training, conflicts and efforts involving the Code of Conduct and the UN Global Compact. Relevant sustainability data are reported monthly, quarterly or annually, while data concerning employees are followed up at a local level on an ongoing basis.

## SAS priorities

SAS' stakeholders generally place the greatest importance on environmental responsibility, especially relating to how SAS handles the demand to reduce greenhouse emissions.

Accordingly, environmental responsibility is the largest part of SAS' reported sustainability work. For SAS, social responsibility on a wide scale is just as important, but is not given the same amount of space in this report. In preparation for GRI G4 an updated analysis will be conducted with regard to materiality and stakeholders.

Read more about SAS sustainability aspects on [page 10](#).

## ISO 26000

SAS has carefully followed the development of the new standard related to social responsibility, ISO 26000. SAS has not yet decided to proceed with this standard but can conclude that SAS has strategies, targets and activities in a number of the areas covered by ISO26001.

# Stakeholders and collaboration

SAS has a long tradition of a developed and fruitful cooperation with a wide range of stakeholders and involvement in community-related issues. For some time now, SAS has worked to systematize, strengthen and further develop relations with external stakeholders. This contributes to creating the premises for the conditions underlying SAS' competitiveness and operational framework.

SAS prioritizes close collaboration with customers, authorities, suppliers and airports in order to create prerequisites to develop solutions in order to improve the sustainability performance. SAS also engages in dialog with parties that want knowledge, drive change or support SAS in different ways, i.e. employees, partners, experts, NGOs, organizations, researchers, etc.

During FY2013, SAS was engaged in dialog and cooperation with stakeholders regarding terms and conditions for aviation from a sustainability perspective. There were three areas of primary focus:

1. Creating a more profitable SAS.
2. Improving fuel efficiency in SAS' aircraft operations through adjustments in external and internal operational prerequisites or accelerating the development of alternative jet fuels.

3. Understanding the development of employment models accepted within civil aviation in Europe with focus on Scandinavia.

An intensive dialog has been conducted with different stakeholders in all of the above areas.

SAS also participates in national industry or employee organizations in an effort to create greater understanding for the terms and conditions for the aviation industry. Together with other Nordic companies that are a part of the UN Global Compact, SAS participates in the UN Global Compact Nordic Network. SAS is also a member of national or Nordic corporate networks whose primary task is to make social responsibility and social engagement a natural part of the companies' daily work and to also encourage the reporting of these issues. Relations and cooperation with parties responsible for airports and air traffic control are of great importance. For many years, SAS has participated in their adaptation and development programs with for example Swedavia (Airport Agency) and LFV (Air Navigation Agency) in Sweden, Avinor (Airport- and Air Navigation Agency) in Norway and in Denmark with CPH A/S (Copenhagen Airports). Environmental impact is reduced

## Stakeholder cooperation on alternative and sustainable jet fuels

An area that has been a high priority in FY2013 is the effort to promote access to alternative and sustainable jet fuels. Besides SAS' own work, SAS took the initiative in FY2012 and has since been a leading driving force to bring together aviation players in the Nordic region in NISA (Nordic Initiative Sustainable Aviation).

The initiative was launched on November 1, 2013 and brings together Nordic aviation stakeholders with a direct or indirect interest in ensuring long-term sustainable aviation. The logic is that a sector that cooperates has greater power to promote its interests in these issues. Starring actors and dialogue partners are a number of airlines in the Nordic region as well as the largest airport owners in Denmark, Finland, Norway and Sweden. Aviation industry organizations in those countries, the respective aviation authorities and IATA, Boeing and Airbus are also active participants in the initiative.

The partners shall establish a regional body with the aim of facilitating and strengthening the conditions for commercial and continuous access to sustainable jet fuels. Part of the work is to identify the level of the sustainability aspects and other goals that may be expected to be achieved over the different pathways and timeframes in light of national legislations, EU Sustainability Criteria and internationally sustainability guidelines. Accelerating commercial access to sustainable jet fuel will lead to reduced emissions. The outcome is aimed primarily at airlines in the Nordic countries, and of course, other off-takers. This will benefit society as a whole to a great extent since the developments described also generates jobs and further development of advanced new technology.

Coordination is essential with initiatives and activities set up by industry organizations, such as IATA and ATAG, UN bodies like ICAO, such EU initiatives as Flight Path 2020 and of course, other cluster initiatives.

Read more about alternative and sustainable fuels on [page 20](#).

## Cooperation on the restriction of ultrafine particles

Along with its main users, Copenhagen Airport launched a process in 2011, to analyze and reduce the amounts of emissions containing ultrafine particles. SAS has participated in this work since the start and is contributing to address this issue.

Read more about ultrafine particles on [page 17](#).



as a result of logistical improvements at the airports and the airspace within Scandinavia.

Cooperation with central players in aviation, components, equipment and catering is essential in promoting sustainable development in all areas. Within the preparations when placing orders or leasing new aircraft, fuel consumption, sustainability criteria's and environmental impact are key parameters in the decision-making process. This also applies to changes in service concepts etc.

Sustainability issues have also gained greater importance for public administration and the business sector, and SAS has discussions in progress in these areas.

SAS is pursuing ongoing dialog with various groups in a bid to advance and adapt products and, indeed, the company itself to the ever-changing market demands. All stakeholders seeking contact with SAS will be offered the opportunity of a dialog with the company. The requirements imposed by SAS' customers confirm that sustainability issues are gaining greater significance. An increasing number of companies are imposing demands in respect of environmental management systems and continuous accounting for climate-impacting emissions.

Also, issues regarding how SAS manages its social responsibility are tending to increase. As a natural component in this development, SAS itself is presenting an increasing number of questions to its suppliers in this area. SAS pursues active talks with various NGOs, researchers and the media regarding current short- or long-term issues on the sustainability agenda. Examples of issues may include aviation's impact as an enabler for globalization or different views on SAS' sustainability performance. The considerable media focus on aviation's negative environmental impact is a challenge for the entire airline industry. SAS has chosen to take a leading role in the debate as a feature of its efforts to link the brand with responsible management of both climate and social issues. Employee attitudes towards the company and its ability to meet their demands in terms of the work environment and other significant factors that affect commitment and loyalty are gauged continuously. The trend towards new employment models is another relevant area. Considerable emphasis is placed on ethical questions and the development of the corporate culture and value base.

## Examples of stakeholder groups engaged by SAS

### Employees

- Employee index PULS
- Performance reviews
- Whistleblower function
- Employee meetings at all levels including meetings related to ISO 14001
- Dialog and close cooperation with labor unions

### Customers

- Customer surveys
- Interviews
- Customer Satisfaction Index (CSI)
- Image index
- Contract customers are offered carbon dioxide compensation
- Direct dialog in meetings and ongoing contact with several thousand customers
- Social media

### Owners, investors and financial analysts

- Regular Board meetings
- Annual General Shareholders' Meeting
- Surveys
- Teleconferences
- Regular meetings with investors and analysts

### Partnerships and networks

- Star Alliance
- Global Compact Nordic Network
- CSR Sweden
- IATA, ATAG, SAFUG and Sustainable Biofuel Network
- NHO Klimatpanel, Baltic Development Forum etc

### NGOs

- Dialogue with, for example, Bellona, WWF and the Norwegian Society for the Conservation of Nature

### Industry organizations

- ICAO's Committee on Aviation Environment Protection (CAEP)
- Association of European Airlines (AEA)
- IATA and ATAG
- Conf. of Swedish Enterprise
- Conf. of Danish Industries
- Conf. of Norwegian Enterprise, etc.

### Authorities

- Close contact with relevant national and international authorities, politicians, airport owners and air traffic control management
- Together with AEA, IATA and Star Alliance, dialog meetings are held with relevant authorities

### Suppliers

- Purchasing negotiations with prioritized suppliers based on the SAS' purchase policy and adherence to the principles of the Global Compact, etc.
- Dialog with energy energy and fuel suppliers

### Manufacturers

- Ongoing dialog with manufacturers of aircraft, engines and equipment that are better adapted to the environment and work equipment products, services, chemicals, etc.

### Mass media

- Daily communication and dialog with media
- Interviews
- Articles and opinion pieces
- Social media, for example, facebook.com/SAS or twitter.com/SAS

### Schools and universities

- Support of and dialog on essays and doctoral theses
- Presentations and participation in conferences and debates

### Airports and air traffic control management

- Partnership and cooperative models established with airport owners and air traffic control management at the most important airports
- Focus on punctuality, efficiency and reduced environmental impact

# Our sustainability aspects

## Social aspects

Prioritized social aspects within SAS are for example employee satisfaction and equality. SAS continuously follows up the development of these aspects to increase employee satisfaction and decrease cost.

## Environmental aspects

Environmental aspects are identified using a proprietary method in the certified environmental management system. The degree of significance of the environmental aspect is governed by, for example: the scope of the environmental consequences, emissions/wastewater volumes, legal requirements, the risk of incidents and deviations, and final stakeholder groups' demands and expectations.

SAS' most significant environmental aspects derive from emissions from using fossil jet fuel, noise from aircraft. On-ground emissions de-

rive from diesel and gasoline consumption, energy use in facilities, fuel and glycol spillages and waste.

SAS makes a distinction between direct and indirect environmental aspects. Direct environmental aspects are the environmental impacts over which SAS has direct control, while the indirect features are those that can only be affected to a greater or smaller degree. This is of great significance for improvement programs where controllable impacts can be governed through guidelines and policies, while an indirect environmental aspect must be governed through purchases, contracts, cooperative agreement, dialogs and monitoring.

One example of a direct environmental aspect is jet fuel, the combustion of which emits greenhouse gases to the atmosphere. An indirect environmental aspect could be an agreement regarding hotel stays for SAS crews, etc., where the service creates emissions to air, soil and water.

## What comes in and goes out – the most significant environmental aspects<sup>1</sup>

IN	<b>SAS' responsibility</b> Jet fuel Halons	<b>In the air</b> 	<b>SAS' responsibility</b> Carbon dioxide (CO <sub>2</sub> ) Nitrogen oxides (NO <sub>x</sub> ) Noise Halons (CFC) <sup>2</sup>	<b>Emissions to</b> <table border="1"> <thead> <tr> <th>Air</th> <th>Ground</th> <th>Water</th> </tr> </thead> <tbody> <tr> <td>●</td> <td>○</td> <td>○</td> </tr> </tbody> </table>	Air	Ground	Water	●	○	○	●	○	○	●	○	○	●	○	○	OUT						
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<b>SAS' responsibility</b> Food and beverages Packaging Articles for sale Newspapers	<b>Onboard</b> 	<b>SAS' responsibility</b> Organic waste Waste and recycling	<b>Emissions to</b> <table border="1"> <thead> <tr> <th>Air</th> <th>Ground</th> <th>Water</th> </tr> </thead> <tbody> <tr> <td>○</td> <td>●</td> <td>○</td> </tr> <tr> <td>○</td> <td>●</td> <td>○</td> </tr> </tbody> </table>	Air	Ground	Water	○	●	○	○	●	○	OUT													
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IN	<b>SAS' responsibility</b> Glycols Water Energy Vehicle fuel Office supplies Chemicals Solvents	<b>On the ground</b> 	<b>SAS' responsibility</b> Waste Hazardous waste Waste water, incl. flooded water Carbon dioxide (CO <sub>2</sub> ) Nitrogen oxides (NO <sub>x</sub> ) Particles	<b>Emissions to</b> <table border="1"> <thead> <tr> <th>Air</th> <th>Ground</th> <th>Water</th> </tr> </thead> <tbody> <tr> <td>○</td> <td>●</td> <td>○</td> </tr> <tr> <td>○</td> <td>●</td> <td>○</td> </tr> <tr> <td>○</td> <td>○</td> <td>●</td> </tr> <tr> <td>●</td> <td>○</td> <td>○</td> </tr> <tr> <td>●</td> <td>○</td> <td>○</td> </tr> <tr> <td>●</td> <td>○</td> <td>○</td> </tr> </tbody> </table>	Air	Ground	Water	○	●	○	○	●	○	○	○	●	●	○	○	●	○	○	●	○	○	OUT
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1. Definitions in the table showing what we emit are immediate emissions.

2. Civil aircraft operation is allowed to use halon 1301 and 1211 for fire protection under critical use clauses, where no alternative substances are yet certified. Research on alternatives is ongoing.

A more comprehensive version of this illustration is available at [www.sasgroup.net/miljo](http://www.sasgroup.net/miljo)

# Vision, policy and strategies

## SAS' Sustainability policy and strategy

### Sustainability policy

For SAS, sustainable development means a simultaneous focus on financial, environmental and social responsibility. The objective is to contribute to the creation of long-term growth in shareholder value. SAS aims to follow strong sustainable practices and to encourage its stakeholders to do the same.

- Sustainable development is an integrated part of SAS' business activities and is closely linked to our ability to fulfill and develop the priority program, Care.
- To contribute to sustainable development, everybody, in their daily work, must take financial as well as environmental and social considerations into account.

### Sustainable development strategies

SAS aims to:

- create a culture among its employees based on strategic decisions and a commitment to environmental work.
- use documented sustainability appraisals as a basis for all decisions.
- engage in strategic sustainability communication with relevant stakeholders.
- promote tomorrow's solutions through alliances and proactive demand of better sustainability performance from our suppliers and stakeholders.

### Environmental policy

SAS will have an environmental program on par with leading industry competitors that attracts employees, customers, and investors and is perceived as positive by other stakeholders.

SAS will contribute to sustainable development by optimizing resource use, seeking the use of renewable energy and minimizing its environmental impact throughout its operations.

SAS' environmental programs and activities are based on continuous improvement, with reference to SAS' overall environmental goals. Each unit is responsible for setting specific targets and working to reach them.

The activities within SAS' environmental programs will be coordinated and integrated with production, quality and financial activities and will comply with applicable legislation and other requirements.

The overall goal for SAS' environmental programs is to create long-term value growth for its owners and contribute to SAS meeting its goals.

### SAS' Quality Policy

SAS is committed to satisfy the customers' expectations for safe and efficient operation. Safety is SAS' foremost quality parameter.

The following order of priorities is always applied:

- Safety and security
- Punctuality
- Care

SAS believes that quality is everybody's concern.

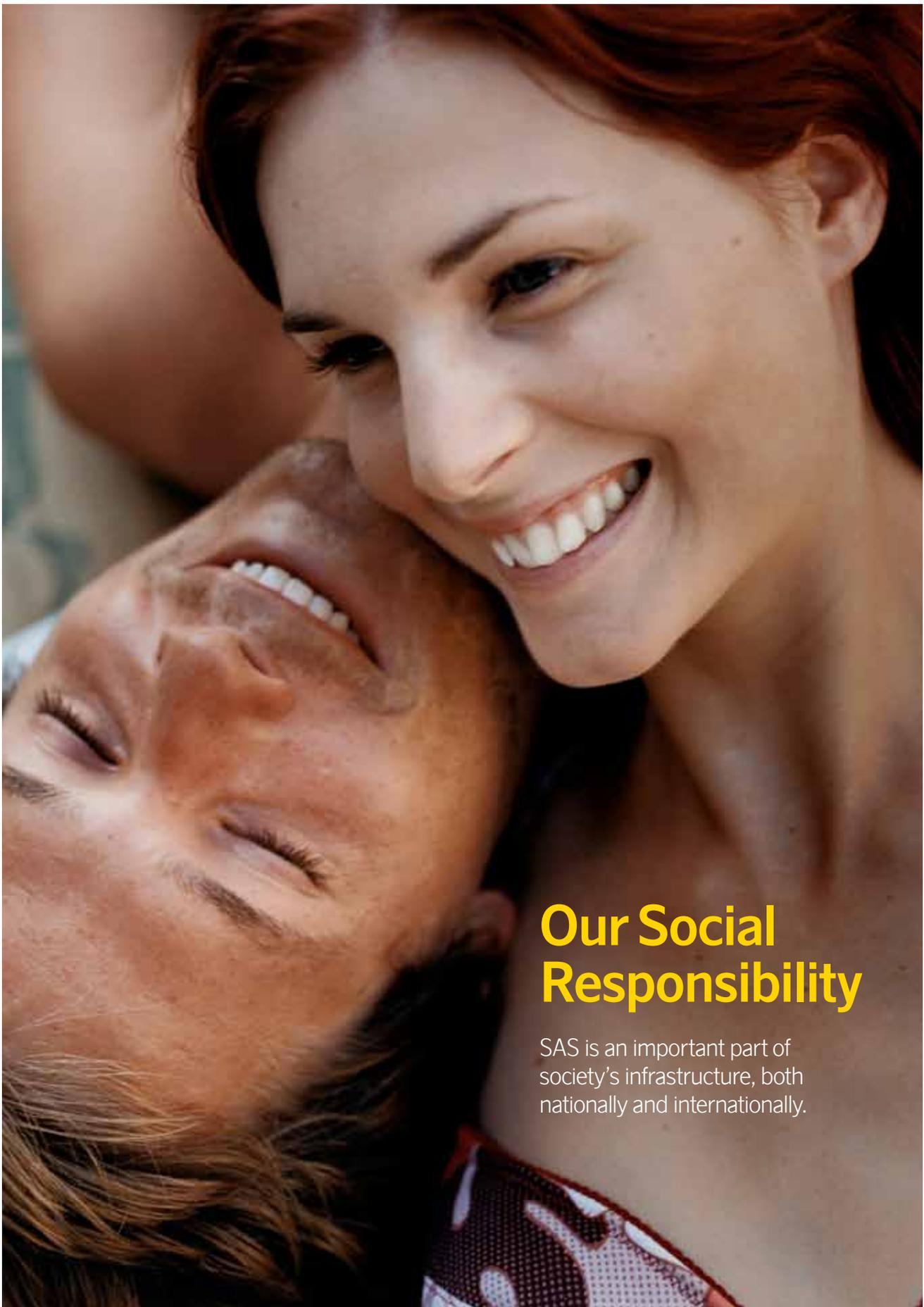
Continuous improvements will be achieved at all times through the dedication of our employees, established standards and measurements, and by cooperation with auditors.

SAS shall control the risk exposure and ensure risk awareness during daily work at all levels.

All flights shall be serviced and operated in accordance with established procedures based on authority regulations, company requirements and safe operational practice.

Activities within SAS shall be performed in such a way that they contribute to minimizing the negative effect on the environment.





## Our Social Responsibility

SAS is an important part of society's infrastructure, both nationally and internationally.

Within Social Responsibility, the following areas are prioritized in SAS' CSR agenda: Labor practices & Decent work, Human Rights, Diversity & Equality, Product responsibility and Social involvement. Besides ensuring safe and secure operations, the majority of work has been focused on employee-related issues within the ongoing activities in 4XNG during fiscal year 2013.

In November 2012, intense negotiations were conducted in order to reach an agreement with the unions representing the pilots and cabin crew on new collective agreements that are on a competitive level compared with the SAS' closest competitors. The process itself was challenging from a financial and social responsibility perspective. With adjusted collective agreements in place after one week, the necessary conditions were established for SAS's banks and core shareholders to grant a credit facility which was a prerequisite for SAS's continued operation and efforts to create long-term competitiveness through implementation of 4XNG. 4XNG is described in more detail on **pages 8–9** in the SAS Annual Report with sustainability overview FY2013.

In November 2012, SAS also launched the plan to centralize its administration to Stockholm and at the same time, reduce or outsource it by approximately 45%. SAS also announced its plan to outsource its ground handling operations and sell Widerøe. All in all, this meant that approximately over 5,000 employees out of the nearly 15,000 employed at SAS in October 2012 would be affected by redundancy or outsourcing. From a social responsibility perspective, SAS assesses all activities continuously. As always with these kinds of changes, employee representatives are involved and national legislation is followed. SAS is well aware of the increasing need for support of its employees in times of uncertainty and has targeted activities towards all employees in order to distribute updated information about the process as well as the possibility to receive support.

The employee survey, which scored lower during fiscal year 2013 than the same period one year earlier, is a clear signal that employees are affected by SAS' current situation and the changes in 4XNG. As mentioned earlier, SAS management is aware of this and all aspects of SAS' social responsibility are addressed in this work and are an important part of the future development of SAS.

### **Labor practices & decent work**

SAS is a large employer. The responsibility connected to labor practices and work conditions are very important. SAS has good cooperation with the union organizations connected to these issues.

However, the current trend within the civil aviation industry is moving towards employment models with complex multinational agreements in order to create lower cost and increased flexibility. This trend will possibly lead to reduced employer responsibility and weaker employee rights. SAS' position on this issue is clear. Employees should be employed on local terms where they are based. When based in Scandinavia, employees should be covered by Scandinavian employment terms, work legislation and tax regimes.

### **Cultural development**

Development of social responsibility is built to a large degree on the SAS corporate culture. SAS' strategic cultural work is therefore focused on increasing employee engagement, as well as increasing understanding of the values that are the basis for how the business is run. The goal is to generate positive repercussions in the relationship with customers and to strengthen SAS' competitiveness.

### **Organizational development**

During fiscal year 2013, a new centralized and more streamlined organization was implemented as part of 4XNG. Most of the changes were implemented in fiscal year 2013, although according to plan, some changes will be implemented in fiscal year 2014. In total, approximately 1,000 positions will be centralized or made redundant within the administration when all changes are concluded.

The process to outsource SAS Ground Handling which will affect approximately 4,000 positions was started in fiscal year 2013. In October 2013, Swissport bought 10% of SAS Ground Handling.

In September 2013, SAS sold 80% of Widerøe.

### **Adjustment and redundancy**

The process to centralize and handle the redundancies connected to 4XNG was handled through negotiations with labor unions following compliance with national laws and agreements.

### **Cooperation with labor union organizations**

Fiscal year 2013 started with intense negotiation between SAS and the labor union organizations referred to above.

Cooperation in day-to-day operations with labor unions is mainly carried out nationally, where dialog is conducted with the labor unions that have collective agreements with SAS. Cooperation takes place within the framework of national laws and agreements affecting the unit concerned.

Employee representatives from the Scandinavian countries sit on the SAS Group Board of Directors. The employees elect representatives from units in the Group's Scandinavian operations. Group Management is engaged in an ongoing discussion with union representatives, above all on issues concerning the personnel and cost reductions, organization structure and the need for a more customer-oriented culture.

During this period there has been a continuous focus on issues connected to implementation of 4XNG and SAS' current situation.

### **Contract negotiations and disputes**

No labor conflict occurred during fiscal year 2013.

All legal disputes of material importance are reported in the statutory Report of the Board of Directors **page 42** in the, SAS Annual Report with sustainability overview fiscal year 2013.

### **Leadership development**

With regard to developing social responsibility, management is key in setting examples and interpreting and implementing SAS' strategies. SAS has worked with a "role model" for leadership with the watchwords consistent, honest and reliable. Managers must be self-aware and mature, and know how personal qualities are to be used to achieve a trustful working relationship with personnel. In fiscal year 2013, SAS based recruitment, yearly assessments, and its leadership development program on this "role model". In 2014, SAS will further develop the leadership "role model" and intensify the focus on leadership.

### **Employee surveys**

PULS, SAS' annual employee survey, was as an exception carried out as a sample survey in fiscal year 2013. The survey was distributed to a statistically significant share of the employees and the result shows that job satisfaction at SAS decreased to 57 from 63 last year. This result is clearly not satisfactory; however it was expected as all employee groups in SAS underwent substantial changes during the course of the year. SAS management is now focusing on long-term activities to re-engage the organization. The activities include "Fixing the Everyday", including working with Lean, communicating a clear vision for the future, and first and foremost further improving Leadership. The survey generally indicates a strong long-term commitment as loyalty is high among employees in SAS.

## Human resource development

Human resources development is an important, ongoing activity throughout SAS. Flight staff and operational ground staff are covered by a number of license and competency requirements from EU-OPS and the IATA through the IOSA (IATA Operational Safety Audit). The mandatory training programs were carried out according to plan for different personnel groups regarding hazardous goods, passengers' rights, IT security and food safety, etc. SAS has approximately 800 managers on different levels in the Group. More than half of the managers are located in daily operations with direct customer contact such as sales, airport services and onboard service. The managers' skills development is based and evaluated on SAS' role model for leadership. A systematic evaluation process is continuously ongoing of existing managers as well as to identify persons who may meet the need for managers in the slightly longer term. The aim is for all potential managers to have an individualized development plan. The "role model" that the manager process is based on reflects general personal attributes as well as SAS' business objectives. Evaluation focuses on the individual's performance, ability to change, leadership, potential and ambition. Training in the Code of Conduct and SAS' environmental efforts is continuous. During the year, approximately 1,250 of SAS' employees conducted e-learning on the Code of Conduct and approximately 1,150 conducted e-learning in SAS' environmental work. SAS' employees had access to more than 200 different web-based courses during the year. Within SAS, nearly all employees are involved in e-learning, both flight personnel and ground employees.

### Courses and training

To retain and develop employee skills, extensive training programs are carried out each year. During fiscal year 2013, Scandinavian Airlines' employees attended an estimated 540,000 hours of training, of which the major part pertained to obligatory training. A growing share of SAS' training takes place through web-based courses, or e-learning.

E-learning cannot always replace classroom instruction, but thanks to its greater flexibility and availability, more courses can be offered at a lower cost.

## Work environment

### Sick leave

SAS' goal is that the work environment should be as good as possible and that sick leave and the number of injuries should be continuously reduced. During fiscal year 2013, total sick leave in Scandinavian Airlines increased to 8.0% (7.1%) and in Blue1 increased to 5.6% (4.7%). Long-term sick leave, 15 days or more, represents 5% of the total sick leave.

During fiscal year 2013, sick leave among some employee groups increased. This was specifically true for cabin crew in Sweden and pilots, and although decreasing during the year, sick leave remained at a high level for cabin crew in Norway, whereas it decreased for cabin crew in Denmark. Analysis carried out during the year has shown that there was no singular explanation for the negative development and level of sick leave. The fact that sick leave differed substantially between identical employee groups underlines this point. Reasons are many and varied and, accordingly, SAS management initiated a number of activities during fiscal year 2013 in order to address the increasing sick leave. Examples are improved follow-up and support for the affected employees as well as long term adjustments to the prerequisites for the scheduling process changed in connection with activities in 4XNG.

### Occupational injuries

The number of occupational injuries in Scandinavian Airlines was 280 during the period. The highest occupational injury frequency is present in SGH in Denmark and Norway (incl. Cargo and Spirit). The extent of the occupational injuries means that SAS will continue to prioritize preventive efforts, in particular in the areas where the challenge is greatest.

Apart from sick leave and occupational injuries, each administrative unit works actively with issues pertaining to telecommuting where this



## Humanitarian support

In December 2012, SAS supported the Norwegian "Christmas flight". The Christmas flight is an aid campaign operated by SAS employees, who cooperate with other volunteers throughout the year to collect goods and contributions from various cooperating companies and private individuals. SAS provides an aircraft with full operational support, pilots and crew volunteer in their free time and the fuel is sponsored by a fuel supplier. This flight was also conducted in December 2013 with SAS support. Visit [www.juleflyet.com](http://www.juleflyet.com) for more information.



## SAS takes its social responsibility seriously

The trend within the civil aviation industry is moving towards employment models with complex multinational agreements in order to create lower cost and increased flexibility. This trend will possibly lead to reduced employer responsibility and weaker employee rights. SAS' position on this issue is clear. Employees should be employed on local terms where they are based. When based in Scandinavia, employees should be covered by Scandinavian employment terms, work legislation and tax regimes.

is possible, flextime, health insurance, etc. It is each company's or unit's responsibility to ensure a well-functioning work environment.

This work takes place in collaboration with safety representatives, supervisors and labor-management joint safety committees that cover all employees in each country.

### Company health services

The company health services or health, safety and environment (HSE) function that supports the whole organization, offers services through in-house or outsourced resources with therapists, stress and rehabilitation experts, ergonomics and engineers.

The function also offers special services, including aviation medicine, stress management, follow-up of sick leave, health profiles, ergonomics and advice in handling chemicals.

Within large parts of the organization, investments are made in different forms of health-promoting activities both in the workplace and during leisure time.

### Diversity and equality

SAS' diversity policy is based on equal treatment of all employees and job applicants. Work on equal treatment includes promotion of diversity and equality in all its forms. Union membership is high within SAS in the Nordic region and labor organizations hold a strong position. Collective agreements define working hours, pay and other terms of employment in great detail. With the same conditions for the same tasks, there is also complete equality between men and women in these issues. In general, SAS is dominated by women in such professions as cabin crew, administrators, assistants and passenger service at the airports, while men dominate in the areas of pilots, technicians, aircraft maintenance, loading and unloading of baggage. Women also have more part-time positions than men. Of the Scandinavian Airlines pilots, 95% are men, and among captains, the share is 96%. At the same time,

the recruitment base for female pilots is small, since few opt for the profession. When it comes to cabin crew, 78% are women. Senior management in the Group is dominated by men. SAS Group Management currently consists of one woman and six men. The figure for the management level directly reporting to Group Management is 29% women. Each year, equal treatment plans are drawn up in Sweden based on analysis and surveys of a number of factors, ranging from sick leave to bullying and harassment. A reference group representing the parties provides support.

### Product Responsibility

SAS takes its responsibility to maintain the highest standards regarding the product responsibility. Being an airline, the organization is highly regulated from a flight safety and security perspective. SAS is regularly audited, reviewed both by external parties as well as partners and customers. Airline personnel work conditions regarding working hours are also regulated by relevant authorities. SAS also has strict policies and follows applicable legislation regarding, food safety, IT security, etc.

### Social involvement

SAS has an agreement on a commercial basis with the Swedish government to make available two specially equipped Boeing 737s as air ambulances within the framework of the Swedish National Air Medevac (SNAM) in the case of an emergency. A corresponding agreement exists with the Norwegian Defense which implies that within 24 hours, SAS must make available a remodeled ambulance service 737-700 for medical evacuation along the same principle as with SNAM. If needed, a second aircraft must be made available within 48 hours.

SAS' personnel participated in a number of fundraisers for Save the Children. All parts of SAS have had varying degrees of contact with schools and universities and participated in a dialog about flight and its environmental impact.

## SAS' work environment and sick leave KPIs

### Scandinavian Airlines' Flight Operations

	DK	NO	SE
No. of employees October 2013 (head count)	2,007	1,863	1,542
of which women, %	50.4	58.2	49.7
<b>Total sick leave, %</b>	<b>9.2</b>	<b>13.7</b>	<b>10.2</b>
Long-term sick leave (more than 14 days), %	4.8	9.6	6.5
Total number of occupational injuries with one day's sick leave or more	46	7	9
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>17</b>	<b>3</b>	<b>4</b>

### SAS Technical Operations

	DK	NO	SE
No. of employees October 2013 (head count)	461	423	417
of which women, %	3.5	4.3	5
<b>Total sick leave, %</b>	<b>3.3</b>	<b>4.9</b>	<b>3.8</b>
Long-term sick leave (more than 14 days), %	1.0	2.5	2.0
Total number of occupational injuries with one day's sick leave or more	10	4	0
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>13</b>	<b>6</b>	<b>0</b>

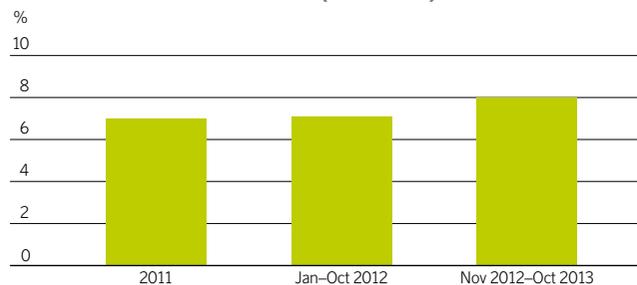
### SAS Ground Handling

	DK	NO	SE
No. of employees October 2013 (head count)	2,240	2,867	1,821
of which women, %	28.8	31.5	32.5
<b>Total sick leave, %</b>	<b>5.7</b>	<b>10.0</b>	<b>8.1</b>
Long-term sick leave (more than 14 days), %	3.4	7.1	4.5
Total number of occupational injuries with one day's sick leave or more	117	52	25
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>31</b>	<b>14</b>	<b>8</b>

### SAS

	Scandinavian Airlines DK	Scandinavian Airlines NO	Scandinavian Airlines SE	Scandinavian Airlines Total (excl. Blue1)	Blue 1
No. of employees October 2013 (head count)		5,027	5,399	14,863	343
of which women, %		36.8	40	39.3	46.9
<b>Total sick leave, %</b>		<b>6.4</b>	<b>10.5</b>	<b>7.4</b>	<b>8.0</b>
Long-term sick leave (more than 14 days), %		3.5	7.4	4.7	5.0
Total number of occupational injuries with one day's sick leave or more		173	64	35	272
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>		<b>21</b>	<b>9</b>	<b>5</b>	<b>12</b>

### Scandinavian Airlines sick leave (excl. Blue1)



### SAS Commercial and Sales & Marketing

	DK	NO	SE
No. of employees October 2013 (head count)	88	144	386
of which women, %	70.5	73.6	60.6
<b>Total sick leave, %</b>	<b>2.4</b>	<b>6.7</b>	<b>3.7</b>
Long-term sick leave (more than 14 days), %	1.3	4.8	2.7
Total number of occupational injuries with one day's sick leave or more	0	1	0
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>0</b>	<b>4</b>	<b>0</b>

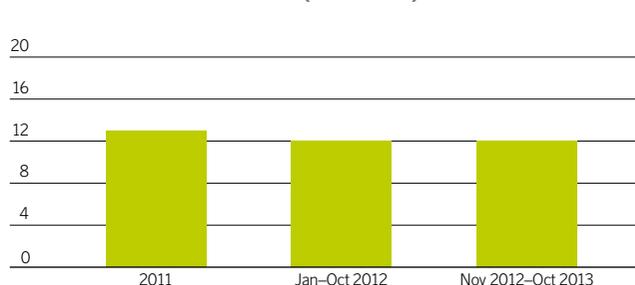
### SAS Administrative functions and others

	DK	NO	SE
No. of employees October 2013 (head count)	231	102	271
of which women, %	36.8	40	39.3
<b>Total sick leave, %</b>	<b>3.2</b>	<b>5.6</b>	<b>1.6</b>
Long-term sick leave (more than 14 days), %	1.4	4.4	1.0
Total number of occupational injuries with one day's sick leave or more	0	0	1
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>0</b>	<b>0</b>	<b>2</b>

### Blue1

	FI
No. of employees October 2013 (head count)	343
of which women, %	46.9
<b>Total sick leave, %</b>	<b>5.6</b>
Long-term sick leave (more than 14 days), %	2.4
Total number of occupational injuries with one day's sick leave or more	8
<b>Occupational injury frequency lost time-to-injury rate (H-value)</b>	<b>12</b>

### Scandinavian Airlines H-value (excl. Blue1)



### Financial aspects of social responsibility

SAS' first social responsibility is to its own employees and the communities dependent and affected by SAS' operations. For employees, this includes issues concerning human resources development, pay and work environment. In addition, SAS is to contribute to social progress wherever it operates and be a respected corporate citizen. Air transport helps improve labor market conditions in rural areas in the Scandinavian countries and makes business travel easier in Europe and to other continents. Given increasing globalization, airlines facilitate business and other contact opportunities where efficient transportation to, from and within the countries is more or less a prerequisite for economic development and progress. The airlines also contribute expertise and transfers of technology and make necessary investment in infrastructure.

### SAS' contribution to the economy

SAS creates employment and value. In fiscal year 2013, SAS paid wages and salaries totaling MSEK 8,442, of which social security expenses were MSEK 1,508 and pensions MSEK 844. SAS endeavors to achieve market pay for all employee groups.

### Costs of sick leave and accidents

Sick leave and occupational injuries constitute a large expense for the individual employee and the employer, as well as for society at large. Sick leave is affected by a number of factors such as risk of infection and accidents as well as physically and mentally stressful working environments. SAS' companies employ various methods to prevent short and long-term sick leave. SAS' own calculation of costs for sick leave indicates a cost exceeding MSEK 290 for fiscal year 2013.

### Work Environment at the airport

Particulate matter (PM), or simply particles, are solid matter in air. Further classification of particles can be made by size into coarse, fine, ultrafine and nanoparticles. Measured in micrometers the size of the coarse particles < 10 PM<sub>10</sub>, fine particles < 2.5 PM, ultrafine particles < 0.1 PM<sub>0.1</sub> and nanoparticles < 0.03 PM.

Since interest was pointed at ultrafine particles in an air quality investigation at Kastrup-Copenhagen Airport in 2010, SAS has been deeply engaged in this issue. The investigation report stated that the majority of the studied compounds, including most particles, are below the limits. The exception is the ultrafine particles for which pollution is at a high level. Sources are identified as engines that use different types of fuel

such as the engines and auxiliary power unit on aircraft or diesel engines on all kinds of vehicles at the airport. It is not known how ultra-fine particles impact health in the absence of scientific studies or investigations, which means that there are no established national or international limits. However, it is known that exposure to larger particles can mean increased risk of serious diseases. Therefore, it is important to find ways to reduce the number of particles in daily operations at all airports. In short, the work is about using more electrical vehicles and electrically powered equipment, introducing remote engine start-up of aircraft, increasing the amount of one-engine taxiing and higher awareness among employees. SAS is focusing on these types of activities at all airports.





## Our Environmental Responsibility

SAS' operations comprise airline operations and ground activities. The major environmental impact results from flight operations, but ground operations and customer service onboard also affect the environment.

During the fiscal year, SAS environmental priorities have been to secure compliance with applicable legal requirements, work with the environmental programs to reduce the emissions from SAS' most significant environmental aspects and re-certify the environmental management system. Managements attention and commitment to environmental issues has not been affected by 4XNG or the turbulent situation within the civil aviation industry.

### SAS Environmental Program

The method SAS uses to achieve its environmental goals is to operationalize its strategies through activities conducted in environmental programs within the environmental management system. Throughout the year, numerous activities were conducted within a wide range of areas. The prerequisites for all activities are that they are well within the limits of applicable legal requirements, flight safety limits, etc.

SAS has defined environmental programs within the following areas:

- More efficient usage of SAS aircraft in day-to-day operations
- More efficient planning of SAS aircraft
- Continuous aerodynamic, weight and efficiency follow up and modification of SAS aircraft
- Fleet renewal
- Environmentally adapted products
- Alternative sustainable jet fuels
- Stakeholder dialog/work with ATM & airports and aircraft & engine Manufacturers
- Single European Sky

### More efficient usage of SAS aircraft in day-to-day operations

SAS has an extensive long-term fuel saving program integrated in its operations. An important aspect of increasing the fuel efficiency is to make sure that all employees in SAS' airline operations have the prerequisites and knowledge to be fuel-efficient. This entails involvement

### Environmental vision

SAS intends to be a part of the future long-term sustainable society and support IATA's vision to make it possible to fly without greenhouse gas emissions by around 2050.

### Eco-political vision

SAS' eco-political vision is for all four transport sectors – road, rail, sea and air – to pay for investments and infrastructure, other social costs (such as accidents) and environmental impact according to the polluter pays principle. Subsequently, all four sectors should compete in a competitively neutral transport system, based on a holistic approach.

of all employee groups affecting the fuel consumption. Key functions are Flight, Ground and Technical Operations.

Work is continuously ongoing with a large number of activities that focus primarily on established operational conditions, such as procedures and how they are implemented, and whether the available system support is sufficiently optimized for higher fuel efficiency. Naturally, all changes maintain a standard that meets the highest level of flight safety requirements.

## Environmental goals 2015

The environment goals up to 2015 will lay the foundation for ensuring that SAS operations will be sustainable in the long-term. The work on the necessary measures are a natural, integrated part of the SAS Environmental Programs conducted within the SAS environmental management system certified according to ISO 14001. The deterioration in market conditions has not affected SAS' goals.

The goals are as follows.

### SAS will:

- ▶ reduce flight emissions by 20% in 2015 compared with 2005.
- ▶ reduce ground-related energy consumption by 15% in 2015 compared with 2010.
- ▶ reduce ground-vehicle consumption of fossil fuels by 10% at SAS' major airports in Scandinavia by 2015 compared with 2010.
- ▶ reduce noise at take off with 15% in 2015 compared with 2010.

SAS has decided to focus and quantifiable goals. This means that the goals regarding customer perception and alternative fuels has been transformed to internal goals and a new goal is established regarding noise. During FY2014 SAS will establish updated or new environmental goals up to 2020.

## MD-80 – A faithful old servant retires from the aircraft fleet

The last commercial MD-80 flight took place in October 2013 and, in this manner, the faithful servant retired from the SAS fleet. SAS has flown MD-80 aircraft for almost 30 years. During this period, SAS MD-80 aircraft flew a distance equivalent to about 3,870 return trips to the moon. SAS took delivery of its first of a total of 66 MD-80s in October 1985. By the time the aircraft was phased out, the aircraft had made about 3,134,900 flights.



## Renewable energy in the wings

To realize the airline industry's environmental objectives, the future of aviation is largely dependent on the development of alternative and sustainable jet fuels based on one or more renewable sources. Unlike most types of transportation, aviation has no real alternative to the liquid fuels that are currently used. There is also a need to secure access to liquid fuels as the supply of fossil alternatives is expected to decline and/or become more expensive.

Developing alternatives that can reduce climate-impacting emissions while also fulfilling the established sustainability criteria is of the utmost importance.

The principal sustainability criteria are that production shall be sustainable in the long-term and thus not compete with the production of foodstuffs or access to potable water, do not harm biodiversity and use as small an area of land as possible. According to the IATA, phasing in alternative fuels over time could enable a reduction in the air travel industry's emissions by up to 80% throughout its lifecycle.

As of today, it is possible to use alternative jet fuels that are based on such renewable sources such as camelina, jathropha, algae, animal oils, fats and various types of coal-based sources such as waste from industry, households, agriculture, forestry, paper mills and so forth. These two specifications allow up to a 50% blend with the traditional fossil fuels to ensure the high requirements related to engines, as well as fuel supply systems on aircraft and on the ground.

Initiatives are under way in a number of countries worldwide to evaluate the possibility of producing alternative sustainable jet fuels based on renewable sources. These initiatives often take the shape of partnership projects between private and public players. Unfortunately, we have not yet experienced the same commitment in Scandinavia.

As a result of the approved certifications, the technological prerequisites are in place and buyers are available, including SAS. It is now a matter of initiating large-scale production at competitive prices.

There are currently a limited number of suppliers that can deliver minor quantities of a certified alternative jet fuel at a high price. These suppliers have provided a number of airlines with sufficient fuel to perform flight trial demonstrations. However, SAS has opted not to purchase these fuels because of very high prices. Furthermore, SAS' sustainability requirements must be fulfilled.

### SAS commitment

For the past decade, SAS has worked on various activities aimed at accelerating the development of alternative and sustainable jet fuels. In 2008, SAS was involved in forming the Sustainable Aviation Fuel Users Group (SAFUG), which was charged with expediting the development of new jet fuels that are sustainable in the long-term from renewable sources. The Group comprises a number of major global airlines and represents about 32% of the global civil jet fuel consumption. SAFUG is carefully monitoring the activities that are currently under way with the aim of ensuring long-term sustainability in all phases of the development of alternative fuels. It is vital that the production of alternative jet fuels is sustainable in all aspects. SAS is also involved in a number of national and international forums, such as the IATA/ATAG biofuel network, the Sustainable Biofuel Network in Copenhagen, Cleantech Cluster, Global Green Growth Fora (3GF), and various Scandinavian interest organizations working in the area. SAS also supports the EU's Biofuel Flight Path, which aims to create the preconditions to produce two million tonnes of bio-fuels by 2020.

During the fiscal year, SAS continued talks with various potential stakeholders, such as Haldor Topsøe (DK) and Solena (US), regarding the possibility to produce alternative sustainable jet fuels in Denmark and Sweden. SAS also continues to clearly indicate to existing and potential future producers of jet fuels that it is prepared to purchase alternative jet fuels if the sustainability criteria are in place and the price is competitive. SAS also continued to be a driving force in the work to establish NISA, which brings together aviation players in the Nordic region in the effort to accelerate commercialization of alternative jet fuel production in the region.

### More efficient planning of SAS aircraft

SAS currently operates aircraft of varying sizes and performance. SAS' own fleet ranges from 88 to 264 seats with capabilities to fly routes that are airborne for 20 minutes to more than 11 hours. The aim is to create conditions for flying as profitably and energy-efficiently as possible depending on demand, time of day and destination. Key functions are Network Planning and Traffic Execution.

One example is to use aircraft of the appropriate size. For example, SAS has Boeing 737NGs and A320-family aircraft. They have 120, 141 and 183 and 141, 168 and 198 seats, respectively. This provides extensive flexibility according to demand, which guarantees the lowest possible total emissions at any given time. Flying aircraft that are too big generates unnecessary emissions even if it generates a better theoretical result per available seat kilometer. SAS also uses wet lease operations from external suppliers to fly short-haul routes with demand at about 50 to 75 seats.

### Continuous aerodynamic, weight and efficiency follow-up and modification of SAS aircraft

SAS modifies its aircraft continuously in order to modernize to better technology, improve aerodynamics or reduce weight. Examples of improved aerodynamics include the installation of Winglets on Boeing 737NGs or Sharklets on Airbus A320s. This can potentially reduce the fuel consumption by 1–5% depending on the stage length for certain airlines. SAS has installed Winglets on a number of Boeing 737NGs where it is profitable from a sustainability perspective.

Examples of weight reduction include the replacement of the brakes on Boeing 737-800s with lighter versions in composite material or installing lightweight seats in a number of Boeing 737NGs and Airbus A320s. When older seats are replaced, approximately two kilos per seat are saved, amounting to 360 kilos saved on a B737-800. These modifications will continue in FY2014. Apart from modifying the aircraft, work is also constantly ongoing to reduce the weight of all material and products included in SAS' service offering. Examples include optimizing the amount of water filled for toilet use, replacing carts with lighter versions, replacing glass bottles with a plastic alternative, optimizing the amount of products served and used based on analysis of the actual demand.

An example of better technology is the ongoing engine upgrade program within the framework of the ordinary technical maintenance of most of the Boeing 737NG fleet. In practice, this entails that the engines are upgraded to the latest version ("Tech Inserts" or "Evolution"). More than half of the fleet's engines on the Boeing 737NG, which were delivered prior to 2006, have now been upgraded and are thus about 3% more fuel efficient than when they were originally delivered. Aircraft delivered after 2007 already have "Tech Inserts" and aircraft delivered after the summer of 2011 have "Evolution".

### Fleet renewal

In the last days of FY2013, SAS retired its last MD-80s. At the end of FY2013, SAS only had three Boeing 737 Classics in operations. These remaining previous generation aircraft are scheduled to be phased out

## Results in FY2013 and measures to be undertaken in FY2014 to attain SAS' environmental goals in FY2015

### ► SAS will reduce flight emissions by 20% in FY2015 compared with 2005

#### Results FY2013

Scandinavian Airlines' CO<sub>2</sub>-emissions per passengerkilometer had been reduced by 16.0% in FY2013 compared with full-year 2005.

#### Measures in FY2014

During fiscal year 2014, Scandinavian Airlines plans to continue its fleet renewal. New aircraft will also be introduced by wet lease operators flying on SK flight numbers. This measure – combined with fuel-savings activities within 4XNG with such activities as more efficient procedures and culture, plus continuing modification of the existing fleet, with more efficient engines, lighter seating and so forth – will contribute positively to realizing the goal for 2015.

### ► SAS will reduce total ground-related energy consumption by 15% in 2015 compared with 2010

#### Results FY2013

The energy consumption was reduced by 24.8% in FY2013 compared with full-year 2010.

#### Measures in FY2014

Structured energy-efficiency activities are continuing as planned. This, in combination with reduced office space, will ensure goal attainment.

### ► SAS will reduce ground-vehicle consumption of fossil fuels by 10% at SAS' major airports in Scandinavia by FY2015 compared with 2010

#### Results FY2013

The fuel consumption was reduced by 33.4% in FY2013 compared to full year 2010.

#### Measures in FY2014

Activities will continue that are aimed at increasing fuel-efficiency in daily operations, as well as fuel-savings programs addressed in the ongoing LEAN project.

### ► SAS will reduce noise at take off with 15% in 2015 compared with 2010

#### Results FY2013

By introducing newer aircraft the noise area exposed to 85 dB at departure has been reduced with 10.9% compared with full-year 2010.

#### Measures in FY2014

The fleet renewal and introduction of more efficient procedures continues which will support the goal attainment.

before the end of December 2013. During FY2013, SAS retired nineteen MD-80s and seven Boeing 737 Classics which were replaced by nine Boeing 737NGs and twelve Airbus A320 aircraft. An example of the improvement is the A320, which has eighteen seats more than the MD-80 while reducing the fuel consumption and associated emissions by approximately 20% on a comparable flight. The 85 dB area in km<sup>2</sup> per departure is also reduced by approximately 55%.

During FY2013, SAS used a number of wet lease operators for flights with SK flight numbers. One of these suppliers uses the ATR72-600, which is the latest development in the turbo prop segment with 70 seats in the SAS configuration.

By 2016, SAS plans to introduce the Airbus A320neo that will have 15% lower fuel consumption and generate 50% less noise than the existing Airbus A320s.

In June 2013, SAS decided to opt for the Airbus A350 as its next long haul aircraft. In total, SAS ordered eight A350s. The order also includes four A330Es, which are enhanced versions of the A330 used today. The plan is to introduce the A330E in 2015-2016 and the A350 will be introduced from 2018. The A330E is marginally more fuel efficient than today's A330 but it has an increased range, meaning that it can operate on routes currently served by the A340 at approximately 20% less fuel consumption per seat. When the A350 is introduced, it will be possible to reduce fuel consumption by approximately 35% per seat and generate 50% less noise compared with an A340.

### Environmentally adapted products

SAS strives to develop its customer offering in a more environmentally adapted direction. This includes everything from locally produced and/or organic food to less material and ultimately, less waste needing to be sorted wherever customers encounter SAS during the ground process, in the lounge or onboard SAS aircraft.

As of today, SAS offers organic breakfast on its flights and a number of organic items in the lounge. In connection with the development towards more electronically based communications, less paper is being used and the use of "green IT" is increasing. Sorting and waste disposal from service and products on board is a focus area, but at the same time, this is a challenge. The challenge lies in the fact that there is limited space on board. There is also a restriction in disposing of meal service waste at airports because different national legislation is involved, making solutions complicated and, in some instances, impossible. In some cases, we are forced to fly waste back to Scandinavia (e.g. USA). Despite this, waste is an area in which efforts are being made to find the best possible solutions. For example, newspapers and aluminum cans from most domestic flights are recycled.

### Alternative sustainable jet fuels

SAS has been working for many years with various activities designed to accelerate the development of alternative and sustainable jet fuels. In FY2013, SAS continued to conduct concrete discussions with a range of prospective stakeholders in connection with the production of alternative and sustainable jet fuels in Scandinavia. SAS took the initiative to start a sustainable-fuel user group in the Nordic region (NISA) which was launched on November 1, 2013.

SAS has indicated clearly to existing and prospective producers of jet fuels that we are prepared to purchase alternative jet fuels if the price is competitive and sustainability criteria are in place.

It is vital for SAS that the production of alternative sustainable jet fuels does not compete with food production or access to drinking water and that it has minimal impact on biodiversity.

### Stakeholder dialog/work with ATM and airports, and aircraft and engine manufacturers

Since the early 2000s, SAS has been working with the parties responsible for air traffic control and airports in Sweden, Norway and Denmark in an effort to identify more efficient methods for controlling air traffic in the airspace as well as on the ground in these countries.

One example is the Continuous Descent Approach from Top of Descent that has become standard during low and medium-peak traffic at an increasing number of airports. The Continuous Descent Approach from Top of Descent entails that air traffic control allows the aircraft to approach in a continuous gliding descent without using unnecessary engine power. This is common at small airports where there is no other air traffic close by, but still unusual at large airports where other air traffic must be handled in parallel. This development derived from the demonstrations conducted in the early 2000s and the feasible changes have been implemented in everyday operations at Swedish airports.

In recent years, SAS has been deeply involved in the establishment of more advanced solutions using satellite-based Required Navigation Performance (RNP AR) rather than the traditional ground-based ILS. Examples are the published and available S-curved approaches on runway 19R and the shortened curved approach to runway 26 at Stockholm-Arlanda. The potential benefits are reduced emissions due to shorter flying distance, as well as the possibility to minimize noise exposure in sensitive areas close to the airport.

SAS is currently involved in a number of activities in Scandinavia that aim to demonstrate short-term potential environmental improvements within the framework of existing systems and methods.

Throughout SAS' continuous environmental work, SAS maintains dialog and discussion with relevant aircraft and engine manufacturers, as well as producers of interiors and other installations in the aircraft. Naturally, this is also the case in the process to decide which new aircraft to acquire for short and long-haul operations. The sustainability criteria are very important aspects for SAS' choice of suppliers.

### Single European Sky

SESAR (Single European Sky Air Traffic Management Research) is an EU initiative aimed at advancing tomorrow's airspace and the air traffic management system in Europe. SAS is involved in SESAR and participates in efforts to enhance efficiency, capacity and safety, and to reduce the environmental impact of flights.

The long-term objectives for SESAR are:

- threefold increase in capacity.
- A tenfold increase in safety levels.
- A 10% reduction in carbon emissions.
- Half the air traffic control costs.

By 2020, this will lead to:

- Flight times that are 8–14 minutes shorter.
- A reduction in fuel consumption of between 300 and 500 kilograms per flight.
- A reduction in CO<sub>2</sub> emissions of between 948 and 1,575 kilograms on average, per flight, compared with 2010.

## Follow-up of SAS' most significant environmental aspects

SAS' most significant environmental aspects derive from emissions from using fossil jet fuel and noise from aircraft, while on-ground emissions derive from diesel and gasoline consumption, energy use in facilities, fuel and glycol spillages and waste.

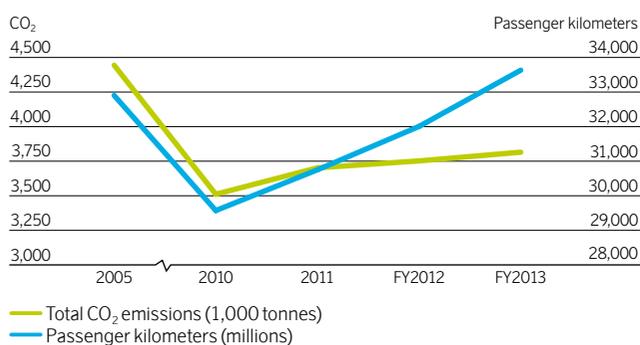
### Emissions from using fossil jet fuel

*Includes all flights flown with SK flight numbers.*

Scandinavian Airlines used 1,211,000 tonnes of jet fuel in FY2013. This corresponds to 3,815,000 tonnes of carbon dioxide and with the aircraft used 16,160 tonnes of nitrogen oxide emissions. Compared with the year-earlier period, this is an increase of 63,000 tonnes of carbon dioxide and 824 tonnes of nitrogen oxide. Relative to the traffic growth it is a relative decrease of 3.2% and an increase of 0.3%, respectively.

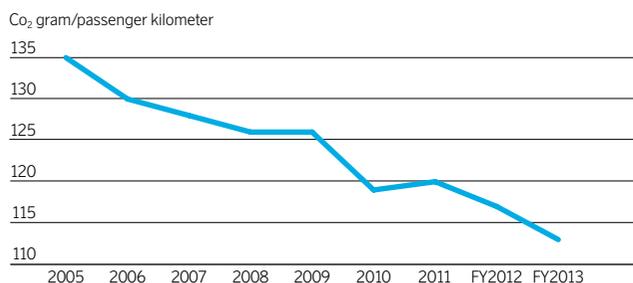
During the period, Scandinavian Airlines fuel efficiency improved and the relative CO<sub>2</sub> emission decreased to 113 grams (117) per passenger kilometer. The positive development was primarily due to fleet renewal, improved load factor and progress in the fuel efficiency activities. In FY2013, only occasional fuel leaks were reported in conjunction with refueling of Scandinavian Airlines aircraft. These were handled in accordance with established procedures. No fuel dumps were reported during the fiscal year.

### Scandinavian Airlines total CO<sub>2</sub> emissions



2005 source: 2007 Annual and Sustainability Report

### Scandinavian Airlines CO<sub>2</sub> gram/passenger kilometer



### Scandinavian Airlines Flight operations' CO<sub>2</sub> emissions fiscal year 2013

	1,000 tonnes CO <sub>2</sub>
<b>Denmark</b>	
Domestic flights	34
Flights to EU/EEA	410
Flight to outside EU/EEA	499
<b>Norway</b>	
Domestic flights	465
Flights to EU/EEA	310
Flight to outside EU/EEA	67
<b>Sweden</b>	
Domestic flights	229
Flights to EU/EEA	274
Flight to outside EU/EEA	137
<b>Finland</b>	
Domestic flights	7
Flights to EU/EEA	68
Flight to outside EU/EEA	2
<b>EU/EEA</b>	
Departing EU/EEA <sup>1</sup> for Scandinavia and Finland	626
Flights within EU/EEA <sup>1</sup>	1
Departing EU/EEA <sup>1</sup> for outside EU/EEA	1
<b>Outside EU/EEA</b>	
Departing from outside EU/EEA bound for Scandinavia/Finland	681
Departing from outside EU/EEA bound for EU/EEA <sup>1</sup> or outside EU/EEA	2
<b>Total</b>	<b>3,815</b>

<sup>1)</sup> Excluding Denmark, Sweden, Norway and Finland that are reported separately.

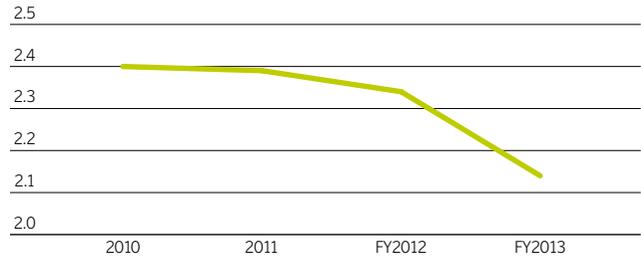
**Aircraft noise**

*Includes all flights flown with SK flight numbers.*

The average noise per departure decreased due to fleet renewal. Scandinavian Airlines received reports of noise violations on nine occasions during FY2013. The number of breaches has declined considerably in recent years as a result of fleet renewal and structured improvement activities, such as specific flight simulator training including scenarios flying to and from airports with strict noise regulations.

An illustrative example is an A320 which replaces an MD-80 where the 85 dB area in km<sup>2</sup> per departure decreased by approximately 55% from 4.7 km<sup>2</sup> to 2.1 km<sup>2</sup>.

**Average aircraft Noise, 85 dB area in km<sup>2</sup> per departure**



**Waste**

*All waste where data is available. Mostly own produced waste from ground facilities, including technical maintenance.*

Waste is divided into unsorted waste and hazardous waste. Hazardous waste is strictly controlled by national authorities and is internally controlled and evaluated by both airlines and suppliers. Data on Scandinavian Airlines, SGH, SCG and SAS Technical Operations' total waste quantities derives from a common data base with COOR. Although waste did not have the same attention levels as energy in FY2013, SAS continues to work on improvement of sorting and recycling of newspapers and aluminum cans in FY2014. No significant emissions or spillages were reported in conjunction with technical maintenance. Both waste reporting and waste-sorting has improved in FY2013. Even if SAS focuses on waste-sorting and waste-handling, there is no target set for waste. The aspect is monitored, registered and followed up in order to detect undesirable or unexplainable trends.

**Total waste in tonnes**



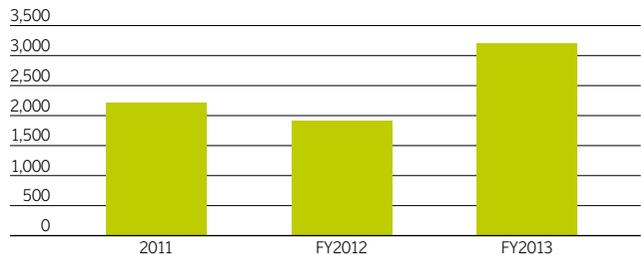
**Deicing fluid**

*All deicing fluids used by SGH directly on aircraft flown with SK flight numbers and on SGH's external customers' aircraft in Scandinavia.*

Deicing is unavoidable from a safety perspective. Glycol is used for the pre-takeoff deicing of aircraft. As this represents an environmental burden, the search continues for alternative techniques. For example, trials are continuing on a system with electronic control of the glycol content and a preventive deicing method that leads to a significant reduction of glycol usage without compromising internal or official safety requirements. Consumption of glycol depends on the size of the airline, both in number of flights and size of the aircraft. The mix of glycol/water depends on the aircraft type, weather conditions, humidity, flight time, route/destination, etc. It is thus impossible to set a reduction target for glycol consumption. Nonetheless, follow-up of use to identify any undesirable deviations is conducted. Even if the amount of glycol has been reduced over the years, the amounts depend on weather demands and can be considerable. Some spillage or leakage of glycol may occur in exceptional circumstances. On these occasions, there are specific mea-

sures to restrict or completely eliminate environmental impact. The remaining glycol is handled according to local regulations and/or reused, so that none or only a low amount is emitted to water. The aim is to reduce the number of glycol spills to zero. In FY2013, SGH reported zero glycol spills from deicing- trucks or deposits.

**Glycol use in m<sup>3</sup>**

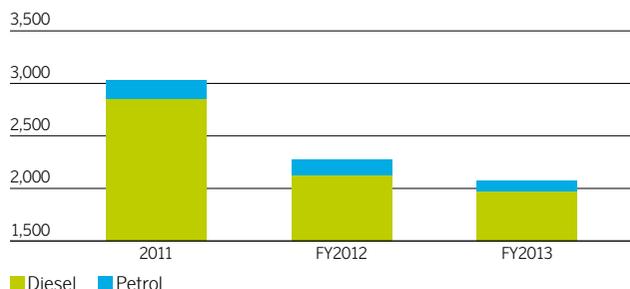


### Fuel used on the ground

All ground fuel used by SGH and SAS Technical Operations own vehicles for all customers.

SAS focuses on reducing ground fuel through LEAN activities and replacement of ground vehicles and equipment with more efficient alternatives to reduce environmental impact and enhance the work environment. In all three Scandinavian countries, SAS participates in voluntary cooperation with various players at the airports in several areas, such as working on ultra-fine particles, measurement of electricity consumption in buildings and the reduction of emissions from vehicles. This cooperation also includes compliance with individual legal requirements. Discussions with airport operators in the Scandinavian countries indicate that the demands on, for example, emissions in relation to vehicles and equipment will be intensified. Combined with SGH's own desire for environmental improvement, this has resulted in ground equipment being improved or replaced by more efficient units. Diesel consumption has been reduced significantly per departure in recent years. During FY2013 seven significant spillages of fuel used on the ground was reported. All were handled according to established procedures.

Ground fuel in liters

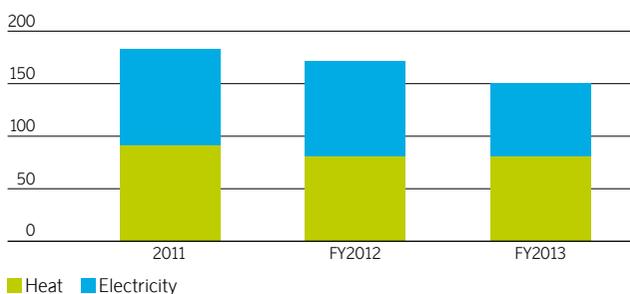


### Energy

All ground energy used in all owned or leased buildings used by Scandinavian Airlines, SGH, SAS Technical Operations, SCG and Blue1.

The work with SAS energy plans continued in FY2013 for all buildings owned or leased in order to achieve the targets up until 2015. The plans were carried out in cooperation with the facility management supplier COOR Service Management. The plans include further improvement of registration procedures for energy consumption, follow-up and continuous reporting. In general, energy consumption is decreasing due to a reduced number of buildings used.

Energy in MWh



### “Other, that is, chemicals and water”

#### Chemicals

SAS Technical Operations is the largest user of chemicals. The chemical products are required by the aircraft manufacturers and authorities and cannot be replaced by SAS alone. The list of products is broad, with many kinds of cleaners, paint, grease, oils, and glues for different commodities such as rubber, textiles and metal. Technical operations generate SAS' highest share of hazardous waste. The use of these products sometimes results in waste and emissions to air and these are handled by approved waste-management providers.

There are many devices in the hangars and documented activities in order to minimize the impact on the environment. These include active contact with the aircraft manufacturer to obtain approval for the substitution of certain products to more environmentally friendly products with less solvent and fewer toxic ingredients. Wastewater and air emissions along with the handling of hazardous waste are strictly controlled by national pollution control authorities and require regular reporting and auditing. Wastewater is handled according to local regulations and in most cases, wastewater is treated in closed drainage and in-house

treatment plants locally. There is an in-house treatment plant at SAS' home bases and there are contracts made with qualified companies to collect and safely deliver the hazardous waste.

The aims of chemical purchasing activities include reduction in storage and the number of suppliers, as well as reducing environmentally hazardous waste. This work has resulted in optimized inventories and less storage and transportation involved in deliveries from suppliers. The number of products purchased has dropped by one third in total and Technical's own purchases have fallen by more than 90% since 2010. SAS has a Chemical Review Board in order to follow-up and ensure compliance with the environmental legislation in the Scandinavian Countries and EU. Examples of tasks in the group are to establish processes to follow the applicable specifications for use on aircraft, ensure the environment aspect review, ensure that hazardous products are substituted by less hazardous ones whenever possible, ensure that the number of different products is kept as low as possible and establish processes in which waste, spills and emissions are reduced as much as possible.

## Water

Data for SAS' total water quantities derives from a common data base with COOR. Although water did not have the same attention levels as energy and waste in FY 2013, SAS' usage of water did however decrease by 34% in FY2013 compared with 2010. The reduction is due to improved processes and less maintenance work conducted within SAS Technical Operations.

Water in 1,000 m<sup>3</sup>



## Environmental compliance and permits

A detailed description of SAS' licenses and environment-related permits is presented in the Report by the Board of Directors in the SAS Annual Report with sustainability overview fiscal year 2013 pages 42–43.

During FY2013 Scandinavian Airlines received nine reports of noise violations at airports.

The new environmental permit that Stockholm-Arlanda Airport submitted in May 2011 was in progress during FY2013.

Scandinavian Airlines estimates that around 27 kilograms of halons were emitted during FY2013.

SAS Oil is a jet fuel purchasing company for SAS at Copenhagen, Oslo and Stockholm airports. Through SAS Oil, SAS is a minority owner of a number of smaller companies that deliver jet fuel. SAS has ensured that these companies have the necessary permits, contingency plans and insurance. No severe incidents breaching any environmental permits were reported in FY2013.

## Emissions calculation and carbon offset

The SAS emissions calculator, which is available on the SAS website has been approved by a third-party review. The calculator provides information about all SAS' flights, with greenhouse gas emissions pre-sented separately. Most calculators on the market calculate the emissions based on average fleet performance and a CO<sub>2</sub>-equivalent based on different greenhouse gas emissions. SAS has chosen not to do so because there is no consensus regarding how to calculate NO<sub>x</sub>, particles and water vapor emissions to CO<sub>2</sub> among scientists and experts. SAS offers the possibility to offset carbon emissions from a specific flight in connection with the emissions calculator. Less than 1% of the customers who book their travel via Scandinavian Airlines websites use this possibility. The offer is also available for SAS Corporate Customers and SAS offsets its own business travel.

## Financial aspects of environmental responsibility

SAS' environmental work has several overriding purposes. Besides making resources use more efficient and improving environmental performance, it includes ensuring that the operations comply with environmental laws and regulations. Below is an account of some of the most important financial aspects of environmental work.

## Infrastructure charges and security costs

Air transport pays the costs for the infrastructure it needs and uses to conduct flights, i.e., airports and air traffic control. During FY2013 these were MSEK 7,348 for Scandinavian Airlines (excl. Widerøe). Corre-

spondingly, Scandinavian Airlines also pays MSEK 1,041 in safety costs, which for most other modes of transportation are financed by taxes.

## Environment-related costs

Scandinavian Airlines' external environment-related costs were MSEK 313 in FY2013. These costs consisted of environment-related taxes and charges that are often linked with the aircrafts' environmental performance and are part of the landing fee. Other environment-related costs, such as costs for waste management, purification plants and the costs for environmental staff, amounted to MSEK 30. Scandinavian Airlines has no known major environment-related debts or contingent liabilities, for example in the form of contaminated soil.

The cost for EU-ETS were in total MSEK 45 for Scandinavian Airlines, Blue1 and Widerøe in calendar year 2012.

## Environment-related savings

Scandinavian Airlines has an ambitious fuel-saving program. The calculated fuel efficiency improvement amounted to 1.6% in FY2013 compared with FY2012. This corresponds to approximately MSEK 126 in cost savings.

## Environment-related investment

The investment made by SAS in accordance with the policies shall be both environmentally and economically sound, thus contributing to SAS' value growth and helping to ensure that SAS can meet adopted future environmental standards. During FY2013 no significant environment-related investments were conducted. This is the fact since leasing is the preferred solution rather than investment in aircraft, vehicles, computers, etc.

This means that SAS' environment-related investments disclosed in the Sustainability Report have decreased but not the actual renewal of vehicles, computers, aircraft, etc. It should also be noted that investments not emphasized in this section may also have a positive impact on the environment. Scandinavian Airlines has an ongoing engine upgrade program within the framework of the regular technical maintenance on the majority of the Boeing 737NG fleet. The engine upgrade is not listed as an environment-related investment since it is an integrated part of SAS' continuous aircraft maintenance plan. However, this does support SAS' environmental goals. In practice, this means that the engines were upgraded to the latest version, so-called "Tech Insert" through the summer of 2011 and "Evolution" thereafter. To date, more than half of the fleet's engines in the Boeing 737NGs delivered before 2006 have been upgraded and are thereby approximately 3% more fuel-efficient than the engine with which the aircraft was delivered. Aircraft delivered after 2007 are already equipped with the "Tech Insert" and aircraft delivered after the summer of 2011 have "Evolution".

### Research and development (R&D)

SAS contributes in many ways to the emergence of a sustainable society. Among them are the commitment to and support of the development and dissemination of such green technologies as sustainable jet fuel and environmentally adapted flights. In FY2013, SAS was involved in the Sustainable Aviation Fuel User Group whose goal is to hasten the development, certification and commercial use of environmentally and socially sustainable aviation fuel. SAS also cooperates with the Scandinavian suppliers of air traffic control for the purpose of speeding up the

development of more efficient use of air space. SAS engages in technology development benefiting the entire industry. However, SAS conducts no proprietary research and development. SAS also plays a leading role internationally in drafting environment-related norms and standards for air transport. SAS is represented on a number of committees, projects and working groups related to the environment and corporate social responsibility in such bodies as IATA, ICAO, AEA, N-ALM and SESAR JU.

### Newer aircraft of the right size creates less emissions

SAS' strategy is to replace older aircraft with newer ones. An example of the improvement is the A320, which has eighteen seats more than the MD-80 while reducing the fuel consumption and associated emissions by approximately 20% on a comparable flight. The 85 dB area in km<sup>2</sup> per departure is also reduced by approximately 55%.

It is also important to use the right size of aircraft on every possible occasion. That is why SAS uses Boeing 737NGs and A320 family aircraft of different sizes. They have 120, 141 and 183 and 141, 168 and 198 seats, respectively. This entails great flexibility according to demand, which guarantees the lowest possible total emissions at any given time. Flying aircraft that are too big generates unnecessary emissions even if it generates a better theoretical result per available seat kilometer.

If we look at a Boeing 737NG on a typical domestic route in Norway during May 2013, it is evident that the fuel consumption and corresponding emissions are lower in a smaller aircraft. When using a B737-800 with 183 seats and 141 passengers onboard, the total fuel consumption (in average) is approximately 6–7% higher than a full B737-700.



## Key environmental figures for Scandinavian Airlines and SAS Ground Handling

<b>Flight Operations Aspect</b>	<b>Aspect Input (1) 2011</b>	<b>Aspect Input (1) FY2012</b>	<b>Aspect Input (1) FY2013</b>	<b>unit (1)</b>	<b>Production Input (2) 2011</b>	<b>Production Inputs (2) FY2012</b>	<b>Production Inputs (2) FY2013</b>	<b>unit (2)</b>
Jet fuel – used	1,175	1,191	1,211	1,000 tonnes	30,751	32,005	33,633	million PK
Jet fuel – CO <sub>2</sub>	3,702	3,752	3,815	1,000 tonnes	30,751	32,005	33,633	million PK
Jet fuel – NO <sub>x</sub>	15.0	15.3	16.2	1,000 tonnes	30,751	32,005	33,633	million PK
Aircraft Noise – takeoff	695	684	639	1,000 km <sup>2</sup>	291	292	299	1,000 departures

<b>Ground Handling Aspect</b>	<b>Aspect Input (1) 2011</b>	<b>Aspect Input (1) FY2012</b>	<b>Aspect Input (1) FY2013</b>	<b>unit (1)</b>	<b>Production Input (2) 2011</b>	<b>Production Inputs (2) FY2012</b>	<b>Production Inputs (2) FY2013</b>	<b>unit (2)</b>
Vehicle Diesel – Fuel used	2,763	2,041	1,883	1,000 liters	368	360	354	1,000 departures
Vehicle Diesel – CO <sub>2</sub>	7,358	5,435	5,013	tonnes	368	360	354	1,000 departures
Vehicle Petrol – Fuel used	125	99	63	1,000 liters	368	360	354	1,000 departures
Vehicle Petrol – CO <sub>2</sub>	285	224	143	tonnes	368	360	354	1,000 departures
Fuel spills	6	1	4	Instances	368	360	354	1,000 departures
Glycol used	2,215	1,913	3,208	1,000 m <sup>3</sup>	16.8	15.7	21.9	1,000 deicings

<b>Technical Operations Aspect</b>	<b>Aspect Input (1) 2011</b>	<b>Aspect Input (1) FY2012</b>	<b>Aspect Input (1) FY2013</b>	<b>unit (1)</b>	<b>Production Input (2) 2011</b>	<b>Production Inputs (2) FY2012</b>	<b>Production Inputs (2) FY2013</b>	<b>unit (2)</b>
Vehicle Diesel – Fuel used	84	82	89	1,000 liters	259	264	299	1,000 departures
Vehicle Diesel – CO <sub>2</sub>	223	217	238	tonnes	259	264	299	1,000 departures
Vehicle Petrol – Fuel used	63	52	33	1,000 liters	259	264	299	1,000 departures
Vehicle Petrol – CO <sub>2</sub>	143	118	76	tonnes	259	264	299	1,000 departures

<b>SAS Cargo Groups' Aspect</b>	<b>Aspect Input (1) 2011</b>	<b>Aspect Input (1) FY2012</b>	<b>Aspect Input (1) FY2013</b>	<b>unit (1)</b>	<b>Production Input (2) 2011</b>	<b>Production Inputs (2) FY2012</b>	<b>Production Inputs (2) FY2013</b>	<b>unit (2)</b>
CO <sub>2</sub> – Jet fuel used	3,702	3,752	3,815	1,000 tonnes	3,595	3,741	3,992	million TK
CO <sub>2</sub> – Truck Diesel used		2,680	2,936	tonnes		14,347	16,262	000 TK

<b>Energy, Waste and Water</b>	<b>Aspect Input (1) 2011</b>	<b>Aspect Input (1) FY2012</b>	<b>Aspect Input (1) FY2013</b>	<b>unit (1)</b>	<b>Production Input (2) 2011</b>	<b>Production Inputs (2) FY2012</b>	<b>Production Inputs (2) FY2013</b>	<b>unit (2)</b>
Energy	183	172	149	GWh	13.9	13.6	12.9	1,000 FTE
As of electricity	92	90	69	GWh	13.9	13.6	12.9	1,000 FTE
As of heating	91	81	81	GWh	13.9	13.6	12.9	1,000 FTE
As of heating oil (included in "heating")	0.8	0	2	GWh	13.9	13.6	12.9	1,000 FTE
Unsorted Waste	731	566	406	tonnes	13.9	13.6	12.9	1,000 FTE
Hazardous waste	178	172	223	tonnes	13.9	13.6	12.9	1,000 FTE
Water	153	146	99	1,000 m <sup>3</sup>	13.9	13.6	12.9	1,000 FTE

**Relationship (1) to (2)**

<b>Relationship (1) to (2)</b>	<b>Result FY2012</b>	<b>Result FY2013</b>	<b>Result FY2012, %</b>	<b>Result FY2013, %</b>
Kilo per PK	0.037	0.036	-2.6	-3.2
CO <sub>2</sub> gram/PK	117	113	-2.6	-3.2
NO <sub>x</sub> gram/PK	0.48	0.48	-1.9	0.3
85 dB area in KM <sup>2</sup> per departure	2.34	2.14	-2.1	-8.7

**Relationship (1) to (2)**

<b>Relationship (1) to (2)</b>	<b>Result FY2012</b>	<b>Result FY2013</b>	<b>Result FY2012, %</b>	<b>Result FY2013, %</b>
1000 liters per departure	5.7	5.3	-24.7	-6.2
CO <sub>2</sub> kilo per departure	15.1	14.1	-24.7	-6.2
1,000 liters per departure	0.3	0.2	-19.6	-35.4
CO <sub>2</sub> kilo per departure	0.6	0.4	-19.6	-35.4
Spills per 1,000 departures	0.00	0.01		
Liter per deicing	122	147	-7.5	20.4

**Relationship (1) to (2)**

<b>Relationship (1) to (2)</b>	<b>Result FY2012</b>	<b>Result FY2013</b>	<b>Result FY2012, %</b>	<b>Result FY2013, %</b>
1,000 liters per departure	0.3	0.3	-4.4	-3.6
CO <sub>2</sub> kilo per departure	0.8	0.8	-4.4	-3.6
1,000 liters per departure	0.2	0.1	-19.0	-43.2
CO <sub>2</sub> kilo per departure	0.4	0.3	-19.0	-43.2

**Relationship (1) to (2)**

<b>Relationship (1) to (2)</b>	<b>Result FY2012</b>	<b>Result FY2013</b>	<b>Result FY2012, %</b>	<b>Result FY2013, %</b>
CO <sub>2</sub> gram/TK	1,003	956	-2.6	-4.7
CO <sub>2</sub> gram/TK	187	181		-3.3

**Relationship (1) to (2)**

<b>Relationship (1) to (2)</b>	<b>Result FY2012</b>	<b>Result FY2013</b>	<b>Result FY2012, %</b>	<b>Result FY2013, %</b>
MWh per FTE	12.6	11.6	-4.2	-8.3
MWh per FTE	6.6	5.3	-0.2	-19.9
MWh per FTE	6.0	6.2	-8.3	4.6
MWh per FTE	0.03	0.1	-41.5	292.9
kilo per FTE	41.4	31.4	-21.0	-24.2
kilo per FTE	12.6	17.2	-1.6	37.1
m <sup>3</sup> per FTE	10.7	7.6	-2.6	-28.7

# About GRI

GRI's Sustainability Reporting Guidelines, version 3, stipulates that SAS should determine which entities' performance will be reported in the Sustainability Report. The entities included in SAS' Sustainability Report November 2012–October 2013 are presented in the introduction of SAS' Accounting Principles for Sustainability Reporting on **pages 40–41**. The reporting boundary, including changes compared with previous reports, is disclosed in the SAS' Accounting Principles for Sustainability Reporting.

GRI's Sustainability Reporting Guidelines, version 3, prescribes disclosure of GRI Application Level Criteria for organizations using the Guidelines.

	C	C+	B	B+	A	A+
Self-declared						√
Third-party Checked						√

SAS has self-declared its reporting to be Application Level A+.

PwC has checked SAS's reporting and has confirmed it to be Application Level A+.

Regarding disclosure of management approach, as required by GRI, SAS has chosen to report on management approach as an integrated part of the SAS Annual Report with sustainability overview November 2012–October 2013 and SAS' Sustainability Report November 2012–October 2013. See below for further details regarding references to SAS' management approach:

*All page references herein refer to the SAS Sustainability Report November 2012–October 2013 unless otherwise specified.*

## Guideline on Management Approach

A general description of SAS' approach to responsibility for sustainable development can be found on **pages 4–7** where SAS defines social, environmental, and financial responsibility, including the SAS' comprehensive objectives governing SAS' operations. Strategies, values, and extracts from policies guiding the operations of SAS can be found on **pages 11 and 19** (policies, with relevance for sustainability, can also be found on the SAS Group's homepage, [www.sasgroup.net](http://www.sasgroup.net)).

On **page 6**, a description of the organization and management of SAS' sustainability work can be found. Relevant information concerning both positive and negative aspects of SAS' performance is disclosed throughout the report, the most significant aspects are commented on in the Board of Directors' Report on **pages 38–43** in the SAS Annual Report with sustainability overview November 2012–October 2013. Risks and opportunities are included in SAS Annual Report with sustainability overview November 2012–October 2013, on **pages 4–7 and 32–34**.

## Economic responsibility

Information regarding financial results can be found on **page 1** and on **page 38** and onward in SAS Annual Report with sustainability overview November 2012–October 2013. Information concerning SAS' economic responsibility is provided on **pages 17 and 26–27**, where SAS' indirect economic impact is described. Information regarding market shares etc. is located on **pages 35–36**, in SAS Annual Report with sustainability overview November 2012–October 2013.

## Environmental responsibility

SAS' main environmental impact is related to the combustion of non-renewable fuels. Thus, the major disclosures regarding environmental aspects are consumption of non-renewable fuels, emissions of CO<sub>2</sub> and NO<sub>x</sub>, and noise. This information can be found on **pages 3, and 28–29**. Targets and results of SAS' environmental work are disclosed on **pages 21 and 23–25**. On **page 6**, the organization and management of SAS' sustainability work are described, together with processes for feedback and reporting of environmental data.

## Social responsibility

**Labor practices and decent work:** Relevant information regarding SAS' approach to labor practices and decent work is presented on **pages 7 and 13–17**. Policies regarding labor practices and decent work are disclosed on SAS Group's homepage ([www.sasgroup.net](http://www.sasgroup.net)). The process for handling questions regarding labor practices and managing feedback and reporting of labor data is described on **page 7**.

**Human rights:** Relevant information regarding SAS' approach to human rights can be found on **page 7** and in the GRI Cross-reference list.

**Society:** Relevant information regarding SAS' approach to communities, corruption, public policy, anti-competitive behavior, and compliance, can be found on **page 7** and in the SAS' Code of Conduct available on the SAS Group's webpage. For any significant case of non-compliance during the year information is disclosed in the Board of Director's Report on **pages 38–43** in SAS Annual Report with sustainability overview November 2012–October 2013.

**Product responsibility:** SAS mainly offers services. Where relevant, information regarding service responsibility is disclosed as a part of SAS's social responsibility on **pages 13–17** otherwise they are commented on in the GRI Cross-reference list.

# Sustainability Report – GRI Cross Reference List

Core Indicator	Page reference	Reported	Comments
<b>Profile</b>			
<b>Strategy &amp; Analysis</b>			
1.1 Statement from the most senior decision maker of the organization about the relevance of sustainability to the organization and its strategy.	AR13 pages 2–3. SR13 page 1.		
1.2 Description of key impacts, risks, and opportunities.	AR13 pages 32–34. SR13 pages 7 and 10.		Description of major risks identified and corresponding actions are described on pages 32–34 (AR13). SAS aspects are on pages 10 (SR13).
<b>Organizational Profile</b>			
2.1 Name of reporting organization.	SR13 back cover.		
2.2 Primary brands, products, and/or services.	AR13 pages 26–28.		
2.3 Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	AR13 pages 13, 26–28 and 82.		Operational structure on page 82 (AR13), Joint Ventures and Partners on page 17 (AR13). Airlines and operating companies on pages 26–28 (AR13).
2.4 Location of organization’s headquarters.	SR13 back cover.		SAS koncernen Kabinvägen 5, Arlanda, 195 87 Stockholm.
2.5 Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	AR13 pages 16 and 22–23.		The main markets for SAS are described on page 22–23 (AR13). A map detailing all locations is to be found on page 16 (AR13).
2.6 Nature of ownership and legal form.	AR13 pages 35–36, 82 and 94–95.		Legal form is described on page 82 and largest shareholders on pages 94–95 (AR13).
2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	AR13 page 1–17 and 22–23.		The main markets for SAS are described on pages 16–17 (AR13). Scandinavian Airlines provides a description of main markets on pages 22–23 (AR13). A map detailing all locations is to be found on page 16 (AR13).
2.8 Scale of the reporting organization, including: • Number of employees; • Net sales (for private sector organizations) or net revenues (for public sector organizations); • Total capitalization broken down in terms of debt and equity (for private sector organizations); and • Quantity of products or services provided.	AR13 pages 26–28, 44 and 57.		<ul style="list-style-type: none"> <li>• Passengers served on pages 26–28 (AR13.)</li> <li>• Net sales on page 44 (AR13)</li> <li>• Total capitalization broken down in terms of debt and equity on page 44 (AR13)</li> <li>• Number of employees on pages 57 (AR13) (Note 3)</li> </ul>
2.9 Significant changes during the reporting period regarding size, structure, or ownership.	AR13 pages 4–9.		Widerøe was sold during the year and the environmental indicators are disclosed separately without external review. Read more in the Accounting Principles.
2.10 Awards received in the reporting period.	AR13 page 12.		SAS received IATA’s Fast Travel Award Platinum during the reporting period.
<b>Report Parameter</b>			
<b>Report Profile</b>			
3.1 Reporting period (e.g., fiscal/calendar year) for information provided.	SR13 front cover.		
3.2 Date of most recent previous report (if any).	SR13 inside front cover.		Previous reports can be obtained from SAS webpage ( <a href="http://www.sasgroup.net">www.sasgroup.net</a> ).
3.3 Reporting cycle (annual, biennial, etc.)	AR13 page 100.		Annual reporting.
3.4 Contact point for questions regarding the report or its contents.	SR13 inside front cover.		Inquiries regarding the Annual Report are handled by Investor Relations and inquiries regarding the Sustainability Report are handled by the Head of Environment and CSR.
<b>Report Scope and Boundary</b>			
3.5 Process for defining report content, including: • Determining materiality; • Prioritizing topics within the report; and • Identifying stakeholders the organization expects to use the report.	SR13 pages 7 and 10.		
3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	SR13 inside front cover and pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		
3.7 State any specific limitations on the scope or boundary of the report.	SR13 inside front cover and pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		

AR13 = SAS Annual Report with sustainability overview November 2012–October 2013    SR13 = SAS Sustainability Report November 2012–October 2013  
■ Reported    ■ Partially reported    ■ Not reported

Core Indicator	Page reference	Reported	Comments
3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	AR13 pages 50–56. SR13 pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		The accounting principles of the SAS Annual Report are described on page 50–56 (AR13). If the Sustainability Report deviates from these principles that will be described in the Accounting Principles for Sustainability Reporting November 2012–October 2013.
3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	AR13 pages 50–56. SR13 pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		The accounting principles of the SAS' Annual Report are described on page 50–56. If the Sustainability Report deviates from these principles that will be described in the Accounting Principles for Sustainability Reporting November 2012–October 2013.
3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	AR13 pages 33–43 and 48–53. SR13 pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		Any significant re-statements regarding the financial report is disclosed in the Board of Directors Report on pages 33–43 or in the accounting principles on pages 50–56 (AR13). Re-statements regarding the Sustainability Report is disclosed in Accounting Principles for Sustainability Reporting November 2012–October 2013.
3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	SR13 pages 40–41 (Accounting Principles for Sustainability Reporting November 2012–October 2013).		
<b>GRI Content Index</b>			
3.12 Table identifying the location of the Standard Disclosures in the report.	SR13 pages 31–39.		
<b>Assurance</b>			
3.13 Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	AR13 page 93. SR13 page 44.		The Auditor's Report of the Annual Report can be found on page 93 (AR13). The auditor's report of sustainability report can be found on page 46 (SR13).
<b>Governance</b>			
<b>Governance</b>			
4.1 Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	AR13 pages 82–91.		The Corporate Governance report on pages 82–91 (AR13) discloses detailed information on governance structure.
4.2 Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	AR13 pages 88.		Fritz H. Schur, the SAS Group Chairman, does not hold any executive position in SAS.
4.3 For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	AR13 pages 88–89.		A majority of the members of the Board of Directors are defined as independent from major shareholders as described on pages 88–89 (AR13). All of the members of the Board of Directors are non-executive except for the union representatives whom are elected through the trade unions' own process.
4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	AR13 pages 82–83. SR13 page 13.		The annual meeting is the main mechanism for shareholders to provide recommendations or direction to the board of directors which is described on pages 82–83 (AR13). SAS has union representatives on the Board of Directors as described on page 13 (SR13).
4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	AR13 pages 57–58.		As stated on pages 57–58 (AR18) the executive compensation only consists of a fixed part as of fiscal year 2013.
4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided.	AR13 pages 82–83 and 84–85.		A majority of the members of the Board of Directors are defined as independent from major shareholders as described on pages 84–85 (AR13). The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on pages 82–83 (AR13).
4.7 Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	AR12 page 79 and pages 82–83.		The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on page 79 (AR13). The Board of Directors prior and current engagements are disclosed on pages 82–83 (AR13).

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Core Indicator	Page reference	Reported	Comments
4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	AR13 pages 6–7. SR13 pages 11 and 19.		
4.9 Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	AR13 pages 83–94. SR13 pages 6–7.		The Board of Directors have sustainable development on their agenda as described on pages 83–84 (AR13). The organization and structure of the SAS' sustainability work is described on pages 6–7 (SR13).
4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	AR13 pages 82–86.		The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on page 83 (AR13). The Annual Meeting is the main forum for all shareholders evaluation of the board of directors as described on pages 82–83 (AR13).

#### Commitments to External Initiatives

4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization.	SR13 pages 7, 19 and 25.		SAS has joined the UN Global Compact, which prescribes the precautionary approach as one of their ten principles. The precautionary approach is also a principle of the Rio Declaration which is a part of both the SAS' Code of Conduct and the SAS' Purchasing Policy. SAS commitment to the UN Global Compact is described on page 7. Examples of how the precautionary approach has been applied is described on page 19 onwards (SR13) regarding SAS Environmental Programs and on 25 (SR13) regarding SAS Tech's activities for reduction and substitution of chemicals.
4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	SR13 pages 4 and 7.		
4.13 Memberships in associations (such as industry associations) and/or national/international advocacy organizations.	SR13 pages 7–9 and 27.		SAS is members of several industry and business organizations. The memberships stated on pages 7–9 (SR13) and page 27 (SR13) are considered the most important ones.

#### Stakeholder Engagement

4.14 List of stakeholder groups engaged by the organization.	SR13 page 9.		
4.15 Basis for identification and selection of stakeholders with whom to engage.	SR13 pages 8–9.		General selection criteria are not used due to the fact that SAS never denies a stakeholder an opportunity for dialogue.
4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	SR13 pages 8–9.		The approach to stakeholder engagement is described on page 8–9 (SR13). In the table on page 9 (SR13) specific dialogues with stakeholders are described where the frequency varies depending on the nature of the dialogue.
4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	SR13 pages 8–10.		

#### Performance Indicators

Page reference Reported Comments

#### Economic

#### Economic Performance

EC1 Economic value generated and distributed.	AR12 pages 44–45. SR13 pages 17 and 26.		Economic value generated and distributed is disclosed on pages 44–45 (AR13). Sustainability specific economic values are disclosed on pages 17 and 26 (SR13). SAS is aware that this indicator is not reported in line with the GRI-protocol. We choose to report the same way as previous years.
EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change.	SR13 pages 19–22 and page 26.		Perspectives on climate change, including risks and opportunities, are described on pages 19–22 (SR13). SAS' activities to reduce the emissions and the effect on climate change are described throughout the sustainability report. The financial implications of environmental related costs are described on pages 26 (SR13).
EC3 Coverage of the organization's defined benefit plan obligations.	AR13 pages 64–65.		SAS' defined benefit pensions are disclosed in note 15 on pages 64–65 (AR13) in accordance with IAS 19.

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■ Reported ■ Partially reported ■ Not reported

Performance Indicators	Page reference	Reported	Comments
EC4 Significant financial assistance received from government.	AR13 pages 94–95.		SAS receives no significant subsidies. Within the airline industry, all operators can be eligible to a discount during the first months of operation on a new flight connection. Some connections to smaller airports, notably in Norway and in Sweden, are subject to a public bidding process where the winning bid gives the operator a fixed sum for operating a flight connection under given frequencies, airplane sizes and timeframes. Due to the open bidding process, SAS does not consider this to be a form of subsidy. The Scandinavian governments are major shareholders of SAS as reported on pages 94–95 (AR13).
<b>Market Presence</b>			
EC6 Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.			SAS promotes the consideration of locally based suppliers. Fuel is for example never sourced from only one supplier since the SAS' Purchasing Policy promotes using multiple suppliers for significant purchases. Catering and waste disposal is for example usually provided by locally-based suppliers. However, SAS does not collect data on aggregated level on this indicator.
EC7 Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.			SAS employees are based in the Nordic countries. SAS seek to attain as high as possible level of locally hired management due to both better knowledge of local markets and lower cost compared to expatriates. However, SAS does not collect data on aggregated level on this indicator.
<b>Indirect Economic Impacts</b>			
EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.			SAS' airline operations are an important part of the transportation infrastructure in all countries where it operates. All in-kind or pro-bono engagement regarding infrastructure, e.g. free or subsidized airline tickets, is performed by each subsidiary by themselves since they are the ones best suited to decide which engagements to support. However, SAS does not collect data on aggregated level on this indicator. Examples of humanitarian assistance and partnerships are described on page 14 (SR13).
EC9 Understanding and describing significant indirect economic impacts, including the extent of impacts.	SR13 page 27.		Research and development is described on page 27 (SR13).
<b>Environmental</b>			
<b>Materials</b>			
EN1 Materials used by weight or volume.			SAS don't use any material for producing air transport.
EN2 Percentage of materials used that are recycled input materials.			
<b>Energy</b>			
EN3 Direct energy consumption by primary energy source.	SR13 pages 3 and 28–29.		The jet fuel consumed by SAS is the dominant source of energy. All certified jet fuels are fossil based. Direct energy consumption is reported on the following pages: Jet Fuel – pages 28–29 (SR13). Diesel/Petrol – pages 28–29 (SR13).
EN4 Indirect energy consumption by primary source.	SR13 pages 3 and 28–29.		SAS reports energy use in kWh or GWh as applicable. SAS does not convert these figures into joule. Reporting this indicator by primary source is not considered relevant due to the fact that jet fuel is the completely dominant source of energy for SAS.
EN5 Energy saved due to conservation and efficiency improvements.	SR13 pages 19–22, 25 and 29.		SAS reports on efficiency as fuel consumption relative to passenger kilometers on pages 29 (SR13). The fuelsave programs are described on pages 19–22 and 26 (SR13)
EN6 Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	SR13 pages 19–22 and 26.		SAS reports on efficiency as fuel consumption relative to passenger kilometers on pages 29 (SR13). The fuelsave program is described on pages 19–22 and 26 (SR13). The possibility for the customer to offset the CO <sub>2</sub> emissions from their flight is described on page 26 (SR13). The research for a jet fuel partly based on renewable resources is described on page 20 (SR13).
EN7 Initiatives to reduce indirect energy consumption and reductions achieved.			Indirect energy consumption (excluding purchased electricity) is not considered material for SAS. In regards to employee business travel, a vast majority of all flights conducted by employees are accounted for in direct greenhouse gas emissions and all employee business travel is CO <sub>2</sub> -compensated.

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■ Reported ■ Partially reported ■ Not reported

Performance Indicators	Page reference	Reported	Comments
<b>Water</b>			
EN8 Total water withdrawal by source.	SR13 pages 3 and 28–29.	Partially reported	Water withdrawal as a total figure is disclosed on pages 28–29 (SR13). Dividing it by source is not deemed material.
<b>Biodiversity</b>			
EN11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	SR13 pages 4 and 8–9.	Not reported	SAS' impact on biodiversity is described on page 4 (SR13). SAS does in general not own land. On locations where SAS' operations can have an indirect significant impact on biodiversity SAS involves in dialogues with the airport operators as described on pages 8–9 (SR13).  SAS, through Star Alliance, has a partnership agreement – Biosphere Connections – with a group of international organizations such as UNESCO, IUCN and Convention of wetlands (Ramsar) as described on <a href="http://www.staralliance.com/en/about/initiatives/environment/">http://www.staralliance.com/en/about/initiatives/environment/</a>
EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.		Partially reported	SAS' impact on biodiversity is described on page 4 (SR13). SAS does in general not own land. On locations where SAS' operations can have an indirect significant impact on biodiversity SAS involves in dialogues with the airport operators. An example is described on pages 8–9 (SR13).
<b>Emissions, Effluents, and Waste</b>			
EN16 Total direct and indirect greenhouse gas emissions by weight.	SR13 pages 4 and 28–29.	Reported	SAS reports on direct greenhouse gas emissions on pages 4 and 28–29 (SR13).
EN17 Other relevant indirect greenhouse gas emissions by weight.		Not reported	SAS does not consider other indirect greenhouse gas emissions to be material in comparison to the direct emissions which is the most significant environmental impact of the SAS' operations. In regards to employee business travel, a vast majority of all flights conducted by employees are accounted for in direct greenhouse gas emissions.
EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved.	SR13 pages 19–22.	Reported	Greenhouse gas emissions are the most significant environmental impact of SAS. Thus, initiatives to reduce greenhouse gas emissions are presented throughout the report. Reductions achieved, both absolute and relative, are presented on pages 19–22 (SR13).
EN19 Emissions of ozone-depleting substances by weight.	SR13 page 26.	Reported	SAS' airline operations have an exemption to use halons and submit annual reports to the authorities. The reason for the exemption is that there are no safe alternatives to halons as a fire extinguishant. The amount of halons used is disclosed on page 26 (SR13). Any emissions of halons will be disclosed in the Sustainability Report.
EN20 NO <sub>x</sub> and other significant air emissions by type and weight.	SR13 pages 4 and 28–29.	Reported	SAS reports NO <sub>x</sub> emissions. Other types of emissions are not considered material in relation to the emissions of CO <sub>2</sub> and NO <sub>x</sub> .
EN21 Total water discharge by quality and destination.		Not reported	SAS does not report on discharges to water due to the fact that SAS' normal operations does not cause any material discharges.
EN22 Total weight of waste by type and disposal method.	SR13 pages 28–29.	Partially reported	Waste is separated into unsorted waste and hazardous waste.
EN23 Total number and volume of significant spills.	AR13 pages 42–43. SR13 pages 24 and 28–29.	Reported	All significant spills are disclosed in the Sustainability report and/or the Report by the Board of Directors.
<b>Products and Services</b>			
EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	SR13 pages 19–22.	Reported	The purposes of the SAS' environmental efforts are all focused on reducing the environmental impact of the services provided. Examples are SAS goal to reduce flight emissions by 20% in 2015 compared with 2005 can be found on page 19-22 (SR13) and SAS work on alternative sustainable jet fuel can be found on page 20 (SR13).
EN27 Percentage of products sold and their packaging materials that are reclaimed by category.		Not reported	The products sold by SAS are not considered material.
<b>Compliance</b>			
EN28 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	AR13 pages 42–43.	Reported	The SAS discloses significant fines subsidiary by subsidiary and/or in the Report by the Board of Directors. No fines in FY2013.

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Performance Indicators	Page reference	Reported	Comments
<b>Transport</b>			
EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	SR13 pages 28–29.		The fuel consumption of SAS ground operations' vehicles contains transportation of goods on the airports where SAS ground operations operates. The transportation of workforce members is included in the figures for the environmental impact of SAS.
<b>Overall</b>			
EN30 Total environmental protection expenditures and investments by type.	SR13 page 26.		SAS discloses sustainability-related charges, costs and investments on page 26 (SR13). Due to long history of reporting on internal definitions that are similar but not exactly as prescribed in the indicator protocol.
<b>Social Performance: Labor Practices &amp; Decent Work</b>			
<b>Employment</b>			
LA1 Total workforce by employment type, employment contract, and region.	AR13 page 57. SR13 page 16.		The workforces, in terms of number of employees, are reported in accordance with SAS' Accounting Principles for Sustainability Reporting November 2012–October 2013. SAS does only report total workforce by region, not by employment type and contract.
LA2 Total number and rate of employee turnover by age group, gender, and region.			SAS does not report detailed turnover figures. Employee turnover is not deemed a significant key performance indicator on aggregated group level.
<b>Labor/Management Relations</b>			
LA4 Percentage of employees covered by collective bargaining agreements.	SR13 page 13.		In general, all SAS employees are covered by collective bargaining agreements. The main exception is top management on group level.
LA5 Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.			Information, consultation and negotiation procedures with employees over significant operational issues are regulated by national laws and regulations. Thus, minimum notice periods are not reported.
<b>Occupational Health and Safety</b>			
LA6 Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	SR13 page 15.		Joint management-worker health and safety committees cover all employees in SAS.
LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	AR13 pages 1 and 26–27. SR13 pages 14 and 16–17.		
LA8 Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	SR13 page 15.		SAS don't have any specific programs but the HSE-department described on page 15 (SR13) continuously assists all SAS personnel regarding health issues, for example stress or HIV/AIDS.
<b>Training and Education</b>			
LA10 Average hours of training per year per employee by employee category.	SR13 page 14.		SAS report total hours of training, not per employee or employee category.
LA11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	SR13 pages 13–14.		SAS' efforts on skills management is described on pages 13–14 (SR13). Programs to support employees in career transitions is available through both SAS' own effort and programs provided by local/regional/national governments. Sabbatical periods and severance pay is regulated through national laws and regulations. Since the Scandinavian countries have a long history of close cooperation between businesses, trade unions and government the solutions regarding restructuring etc. is handled in a dialogue with the parties concerned.
LA12 Percentage of employees receiving regular performance and career development reviews.			All employees have the right to get annual performance and career development reviews.
<b>Diversity and Equal Opportunity</b>			
LA13 Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	AR13 pages 88–91. SR13 page 16.		The board of directors and management is presented on pages 88–91 (AR13). Gender breakdown of employees is presented on page 16 (SR13). No further indicators of diversity are aggregated on company level.
LA14 Ratio of basic salary of men to women by employee category.	SR13 page 13.		A vast majority of all SAS employees are subject to collective bargaining agreements where the salary and other benefits are defined, equal for both women and men as described on page 13 (SR13). Thus, no indicator on salary ratio is reported.

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Performance Indicators	Page reference	Reported	Comments
<b>Social Performance: Human Rights</b>			
<b>Investment and Procurement Practices</b>			
HR1 Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.			The SAS General Terms & Conditions includes clauses regarding Global Compact's 10 principles.  The majority of SAS suppliers are assessed with questions regarding sustainability related issues.
HR2 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.			The SAS General Terms & Conditions includes clauses regarding Global Compact's 10 principles.
HR3 Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	SR13 page 14.		SAS provides an e-learning program regarding Code of Conduct. The number of employees that have completed the program in the fiscal year is reported on page 14 (SR13).
<b>Non-Discrimination</b>			
HR4 Total number of incidents of discrimination and actions taken.	SR13 pages 7.		Incidents can be reported three ways. Through the whistleblower function which is mentioned on page 7 (SR13), through safety representatives and through management and HR representatives. Due to the potential confidentiality of the information incidents reported is not publicly reported.
<b>Freedom of Association and Collective Bargaining</b>			
HR5 Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.			SAS endorses the UN Global Compact, whose ten principles are based on the UN Declaration on Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the UN Rio Declaration on Environment and Development and the UN Convention against Corruption. SAS endeavors to act responsibly in the countries and contexts where the SAS operates. This means, among other things, that SAS is always to be associated with respect for human rights, acceptable labor standards, social considerations and sustained environmental work. A self assessment regarding the Global Compact principles (among them human rights) is done every year.
<b>Child Labor</b>			
HR6 Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.			SAS endorses the UN Global Compact, whose ten principles are based on the UN Declaration on Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the UN Rio Declaration on Environment and Development and the UN Convention against Corruption. SAS endeavors to act responsibly in the countries and contexts where SAS operates. This means, among other things, that SAS is always to be associated with respect for human rights, acceptable labor standards, social considerations and sustained environmental work. A self assessment regarding the Global Compact principles (among them human rights) is done every year.
<b>Forced and Compulsory Labor</b>			
HR7 Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor.			SAS endorses the UN Global Compact, whose ten principles are based on the UN Declaration on Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the UN Rio Declaration on Environment and Development and the UN Convention against Corruption. SAS endeavors to act responsibly in the countries and contexts where SAS operates. This means, among other things, that SAS is always to be associated with respect for human rights, acceptable labor standards, social considerations and sustained environmental work. A self assessment regarding the Global Compact principles (among them human rights) is done every year.
<b>Security Practices</b>			
HR8 Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.			SAS does not in its operations employ security personnel since it is the responsibility of the airport operators. However, the personnel at central security department at SAS, that are responsible for company-wide security, are, as all SAS employees, introduced to the SAS' Code of Conduct.
<b>Indigenous Rights</b>			
HR9 Total number of incidents of violations involving rights of indigenous people and actions taken.			No incident of violations involving rights of indigenous people has been reported during November 2012–October 2013.

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Performance Indicators	Page reference	Reported	Comments
<b>Social Performance: Society</b>			
<b>Community</b>			
S01 Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.			SAS is constantly involved in stakeholder dialogues to be able to assess and manage the impact on communities.
<b>Corruption</b>			
S02 Percentage and total number of business units analyzed for risks related to corruption.			SAS considers all business where valuable resources are handled to be at risk related to corruption. Thus, all employees are covered by SAS' Code of Conduct. Moreover, comprehensive guidelines are available for all employees regarding situations where risks related to corruption and other issues of unethical behavior is present. Hence, all business units are continuously analyzed for risks related to corruption.
S03 Percentage of employees trained in organization's anti-corruption policies and procedures.	SR13 page 14.		SAS provides an e-learning program regarding Code of Conduct. The number of employees that have completed the program in the fiscal year is reported on page 14 (SR13) All key personnel have been educated in SAS Competition Law Compliance Program.
S04 Actions taken in response to incidents of corruption.			No material crime or fraud has been directed toward SAS. SAS takes substantial measures to ensure that ethical behavior is a core value in all business relationships through the Code of Conduct and SAS Competition Law Compliance Program.
<b>Public Policy</b>			
S05 Public policy positions and participation in public policy development and lobbying.	SAS' Code of Conduct		SAS' Code of Conduct states that "communication work is to be conducted on a high, professional level and follow the laws and regulations that apply to listed companies. Internal and external communication is used to create insight, understanding, motivation, strength, willingness to change, sound labor standards and a good reputation. The main principle is that central functions are responsible for all communication affecting overarching issues in SAS." Moreover, the public affairs department manages all communication activities with authorities and politicians. Many of the organizations in which SAS is a member (AEA and IATA) carry out lobby activities. However, SAS does not make any contributions or give other support, direct or indirect, to political parties or individual politicians. Nor are you allowed to make contributions at SAS' expense or provide assistance in the form of funds or resources from the SAS.  For more information, see also the SAS' Code of Conduct available at <a href="http://www.sasgroup.net">www.sasgroup.net</a> under the heading "Sustainability".
<b>Anti-Competitive Behavior</b>			
S07 Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.			SAS has an extensive program, SAS Competition Law Compliance Program, to ensure that professional business relations are conformed to in SAS. No material crime or fraud has been directed toward SAS.
<b>Compliance</b>			
S08 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	AR13 pages 32 and 42.		SAS discloses significant fines subsidiary by subsidiary and in the Report by the Board of Directors. No significant fines in FY2013.

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Performance Indicators	Page reference	Reported	Comments
<b>Social Performance: Product Responsibility</b>			
<b>Customer Health and Safety</b>			
PR1 Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	AR13 page 25.		Flight safety is a main concern of SAS, where all airlines are certified in accordance to IOASA (IATA Operational Safety Audit). Further details about the SAS' approach to customer safety can be found on page 25 (AR13).
PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	AR13 page 25.		SAS reports a risk index for Scandinavian Airlines and deviations in accordance with ICAO's rules and regulations on page 25 (AR13). SAS considers flight safety to be the most relevant indicator for customer health and safety.
<b>Products and Service Labeling</b>			
PR3 Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.			All airline travel has substantial information requirements. SAS strives to adhere to all laws and regulations regarding service information. However, data on information requirements are not publicly communicated.
PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	AR13 page 7.		SAS publishes results of their customer satisfaction surveys or other measures on customer satisfaction per entity and in total.
<b>Marketing Communications</b>			
PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	SR12 page 7.		SAS Code of Conduct and SAS Competition Law Compliance Program both include the subject of marketing and communications.
<b>Compliance</b>			
PR9 Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	AR13 pages 32 and 42.		SAS discloses all significant legal actions, including fines for non-compliance concerning the provision and use of services, see pages 32 (AR13) and 42 (AR13) for further details.

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# Accounting Principles for Sustainability Reporting fiscal year 2013

"SAS" or "SAS Group" is used throughout the report when the total operations are referred to.

For the financial year of 2013, SAS reports its general sustainability results divided into same segments as reported in the Annual report:

- Scandinavian Airlines comprises all operations within the SAS Consortium, including SAS Technical Operations, SAS Cargo Group (SCG) and Blue 1.
- SAS Ground Handling (SGH).
- Widerøe was sold during the year and the environmental indicators are disclosed separately on **page 42** without external review.

Within environmental responsibility, SAS strives to separate between airline and ground operations. Thus, the following divisions have been made:

- Airline operations with SK flight number
- Ground handling within SAS Ground Handling (SGH). SGH conduct ground handling for Scandinavian Airlines, Widerøe, Blue1 and other customers, such as other airlines.
- Technical maintenance within SAS Technical Operations. SAS Technical Operations conduct technical maintenance primarily for Scandinavian Airlines but also for other customers, such as other airlines.
- Freight and mail services within SAS Cargo Group A/S (SCG).
- Facilities owned or leased by SAS used by Scandinavian Airlines (incl. Blue1), SGH, SAS Technical Operations or SCG.

SAS still holds interests in Air Greenland and Estonian Air, but as SAS is no longer majority shareholder and is divesting the current holdings, they are not presented. SAS' structure is presented on **page 82** in the SAS Annual Report with sustainability overview November 2012–October 2013.

## Sustainability reporting

SAS' Sustainability Report has been prepared in accordance with the SAS Accounting Principles for Sustainability Reporting. SAS has also applied the Global Reporting Initiative's (GRI) Sustainable Reporting Guidelines, version 3.0. GRI cross-references are available on **page 31–39**. These indicate where the GRI-indicators are found in the SAS Sustainability Report November 2012–October 2013, and also comment on non-applicable GRI-indicators. The Sustainability Report also covers all important principles in the UN Global Compact. GRI's Sustainability Reporting Guidelines, version 3, contains 10 reporting principles, which have been taken into account in preparing the SAS Sustainability Report November 2012–October 2013.

## Scope of the sustainability report

SAS' Sustainability Report should contribute to the evaluation and understanding of SAS' operations. The report is an overview of SAS' structured sustainability work. The goal of the SAS' Sustainability Report November 2012–October 2013 is to disclose all information necessary to provide the reader with a fair overview of SAS' environmental, social, and financial responsibilities.

SAS Annual Report with sustainability overview November 2012–October 2013 includes a general overview of SAS' sustainability work on **pages 18–21** and the sustainability information in the Board of Director's Report on **pages 38–43**.

The utmost responsibility for the sustainability aspects of SAS, and their integration in operational activities, lies with Group Management. The Sustainability Report was reviewed by the SAS Group Management in January 2014. The SAS Group Board of Directors submitted the Annual Report in January 2014, and was informed of the Sustainability Report.

## Limitations

The main principle for sustainability reporting is that all units and companies controlled by SAS are accounted for. This means that sustainability-related data for divested companies owned by SAS during the period will be reported wherever possible. The same accounting principles as for financial information in the Annual Report are intended to be used for financial information in the Sustainability Report.

SAS has a number of production indicators (such as passenger kilometers and available seat kilometers). There are differences between the Annual Report and the Sustainability report regarding how the number of passenger kilometers are disclosed. The Annual Report uses Revenue passenger kilometers (RPK) were paying passengers are included and the Sustainability Report uses passenger kilometers (PK) were all passengers are included.

Standard definitions for environmental and social data have been applied throughout SAS. One example is NO<sub>x</sub> calculations were SAS applies engine emissions data from the most common engine version on each different version of Boeing 737NG. Some minor limitations have been made regarding the information provided in the Sustainability Report. None of the limitations are considered to have substantial significance.

## Changes in accounting and calculating principles

The sustainability information in the Sustainability Report is affected by the following changes:

Blue1 is disclosed as Scandinavian Airlines except for sick leave where the result is disclosed separately.

Widerøe was sold during the year and the environmental indicators are disclosed separately on **page 45** without external review.

HC is not reported in FY2013. This is because the calculation method needs to be developed for parts of the Boeing 737NG fleet in order to more accurately reflect the size of HC emissions during the current engine upgrade program. HC will be reported in FY2014.

FTE in Scandinavian Airlines and SAS Ground Handling in 2011 has been adjusted due to updated calculations.

No changes in calculation principles fiscal year 2013.

## Principles for reporting and calculation of environmental data

Reported environmental information is based on the following calculations and/or factors:

- Distance, based on WGS84 Great Circle Distance (GCD) calculations between airport reference points as defined in national AIPs.
- Passenger weight for TK calculations in 100 kg for any person with hand luggage and checked luggage transported. Does not including active crew.
- Cargo and mail, actual weight is used.
- Fuel density (kg per liter):
  - Jet A/A-1<sup>2)</sup>: 0.8 or actual density.
  - Diesel: 0.84
  - Petrol: 0.73
  - Heating oil: 0.84
- CO<sub>2</sub> factor (per weight unit of fuel):
  - Jet A/A-1<sup>2)</sup>: 3.15
  - Diesel: 3.17
  - Petrol: 3.12
  - Heating oil: 3.17
- Energy conversion of fuels (GWh per 1,000 tons):
  - Jet A/A-1: 12.0
  - Diesel: 12.0
  - Petrol: 12.2
  - Heating oil: 12.0
- Nitrogen oxides (NO<sub>x</sub>), factors (per weight unit of fuel):
  - Jet A/A-1<sup>1)</sup> Between 0.00694 and 0.01932

1. Varies per aircraft/engine combination. SAS applies the most common engine version on each different version of Boeing 737NG.

2. Fuel density and CO<sub>2</sub> factor for Jet A/A-1 is calculated according to approved MRV-plan.

### Climate index

SAS has chosen to construct a climate index for flight operations. The base year is full-year 2011 in order to follow up progress connected to activities in 4Excellence and 4XNG. The climate index is calculated by taking the quantity of emissions of carbon dioxide and nitrogen oxides in relation to production. Even though there is no consensus regarding the weighting between the different greenhouse gases' effect on total impact on climate change, SAS has chosen to base the calculation on the assumption from, among others, Cicero that 1.5 is a reasonable multiplier given the knowledge available "today". Read more about Cicero that has provided basic data for IPCC, for example, on [www.sasgroup.net](http://www.sasgroup.net) under the headline Sustainability. This gives a relationship of 2/3 carbon dioxide to 1/3 other climate changing emissions such as nitrogen oxides, water vapor and particulates. Nitrogen oxides have been chosen as a non-CO<sub>2</sub> indicator for the climate index. Until clearer directives are given regarding how the total climate effect should be calculated every emission is reported separately.

Environmental aspect	Weighting	Production factor
Carbon dioxide	67%	Passenger Kilometer (PK)
Nitrogen oxides	33%	

The Climate index is designed for SAS to present year-to-year development. This assumes that no changes to methodology are made.

### Principles for reporting and calculation of social data

The following principles for calculating and reporting of social data have been used.

Occupational injuries (H-value):

Frequency of occupational injuries (H value) is calculated using the following formula:

$$\frac{\text{No. of occupational injuries with minimum of one day's absence} \times 1,000,000}{\text{total number of performed working hours per year}}$$

*Number of employees:*

In the Sustainability Report, the number of employees is based on the number of persons during the month of October and sick leave statistics calculated for the fiscal year. These are employees having a budgeted or actual schedule and/or who have been sick during the period.

*Sick leave:*

Sick leave for Scandinavian Airlines is reported as the number of hours sick in relation to actual or planned working hours. For Blue1 sick leave is reported as the percentage of sick leave in relation to planned work time. For sick leave, absence due to sick children is excluded. Long-term sick leave (more than 14 days) is reported as a percentage of total sick leave.

### Principles for reporting and calculation of external and other environmentally related costs

Where possible environmentally related costs are based on information directly from the accounting system. When this has not been possible, e.g. for calculations of certain charges and taxes that are included in landing charges, estimates have been used based on the number of passengers to a certain destination and the charge or tax per passenger.

# Sustainability-terms, definitions and concepts

A

**Acetate** Acetic acid (CH<sub>3</sub>COOH). Used by airport operators to deice takeoff and landing strips.

**ASK** Available Seat Kilometers, the available (offered) number of passenger seats multiplied by the distance flown.

**ATAG** Air Transport Action Group is an independent coalition of organization and companies throughout the air transport industry.

**ATK** Available Ton Kilometers, available (offered) capacity for passengers and cargo expressed in metric tonnes, multiplied by the distance flown.

**Average number of employees** Average number of employees is defined as the average number of employees expressed in full time equivalents, excluding leave of absence, parental leave and long-term sick leave. This definition is also used in the financial reporting. Sometimes the term FTE (Full Time Equivalent) is used.

B

**Biofuels** Solid or liquid fuel with biological origin. Liquid fuels for vehicle/ship/aircraft engines. To various degrees considered carbon neutral. EU's renewables directive (2009/28/EC) and biofuels directive (2003/30/EC) defines the EU's mandates on biofuels and degree of carbon neutrality.

C

**CAEP** Committee on Aviation Environmental Protection, technical committee of the ICAO (see definition) charged with developing and establishing rules and recommending measures to reduce the environmental impact of aviation.

**Carbon dioxide** (CO<sub>2</sub>) A colorless gas that is formed in combustion of all fossil fuels. The airline industry's CO<sub>2</sub> emissions are being reduced through a change-over to more fuel-efficient aircraft, something that is also desirable from a financial standpoint since lower fuel consumption automatically means lower costs.

**Carbon monoxide** (CO) A toxic and combustible gas formed by incomplete burning of substances containing carbon, e.g. fossil fuels.

**Certification requirements** The ICAO's minimum requirements for certification of aircraft types, such as limits for noise and emissions of carbon dioxide, nitrogen oxides and hydrocarbons (see Chapter 2, 3).

**CFCs** A group of chlorofluorocarbons that may also contain hydrogen and /or bromide. A class of stable chemical compounds mostly known under the trade names Freon or Halon. Manufacture prohibited by Montreal Protocol because of negative effect, depletion of the Ozone Layer. Aviation has exception for use under a critical use clause due to lack of approved alternatives. Research for alternatives is ongoing.

**Charges for the infrastructure** Charges imposed by the operators of the infrastructure and which are intended to cover operating and capital costs for airlines and air traffic management.

**CO<sub>2</sub>** Carbon dioxide (see definition).

**Code of Conduct** Business ethics rules and guidelines.

D

**dB** Decibel, a logarithmic unit of measurement that expresses the magnitude of a physical quantity relative to a specified or implied reference level.

**Drop-in fuel** A fuel that is chemically indistinguishable from conventional jet fuel. This means that no changes would be required in aircraft or engine fuel systems, distribution infrastructure or storage facility. It can be mixed interchangeably with existing jet fuel.

E

**Ecoefficiency** A term launched primarily by the environmentally oriented business organization WBCSD. Ecoefficiency is defined as a tool that companies can use to measure their environmental performance relative to how market demands are met and the company's financial performance is improved. The goal of ecoefficiency is to generate qualitative growth where value is created instead of transforming unnecessary volumes of material and energy into waste.

**EMAS** EU Eco Management and Audit Scheme. EMAS is based on ISO 14001. Two of its requirements are publication of an environmental audit and employee involvement. Current edition is EMAS III (2009).

**Environmental impact of leased aircraft** Fuel consumption and emissions from leased aircraft and aircraft leased including the crew (wet lease), are included in the reported data for Scandinavian Airlines.

**Environmentally related charges** Charges imposed by the airport operators for the purpose of motivating aircraft operators to operate aircrafts with high ecoefficiency with respect to noise and other emissions such as of NO<sub>x</sub> as well as surcharges imposed by airport operators to motivate aircraft operators to avoid take-offs and landings at night. In some cases the environmentally related charges are considered income-neutral, i.e. the total income of the airport remains un-

changed by decrease in other charges. The methods for classifying aircraft differ between countries as well as airports within countries. Although the charges are differentiated based on the ecoefficiency of the aircraft, all in all they are balanced out in such a way as to amount to the total cost determined by the airport operator.

**Environmentally related contingent liabilities** Contingent liabilities pertaining to possible future costs for measures to prevent, reduce or restore environmental damage arising from operations.

**Environmentally related investments** Investments in assets to prevent, reduce or restore environmental damage arising from operations and/or aimed at meeting upcoming, more stringent environmental requirements.

**Environmentally related provisions** Provisions for liabilities and allocations for known undertakings and requisite measures to prevent, reduce or restore environmental damage arising from operations.

**Environmentally related taxes** Taxes which, in contrast to other corporate taxation, are motivated by environmental grounds. Examples are the environmentally motivated passenger charge in the UK and the environmentally related fiscal CO<sub>2</sub>-charge in Norway. The charge on glycol in Norway is also included as a part of the environmentally related taxes.

**External environmentally related costs** The sum of environmental charges and environmentally related charges and taxes.

F

**Fossil fuels** Fuels consisting of organic carbon and hydrogen compounds in sediment or underground deposits – especially coal, oil and natural gas.

G

**Germicides** Chemicals used to kill or prevent the growth of harmful microorganisms such as bacteria, virus or fungus. Added to the sanitizing liquid in aircraft lavatories reduce the risk of infection.

**Global Compact** A challenge from the former UN Secretary General Kofi Annan to business and industry to live up to ten principles of human rights, employee rights, the environment and anti-corruption, as formulated by the UN. [www.unglobalcompact.org](http://www.unglobalcompact.org)

**Glycol** An alcohol that is sprayed on the aircraft in cold weather to prevent ice formation. Today, a non-toxic propylene glycol is used. Some 80% of the glycol runs off the aircraft when applied, and seeps into the ground unless collected. A further 15% is emitted into the air and is thus dispersed in the vicinity of the airport. The airports are responsible for collecting the glycol runoff for reuse.

**GRI** Global Reporting Initiative. An organization aiming to provide companies and organizations with a global sustainability reporting framework and thereby facilitate comparisons between companies from a social, environmental and economic perspective. [www.globalreporting.org](http://www.globalreporting.org)

**Green Approach** In a Green Approach, the approach begins from the Top of Descent (ToD) using a Continuous Descent Approach (CDA) with minimum thrust.

**Greenhouse effect** Carbon dioxide and other gases trap and reradiate incoming solar radiation that would otherwise be reflected back into space. The problem is that emissions of greenhouse gases have increased. Most scientists agree that heavy human use of fossil fuels is causing global warming. Carbon dioxide is formed in combustion of all fossil fuels, but burning of biofuels only emits an amount of carbon equal to that absorbed during growth, producing no net emissions. However, use of coal, oil and natural gas produce a net increase, since they release carbon that has been bound in the earth's crust. The freon substitute HFC, methane and nitrous oxide are other powerful greenhouse gases. Other gases that contribute to the greenhouse effect are CFCs (see definition), methane and nitrous oxide.

H

**Halons** See CFCs.

**HC** Hydrocarbons (see VOCs).

**Heavy metals** Certain high-density metals, such as cadmium and mercury, which both have acute and chronic toxic effects.

**Hydrocarbons** See Volatile organic compounds.

I

**IATA** The Air Transport Association represents, leads and serves the airline industry. Its members comprise all major passenger and cargo airlines

**ISO 14000** A series of international environmental standards developed by the International Organization for Standardization. The general guiding principles for ISO 14000 are identical to those in the quality standard ISO 9000. There are several environmental standards in the ISO 14000 family, such as for environmental management systems (ISO 14001), environmental labeling, environmental audits and life-cycle analyses.

**J**

**Jet A-1** Common jet fuel specification outside North America. (Jet A and Jet A-1 are very similar and throughout this Sustainability Report the term jet fuel is used to describe fuel used by aviation).

**K**

**Kerosene** The common name for petroleum-derived jet fuel such as Jet A-1. Kerosene is one of the fuel sources that can be made by refining crude oil. It is also used for a variety of other purposes.

**M**

**MRV** Monitoring, Reporting and Verification of CO<sub>2</sub> emissions and production in tonne-kilometers in the EU Emissions Trading Scheme.

**N**

**N-ALM** The Nordic Working Group for Environmental Issues in Aviation, composed of civil aviation, environmental and communication authorities and airlines in the Nordic countries.

**Nitrogen oxides (NO<sub>x</sub>)** Formed during combustion in all engines. For aircraft engines since the high temperature and pressure cause the atmospheric nitrogen and oxygen to react with each other, mainly during takeoff and ascent when the engine temperature is at a maximum. With effect from 1996, the ICAO has tightened the requirements for nitrogen oxide emissions, and these are expected to be made even stricter. New engines with double annular combustors (DAC), for example, reduce emissions by up to 40% compared with the previous generation of engines. (See also Acidification and Ozone layer.)

**Noise** Environmentally detrimental, undesirable sounds. The environmental impact of air traffic in the form of noise is primarily of a local nature. Noise is normally described and measured in dB(A), an A-weighted sound level.

**NO<sub>x</sub>** Nitrogen oxides (see definition).

**O**

**Occupational injuries** Occupational injuries is the number of injuries employees incur by accidents at the workplace resulting in at least one day of absence.

**Oil aerosols** Oil emitted from the aircraft engines during operation under high pressure. Upon contact with air they form a fine mist, which is then broken down primarily into carbon dioxide.

**Other environmentally related costs** Costs for waste management, purification plants, permits, any fines and charges for permit deviation, costs for remediation measures, etc. as well as internal reported costs for environmental work, e.g. costs for persons and organizations working with environmental issues, costs for sustainability reporting etc.

**P**

**PFOS:** Perfluorooctane sulfonate. A substance used as fire-fighting foam among other uses and prohibited for use in concentrations of 0.005% per weight or higher since 2007 in Norway. Regulation work ongoing in the EU and USA.

**PK (used in the sustainability-related reporting)** Passenger Kilometers, utilized (sold) capacity for passengers expressed as the number of seats multiplied by the distance flown in scheduled traffic, charter, ad hoc flights and bonus trips.

**PULS** The Swedish acronym for SAS's employee surveys, conducted via individual questionnaires.

**R**

**RPK (used in the financial reporting)** Revenue Passenger Kilometers, utilized (sold) capacity for passengers expressed as the number of seats multiplied by the distance flown. Revenue passengers include only those paying at least 25% of the regular ticket price.

**RTK** Revenue Ton Kilometers, utilized passenger and cargo capacity expressed in metric tonnes, multiplied by the great circle distance flown. Revenue passengers and cargo over a certain payment limit.

**PK** Passenger Kilometers, includes all passengers excluding active crew multiplied by the great circle distance flown for all flights performed.

**S**

**SAFUG** Sustainable Aviation Fuel Users Group. Aviation industry organization focused on accelerating the development and commercialization of sustainable aviation fuels.

**SO<sub>2</sub>** Sulfur dioxide (see definition).

**Sulfur dioxide (SO<sub>2</sub>)** Formed in combustion of fossil fuels if containing sulfur. A colorless gas with an acrid odor that is toxic when inhaled in large quantities. Aviation fuel contains a minute proportion of sulfur, and, accordingly, causes only minor emissions of this substance. The same applies to the "green" diesel used in ground vehicles. In the airline industry, as in many others, sulfur dioxide emissions come largely from oil-fired heating.

**Sustainable development** means that when mankind satisfies its needs to today, it does so without limiting the opportunities for future generations to satisfy theirs.

**T**

**Tonne kilometers** The number of transported metric tonnes of passengers and cargo multiplied by the distance flown.

**U**

**Urea** A urine substance synthetically produced from carbon dioxide and ammonia that is used by airport operators for deicing of runways. Contributes to eutrophication. See also Acetate.

**V**

**Volatile Organic Compounds (VOC)** Emitted during incomplete combustion of fossil fuels – in aviation mainly when the engine is run at low speed and the temperature in the combustion chamber is low. This category also includes all types of solvents that evaporate from detergents and paints, among other things. With effect from April 1, 2002, only aircraft with low VOC emissions will be permitted in the EU.

**W**

**Weighted noise contour** The weighted noise contour is calculated based on the number of takeoffs per day at a given airport, with regard to the aircraft types the airline uses at that airport. The weighted noise contour defines the area in km<sup>2</sup> that is subjected to a noise footprint of 85 dB(A) or more in connection with takeoff.

# Assurance Report

## Auditor's Combined Assurance Report on the Sustainability Report

*To the readers of the SAS AB (publ) Sustainability Report*

### Introduction

We have been engaged by the management of SAS AB (publ) to perform an examination of the SAS Sustainability Report for the year November 2012–October 2013, excluding pages 42–45.

### Responsibility of the Board and Management for the Sustainability Report

The Board of Directors and Executive Management team are responsible for the company's activities regarding environment, health & safety, social responsibility, and sustainable development, and for the preparation and presentation of the Sustainability Report in accordance with applicable criteria.

### Responsibility of the Auditor

Our responsibility is to express a conclusion on the Sustainability Report based on our examination. We have performed the assurance engagement in accordance with RevR 6 Assurance of Sustainability Reports issued by FAR. The engagement consists of a review of the Sustainability Report as a whole, excluding information on Widerøe, and an audit of selected information as specified below.

The objective of an audit is to obtain reasonable assurance that the information in the Sustainability Report is free of material misstatements. An audit includes examining, on a test basis, evidence supporting the quantitative and qualitative information in the Sustainability Report. A review is mainly limited to making inquiries of personnel responsible for sustainability issues, and applying analytical and other review procedures. Hence, the conclusion based on our review procedures does not comprise the same level of assurance as the conclusion of our audit. Since this assurance engagement is combined, our conclusions regarding the audit and the review will be presented in separate sections.

Our audit has included the following information:

- a. Financial indicators on page 3
- b. Jet fuel and carbon dioxide (CO<sub>2</sub>) emissions related to SAS flight operations

The criteria on which our examination is based are the parts of the Sustainability Reporting Guidelines G3, published by the Global Reporting Initiative (GRI), which are applicable to the Sustainability Report, as well as the accounting and calculation principles that the company has developed and disclosed. These criteria are presented on pages 40–41. We consider these criteria suitable for the preparation of the Sustainability Report.

We consider the evidence collected during our examination to be sufficient and appropriate in order to support our conclusions listed below.

### Conclusions

Based on our review, nothing has come to our attention that causes us to believe that the information in the SAS Sustainability Report has not, in all material respects, been prepared in accordance with the above stated criteria.

Based on our audit, the information in the SAS Sustainability Report which has been subject to our audit procedures has, in all material respects, been prepared in accordance with the above stated criteria.

Stockholm, 27 January 2014

PricewaterhouseCoopers AB

Bo Hjalmarsson  
Authorised Public Accountant

Fredrik Ljungdahl  
Expert Member of FAR

# Key environmental figures for Widerøe

Not reviewed by external auditor.

## Key environmental figures for Widerøe flight operations

Widerøe Aspect	Aspect Input (1) Nov 12–Sep 13		Inputs (2) Nov 12–Sep 13		Relationship (1) to (2)	Results Nov 12–Sep 13
	unit (1)	unit (2)	unit (1)	unit (2)		
Jet fuel – used	57	1,000 tonnes	915	million PK	Kilo per PK	0.062
Jet fuel – CO <sub>2</sub>	178	1,000 tonnes	915	million PK	CO <sub>2</sub> gram/PK	0.195
Jet fuel – NO <sub>x</sub>	0.7	1,000 tonnes	915	million PK	NO <sub>x</sub> gram/PK	0.001
Aircraft Noise – takeoff	33	1,000 km <sup>2</sup>	126	1,000 departures	85 dB area in KM <sup>2</sup> per departure	0.26

## Key environmental figures for Widerøe operations regarding Ground Fuel, Glycol, Energy, Waste and water

Total	Aspect Input (1) Nov 12–Sep 13		Inputs (2) Nov 12–Sep 13		Relationship (1) to (2)	Results Nov 12–Sep 13
	unit (1)	unit (2)	unit (1)	unit (2)		
Energy	7	GWh	1.2	1,000 FTE	MWh per FTE	5.8
As of electricity	5	GWh	1.2	1,000 FTE	MWh per FTE	3.8
As of heating	2.4	GWh	1.2	1,000 FTE	MWh per FTE	2.0
As of heating oil (included in “heating”)	2.4	GWh	1.2	1,000 FTE	MWh per FTE	2.0
Unsorted Waste	72	tonnes	1.2	1,000 FTE	kilo per FTE	59.6
Hazardous waste	7	tonnes	1.2	1,000 FTE	kilo per FTE	5.8
Water	7	1,000 m <sup>3</sup>	1.2	1,000 FTE	m <sup>3</sup> per FTE	5.5
Vehicle Diesel – Fuel used	71	1,000 liters	126	1,000 departures	1,000 liters per departure	0.6
Vehicle Diesel – CO <sub>2</sub>	190	tonnes	126	1,000 departures	CO <sub>2</sub> kilo per departure	1.5
Vehicle Petrol – Fuel used	1	1,000 liters	126	1,000 departures	1,000 liters per departure	0.0
Vehicle Petrol – CO <sub>2</sub>	2	tonnes	126	1,000 departures	CO <sub>2</sub> kilo per departure	0.0
Glycol used	183	1,000 m <sup>3</sup>	1.2	1,000 deicings	Liter per deicing	150.8

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