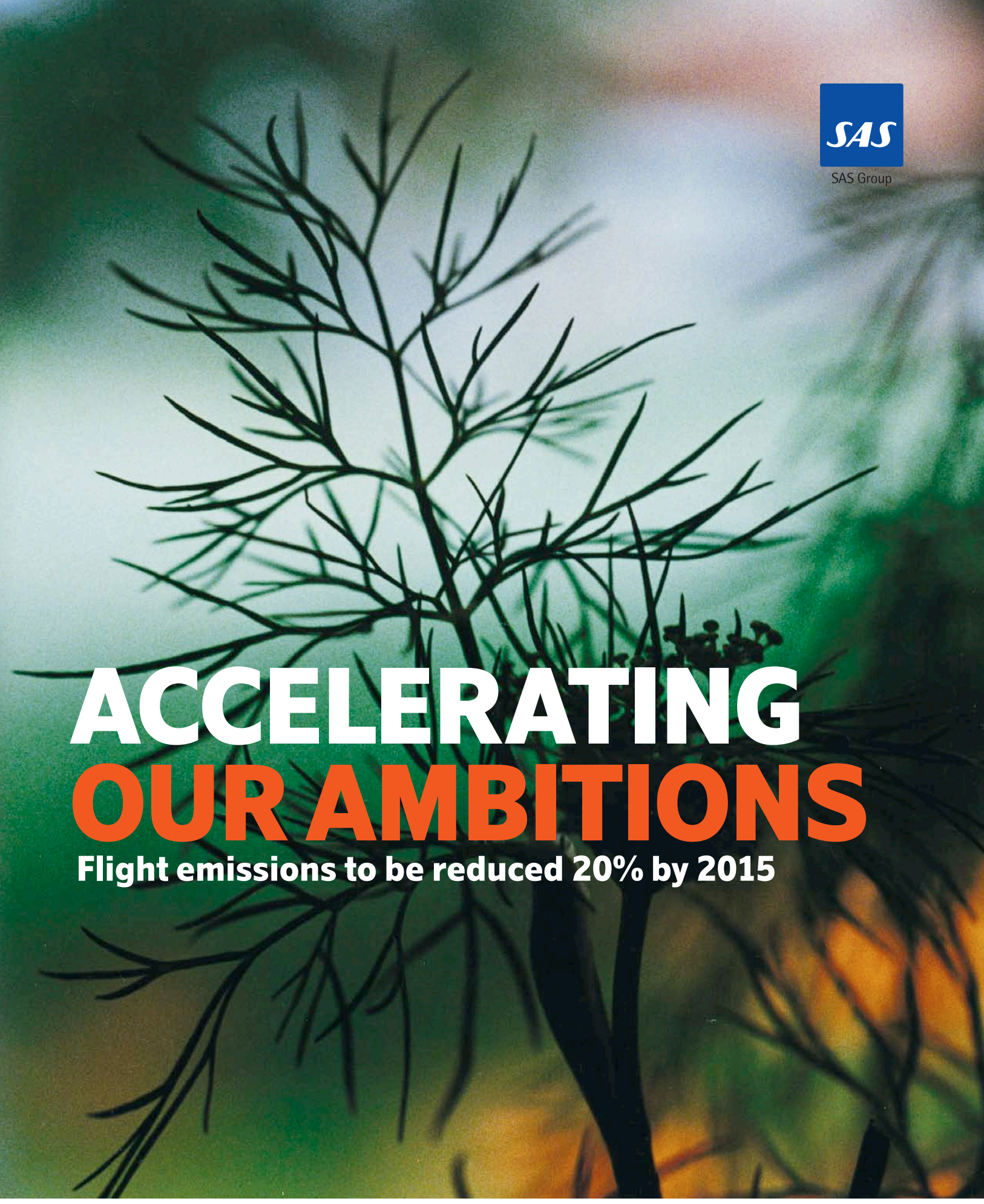

SAS Group

ACCELERATING OUR AMBITIONS

Flight emissions to be reduced 20% by 2015

A STAR ALLIANCE MEMBER

SAS Group Sustainability Report 2011

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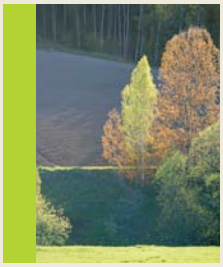

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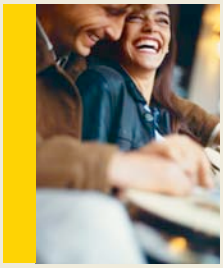

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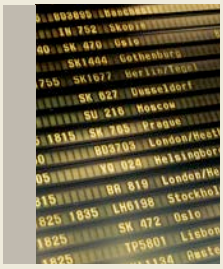

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SAS
Environmental Program

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.
This is SAS's 16th sustainability report, which has been audited since 1997, and, as of 2009, also includes EMAS requirements. This sustainability report begins with a brief summary of SAS' sustainability work, followed by a detailed description of how SAS works with sustainable development, meaning its environmental responsibility, its social responsibility and its financial responsibility. In addition, aspects of SAS's sustainability programs are described in the Annual Report for 2011.

About the SAS Group Sustainability Report 2011
The Sustainability Report 2011 describes the most essential environmental and societal aspects impacted by its operations. It reports what is felt, after continuous dialog, to be of interest to its main target groups: financial analysts, customers, suppliers, employees, authorities, policymakers and shareholders. SAS Group has self-declared the Annual- and Sustainability Report 2011 to be Application Level A+, in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines version 3.0. Deloitte AB has reviewed the Sustainability Report 2011 and has confirmed it to be Application Level A+.

Accounting Principles for Sustainability Reporting 2011 are avaliable on ***pages 56–58***.

The SAS Group Sustainability Report 2011 was approved by SAS Group Management in March 2012. The SAS Group Board of Directors submitted the annual report in March 2012, and was informed of the sustainability report at the same time. SAS Group Management is responsible for organizing and integrating sustainability work with the operations of the Group. SAS Group Annual Report and Sustainability Report 2010 was published in March 2011.

Scope of the sustainability report
The sustainability report includes the entire Group excluding Individual Holdings. The focus is on all the main bases, but comprises all destinations in Scandinavia and Finland. Other destinations are handled through checks and follow-ups of contracted sub-suppliers. A certification site list is available at: http://www.sasgroup.net under the heading sustainability.

UN Global Compact, EMAS, ISO 14001 and the Carbon Disclosure Project, together with GRI's guidelines, have been taken into consideration in the preparation of this sustainability report.

External review
Material sustainability information
All material sustainability information in the Annual- and Sustainability Reports for 2011 has been reviewed by Deloitte. The Auditor's review of sustainability report can be found on ***page 55***.

EMAS
This published report has been EMAS-verified by Bureau Veritas, EMAS verification and registration will be issued when all underlying data for each business area mentioned in this report has been verified.The review was conducted as part of the periodic assessment of the overall ISO 14001 and EMAS environmental certification. Bureau Veritas, accreditation number DANAK 6002.

EU-ETS
External auditors have verified systems and reports regarding the EU trading scheme for emission allowances. PwC for SAS, Blue1 and Widerøe.

Sustainability work in brief

Highlights from 2011

- All of the SAS Group's airlines are certified in accordance with both ISO 14001 and EMAS, and, are currently the only airlines worldwide to hold both certifications.
- The SAS Group's relative CO_2 emissions increased during the year to 122 grams (121) per passenger kilometer. Among other factors, this is due to a continuing challenging market situation and severe winter weather at the beginning of the year.
- Energy consumption in SAS declined by 8.3% during the year, adjusted for changes in the property portfolio.
- SAS accelerated its environmental goal via the 4Excellence strategy, which was launched during 2011. Flight emissions shall be cut by 20% by 2015 compared with 2005.
- SAS completed its commitment in regards to national legislation, including trading in emissions permits as of January 1, 2012.
- The industry organization, IATA continued to promote the aviation industry's inclusion in a global trading system of emissions permits in an effort to reduce climate-impacting emissions.
- Work satisfaction at SAS continued to rise. The Employee Work Satisfaction index rose by 4 percentage points to 66.
- Illness-related absenteeism at SAS declined. Total absenteeism in Scandinavian Airlines was 7.0 % in 2011.

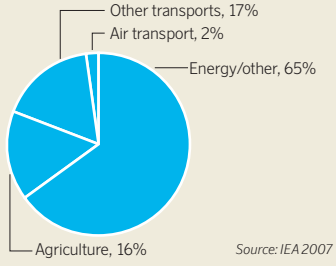
Sustainability-related KPIs[1)]

	2011	2010	2009
Revenue, MSEK	41,412	41,070	44,918
EBT before nonrecurring items, MSEK	94	–444	–1,754
EBT margin before nonrecurring items, %	0.2	–1.1	–3.9
Number of passengers, 1,000	28,990	27,096	26,967
Average number of employees[4)]	15,142	15,559	18,786
of whom women, %	38	38	45
Sick leave, %	7.0[2)]	7.1[2)]	6.9
Total number of occupational injuries	272	327	291
Climate index	91	90	94
CO_2 emissions, 1,000 tonnes	3,863[3)]	3,654	3,793
NO_x emissions, 1,000 tonnes	15.6	14.8	15.4
CO_2 gram/passenger kilometer	122[3)]	121	127
Fuel consumption airline operations, 1,000 tonnes	1,226	1,160	1,204
Fuel consumption ground operations, 1,000 liters	3,317[5)]	3,668	3,869
Water consumption, 1,000 m^3	154	159	169
Energy consumption, ground, GWh	193	216	205
Unsorted waste, 1,000 tonnes	0.8	0.9	1.1
Hazardous waste, 1,000 tonnes	0.2	0.3	0.4
External environment-related costs, MSEK	407	356	364

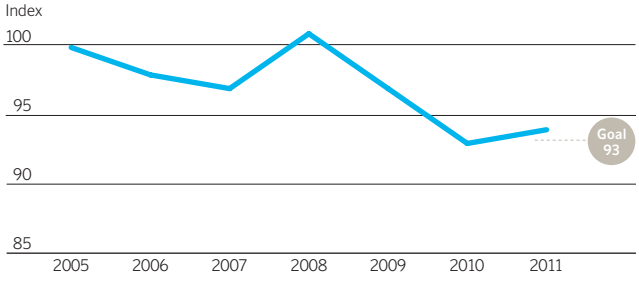
1. Changed method for environmental key figures.
2. Changed method. Pertains solely to Scandinavian Airlines.
3. The negative development was primarily due to a continuing challenging market situation with lower load factors and severe winter weather at the beginning of the year. The increase in absolute CO_2 emissions can partly be explained by traffic and passenger growth. Read more on ***page 21***.
4. Source: Note 3 on ***page 64*** in SAS Annual Report 2011.
5. The reason for difference between the reported 3,540 in the SAS annual report 2011 and the 3,317 in this sustainability report is a calculation error discovered too late for annual report print.

Transport sector's global emissions

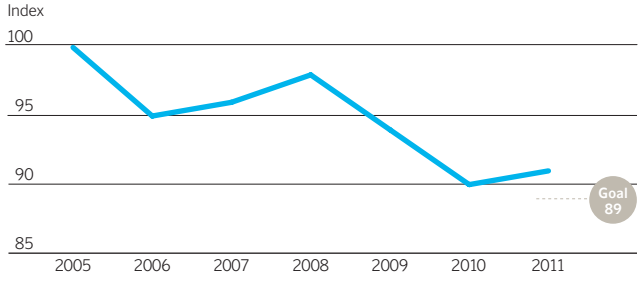
Today, commercial air transport accounts for about 2% of global CO_2 emissions, corresponding to 12% of the transport sector's global emissions. The remaining 88% of the transport sector's global emissions is divided among road traffic, 76%, and sea and rail traffic, 12%. To manage its share, the airline industry has adopted an ambitious target to halve its total emissions by 2050 compared with 2005. SAS has adopted the even more ambitious target of reducing flight emissions by 20% by 2015 compared with 2005.



Environmental index, Scandinavian Airlines total



SAS climate index



Since 1996, SAS has measured environmental efficiency using an environmental index in which environmental impact is measured in relation to production. The environmental index is measured for each individual airline, but not for the Group as a whole. This index is used as a tool for control and follow-up of the Group's environmental performance. As of 2007, all environmental indexes have been restructured according to a new model using 2005 as the base year. The airlines' targets were established in consultation with Group management. The index comprises 50% carbon dioxide, 40% nitrogen oxides and 10% noise in relation to the most significant production parameter, passenger revenue kilometers.

As of 2007, SAS also reports a climate index that pertains to climate impact excluding noise, that is, emissions of carbon dioxide (2/3) and nitrogen oxides (1/3). The climate index measures the Group's overall climate impact related to traffic measured in passenger revenue kilometers.

The long-term improvement trend is primarily attributable to a higher load factor as a consequence of early adaptation of capacity to the market, but also increased demand, high punctuality, progress in the airlines' fuel save program and renewal in the aircraft fleet during the years.

Our specific situation places high demands on responsibility and commitment

From the President's comments, SAS Group Annual report 2011

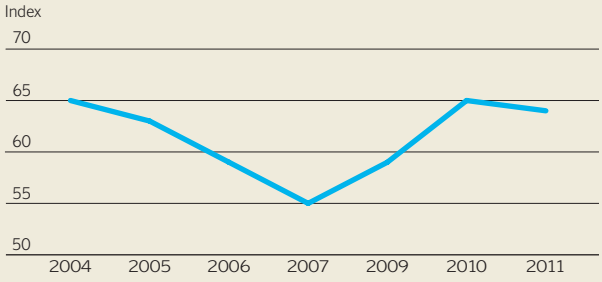
Our employees, who are strongly committed to our service pledge – Service And Simplicity – are one of our greatest assets. An employee survey conducted in 2011 showed that employee motivation has increased. This is also confirmed by how our customers perceive us, and indicates that our level of service and punctuality is world-class. A marked rise in job satisfaction in connection with the launch of a new strategic platform also demonstrates that our employees believe in, and want to dedicate themselves to, the course that SAS has chosen. The fact that our unions have undertaken to reduce employee-related costs by SEK 1 billion shows commitment and responsibility for the future of SAS.

The fact that the employee survey also indicates growing satisfaction with SAS's leadership is very positive. It shows that our systematic efforts to promote strong leadership as a means of enabling employees to deliver the highest possible standards of service have been successful.

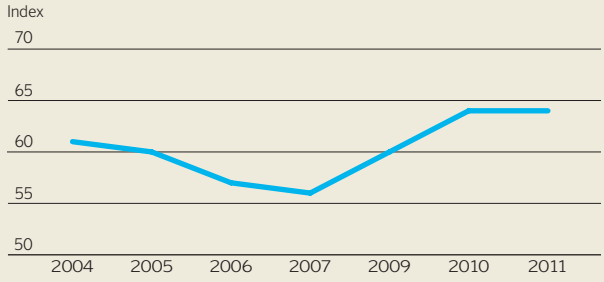
In 2011, SAS's sustainability efforts continued to gain momentum and we accelerated our environmental targets, which are now a 20% reduction of our flight emissions by 2015, compared with 2005. We are determined to attain this ambitious target and have introduced a number of activities within the framework of our environmental management system to secure their fulfillment."

Rickard Gustafson
President and CEO

CSI, Being an evironmentally aware company

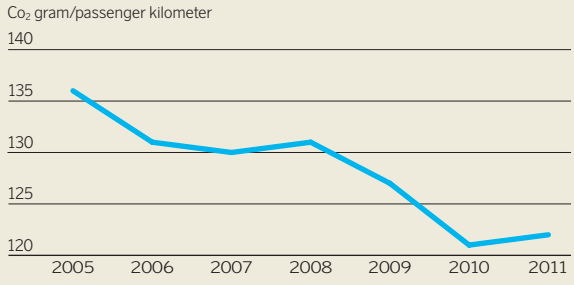


CSI, Being a company taking on society and social reponsibility



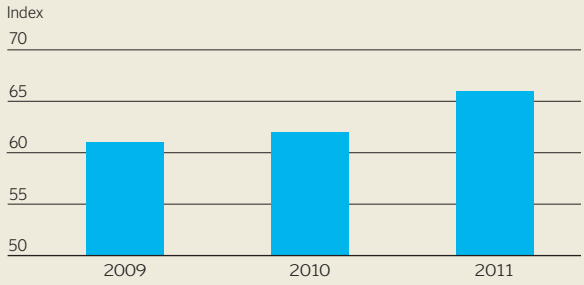
Result of sub-questions in SAS's recurring customer survey (Customer Satisfaction Index): "Rate SAS in regard to being an environmentally-aware company" and "Rate SAS in regard to its taking social responsibility".

CO_2 gram/passenger kilometer



Since 1995, the Group's relative CO_2 emissions have been reduced by 33% from 183 to 122 grams per passenger kilometer.

Result in total index PULS regarding "Job satisfaction"



Organization and management

Management

Board of Directors
- follows the Swedish model for Code of Corporate Governance
- submits the annual report and reviews the sustainability report
- sets guidelines for the Group's strategies and activities
- internal control that the Code of Conduct is implemented

Group Management
- sets the framework in the form of comprehensive objectives, policies, and other guidelines
- has the comprehensive responsibility for the Corporate Manual which make up the basis for the Group's sustainability work
- assesses risk and possibilities related to sustainability
- has the comprehensive responsibility for the implementation of the Code of Conduct

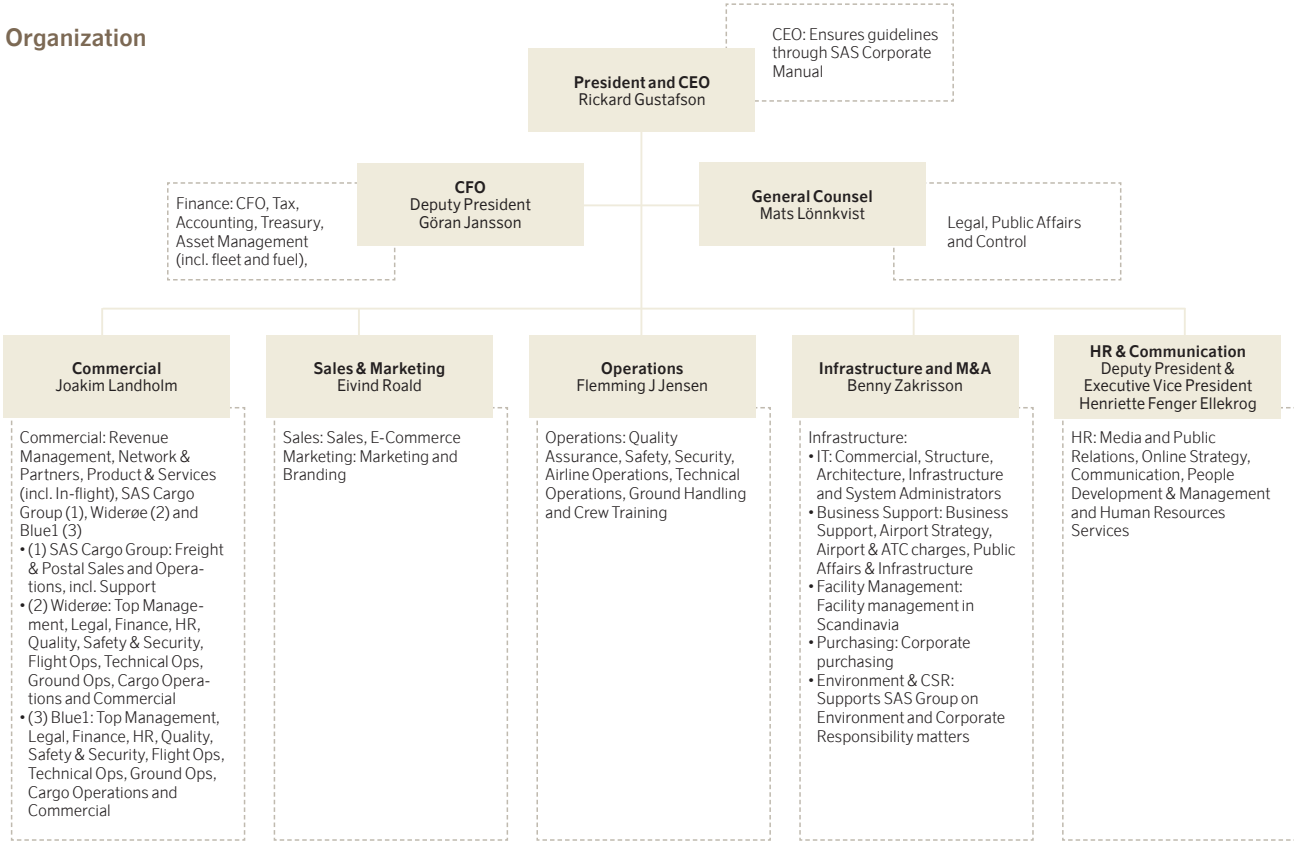
Operations, Commercial & Sales
- implements sustainability related policies
- carries out management's overview of the environmental management program
- provides , via Environment & Sustainability, support for the sustainability work
- is responsible for and integrates sustainability issues in manuals, plans and operations
- is responsible for the work on following-up quality, safety and sustainability issues and dialog with internal and external stakeholders

Environment & Sustainability
- coordination, consultation and support in regard to sustainability issues and work for Group management and other SAS operations
- coordinates the Group's Sustainability Network and internal evaluation process
- carries out ISO 14001 and EMAS follow-ups, internal audits and also coordinates external audits
- communicates the sustainability work

Human Resources
- formulates and implements policies related to employees, management development and other HR-related subjects
- carries out negotiations and dialog with unions regarding collective agreements in accordance with national regulations
- develops the work with social responsibility and contributes to the sustainability report

SAS's sustainability related policies

Organization



Responsibility for sustainable development

The sustainability work is based on SAS policies and the Group's commitment to adhere to the principles in the UN Global Compact, Code of Conduct, SAS priorities and promise.

Sustainable development creates value

By constantly improving processes and enhancing the efficiency of production in a sustainable manner, value is created, not only for shareholders, but also for stakeholders such as passengers, employees and suppliers. To communicate this work and its results, SAS strives to remain at the forefront of sustainability reporting; work that is driven by society's demand and the expectations of stakeholders.

SAS's long-term targets remain unchanged and reporting on its sustainability work shall maintain a high standard, for which SAS has received positive responses, both from sustainability analysts and other independent assessors.

SAS's stakeholders generally place the greatest importance on environmental responsibility, especially relating to how SAS handles the demand to reduce greenhouse emissions. Therefore, environmental responsibility is the largest part of SAS's 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.

Despite the turbulent market for the airline industry in recent years, SAS has chosen to maintain its commitment to sustainability-related issues. Adapting capacity and taking emission-reducing action have constantly decreased emissions per passenger kilometer over time. Although the 2011 results were weaker, it is evident that the structured actions are generating long-term results.

SAS Sustainability policy and strategy

Sustainability (CSR) 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's business activities and is closely linked to our ability to fulfill and develop the priority program, Care,
- To contribute to sustainable development, everybody must, in their day-to-day work, 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.

SAS Corporate Manual

The Corporate Manual describes SAS's organization, corporate form and all of its policies, which, combined, govern the Group's sustainability work and operations in general.

The SAS Group's role models for executives and employees comprise the basis for the Group's sustainability programs.

Code of Conduct

To summarize and clarify the Group's stated priorities, promises, policies, and other regulations, the SAS Board of Directors has issued a Code of Conduct that covers all employees within the Group. 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. At the end of 2011, 76% of the employees had done so.

The Code's whistleblower function was used in four cases. One case was dismissed without further action and three were concluded after investigation.

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 the area. Regulations relating to bribery and other improper actions are especially strict.

UN's Global Compact, GRI and CDP

The SAS Group 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's information was completed in April 2011.

UN Global Compact is a pivotal component of the SAS Code of Conduct and the requirements imposed on the company's suppliers.

SAS's 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. ***Page 45*** presents specified GRI cross references.

SAS reports to CDP (Carbon Disclosure Project). For 2011, SAS was awarded 74 points.

Sustainability-related business opportunities and risks

Management of sustainability-related risks is integrated with the SAS Group's comprehensive risk management. This is described in the Annual Report on ***pages 32–34***. In general, we can conclude 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 the SAS Group report once a year on measures for the purpose of improving the Group's 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. Although the heads of the particular companies and units are responsible for reporting, in practice, the coordinators in the Sustainability Network undertake this work.

Environmental data are reported annually, while data concerning employees are followed up at a local level on an ongoing basis. Data are compiled by the Group department for Environment & Sustainability, checked by internal auditors and reported once a year to Group Management. During 2012, the reporting frequency in respect of environmentally related data will stepped up to a monthly basis, with quarterly monitoring integrated in other reporting. Read more on ***page 9***.

Stakeholders – dialog and commitment

During 2011, dialog and cooperation in stakeholder resulted in a number of activities aimed at creating dialog around the terms and conditions for aviation from a sustainability perspective, with the focus on financial controls, alternative jet fuels and efficiency-enhancement of the European air space. Similarly, SAS 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 Global Compact, SAS participates in the 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. 2011 saw continuing proactive cooperation with Swedavia (Airport Agency) and LFV (Air Navigation Agency) in Sweden, and in Denmark with CPH A/S (Copenhagen Airports). Environmental impact is reduced as a result of logistical improvements at the airports – such as higher passenger and baggage flows and reduced waiting times. Also, during 2011, cooperation with suppliers of air traffic control management proved instrumental in SAS' efforts to reduce environmental impact in connection with incoming and outgoing flights. Particular focus was devoted to the dialog with Avinor in Norway in an effort to address challenges in conjunction with the implementation of a new methodology for incoming and outgoing flights at Oslo-Gardermoen Airport. Read more on ***page 21***. During 2011 SAS participated in the update of Avinor's report on "Samfunnsnyttig og bærekraftig luftfart".

Cooperation with central players in aviation, components, equipment and catering is essential in promoting sustainable development in all areas. SAS plans to renew a large share of its aircraft fleet, with fuel consumption and environmental impact as key parameters in the decision-making process.

Discussions with potential suppliers are underway and will be intensified in 2012. SAS is also engaged in talks with a series of prospective suppliers of alternative sustainable fuel, which are expected to lead to contracts during 2012 regarding future deliveries.

Sustainability issues have gained greater importance for public administration and the business sector, and SAS is initiating discussions with these parties. SAS is pursuing ongoing dialogs 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 continual 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.

Employees
- Employee index PULS
- Performance reviews
- Whistleblower function
- Employee meetings at all levels including meetings related to ISO 14001 and EMAS
- 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
- Green Light Project

NGOs
- Close dialogue and cooperation with, for example, Bellona, WWF and Naturvernforbundet, Norway
- SAS was a sponsor of Save the Children in 2011

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.

SAS pursues active talks with various NGOs, researchers and the media. Over the course of 2011, the dialog with WWF was extended in respect of the challenges associated with the use of biomass and other resources for the production of jet fuel . SAS believes that society should prioritize the production of alternative, sustainable jet fuel, since there are currently no realistic alternatives, and that production should be conducted in a manner that is socially, environmentally and economically sustainable.

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. Considerable emphasis is placed on ethical questions and the development of the corporate culture and value base.

Systematic approach offers benefits

For some time now, SAS has worked with systematizing, strengthening and further developing relations with external, primary stakeholders, meaning customers, politicians, financial analysts/investors and the general public. This contributes to creating the premises for the conditions underlying SAS's competitiveness and operational framework.

Talks are held with stakeholder organizations, the media and universities. 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.

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 Group's 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

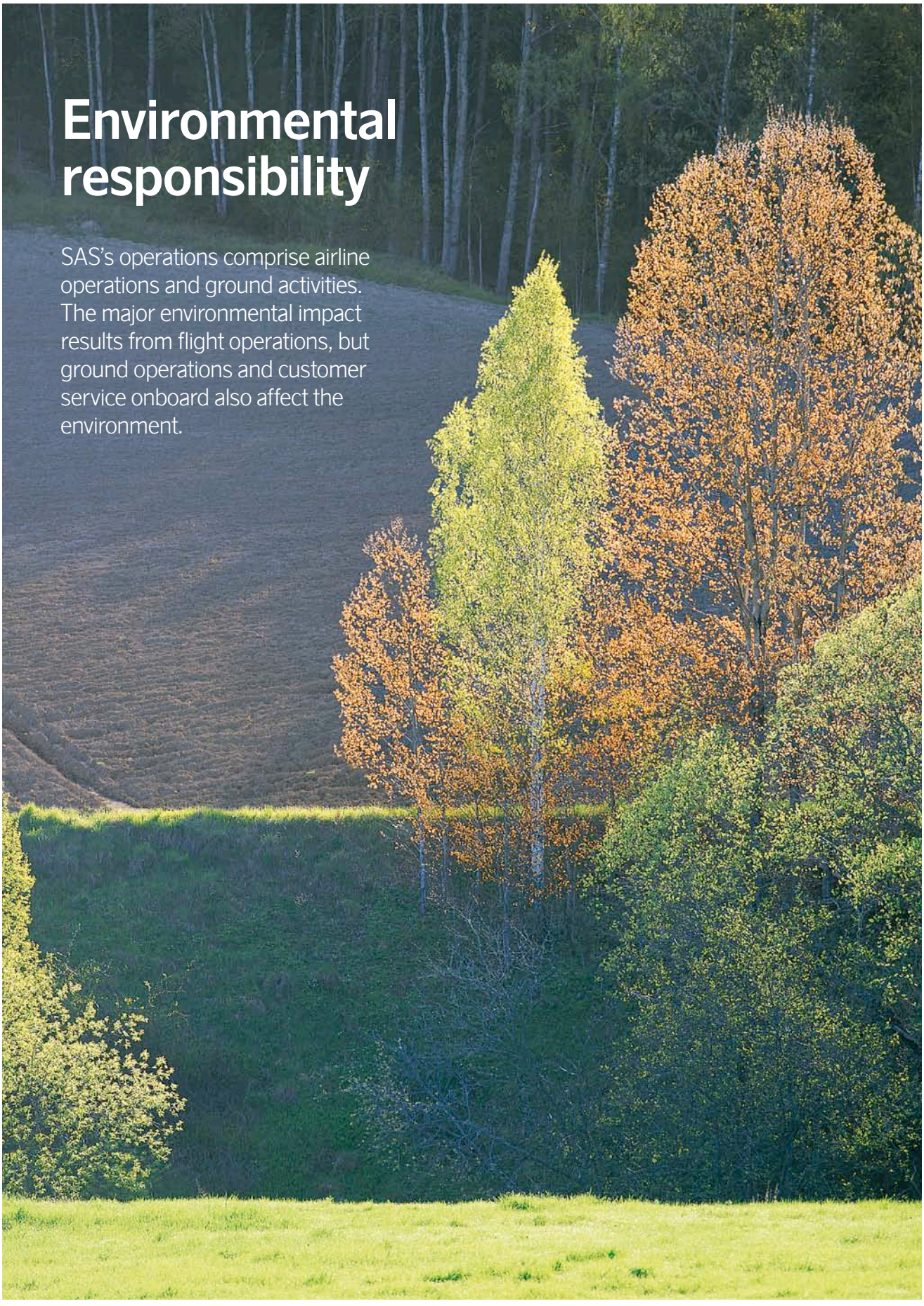
- Support of and dialog on essays and doctoral theses
- Presentations and participation in conferences and debates

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

Environmental responsibility

SAS's 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.



Environmental Management System
SAS's environmental management system includes all activities in the SAS Group, except Individual Holding (Air Greenland where SAS owns 37.5% of the shares). The system focuses on activities around the main bases (Stockholm, Copenhagen, Oslo, Helsinki and Bodø), but also embraces all stations in Scandinavia and Finland, as well as international services and activities through follow-up programs and contracted services. See the scope list on www.sasgroup.net/sustainability/ISO14001 and EMAS

The system is based on shared environmental and sustainability policies, such as the Code of Conduct, the UN Global Compact, airline operational standards and ISO 14001 and EMAS. 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 integrates environmental reports in existing quality/security inspections. This is part of our endeavor to achieve constant improvement.

SAS has a central department for Environment & Sustainability that reports to senior management through the Infrastructure Manager. The department coordinates sustainability programs at SAS through the SAS Sustainability Network. Annual, internal self-assessments are conducted on sustainability programs throughout the Group. This function also includes a resource – Green Flight & Fuel Efficiency – that works with the enhancement of SAS's fuel efficiency, thereby reducing climate-impacting emissions. This function concentrates primarily on the fuel-savings program, which involves a focus on procedures, behavior, and cooperation centered on "green" flights with air traffic control and the European project, SESAR. Read more on ***page 18***.

Administration of the Environment Management System:

I ***General requirements:*** through the SAS Corporate Manual: A guidance and control system at SAS, which consolidates many local control systems from each business area /unit. (www.sasgroup.net/sustainability)

II ***Environmental Policy:*** The SAS Group works in line with the SAS Environmental Policy. See policies on ***page 14***.

III ***Environmental aspects:*** Management groups at all levels are supported by an environmental group that works on proprietary aspects. These are described in local control systems that incorporate goals and activities. See aspects on ***page 10*** and data and results on ***pages 21–35***.

IV ***Legal and other requirements:*** A list of legal and other requirements that apply to all units and companies has been compiled for each of the four countries: Denmark, Finland, Norway and Sweden. The list comprises statutory and other requirements from national/municipal authorities, the EU, airline regulators, approvals and other applicable leases. SAS works on compliance with legal and other requirements, with observance controlled by units designed to support SAS's operational management. Any breach of regulations or rules in respect of permits is described in the annual sustanability report.

V ***Resources and responsibility:*** Described in the control systems at all levels

VI ***Training and awareness:*** All employees of the SAS Group receive essential environmental awareness training, while managers and selected key individuals receive training at a higher level. All operational training aimed at safeguarding processes is controlled and registered in line with official requirements.

VII ***Monitoring and follow-up:*** All key aspects are measured, including regular follow-ups of key data and environmental improvement activities. Inspections/audits are conducted continually – internally and externally – by suppliers and certification bodies. An overall audit process has been established to ensure knowledge sharing among companies/units/departments. A self-assessment and data collection on the management system for the whole organization is conducted yearly and signed by SVP or CEO. The self assessment is followed up by spot checks. Knowledge sharing is conducted through four rounds of the SAS Group's Sustainability Network meetings.

VIII ***Reporting:*** Each year, a thorough self-evaluation is conducted throughout the SAS Group and the results are used for control, improvements and goal setting, as well as for annual sustainability reporting.

IX ***SAS Sustainability Network*** comprises a representative from each of the largest areas/companies, while each of the smaller units/parts of the SAS Group are managed by other network members. In turn, the representatives support local management in the individual company/unit. Thanks to its fixed agenda, the sustainability network ensures that all ISO14001/EMAS components are discussed and followed up throughout the organization. The Network meets four times a year. All environmental work is governed through policies, key aspects, targets and control and follow-up of results.

Key environmental aspects
To identify the most important aspects in normal and abnormal situations, SAS environmental aspects are identified using a proprietary method. The degree of significance of the environmental aspect significance is governed by:

- the scope of the environmental consequences
- emissions/wastewater volumes
- legal requirements
- the risk of incidents and deviations
- stakeholder groups' demands and expectations

All essential environmental aspects are measured and key indicators as well as improvement activities are continuously followed-up.

In the SAS environmental management system, a distinction is made 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, dialogues 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 is an agreement regarding hotel stays for SAS crews, etc., where the service creates emissions to the air, soil and water.

What comes in and goes out [1]

In the air

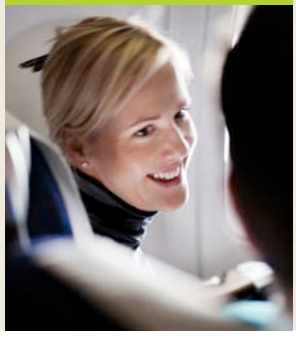
IN

SAS's responsibility
Jet fuel
Engine oil
Halons

OUT

SAS's responsibility	Emmissions to Air	Ground	Water
Carbon dioxide (CO_2)	●	○	○
Nitrogen oxides (NO_x)	●	○	○
Unburnt hydrocarbons (HC)	●	○	○
Volatile organic compounds (VOC)	●	○	○
Oil aerosols	●	○	○
Jettisoned fuel	●	(○)	(○)
Noise	●	○	○
Water vapor (H2O)	●	○	○
Sulfur dioxide (SO_2)	●	○	○
Carbon monoxide (CO)	●	○	○
Halons (CFC)[2]	●	○	○

Onboard



IN

SAS's responsibility
Food and beverages
Packaging
Disposable/semidisposable items
Articles for sale
Newspapers
Chlorinated water
Germicides

OUT

SAS's responsibility	Emmissions to Air	Ground	Water
Organic waste	○	●	○
Waste	○	●	○
Unopened packaging	○	●	○
Waste and recycling	○	●	○
Lavatory waste	○	○	●
Germicides	○	○	●
Airport-owner responsibility			
Wastewater (disposal)	○	○	●
Lavatory waste (disposal)	○	○	●

On the ground

IN

SAS's responsibility
Glycols
Water
Maintenance supplies
Energy
Vehicle fuel
Office supplies
Chemicals
Solvents
Equipment
Work clothes and uniforms

Airport-owner responsib.
Urea/Acetat

OUT

SAS's responsibility	Emmissions to Air	Ground	Water
Waste	○	●	○
Hazardous waste	○	●	●
Waste water, incl. flooded water	○	○	●
Sulfur dioxide (SO_2), Carbon dioxide (CO_2)	●	○	○
Nitrogen oxides (NO_x), HC	●	○	○
Soot och particulates, VOC	●	○	○
Heavy metals[3]	○	●	●
Recycling	○	○	○
Airport-owner responsibility			
Glycols (disposals)	○	●	●
Urea/Acetate	○	●	(○)
Wastewater (disposals)	○	○	●

1. Definitions in the table of 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.
3. Heavy metals such as cadmium and chromium are used as alloys and very small amounts can be cast off during washing and rainy weather, which during aircraft maintenance is confined in the closed sewage systems in the hangars. The process is strictly regulated through measurements and approval from municipalities.

From the list of aspects, (see What comes in and goes out, ***page 10***), the SAS Group has elected to primarily work with six of the most significant environmental aspects:
1) Jet fuel,
2) Aircraft noise,
3) Waste from onboard products and services,
4) Deicing fluid,
5) Fuel used on the ground and,
6) Energy.

Biodiversity
Biological diversity is affected by airline operations in different ways. The actual flight affects the 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 respective airport's own sustainability reports.

Impact of air transport
Today, commercial air transport accounts for about 2% of global CO_2 emissions, which corresponds to 12% of the transport sector's global emissions. CO_2 emissions account for about two-thirds of air transport's total impact on climate, while nitrogen oxides (NO_x), water vapor and particles are assumed to account for most of the balance. *(Source: IATA & ATAG)*

SAS's main markets and its impact
SAS's main market is the Nordic region, with travel among the Nordic countries as the core operation. Scandinavian Airlines' share of total traffic in its home market was 36% in 2011. Widerøe's share was 17% and Blue1's 18%. Norwegian domestic air traffic accounts for 2.3% of total national CO_2 emissions. The corresponding figures for Danish, Swedish and Finnish domestic traffic are 0.2%, just under 0.9%, and 1.0%, respectively. *(Sources: National statistics)*.

CO_2 vs. nitrogen oxides
To date, the climate impact of air transport has focused on CO_2 emissions. However, in the future, the focus will most likely also include other climate effects, primarily nitrogen oxides and water vapor.

The multiplier – to be or not to be
Industry and scientists generally agree on the magnitude and impact of CO_2 emissions. However, there is less consensus regarding NOx, particles and water vapor. Meanwhile, more voices are being raised in support of the introduction of some form of duty on nitrogen oxides. SAS and the airline industry recommend ECAC's model of differentiated landing fees based on nitrogen oxide emissions. There is also a proposal to use a multiplier; however, the size of the multiplier is disputed and not based on scientific findings. Ten years ago, a multiplier of 2–4 was discussed while today's indicative value is around 1.2–1.8 *(Source: Cicero)*. This issue is on the EU's agenda and, until clearer directives are given, SAS has chosen to report each emission separately.

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 transport modes is taken into consideration. Read more about SAS' environmentally related costs on ***page 43*** .

Market trend
2011 was hallmarked by rising demand in the early part of the year, which, however, subsequently declined due to macroeconomic conditions.

The market is characterized by continuously increasing competition and rising price pressure, affecting margins and profitability for the entire industry. Although there are varying perceptions about the future performance of air transport, according to AEA, 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, the primary growth is expected to be on longer routes that offer no other real alternative to air transport.

Air transport is a key part of the infrastructure of a globalized world and a prerequisite for economic and social progress.

Industry and IPCC estimates indicate a possible reduction in emissions by an annual average of 2% as a result of enhanced technology and short-term efficiency gains. This trend – combined with expected long-term growth – means that air transport's environmental impact will increase in the absence of action programs.

Accordingly, the airline industry as a whole has agreed to ambitious, long-term environmental targets.

The journey towards certification...

The idea of certification emerged because the SAS Group had conducted proactive environmental efforts and had a structured environmental program – including published environmental/sustainability reports – since the mid-1990s.

In June 2008, executive management decided to secure ISO 14001 certification for the SAS Group since SAS Cargo was already certified and the rest of the organization had a well-developed management system.

As of 2008, the ISO 14001 environmental groups were formed with expertise from the particular areas. The Group reviews manuals, documentation and procedures to identify environmental aspects. Efforts to gain ISO 14001 certification revealed that EMAS was an equally important standard. One of the tasks was to find a certification authority and Bureau Veritas, the world's largest certification authority, was selected.

From mid-2009 until late summer of 2010, Bureau Veritas tested management and all employees throughout the organization using certification audits.

On September 23, 2010, the SAS Group was awarded ISO 14001 and EMAS certification.

...and the resulting effects
The environmental management system has provided operations with extra support in a number of areas, such as a superior structure for the follow-up of environmental programs and a simpler structure of regulations, legislation and so forth, which SAS must observe. Moreover, the system has created new conditions for pursuing development efforts as well as monitoring the adopted environmental programs. The system gives us a constant reminder to both monitor and control goals – which has resulted in both environmental and economical savings.

Aviation industry moving towards zero emissions

The industry's environmental work primarily focuses on four areas, or what are referred to as the pillars, namely: New Technology, Infrastructure, Operational Measures and Economic Instruments. The airline industry's commitment to reducing environmental impact requires long-term investments that take time to complete and are capital intensive.

Aviation is a relatively young industry but there is significant potential for environmental improvements, provided that they are economically justifiable and technically feasible. In the past 40 years, developments have obviously changed the conditions underlying air transport, with CO_2 emissions per produced passenger kilometer decreasing by 70% according to IATA.

In 2007, IATA formulated a 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.

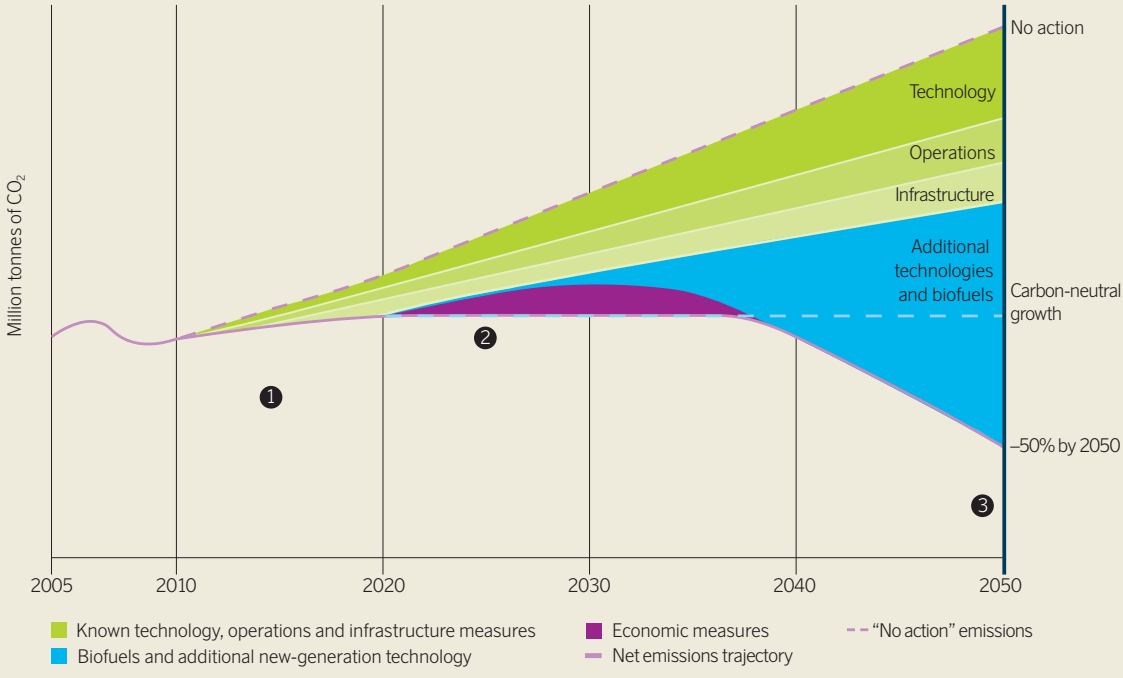
Achieving zero emissions requires the total replacement of existing aircraft fleets with a new generation of aircraft and engines not yet on the market. The lead-time for such a changeover is 20–30 years, which is why the vision of zero emissions should be interpreted as meaning that the necessary technology must be commercially available.

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 will now be further developed by ICAO:

- Improving fuel efficiency by an average of 1.5% annually until 2020
- Carbon-neutral growth from 2020
- 50% reduction in greenhouse CO_2 emissions by 2050, compared with 2005 levels

Source: www.enviro.aero

Road map to 50% reduction by 2050



1. Improve fleet fuel efficiency by 1.5% per year from now until 2020.
2. Cap net emissions from 2020 through carbon neutral growth.
3. By 2050, net aviation CO_2 emissions will be half of what they were in 2005.

Source: http://www.enviro.aero/CNG2020

The framework for aviation

Emissions trading

Europe has adopted a goal of reducing emissions in the Union by 20% by 2020. One of the measures devised to achieve this was the establishment of the EU Emission Trading System (EU-ETS) for stationary sources. On the January 1, 2012, aviation became the first transport sector to be included in the EU-ETS, regulations, covering emissions from flights inside the Union and international flights departing or entering the EU. EFTA has adopted the same scheme through the EEA agreement, and is – from an aviation operator's ETS perspective – an integral part of the EU-ETS. Talks are progressing with Switzerland on a similar approach and the upcoming EU membership of Croatia from 2013 will further enlarge the EU-ETS area. There are also other industry sectors and new emission types that will be included for stationary sources from 2013. The final year of the second ETS trading period is 2012. The third trading period covers 2013–2020, while plans are in progress for a fourth trading period starting 2021.

SAS – and its subsidiaries Widerøe and Blue1 – applied for and received approvals for the required monitoring plans for emissions and ton-kilometers within the set deadlines at year-end 2010. During 2010, both of these parameters were continuously monitored on a flight-by-flight basis, and the required annual emissions and ton-kilometer reports were verified by the third party accredited verification companies, namely, PwC for SAS and Widerøe, and Bureau Veritas for Blue1. These reports were handed over to the relevant national authorities within the set deadline. The ton-kilometer report also functioned as an application for allocation of free allowances.

In 2011, SAS received notification of the number of allowances granted for 2012 and the third trading period 2013–2020. For 2012, compared with 2010, emissions will cover 74% for Scandinavian Airlines, 44% for Widerøe and 52% for Blue1. Emissions reports for 2011 for the three airlines are currently being produced and verified, and will be delivered to national authorities within the set deadline of April 31, 2012.

The EU-ETS has been criticized by several airlines – mostly based outside the EU/EEA, and IATA – for including emissions that occur outside the EU, such as on a flight to or from the US or China. The Airlines for America industry group has taken legal action against the EU on this issue on the basis that the ETS is contrary to the principles laid down in the Chicago Convention, which forms the basis for many bilateral air agreements and is the foundation of the UN aviation organization ICAO. The US administration has criticized this unilateral approach by the EU and a large group of nations support similar views. Moreover, some of these have threatened retaliatory measures such as increased over-flight charges for EU airlines and a procurement boycott of, for example. Airbus aircraft. The European High Court has ruled that EU-ETS is lawfully established within EU law, and that it is not contradictory to international agreements.

SAS supports the concept of a global solution for airline emissions rather than regional or local programs. A task force at AEA, in which SAS has participated, has formulated a proposal for a global system that does not distort competition and incorporates the UN's CBDR principles (Common But Differentiated Responsibility), referred to as GAP (Global Approach for International Aviation Emissions). The proposal is based on a division of the world into three blocks, where the industrialized counties are given greater responsibility than developing countries. In addition, IATA is also working on a document outlining concepts for economic instruments for reducing CO_2 emissions from air transport. It is SAS opinion that a global solution for aviation must come through political processes and not through court actions.

SAS has started to trade allowances to cover estimated needs beyond the allocation of permits. An emission reporting (EMIR) system gives an overview of monthly emissions. Permits are traded as required and SAS hedges about 60% of the required EUA's. As in the case of several airlines, cost is recovered through add-on fuel surcharges.

Environmental compliance

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

One of Stockholm-Arlanda Airport's environmental rules is a ceiling for how much CO_2 and NO_x airport activities may emit. Since 2008, Swedavia (previously a part of LFV – Swedish Navigational Agency), has developed an application for a totally new environmental permit that was submitted to the authorities in charge in May 2011. *Source: http://arlanda.se/sv/Information-om/Miljoarbete/Miljotillstand/*

The established noise limit of 80dB(A) for night traffic at Copenhagen-Kastrup did not result in any complaints from the authorities regarding SAS's operations in 2011. During a test run of aircraft engines on the ground after technical maintenance, there was one run outside the established time limit. For other environmental permits/policies decided by authorities, such as premature deviation from the takeoff path, unnecessary use of an aircraft's extra engine for energy provision (APU) and engine reversals, SAS did not exceed limits during the year.

Measuring the air quality at the airport is also a part of environmental policies. Copenhagen-Kastrup was the first airport in Europe to measure air quality on the ramp in 2010, with a special focus on ultra-fine particles. This was carried out by DMU (Danish National Environmental Research Institute) and showed a periodic increased concentration of ultra-fine particles. The foremost sources are APU, aircraft engines, heavy traffic on the ramp and other ground transport to and from the airport. There are no limit values for ultra-fine particles but they are considered to be health-impairing. The concentration of larger particles in exhaust emissions was below the limit values. Read more on ***page 40***.

A new noise regulation was implemented at Oslo-Gardermoen during 2011. Unfortunately, this led to higher emissions in the short term, as described in greater detail on ***page 21***.

In general, there is a trend towards introducing tougher restrictions regarding permitted approach and takeoff paths. Deviations generally result in fines for the airline. In general, the 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. Read more in the Report by the Board of Directors in SAS Group Annual Report 2011 ***pages 46–51***.

Environmental permits

Airline operations have no separate licenses or environmental permits for operation; instead, they depend on permits held by the airport owner, such as for glycol handling, noise and emission thresholds.

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. SAS estimates that around 5 kilograms of halons was emitted during 2011.

SAS Oil is a jet fuel purchasing company for the SAS Group at Copenhagen, Oslo and Stockholm airports. Through SAS Oil, SAS is a minority owner of a number of smaller companies that deliver jet fuel. The Group has ensured that these companies have the necessary permits, contingency plans and insurance.

A detailed description of SAS's licenses and environment-related permits is presented in the Report by the Board of Directors in SAS Group Annual Report 2011 ***pages 46–51***.

SAS environmental vision, policy and targets

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's 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.

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

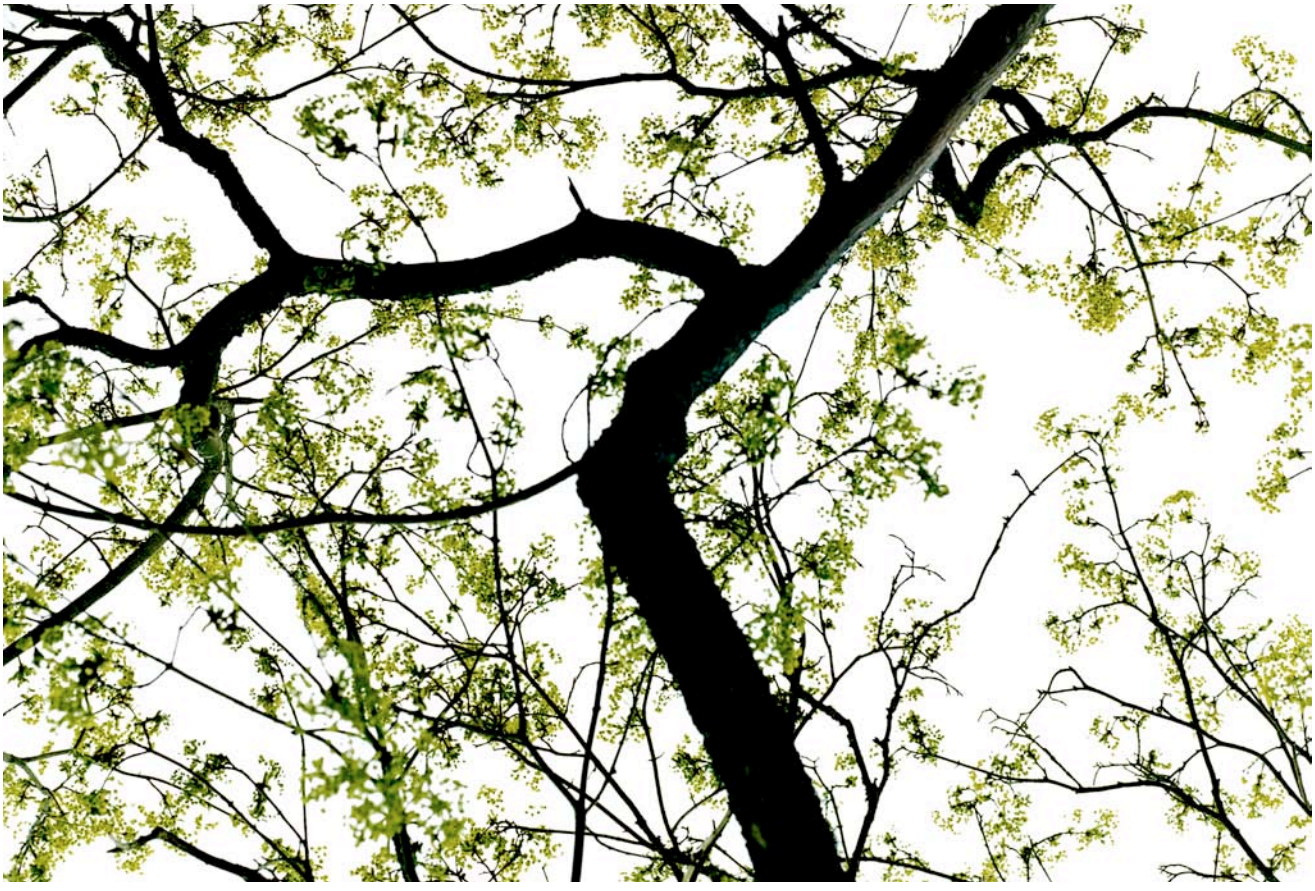
The activities within SAS's environmental programs will be coordinated and integrated with production, quality and financial activities and will comply with applicable legislation and other requirements.

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

Environmental target
SAS aims to create responsible and sustainable traffic growth, while reducing environmental impact.
- 50% lower emissions per unit by 2020 compared with 2005

Environmental goals, 2008–2011
During 2011, SAS's sustainability programs continued at an intense pace in the Group, which was in line with the action plans drawn up in 2008 to reach their targets no later than by 2011. The deterioration in market conditions has not affected SAS's goals and schedules. A description of the outcome for these goals, which have now been concluded, is available on ***page 15***. Also, ***page 16*** provides a description of SAS's new goals, which extend through 2015.

SAS should:
- be seen as the most environmentally aware airline in Europe
- have ISO 14001-certified environmental management systems
- have the industry's most effective fuel-saving program
- be among the first airlines to use alternative fuel blends once they are approved and commercially available
- have a long-term plan for its aircraft fleet that leads to a significant reduction of greenhouse emissions
- have reached the target for SAS's environmental indexes.



Environmental goal attainment, 2008–2011

SAS will be seen as the most environmentally aware airline in Europe

Goal achievement in 2011

The basis for achieving this goal is, of course, the actual achievements attained by SAS in its efforts to reduce its environment impact. These are, for example, embodied in the company's status as the only airline that is certified according to ISO 14001 and EMAS; in having a number of environmentally certified products onboard and in the lounge, seeking to conduct more environmentally compatible flights, offer voluntary CO_2 compensation, being involved in seeking suitable suppliers for future aircraft purchases and future fuel purchases based on renewable sources. During the year, a large number of communications activities were conducted to support the goal. This involves, for example, partaking in external conferences and trade fairs, as well as participating in all the channels that SAS itself has at its disposal, as well as activities that increase commitment among SAS employees. SAS's sustainability report also gained a number of distinctions over the years.

During 2011, SAS was a strong driving force in environmental and sustainability issues in international bodies such as IATA and AEA, as well as participating actively is the social debate around these issues.

The annual CSI (Customer Satisfaction Index) indicates that SAS has improved its result for the question: "Do you perceive SAS as an environmentally aware company?" from 55 till 64 between 2007 and 2011.

SAS will have ISO 14001-certified environmental management systems

Goal achievement in 2011

SAS has attained this goal. The SAS Group's three airlines have been certified in line with ISO 14001 and EMAS since September 2010. This means that SAS's airlines are the only ones worldwide to be certified according to both standards.

SAS will have the industry's most effective fuel-saving program

Goal achievement in 2011

In 2005, Scandinavian Airlines initiated a program aimed at operating existing aircraft types in a more fuel-efficient manner. The goal is that, by year-end 2011, to operate comparable flights with 6–7% fuel efficiency compared with the period from July 2005 to June 2006. At year-end 2011, the improvement was 4.5% since the launch of the program. This corresponds to an emissions reduction of 161,000 tons of CO_2 or a reduction in fuel purchases of approximately MSEK 350 at year-end 2011 compared with the base period.

There are several reasons as to why the goal was not fully achieved. One contributory factor is the implementation of new approach and takeoff routes at Oslo-Gardermoen. Read more on ***page 21***. Another is the relatively tougher winter weather in Scandinavia in recent years compared with the base period.

The fuel-savings program is progressing with a greater scope within the 4Excellence strategy. Read more on ***page 17***.

SAS will be one of the first airlines to use alternative fuel blends once they are approved and commercially available

Goal achievement in 2011

During the year, SAS has worked in cooperation with relevant stakeholders to hasten the production of sustainable alternative jet fuel based on renewable sources.

July 2011 marked the certification of the international specification for jet fuel, which has opened up the international market for alternative aviation fuels based on sources other than crude oil and coal. To date, production has been on a small scale and prices very high, which has meant that our goal cannot yet be realized. At this point in time, a number of airlines have conducted individual demonstration flights using alternative fuels based on, for example, cooking oil. SAS has opted not to purchase this fuel, since we are focusing entirely on identifying appropriate suppliers that can deliver at commercial prices and with a sustainability performance that meets our demands. Read more on ***page 20***.

SAS will have a long-term plan for its aircraft fleet that leads to a significant reduction of greenhouse emissions

Goal achievement in 2011

A key condition for attaining SAS's environmental goal is a cost-effective and fuel-efficient aircraft fleet designed to meet market requirements. The strategy is based on continually replacing aircraft to upgrade to the optimum technology when it is financially defensible.

SAS has a long-term plan for its aircraft fleet that affects the goal up to 2015 by replacing a number of older aircraft with more energy-efficient aircraft; but also after 2015 a number of current generation aircraft will be replaced by the next generation A320neo. Read more on ***page 19***.

SAS has an aircraft fleet that offers considerable flexibility ahead of future aircraft procurement and, like other airline companies, SAS is monitoring the results of the development programs currently in progress among the relevant manufacturers.

SAS will reach the target for its environmental indexes

Goal achievement in 2011

Scandinavian Airlines saw a decline of one index point – to 94 – in its environmental index compared with 2010. Thus, Scandinavian Airlines did not achieve its goal. The deterioration is primarily due to a generally challenging market situation, resulting in a weaker cabin factor. Scandinavian Airlines' aviation operations in Norway displayed a general improvement, while other markets showed a decline.

Wideroe improved its index by 8 index points – to 82 – compared with 2010. However, it should be noted that Wideroe's environmental index declined significantly in 2010 due to factors including changes of methods in conjunction with the introduction of a new database (MRV). Wideroe missed its target by one index point.

Blue1 saw a deterioration in its environmental index by one index point – to 80, but nevertheless achieved its target for 2011.

Year-end 2011 marked the conclusion of the environmental index. As of 2012, the focus will be on goals within the framework of 4Excellence and the SAS Group's climate index.

Environmental goals ▸ 2015

The climate goal up to 2015 will lay the basis for ensuring that SAS operations will be sustainable in the long-term.

4EXCELLENCE

SAS will:

reduce flight emissions by 20% in 2015 compared with 2005.

reduce total ground-related energy consumption by 15% in 2015 compared with 2010.

reduce ground-vehicle consumption of fossil fuels by 10% at SAS's major airports in Scandinavia 2015 compared with 2010.

improve one index point annually for the Customer Satisfaction Index question involving being an environmental-aware company (2011: Index 64)

secure a regular, large-scale supply of a commercially available and sustainable jet fuel by 2015.

Measures to be undertaken in 2012 to attain SAS environmental goals ▸ 2015

SAS will reduce flight emissions by 20% in 2015 compared with 2005

Measures in 2012
During 2012, Scandinavian Airlines plans to phase in about ten aircraft to the fleet, thereby replacing a similar number of older generation models. This measure – combined with fuel-savings programs new route planning systems, more efficient procedures and culture, plus continuing modification of the existing fleet more efficient engines, lighter seating and so forth – will contribute positively to realizing the goal for 2015. Read more on ***page 17***.

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

Measures in 2012
Structured energy-efficiency programs are progressing as planned. Examples of activities include the adjustment of the existing installation, continuing reporting from users and fault-searching, etc., as well as the continual follow-up and environmental management system audits.

SAS will reduce ground-vehicle consumption of fossil fuels by 10% at SAS's major airports in Scandinavia by 2015 compared with 2010

Measures in 2012
The planned replacement of vehicles continued during the year. The switch involved more fuel-efficient vehicles, as well as vehicles driven by alternative energy sources, such as electricity. Also, during the year 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 improve one index point annually regarding the Customer Satisfaction Index question of: "being an environmentally-aware company" (2011: Index 64)

Measures in 2012
During 2012, communication will continue of all the activities that SAS undertakes to realize its environmental goals. This is expressed, for example, in communications activities aimed at customers through social and traditional media, as well as onboard SAS aircraft.

SAS will secure a regular, large scale supply of a commercially available sustainable jet fuel by 2015

Measures in 2012
SAS is continuing its cooperation with potential suppliers of alternative aviation fuel. Depending on the terms and conditions, SAS will sign contracts with one or several future suppliers. Subsequently, SAS will communicate more details regarding these suppliers. Depending on the progress of negotiations, one or several demonstration flights will be conducted during the year.

During 2012, SAS will continue its involvement in the various international forums in which this issue is addressed. Read more on ***page 20***.

SAS will reduce flight emissions by 20 % in 2015 compared with 2005.

This is one of SAS's four main goals within the framework of the 4Excellence strategy.

In addition, to maintaining favorable punctuality – which boosts fuel-efficiency – this goal wil be realized in the four priority areas.

1. Modern and more efficient aircraft

During the period through 2015, SAS plans to replace its old generation aircraft fleet (MD80 and Boeing 737 Classic) for new and more efficient aircraft (Boeing 737NG and the Airbus A320-family). This alone will provide fuel savings of 10–15% per seat compared with a similarly sized aircraft.

2. Fuel-savings program

SAS's fuel-savings program is continuing and is being extended to include more aspects of SAS operations that can contribute to lower fuel consumption throughout SAS's flight operations. This means that other employee groups – other than pilots – will be involved in the fuel-saving program

The program includes a large number of activities that focus primarily on the conditions established in operations in the form of procedures and how we implement these, as well as how the available systems support is sufficiently optimized for fuel-efficiency. Of course, all changes remain at a level that ensures the high flight safety requirements.

Activities include:

- Speed policy: Securing optimal speed in all flight phases to ensure optimal fuel efficiency.
- Weight reduction: Such as reducing weight through taking varying amounts of water in the aircraft water tanks, depending on the length of the flight.
- Lower air resistance: Such as landing with reduced flap setting, permitting flaps to be pulled in earlier on takeoff in order to reduce fuel consumption.
- Clean aircraft and engines: Regular engines cleaning provide lower fuel consumption.
- Single engine taxiing: Starting or shutting down an engine before or after landing to reduce fuel consumption.
- Weight and balance: Ensuring that the aircraft is optimally loaded.
- On-ground processes: Ensuring that the aircraft engines are used as little as possible around the gate.
- New flight planning system: During 2012, a new flight planning system will be implemented to permit more efficient flight plans.

In early 2012, a new system support will be implemented to follow up on resolved activities and to identify new ones.

All activities are followed up through audits, inspections, evaluations and line checks, within the framework of the environmental management system.

The 2012 goal for the isolated fuel-savings program is to increase the fuel efficiency by 0.4%.

3. Modification of existing aircraft

SAS continuously modifies its aircraft. This involves such procedures as the ongoing engine upgrade program within the framework of the ordinary technical maintenance of most of the Boeing 737NG fleet. In practice, this entailed upgrading the engines to the latest version known as Tech Insert until the summer of 2011 and subsequently to the Evolution. To date, more than half of the fleet's engines on the Boeing 737NGs that were delivered prior to 2006 have been upgraded and are thus about 3% more fuel efficient than the engines with which the aircraft were delivered. Aircraft delivered after 2007 are already equipped with Tech Insert and aircraft delivered after the summer of 2011 have "Evolution". Another example is the replacement of the brakes on Boeing 737-800s with a lighter composite-material version, or the light-weight seats that are to be installed in a number of B737NGs as of 2012.

4. Lighter products onboard

There is an ongoing effort to reduce the weight of all products included in the SAS service offerings. One example is wine bottles of plastic instead of glass.

External partnerships are key

The four aforementioned principal areas are activities that are conducted in proprietary operations. In addition to these, extensive collaborations are conducted with airport and air traffic control suppliers in Scandinavia to advance the ways in which aircraft are propelled through airspace and at airports. Two examples of this fall under the designation Green flights and the European development project SESAR. A positive aspect of SAS's involvement is that this trend will also benefit other airlines when the changes have been implemented.

Scope and method

The goal includes Scandinavian Airlines, Widerøe and Blue1 flight operations. The emissions in this goal are defined as the absolute emissions of carbon dioxide (CO_2) and nitrogen oxides (NO_x).

In order to measure and follow-up the progress SAS monitors the absolute CO_2 emissions. NO_x will follow the development of CO_2 and possibly be reduced even more as newer aircraft are introduced.

To attain the goal in 2015, the absolute flight CO_2 emissions from Scandinavian Airlines, Widerøe and Blue1 should be less than the 3,658 million tons. In 2011, absolute flight CO_2 emissions from the three airlines was 3,863 million tons. During the period to 2015, traffic growth is expected at the same time as the absolute flight CO_2 emissions are expected to decline.

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.

Congestion in European airspace

Europe's air traffic is currently marked by inefficiency and a lack of airspace and ground capacity. Unlike the US, we have no joint airspace where air traffic can be governed and controlled at a joint European level. European airspace is among the most highly congested in the world with up to 33,000 daily flights during the peak season. Air traffic is also continuously increasing and is expected to double by 2030.

Air Traffic Management (ATM) governs how high, far, close and at what speed and output aircraft can fly. These factors impact how much fuel is consumed, how much greenhouse gases are emitted and the level of noise exposure on the ground. ATM improvements can dramatically reduce emissions by optimizing vertical and horizontal flight path.

Delays cost airlines in Europe large amount of money annually, due to several factors, including insufficient Air Traffic Control (ATC) capacity, poor weather conditions, a lack of capacity and inefficiency at airports or internally at airlines.

Renewal of Europe's air traffic system

The European Commission and EUROCONTROL jointly created SESAR in 2004 with the aim of modernizing, unifying and reforming air traffic in Europe.

Since 2009, SAS has participated in SESAR with a number of experts in various flight-operating areas, and participates as an "airspace user" in some 20 development projects to ensure that the end result suits SAS' needs as a Nordic airline.

Part of the development effort consists of practical trials. In 2011 and 2012, SAS is participating in live flight trials in the Green Connection project. These flight trials will demonstrate what can be achieved using existing technology with a focus on such aspects as optimized procedures for controlled time of arrival (CTA/RTA) and the use of precision navigation (RNP-AR) through a new arrival procedure at runway 26 at Stockholm-Arlanda. The project aims to conduct more than 100 flights between Gothenburg-Landvetter and Stockholm-Arlanda more efficiently than today, and one of the major savings is that the flight stretch can be shortened by slightly more than 15 kilometers as a result of the more efficient use of existing system support.

Another example was the establishment of what is known as the Free Route Airspace concept on November 17, 2011, by the Danish air traffic management supplier Naviair and its Swedish equivalent LFV. Under the Free Route Airspace concept, flights in this airspace can be conducted more efficiently by making the actual flight routes straighter and shorter.

SESAR objectives

The long-term objectives for SESAR are:
- Three times as much capacity.
- Ten times as much safety.
- A 10% reduction in the environmental impact of emissions.
- Half the Air Traffic Control costs.

Already 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_2 emissions of between 948 and 1,575 kilograms on average, per flight, compared with 2010.

Large vs. small & new vs. older aircraft

SAS currently operates with a mix of aircraft in various sizes and ages. The aim is to create the conditions for flying as profitably and energy efficiently as possible on each occasion.

An aircraft that flies for 15 minutes with an average demand of 20 passengers between two islands along the Norwegian coast has different prerequisites, for natural reasons, than an aircraft that flies for ten hours with a demand of 240 passengers. These two aircraft are part of SAS's business model and have varying energy efficiencies. The age of the aircraft also generate varying degrees of energy efficiency and environmental performance. An aircraft of latest generation (Boeing 737NG and Airbus A320 series) is about 10–15% more energy efficient than one of the previous generation (MD80 and Boeing 737 Classic) provided that two aircraft of the same size are compared. For this reason SAS seeks to use the older aircraft relatively less and these are the aircraft remaining on the ground in traffic weak periods. Within a generation, there has also been some product development. For example, SAS has actively chosen to invest and upgrade its Boeing 737NG when the desired effect occurs. Examples are the current engine upgrade program, installation of winglets, and to replace chairs and other fixed installations with lighter versions, etc. Another important aspect is how the aircraft is flown during its lifetime. For example, SAS has Boeing 737NGs with 120+, 140+ and 180+ seats that grant high flexibility depending on demand and ensure a total emission that is as low possible at any given moment. Flying over-dimensioned aircraft generates unnecessary emissions, although the result per available seat kilometer is better.

In 2011, Scandinavian Airlines decided to phase out all aircraft from the previous generation in the coming years and replace these with leased aircraft featuring the best available technology today. This means that Scandinavian Airlines will only fly current generation aircraft by 2015.

Blue 1 replaced all older Avro RJ85s and MD-90s with newer and more energy-efficient Boeing 717s in 2011.

Next generation aircraft

The development of the next generation of long-haul aircraft has been underway since 2004. In 2011, the Boeing 787 embarked on its first flight in commercial traffic and, within a couple of years, the Airbus A350 will be launched into traffic. These aircraft are essentially built in lighter materials and more aerodynamically efficient constructions with more efficient engines, which results in a 15–20% reduction in emissions compared with an aircraft with the same amount of seats from current generation. What is known as the noise abatement zone also generates a tangible reduction, which contributes to less noise around airports.

SAS is currently working on identifying potential replacements to today's long-haul fleet. As with the short-haul fleet, these efforts take an ambitious approach to sustainability related aspects for the entire lifecycle of the aircraft, included everything from construction to use to decommissioning and recycling.

In terms of the next generation of short-haul aircraft, Airbus and Boeing will be offering updated versions of their pre-existing aircraft families, the A320 (delivery 2015) and B737 (delivery 2017), as of 2016. Bombardier will be offering the C series as of 2013. All three offer completely new, more fuel efficient engines, which are also considerably quieter. Bombardier will launch an entirely new construction, while Airbus and Boeing have incorporated aerodynamic improvements in the existing constructions. The estimated reduction in emissions is calculated at about 10–15% and the so-called noise abatement zone is anticipated to be half the size compared to an aircraft with the same amount of seats from current generation. Following a selection process in 2011, SAS decided to order 30 A320neo for use by Scandinavian Airlines, which will be delivered as of 2016.

Carbon offset and emission statistics

SAS's offer to voluntarily carbon-offset its flight emissions is a key supplement to its environmental program. It does not replace any other actions, but comprises a prudent solution for those who want to offset the CO_2 emissions caused by flight travel.

For organizers of conferences, seminars, trips, meetings, etc., SAS offers customized offsets, often when SAS is the Official Airline. All SAS own duty travels are offset.

Corporate customers are encouraged to sign up for carbon offsets, which are based on estimates of travel volume on an annual or semi-annual basis. Individual customers can purchase CO_2 offsets via SAS' website, and work is continuously underway to facilitate the compensation of CO_2 emissions. All carbon offset revenues are channeled to SAS's partner, the CarbonNeutral Company, which is responsible for funding energy projects based on renewable energy sources and verified/certified projects.

SAS was one of the first airlines to offer an emission calculator on its website, which is approved by a third party. SAS also offers all corporate customers sustainability statistics as part of their agreements.

Alternative sustainable jet fuel

The global perspective

To realize the airline industry's environmental objectives, the future of aviation is largely dependent on the development of alternative 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 as well as to use as small an area of land as possible. According to the IATA, phasing in alternative fuels over time will enable a reduction in the air travel industry's emissions by up to 80% throughout its lifecycle.

In 2011, the American Society for Testing and Materials (ASTM) adopted an updated specification that enables the commercial use of alternative jet fuels that are based on renewable sources such as camelina, jathropha, algae, animal oils, fats and so forth.

The so-called, Fischer Tropsch method was approved under the Standard Specification for Aviation Turbine Fuels Containing Synthesized Hydrocarbons in 2009. This standard uses 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 as for example SAS. It is now a matter of initiating large-scale production at competitive prices.

SAS would like to accelerate the development together with a number of players in the aviation industry, and is appealing to agencies and politicians worldwide to create framework agreements that reduce the risks of investing in this type of production, as well as giving airlines the incentive to use these alternative fuels.

The current market

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 to not purchase these fuels, since the objective is to achieve a continuous large-scale use that tangibly reduces climate impacting CO_2 emissions. Furthermore, SAS's sustainability requirements must be fulfilled.

SAS commitment

For the past decade, SAS has worked on various activities aimed at accelerating the development of alternative 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 25% of the global civil jet fuel consumption. SAFUG is carefully monitoring the activities that are currently under way in the aim of ensuring long-term sustainability in all phases of the development of alternative fuels. It is vital that the production of alternative fuels are 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 tons of biofuels by 2020.

During the year, SAS has engaged in specific 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 is optimistic that one or more of these activities will lead to specific contracts during 2012 regarding future deliveries.

In 2011, the Norwegian air service provider Avinor launched a project aimed at assessing the preconditions for producing alternative jet fuels in Norway. SAS is participating in this effort.

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

Green flights

Partly in parallel with and prior to the launch of SESAR, in the early 2000s, SAS initiated partnerships with the heads of the air traffic management in Sweden, Norway and Denmark to identify more effective methods for conducting air traffic in the airspace of each country. This effort has primarily been conducted in Sweden and resulted in manual green approaches (Continuous Descent Approach from Top of Descent) now being the standard during low and medium traffic at Stockholm-Arlanda, and in SAS being the only airline in Europe that is allowed to conduct what are known as curved approaches on Stockholm-Arlanda's third runway.

Manual green approaches mean that air traffic management allows the aircraft to conduct the approach in a continuous sequence without the engines being used unnecessarily. While this is standard at smaller airports without nearby air traffic, it remains unusual at larger airports where other air traffic must be managed simultaneously.

In practice, curved approaches mean that the approach is conducted using the satellite-based precision navigation (RNP AR) instead of the traditional ground-based approach system (ILS). In the application deployed on Stockholm-Arlanda's third runway, approaches are conducted in an S-shaped curve. Accordingly, the noise in the immediate vicinity of the airport is relocated and exposure is reduced in susceptible areas. The approach also often entails a shorter flight route, which reduces climate-impacting emissions. The development of the curved approaches commenced in 2004 through a partnership between SAS and LFV.

Results Environmental responsibility 2011

2011 was hallmarked by rising demand in the early part of the year, which, however, subsequently declined due to macroeconomic conditions. The market is characterized by continuously increasing competition and rising price pressure, affecting margins and profitability for the entire industry. SAS's climate index, which also encompasses other emissions than CO_2, deteriorated to 91 (90). Overall CO_2 emissions increased 1% compared with 2010.

During the year, the SAS Group's fuel efficiency deteriorated and the relative CO_2 emission increased to 122 (121) grams per passenger kilometer. The negative development was primarily due to a continuing challenging market situation with lower load factors and severe winter weather at the beginning of the year.

When making comparisons with other airlines, it is important to compare airlines with similar traffic systems and that use identical production measurements. SAS frequently flies shorter average flights – in order to satisfy business travelers' needs – than airlines that serve the leisure market. When comparing specific routes, the results are often identical. Relatively often, available seat kilometers is used as a production measurement, which generates lower emissions per unit, but does not reveal whether the emissions generate any social benefit. By using passenger kilometers as the production measurement, SAS put the emission in context of the value for society, i.e. passenger transportation.

The SAS Group was still certified in accordance with ISO 14001 and EMAS and is the only airline in the world with both certifications.

No significant emissions or spillage was reported in conjunction with technical maintenance.

During the year, small spillages of Jet A1 fuel were reported on a few occasions in conjunction with refueling of aircraft. The fuel was handled in accordance with established procedures. No fuel dumps occurred during the year.

Management of all of the Group's owned and rented properties is handled by Coor Service Management. SAS thus participates in Coor's environmental and energy program for property management.

SAS cooperates extensively with public authorities and other organizations on environmental issues. In 2011, a continued heightened interest was noted from major customers regarding the operation's environmental management system and sustainability efforts. A large number of sustainability-related presentations were conducted at various seminars and trade fairs during the year.

In 2011, SAS's new strategy was launched, 4Excellence, in which one of the four main objectives is environmental. SAS shall reduce its flight emissions by 20% by 2015 compared with 2005. In practice, this means that the objective announced earlier has been brought forward by five years. Read more on ***page 17***.

During 2011, SAS also developed its new goals for the period 2012 to 2015. They replace the goals for 2008 to 2011. Read more on ***page 16***.

As of 2012, SAS will report its environmental efficiency based on climate index and EMAS KPIs for each airline and SAS as a whole. Climate index consists of climate impact excluding noise, that is, emissions of carbon dioxide (2/3) and nitrogen oxides (1/3). As of 2012, the climate index measures the Group's overall climate impact related to traffic measured in passenger kilometers. Until and including 2011, it relates to traffic measured in passenger revenue kilometers. Noise is a part of the EMAS KPI's specified for each airline. This means that SAS will stop measuring environmental efficiency index as of 2011.

Blue1 was the only airline that reached its environmental efficiency index target. Scandinavian Airlines and Widerøe was one index point above its respective targets. As a complement, the key data are reported for flight operations based on the geographic markets served by the airlines.

Official requirements, improvements and decline

In 2011, SAS worked with Oslo-Gardermoen and is following the new regulations on noise prevention and the new traffic regulation system. Takeoff is undertaken using defined procedures that determine routing. Earlier, the western runway was largely used for takeoff to the north. Under the new rules, the day is divided into three periods with different rules for runway use. Previously, it was possible to turn directly toward a destination after the aircraft reached a certain altitude. Under the new rules, aircraft must remain in fixed tolerance corridors regardless of altitude. The most densely built areas around the airport are thus better protected from overflight on takeoff. The new system requires use of both runways from 6:30 a.m. until 10:30 p.m. Previously, the areas close to the airport were overflown by approaching aircraft en route to a point merge about 11 kilometers from the runway. With the new rules, this point merge was relocated at about 20 kilometers' distance and visual approaches were prohibited.

In periods of dense traffic, incoming aircraft are regulated using a new system called "point merge". Oslo-Gardermoen (OSL) is the first airport in the world to employ this system. The new point merge for approaching aircraft results in an approximately 40-kilometer predictable approach. The result of this is an increase in fuel consumption and thus CO_2 emissions. Naturally, this impacts the SAS fuel save program and result.

Discussion with Avinor has resulted in some improvements but not entirely.

SAS airline operations' CO_2 emission	tons CO_2
Denmark	
Domestic flights	30,307
Flights to EU/EEA	424,896
Flight to outside EU/EEA	364,846
Norway	
Domestic flights	579,939
Flights to EU/EEA	286,298
Flight to outside EU/EEA	123,308
Sweden	
Domestic flights	225,943
Flights to EU/EEA	261,893
Flight to outside EU/EEA	134,604
Finland	
Domestic flights	44,734
Flights to EU/EEA	106,736
Flight to outside EU/EEA	14,009
EU/EEA	
Departing EU/EEA[1)] for Scandinavia and Finland	616,105
Flights within EU/EEA[1)]	416
Departing Europe for EU/EEA[1)]	47
Outside EU/EEA	
Departing from outside EU/EEA bound for Scandinavia/ Finland	641,239
Departing from outside EU/EEA bound for EU/EEA	276
Flights outside EU-ETS or excempted	7,258
Total all operations	**3,862,854**

1. Excluding Denmark, Sweden, Norway, Finland that are reported separately.

Scandinavian Airlines

Scandinavian Airlines is the largest airline in the Nordic region in terms of revenue, passengers and flights. The airline generated revenue of SEK 36.7 billion in 2011, and transported 22.9 million scheduled passengers to 90 destinations with 638 daily flights. The network is mainly dimensioned according to business travelers' needs, but leisure travel is a growing segment and represents a growing share of revenue.

The main bases are Copenhagen- Kastrup, Oslo-Gardermoen and Stockholm-Arlanda. The head office is located at Stockholm-Arlanda Airport. Scandinavian Airlines had 14,049 employees in December 2011.

In 2011, 30 Airbus A320neo were ordered. During 2011, work also commenced to identify potential replacements for today's long-haul fleet. As with the short-haul fleet, this work focuses on the sustainability related aspects of the aircraft's complete life cycle, from construction to use and recycling. Read more on ***page 19***.

Work continued in 2011 on the adaptation of Scandinavian Airlines' new route-planning system. When it is fully implemented, it will provide the conditions for more efficient flights and the acceleration of future fuel-savings programs.

Work also continued with Green Flights. There is potential to identify and support the development of more effective methods for conducting air traffic in the airspace. Read more on ***page 20***.

The most significant environmental aspects derive from emission from using fossil jet fuel, and noise from aircraft. It was in these areas the focus was placed in 2011.

Aircraft fleet

Scandinavian Airlines has a network of destinations with varied passenger volumes and distances, which requires an aircraft fleet with aircraft of varying size and range to make the offering attractive to business and leisure travelers. Scandinavian Airlines had 138 aircraft in operation at year-end and the fleet comprised 10 long-haul aircraft, 116 short-haul aircraft, and 12 regional jets. There are also four CRJ-200s on wet lease. The average age of the aircraft fleet was 12.7 years. Scandinavian Airlines increased the operational fleet by two aircraft in 2011. The fleet was also regenerated by the delivery of two new aircraft.

Reporting and official requirements

Scandinavian Airlines breached noise regulations on one single occasion at London-Heathrow in 2011. The number of breaches has declined considerably in recent years as a result of structured improvement activities, such as specific flight simulator training including scenarios flying to and from airports with strict noise regulations.

In 2011, 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 year.

Results and focus areas

Scandinavian Airlines' relative emissions increased to 119 grams (117) per passenger kilometer in 2011. The increase is primarily due to a generally challenging market situation, resulting in a weaker cabin factor.

The fuel-saving program continued in 2011, although unfortunately, it did not bring the desired result. A considerable number of improvements were noted (including clean configuration after takeoff and reviews of the block fuel calculation for a number of destinations), but overall fuel efficiency declined.

The decline in fuel efficiency was partly attributable to the new approach- and departure procedures implemented at Oslo-Gardermoen. Read more on ***page 21***.

Scandinavian Airlines environmental efficiency index deteriorated to 94 (93), see ***page 1***, and the target for 2011 was missed by one index point. Within Scandinavian Airlines, only operations in Sweden reached its target.

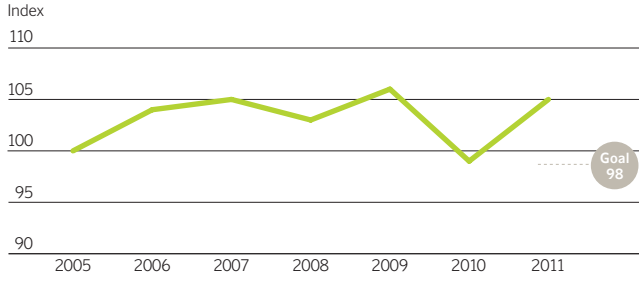
Environmental index

Scandinavian Airlines' airline operations in Norway

Scandinavian Airlines' airline operations in Denmark

Scandinavian Airlines' airline operations in Sweden

Scandinavian Airlines' intercontinental traffic



SAS measured environmental efficiency using an environmental index which comprises 50% carbon dioxide, 40% nitrogen oxides and 10% noise in relation to the most significant production parameter, passenger revenue kilometers. These indices are concluded with this report and will not be continued.

Key environmental figures for Scandinavian Airlines' operations

Scandinavian Airlines in Norway Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	273,157,979	287,564,162	Kg	7,065,534,435	7,802,505,591	PK	Kg per PK	–0.9	0.039	0.037	–4.9	–4.7
Jet fuel – CO_2	860,448	905,827	Tons	7,065,534,435	7,802,505,591	PK	CO_2 gram/PK	–0.9	122	116	–4.9	–4.7
Jet fuel – NO_x	2,731	2,863	Tons	7,065,534,435	7,802,505,591	PK	NO_x gram/PK		0.39	0.37	–6.2	–5.0
Jet fuel – HC	335[2]	363	Tons	7,065,534,435	7,802,505,591	PK	HC gram/PK		0.05	0.05	-	–1.7
Aicraft Noise – takeoff	180,062.20	207,706.00	Km^2 @ 85dba	103,204	101,320	Departures	85db area in KM^2 per departure		1.74	2.05	2.7	17.5

Scandinavian Airlines in Denmark Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	261,782,482	265,170,518	Kg	6,658,432,008	6,616,801,689	PK	Kg per PK	–0.9	0.039	0.040	–4.0	1.9
Jet fuel – CO_2	824,615	835,287	Tons	6,658,432,008	6,616,801,689	PK	CO_2 gram/PK	–0.9	124	126	–4.0	1.9
Jet fuel – NO_x	3,555	3,631	Tons	6,658,432,008	6,616,801,689	PK	NO_x gram/PK		0.53	0.55	–4.1	2.8
Jet fuel – HC	196[2]	198	Tons	6,658,432,008	6,616,801,689	PK	HC gram/PK		0.03	0.03	-	1.8
Aicraft Noise – takeoff	267,424.50	264,805.28	Km^2 @ 85dba	85,589	87,107	Departures	85db area in km per departure		3.12	3.04	2.5	–2.7

Scandinavian Airlines in Sweden Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	203,466,191	218,251,834	Kg	5,459,692,424	5,754,206,203	PK	Kg per PK	–1.4	0.037	0.038	–8.3	1.8
Jet fuel – CO_2	640,919	687,493	Tons	5,459,692,424	5,754,206,203	PK	CO_2 gram/PK	–1.4	117	119	–8.3	1.8
Jet fuel – NO_x	2,004	2,141	Tons	5,459,692,424	5,754,206,203	PK	NO_x gram/PK		0.37	0.37	–11.5	1.4
Jet fuel – HC	342[2]	368	Tons	5,459,692,424	5,754,206,203	PK	HC gram/PK		0.06	0.06	-	2.2
Aicraft Noise – takeoff	126,151.50	151,955.68	Km^2 @ 85dba	59,847	64,388	Departures	85db area in km per departure		2.11	2.36	–10.7	12.0

Scandinavian Airlines Intercontinental traffic Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	302,846,089	327,470,818	Kg	8,773,694,125	9,018,976,023	PK	Kg per PK		0.035	0.036	–5.5	5.2
Jet fuel – CO_2	953,965	1,031,533	Tons	8,773,694,125	9,018,976,023	PK	CO_2 gram/PK		109	114	–5.5	5.2
Jet fuel – NO_x	5,176	5,619	Tons	8,773,694,125	9,018,976,023	PK	NO_x gram/PK		0.59	0.62	–5.8	5.6
Jet fuel – HC	27[2]	31	Tons	8,773,694,125	9,018,976,023	PK	HC gram/PK		0.003	0.003	-	10.7
Aicraft Noise – takeoff	21,746.70	26,846.82	Km^2 @ 85dba	5,463	6,006	Departures	85db area in km per departure		3.98	4.47	–10.6	12.3

Scandinavian Airlines Total Fuel/FTE Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	1,041,252,741	1,098,457,332	Kg	4,775[4]	4,624	FTE	Kg per FTE		218,063	237,556	45.5[5]	8.9[5]
Jet fuel – CO_2	3,279,946	3,460,141	Tons	27,957,352,992	29,192,489,506	PK	CO_2 gram/PK		117	119	–5.7	1.0
Jet fuel – NO_x	13,465	14,255	Tons	27,957,352,992	29,192,489,506	PK	NO_x gram/PK		0.48	0.49	–6.0	1.4
Jet fuel – HC	899[2]	960	Tons	27,957,352,992	29,192,489,506	PK	HC gram/PK		0.03	0.03	-	2.3
Jet Fuel as Energy	12,495,033	13,181,488	MWh	4,775[4]	4,624	FTE	MWh per FTE		2,617	2,851	45.5[5]	8.9[5]
Jet Fuel as Energy	12,495,032,893	13,181,487,984	KWh	27,957,352,992	29,192,489,506	PK	KWh per PK		0.447	0.452	–5.7	1.0
Aicraft Noise – takeoff	595,385	651,314[3]	Km^2 @ 85dba	254,103	258,821				2.34	2.52	–0.5	7.4

Density used from 2010 is 0.8 kg per liter. PK measured per passenger kilometer, meaning all persons transported except active crew.
Reduction targets and reduction results are shown with minus.

FTE = Total number of employees December 2011 in Scandinavian Airlines Flight Operations. The same figures is found in the table on ***page 38***.

1. Data from Route Hierarchy Report.
2. New data disclosure based on stakeholder request. 2010 data not verified. Method unchanged between 2010 and 2011.
3. Increase explained by increased use of heavier aircraft such as B737-800 and A340.
4. Changed historic figure to reflect actual organization.
5. Increase partly explained by method change. Read more in Accounting Principles on ***pages 56–58***.

Widerøe

Widerøe is a wholly owned Norwegian subsidiary in the SAS Group that conducts regional, domestic and international traffic, and is based in Norway. Widerøe flew 317 daily flights to 47 destinations with over 2.5 million passengers in 2011. The head office is located in Bodø and the company comprises flight operations, technical, ground and cargo operations, Network & Pricing, Sales & Marketing and administration. Widerøe had 1,260 employees in December 2011. Commercial routes currently comprise 60%, while the procured routes on the short-runway network represent 40% of the business.

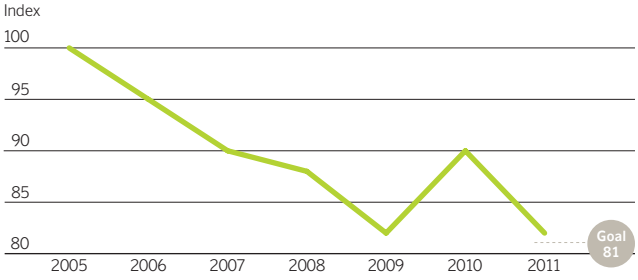
The most significant environmental aspects derive from emission from using fossil jet fuel, and noise from aircraft. It was in these areas the focus was placed in 2011.

Aircraft fleet

In December 2011, Widerøe's aircraft fleet comprised 35 Q100/ Q300/ Q400/Q400NGs. The aircraft fleet was expanded by three Q400NG during the year. The average age of the aircraft fleet was 14.1 years. The smaller Q100 and Q300 aircraft fly mainly on the contracted short-haul routes, while the larger Q400/Q400NG aircraft serve the large airports.

Environmental index

Widerøe



SAS measured environmental efficiency using an environmental index which comprises 50% carbon dioxide, 40% nitrogen oxides and 10% noise in relation to the most significant production parameter, passenger revenue kilometers.

Reporting and official requirements

Widerøe did not breach any noise regulations in 2011. There has been a focus on compliance with noise regulations. During 2011, no fuel leaks were reported in conjunction with refueling of Widerøe's aircraft.

Results and focus areas

Since 2009, the fuel save program has comprised a main focus – with 2009 as the base year. Since the beginning of March 2009, this has resulted in a saving of nearly 2%, which is 1,649 tonnes of fuel, corresponding to 5,200 tonnes of CO_2. The program covers the entire fleet and the results have been measured on 16 of the 20 Q100s, five of the Q300s and all seven Q400 aircraft. The calculation is based on fuel used and the time airborn. The program is motivated on requests and recommendations on the "best practices whenever possible" principle and includes the optimum speed policy and activities on the ground. However, the trend in 2011 was for an increase in fuel consumption per hour compared with 2010. The increase varies per aircraft type from 0.6 to 0.9%.

However Widerøe's relative emissions decreased to 191 grams (198) per passenger kilometer in 2011 due to higher cabin factor.

Another focus area has been waste on ground. During 2011, there was a focus on sorting containers and the reporting of waste from transporters thus enabling better follow-up of these by Widerøe.

The work on fuel save and waste will continue during 2012, but there will also be a focus on energy. A energy project is to be started in January and concluded during 2012. This is expected to generate an energy saving of approximately 20% in relation to the 2011 level.

Widerøe's environmental efficiency index improved to 82 (90). The target for 2011 was missed by one index point.

Key environmental figures for Widerøes' operations

Widerøe ALL								Relationship (1) to (2)				
Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	45,265,747	50,989,932	Kg	721,614,215	842,453,404	PK	Kg per PK	2–3% decrease	0.063	0.061	2.1	–3.5
Jet Fuel as Energy	543,189	611,879	MWh	1,186	1,260	FTE	MWh per FTE		458	486	12.1	6.0
Jet fuel – CO_2	142,587	160,618	Tons	721,614,215	842,453,404	PK	CO_2 gram/PK	2–3% decrease	198	191	2.1	–3.5
Jet fuel – NOX	499	561	Tons	721,614,215	842,453,404	PK	NO_X gram/PK		0.69	0.67	6.0	–3.7
Jet fuel – HC	48[3]	60	Tons	721,614,215	842,453,404	PK	HC gram/PK		0.07	0.07	-	7.9
Aircraft Noise – takeoff	23,158	27,991	Km^2 @85dba	100,685	111,964	Departures	85db area in km^2 per departure		0.23	0.25	9.5	8.7
Vehicle Petrol – Fuel used	-	2,848	Liter	100,685	111,964	Departures			-	0.03	-	-
Vehicle Petrol as Energy	-	25	MWh	1,186	1,260	FTE			-	0.02	-	-
Vehicle Petrol – CO_2	-	6,486	Kg	100,685	111,964	Departures			-	0.06	-	-
Vehicle Diesel – Fuel used	97,202	78,067[2]	Liter	100,685	111,964	Departures	Liter per departure		0.97	0.70	25.0	–27.8
Vehicle Diesel as Energy	980	787	MWh	1,186	1,260	FTE	MWh per FTE		0.83	0.62	29.3	–24.4
Vehicle Diesel – CO_2	258,829	207,876	Kg	100,685	111,964	Departures	Kg CO_2 per departure		2.6	1.86	5.0	–27.8
Fuel spills	0	0	Instances	101	112	1,000 departures	Spills per 1,000 departures	0	-	-	0.0	0.0
Glycol used	216,533	141,924[4]	Liter	1,618	1,532	Deicings	Liter per deice		134	93	–11.8	–30.8

Density used from 2010 is 0.8 kg per liter. PK measured per passenger kilometer, meaning all persons transported except active crew. Reduction targets and reduction results are shown with minus.
FTE = Total number of employees December 2011 in Widerøe. The same figure is found in the table on ***page 38***.
1. Data from Route Hierarchy Report. 2. Wideroe had no transportation trucks Jan–Apr 2011. 3. Not: New data disclosure based on stakeholder request. 2010 data not verified. Method unchanged between 2010 and 2011.
4. Decrease explained by warm winter weather and a proportional mixture of glycol.

Key environmental figures for Widerøes' operations

Widerøe in BOO Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Energy (electricity)	5,746,345	5,208,265	KWh	1,186	1,260	FTE	KWh per FTE	–2%	4,845	4,134	16.4	–14.7
Energy (heating oil)	69,561	82,733	Liter	1,186	1,260	FTE	KWh per FTE	–2%	59	66	0.0	12.0
Heating oil energy	701,175	834,009	KWh	1,186	1,260	FTE	KWh per FTE		591	662	0.0	12.0
Water used	6,886	5,536	m^3	1,186	1,260	FTE	m^3 per FTE		5.8	4.4	–4.7	–24.3
Unsorted Waste	68	77	Tons	1,186	1,260	FTE	Tons per FTE	–30%	0.06	0.06	–18.9	6.6
Hazardous waste	3	27	Tons	1,186	1,260	FTE	Tons per FTE		0.00	0.02	–56.5	747.1
Widerøe in TRF												
Energy (electricity)	1,163,861	1,058,109	KWh	1,186	1,260	FTE	KWh per FTE	–2%	981	840	–1.3	–14.4
Energy (heating oil)	124,053	95,349	Liter	1,186	1,260	FTE	KWh per FTE	–2%	105	76	34.3	–27.7
Heating oil energy	1,250,434	961,108	Kwh	1,186	1,260	FTE	KWh per FTE		1,054	763	34.3	–27.7
Water used	2,744	1,755	m^3	1,186	1,260	FTE	m^3 per FTE		2.3	1.4	21.2	–39.8
Unsorted Waste	15	23	Tons	1,186	1,260	FTE	Tons per FTE	–30%	0.01	0.02	0.0	44.3
Hazardous waste	4	12	Tons	1,186	1,260	FTE	Tons per FTE		0.00	0.01	0.0	170.6
Widerøe in OSL												
Energy (electricity)	207,573	198,581	KWh	1,186	1,260	FTE	KWh per FTE	–2%	175	158	–0.1	–10.0
Energy (heating)	779,249	593,700	KWh	1,186	1,260	FTE	KWh per FTE	–2%	657	471	36.8	–28.3
Water used	180	190	m^3	1,186	1,260	FTE	m^3 per FTE		0.2	0.2	–5.4	–0.6
Unsorted Waste	1	1	Tons	1,186	1,260	FTE	Tons per FTE	–30%	0.00	0.00	0.0	–5.9
Hazardous waste	1	1	Tons	1,186	1,260	FTE	Tons per FTE		0.00	0.00	0.0	–52.9
Widerøe in TOS												
Energy (electricity)	445,044	397,351	KWh	1,186	1,260	FTE	KWh per FTE	–2%	375	315	3.6	–16.0
Energy (heating oil)	85,678	70,937	Liter	1,186	1,260	FTE	KWh per FTE	–2%	72	56	47.7	–22.1
Heating oil energy	863,634	715,045	KWh	1,186	1,260	FTE	KWh per FTE		728	567	–22,1	–22.1
Water used	208	205	m^3	1,186	1,260	FTE	m^3 per FTE		0.2	0.2	17.2	–7.2
Unsorted Waste	7	8	Tons	1,186	1,260	FTE	Tons per FTE	–30%	0.01	0.01	0.0	7.6
Hazardous waste	1	5	Tons	1,186	1,260	FTE	Tons per FTE		0.00	0.00	0.0	323.6
Widerøe TOTAL												
Energy (electricity)	8,569,701	7,772,897	KWh	1,186	1,260	FTE	KWh per FTE	–2%	7,226	6,169	12.4	–14.6
Energy (heating)	779,249	593,700[2]	KWh	1,186	1,260	FTE	KWh per FTE	–2%	657	471	36.8	–28.3
Energy (heating oil)	297,998	264,430[2]	Liter	1,186	1,260	FTE	Liter per FTE	–2%	251	210	35.5	–16.5
Heating oil energy	3,003,820	2,665,454	KWh	1,186	1,260	FTE	KWh per FTE		2,533	2,115	35.5	–16.5
Water used	10,018	7,686[3]	m^3	1,186	1,260	FTE	m^3 per FTE		8.4	6.1	1.6	–27.8
Unsorted Waste	91	109[4]	Tons	1,186	1,260	FTE	Tons per FTE	–30%	0.08	0.09	–35.9	12.7
Hazardous waste	9	45[4]	Tons	1,186	1,260	FTE	Tons per FTE		0.01	0.04	30.4	365.4

Reduction targets and reduction results are shown with minus.
FTE = Total number of employees December 2011 in Widerøe. The same figure is found in the table on ***page 38***.

1. Data from Route Hierarchy Report.
2. Decrease explained by warm winter weather and increased energy efficiency.
3. Decrease explained by less washing of fire-fighting water basin and exclusion of external temporary offices.
4. Increase explained by improved sorting, previous lack of reported data, increased production with Q300 and Q400.

Blue1

Blue1 is a wholly owned Finnish subsidiary in the SAS Group that flew 86 daily flights to 28 destinations with over 1.7 million passengers in 2011. Blue1's main base and head office is at Helsinki-Vantaa Airport. Blue1 comprises Airline Operations, Technical Operation, Support and administration. Blue1 had 352 employees in December 2011.

The most significant environmental aspects derive from emission from using jet fossil fuel, and hazardous and other waste. It was in these areas the focus was placed in 2011.

Aircraft fleet

The Avro aircraft were taken out of operation in September. At the end of 2011, Blue1's aircraft fleet comprised nine Boeing 717s. The average age of the fleet is 11.3 years. Blue1 has also wet-leased two ATR 72s and four SAAB 2000s for production on short regional routes in Finland and Sweden.

Reporting and official requirements

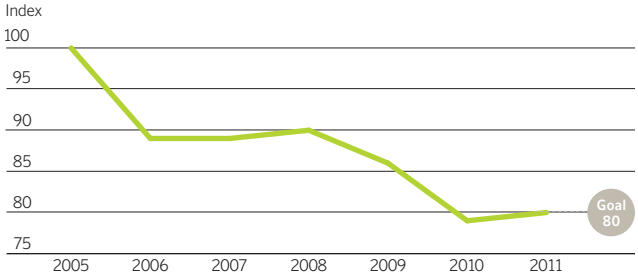
Blue1 did not breach any noise regulations in 2011. During 2011, no fuel leaks were reported in conjunction with refueling of Blue1's aircraft.

Results and focus areas

Blue1 focused its 2011 environmental effort on reducing the relative emissions from flight operations (fuel save program) and improving sorting and reporting of hazardous and mixed waste. CO_2 emissions per passenger kilometer increased 8,5% to 155 grammes as a result of a challenging market situation with lower cabin factor.

Environmental index

Blue1



SAS measured environmental efficiency using an environmental index which comprises 50% carbon dioxide, 40% nitrogen oxides and 10% noise in relation to the most significant production parameter, passenger revenue kilometers.

In 2011, aircraft cleaning personnel were trained in the correct handling of mixed waste and inflight waste. Blue1 is also working to include environment in contracts with suppliers so that indirect influence can also be included in the agenda.

The target for 2011 was achieved, however, Blue1 environmental efficiency index deteriorated one index point in 2011, to 80 (79).

Key environmental figures for Blue1s' operations

Blue1 Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Jet Fuel used	73,411,467	76,855,689	Kg	1,614,489,410	1,558,011,210	PK	Kg per PK	2–3% decrease	0.045	0.049	–9.0	8.5
Jet Fuel as Energy	880,938	922,268	MWh	416	352	FTE	MWh per FTE	-	2,118	2,620	14.0	23.7
Jet fuel – CO_2	231,246	242,095	Tons	1,614,489,410	1,558,011,210	PK	CO_2 gram/PK	2–3% decrease	143	155	–9.0	8.5
Jet fuel – NO_x	802	767	Tons	1,614,489,410	1,558,011,210	PK	NO_x gram/PK	-	0.50	0.49	–6.8	–0.8
Jet Fuel – HC	49[5]	44	Tons	1,614,489,410	1,558,011,210	PK	HC gram/PK	-	0.03	0.03	-	–8.1
Aircraft Noise – takeoff	47,442	43,552	Km^2 @ 85dba	25,235	31,805	Departures	85db area in km^2 per departure	-	1.88	1.37	–9.9	–27.1
Vehicle Petrol[6] – Fuel used	-	12,618	Liter	25,235	31,805	Departures	Liter per departure	–1%	-	0.40	-	-
Vehicle Petrol[6] as Energy	-	112	MWh		352	FTE	MWh per FTE	–1%	-	0.32	-	-
Vehicle Petrol[6] – CO_2	-	28,734	Kg	25,235	31,805	Departures	Kg CO_2 per departure	–1%	-	0.90	-	-
Vehicle Diesel[6] – Fuel used	48,712	31,704[2]	Liter	25,235	31,805	Departures	Liter per departure	-	1.93	1.00	37.9	–48.3
Vehicle Diesel[6] as Energy	491	320	MWh	416	352	FTE	MWh per FTE	-	1.18	0.91	24.5	–23.1
Vehicle Diesel[6] – CO_2	129,709	84,421	Kg	25,235	31,805	Departures	Kg CO_2 per departure	-	5.14	2.65	15.8	–48.4
Fuel spills	6	0	Instances	25	32	1,000 departures	Spills per 1,000 departures	0	0.24	0.00	15.4	–100.0
Glycol used	784,459	373,888[3]	Liter	-	1,960	Deicings	Liter per deice	-	-	190.76	-	-
Energy (electricity)	1,587,000	1,617,000	KWh	416	352	FTE	KWh per FTE	–2%	3,816	4,594	–55.1	20.4
Energy (heating oil)	-	-	KWh	416	352	FTE	KWh per FTE	–2%	-	-	-	-
Water used	3,664	2,520[4]	m^3	416	352	FTE	m^3 per FTE	-	8.81	7.16	149.2	–18.7
Unsorted Waste	95	81	Tons	416	352	FTE	Tons/FTE	–30%	0.23	0.23	17.9	0.5
Hazardous waste	5	6	Tons	416	352	FTE	Tons/FTE	-	0.01	0.02	14.7	56.6

Density used from 2010 is 0.8 kg per liter. PK measured per passenger kilometer, meaning all persons transported except active crew.
Reduction targets and reduction results are shown with minus.

FTE = Total number of employees December 2011 in Blue1. The same figures is found in the table on ***page 38***.

1. Data from Route Hierarchy Report.
2. Decrease explained by decreasing car fleet.
3. Decrease explained by warm winter weather.
4. Decrease explained by fewer FTE and less aircraft cleaned.
5. New data disclosure based on stakeholder request. 2010 data not verified. Method unchanged between 2010 and 2011.
6. In 2010 Vehicle Petrol and Diesel was reported as Diesel.

SAS Ground Handling, SGH

SGH operates at airports in Norway, Sweden and Denmark and under contract abroad. SGH is part of Scandinavian Airlines. Customers include airlines other than those of the SAS Group and SAS's partners. Ground handling services include, for example, passenger and lounge service, loading and unloading, de-icing and towing of aircraft.

The most important environmental aspects for SGH are diesel and gasoline consumption, energy use, fuel and glycol spillages, waste, water and toilet liquids. SGH's environmental objectives are based on reducing the impact from these environmental aspects.

De-icing is unavoidable from a safety perspective. Glycol is used for the pre-takeoff de-icing of aircraft. As this represents an environmental burden, the search continues for alternative techniques. In the use, various methods are being evaluated for the reduction of glycol use. For example, trials are continuing on a system with electronic control of the glycol content and a preventive de-icing method that leads to a significant reduction of glycol usage without compromising internal or official safety requirements.

Consumption of glycol depends on the airline, which itself determines the mix of glycol/water, aircraft type, weather conditions, humidity, flight time, route/destination, etc. It is thus impossible to set a reduction target for glycol consumption. Nonetheless, SGH has follow-up of use to identify any deviations. Due to the warm winter of 2011/2012, there has been lower use of glycol.

Even if smaller amounts of glycol are used, the amounts are sometimes considerable and emissions of glycol may occur in exceptional circumstances. On these occasions, there are specific measures to restrict or completely eliminate environmental impact. The remaining glycol is handled and recovered, so that none or only a low amount is emitted to water. The aim is to reduce the number of undesired glycol spills to zero. In 2011, SGH had no reported glycol spills.

Results and focus areas

SGH's focus in 2011 included an intensive effort to improve punctuality, thereby reducing CO_2 and particle emissions. The focus is also on replacement of ground vehicles and equipment with greener alternatives to reduce environmental impact and enhance the work environment. For example, SGH Arlanda decided to use remote-controlled aircraft heaters/coolers at the ramp, with temperature-regulating equipment to reduce energy use. Another example is the purchase of hybrid push-back tractors by SGH at Copenhagen-Kastrup and Stockholm-Arlanda.

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, waste management and 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 environmentally compliant units. SGH in Sweden has achieved about 60% "green equipment," reduction of emissions (see KPI table below) and the shift from environmental diesel to BIOdiesel from April 2011.

In Denmark, SGH has seen excellent results: an increase in "green equipment" from 66% to 69% - putting SGH far beyond the airport's target of 60% in cooperation with Copenhagen Airport's "Better Air Quality" project. With the reduction of the use of diesel, emissions have also been cut. In Norway, SGH cooperates with Avinor on climate projects related to the Airports Council International (ACI). SAS is aiming to replace all company cars with environmental cars. Guidelines will be issued to all companies and units within SAS, but decisions will be made locally because environmental cars are defined differently in different countries.

There was a deviation related to SGH's environmental approval for operation of the equipment workshop at CPH, but this deviation has been resolved. The employees demonstrate great interest in environmental issues and have submitted ideas and suggestions for improvements. SGH has also involved employees in activities through procedures, such as respect for minimum idling and getting them to use engine heaters rather than using the engine to heat the tractors.

SGH's focus on improvement in 2012 is to increase the amount of "green equipment," improve punctuality and reduce diesel and gasoline consumption for vehicles.

Key environmental figures for SAS Ground Handlings' operations

Norway[10] Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	1,433,180	1,259,785	Liter	176,863	184,271	Departures	Liter per departure	–5	8.10	6.84	–7.14	–15.63
Vehicle Diesel as Energy	14,446	12,699	MWh	2,232[8]	2,117[3]	FTE	MWh per FTE		6.47	6.00	–14.53[9]	–7.32
Vehicle Diesel – CO_2	3,816,272	3,354,555	Kg	176,863	184,271	Departures	Kg CO_2 per departure		21.58	18.20	–7.14	–15.63
Vehicle Petrol – Fuel used	116	622[4]	Liter	176,863	184,271	Departures	Liter per departure		0.00	0.00	–3.82	414.31[2]
Vehicle Petrol as Energy	1	6	MWh	2,232[8]	2,117[3]	FTE	MWh per FTE		0.00	0.00	–11.48[9]	464.96[2]
Vehicle Petrol – CO_2	264	1,416	Kg	176,863	184,271	Departures	Kg CO_2 per departure		0.00	0.01	–3.82	414.31[2]
Fuel spills	1	0	Instances	177	184	1,000 departures	Spills per 1,000 departures	0	0.01	-	–78.70	–100.00
Glycol used	1,799,513	1,264,225[5]	Liter	13,918	10,009	Deicings	Liter per deice	–5	129	126	–3.19	–2.31

Denmark[11] Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	1,129,282	1,021,172[6]	Liter	90,774	91,213	Departures	Liter per departure	–2	12.44	11.20	0.01	–10.01
Vehicle Diesel as Energy	11,383	10,293	MWh	1,972[8]	2,182[3]	FTE	MWh per FTE		5.77	4.72	0.03[10]	–18.28[9]
Vehicle Diesel – CO_2	3,007,052	2,719,177	Kg	90,774	91,213	Departures	Kg CO_2 per departure		33.13	29.81	0.01	–10.01
Vehicle Petrol – Fuel used	129,677	109,651[6]	Liter	90,774	91,213	Departures	Liter per departure		1.43	1.20	–0.12	–15.85
Vehicle Petrol as Energy	1,155	977	MWh	1,972[8]	2,182[3]	FTE	MWh per FTE		0.59	0.45	–0.10[9]	–23.58[9]
Vehicle Petrol – CO_2	295,305	249,701	Kg	90,774	91,213	Departures	Kg CO_2 per departure		3.25	2.74	–0.12	–15.85
Fuel spills	0	5[7]	Instances	91	91	1,000 departures	Spills per 1,000 departures	0	-	0.05	-	0.00
Glycol used	1,413,607	285,640[5]	Liter	6,707	1,862	Deicings	Liter per deice		211	153	-	–27.18

Sweden[12] Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	654,437	639,804	Liter	88,977	92,140	Departures	Liter per departure	–3	7.36	6.94	1.33	–5.59
Vehicle Diesel as Energy	6,597	6,449	MWh	1,608[8]	1,724[3]	FTE	MWh per FTE		4.10	3.74	–9.16[9]	–8.81[9]
Vehicle Diesel – CO_2	1,742,635	1,703,670	Kg	88,977	92,140	Departures	Kg CO_2 per departure	–3	19.59	18.49	1.33	–5.59
Vehicle Petrol – Fuel used	20,874	15,750[6]	Liter	88,977	92,140	Departures	Liter per departure		0.23	0.17	–50.75	–27.14
Vehicle Petrol as Energy	186	140	MWh	1,608[8]	1,724[3]	FTE	MWh per FTE		0.12	0.08	–55.85[9]	–29.59[9]
Vehicle Petrol – CO_2	47,535	35,866[6]	Kg	88,977	92,140	Departures	Kg CO_2 per departure		0.53	0.39	–50.75	–27.14
Fuel spills	2	1	Instances	89	92	1,000 departures	Spills per 1,000 departures	0	0.02	0.01	–33.33	–51.70
Glycol used	1,384,837	665,549[5]	Liter	9,711	4,937	Deicings	Liter per deice		143	135	16.77	–5.47

Reduction targets and reduction results are shown with minus.

FTE = Total number of employees December 2011 in SAS Ground Handling per country. The same figures are found in the table on ***page 38***.

1. Data from Route Hierarchy Report.
2. The increase is due to inadequate reporting 2010.
3. Spirit now included.
4. Almost no petrol cars left in production.
5. Decrease explained by warm winter weather in end of 2011.
6. More electric cars.
7. Improved reporting.
8. Changed historic figure to reflect actual organization.
9. Decrease partly explained by method change. Read more in Accounting Principles on ***pages 56–58***.
10. Includes; Oslo, Bodø, Trondheim, Bergen, Stavanger, Kristiansand, Tromsø, Molde, Ålesund, Evenes, Alta, Kristiansund, Haugesund and Kirkenes.
11. Includes; Copenhagen
12. Includes Stockholm, Malmö and Gothenburg.

SAS Technical Operations

SAS Technical Operations is part of Scandinavian Airlines and with its 1,606 employees in Sweden, Denmark and Norway, manages the technical maintenance of the aircraft. The largest customers comprise the Group's airlines and operations are mainly located in Scandinavia. SAS Technical Operations also sells its services to external airlines.

SAS Technical Operations is responsible for most of the activities in the Group that require environmental permits. The operation is also the largest user of chemicals. The chemical products are required by the aircraft manufacturer and the 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, textile and metal. Technical operations generate SAS's highest proportion 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. In addition to chemicals and hazardous waste, the most important environmental aspects are emissions related to energy consumption, and the burning of petrol and diesel. SAS Technical Operations applies a system that is monitored by its own auditors and municipal authorities.

Results and focus areas

There are many devices in the hangars and documented activities 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 water locally. There is an in-house treatment plant at our home bases and there are contracts made with qualified companies to collect and safely deliver our hazardous waste.

Emissions to air are negligible, some derive from ground transport and some from motor test runs. Focus areas 2011 in addition to chemicals:
1. Vehicle diesel consumption,
2. Vehicle gasoline consumption,
3. Electricity on facilities,
4. Heating in facilities and
5. Information/training to employees.

The aims of chemical purchasing activities include reduction in storage and the number of suppliers and 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 been reduced by one third in total and Technical's own purchases have dropped by more than 90% since 2010. Operation Management Board have established a new internal body called "Chemical Board" which is a Chemical's Review Board in order to establish processes for compliance with the environmental legislation in the Scandinavian Countries and EU, establish processes to follow the applicable specifications for use on aircraft, ensure the environment aspect review, secure that hazardous products are substituted with less hazardous whenever possible, secure that the number of different products is kept as low as possible and establish processes that waste, spills and emissions are reduced as much as possible.

Energy as such has been given a high priority in 2011 as part of SAS energy plan. A "turn off the lights" drive and light sensors installed in the hangar maintenance area. And this is a part of the positive results can be seen on ***pages 34–35***. Fuel save also brought favorable results and the main reason for this was the reduction in the number of vehicles and a specific focus on consumption in Denmark and Norway.

Waste sorting has been improved in Denmark 2011, where the waste company has been invited to provide information about the different sorting hence reduced the volumes of mixed waste.

The focus area will remain the same in 2012. See details about the energy plan on ***page 33***.

Key environmental figures for SAS Technical Operations' operations

Norway Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	46,529	40,762[2]	Liter	103,713[3]	101,824	Departures	Liter per departure	–1	0.45	0.40	5.9	–10.8
Vehicle Diesel as Energy	469	411	MWh	452[7]	498	FTE	MWh per FTE	–1	1.04	0.83	41.3[8]	–20,5[9]
Vehicle Diesel – CO_2	123,897	108,541	Kg	103,713[3]	101,824	Departures	Kg CO_2 per departure	–1	1.19	1.07	5.9	–10.8
Vehicle Petrol – Fuel used	976	405[2]	Liter	103,713[3]	101,824	Departures	Liter per departure	–1	0.01	0.004	3.9	–57.7
Vehicle Petrol as Energy	10	4	MWh	452[7]	498	FTE	MWh per FTE	–1	0.02	0.01	38.6	–62.3[9]
Vehicle Petrol – CO_2	2,314	922	Kg	103,713	101,824	Departures	Kg CO_2 per departure	–1	0.02	0.01	3.9	–57.7

Denmark Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	32,333	27,153[4]	Liter	90,394[3]	91,301	Departures	Liter per departure	–1	0.36	0.30	–29.9	–16.9
Vehicle Diesel as Energy	326	274	MWh	540[7]	546	FTE	MWh per FTE	–1	0.60	0.50	–9.0[9]	–16.9[9]
Vehicle Diesel – CO_2	86,096	72,303	Kg	90,394[3]	91,301	Departures	Kg CO_2 per departure	–1	0.95	0.79	–29.9	–16.9
Vehicle Petrol – Fuel used	19,429	17,003[5]	Liter	90,394[3]	91,301	Departures	Liter per departure	–1	0.21	0.19	–14.1	–13.4
Vehicle Petrol as Energy	173	151	MWh	540[7]	546	FTE	MWh per FTE	–1	0.32	0.28	11.5[8]	–13.4[9]
Vehicle Petrol – CO_2	44,244	38,720	Kg	90,394[3]	91,301	Departures	Kg CO_2 per departure	–1	0.49	0.42	–14.1	–13.4

Sweden Aspect	Aspect Input (1) 2010[1]	Aspect Input (1) 2011[1]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
Vehicle Diesel – Fuel used	14,822	15,484[6]	Liter	61,357[3]	65,718	Departures	Liter per departure	–1	0.24	0.24	35.5	–2.5
Vehicle Diesel as Energy	149	156	MWh	499[7]	562	FTE	MWh per FTE	–1	0.30	0.28	88.0[8]	–7.2[9]
Vehicle Diesel – CO_2	39,468	41,231	Kg	61,357[3]	65,718	Departures	Kg CO_2 per departure	–1	0.64	0.63	35.5	–2.5
Vehicle Petrol – Fuel used	40,251	44,364	Liter	61,357[3]	65,718	Departures	Liter per departure	–1	0.66	0.68	–18.0	2.9
Vehicle Petrol as Energy	358	395	MWh	499[7]	562	FTE	MWh per FTE	–1	0.72	0.70	13.8[8]	–2.1[9]
Vehicle Petrol – CO_2	91,661	101,027	Kg	61,357[3]	65,718	Departures	Kg CO_2 per departure	–1	1.49	1.54	–18.0	2.9

Reduction targets and reduction results are shown with minus.
FTE = Total number of employees December 2011 in SAS Technical Operations per country. The same figures are found in the table on ***page 38***.

1. Data from Route Hierarchy Report.
2. Fewer cars.
3. Corrected including only SAS flight incl. International.
4. Increased focus and reduction in no of cars.
5. Increased focus and increased use of diesel cars.
6. Increased use of electric cars.
7. Changed historic figure to reflect actual organization.
8. Increase partly explained by method change. Read more in Accounting Principles on ***pages 56–58***.
9. Decrease partly explained by method change. Read more in Accounting Principles on ***pages 56–58***.

SAS Cargo Group, SCG

SAS Cargo Group A/S (SCG) provides postal and air cargo services within the framework of the operations in Scandinavian Airlines and other partners. The business is controlled from Copenhagen and includes an independent full-service provider of freight forwarding services, Trust. In 2011, there were 206 employees. The actual handling of cargo and post is conducted by Ground Handling Agents (GHA) and all contracts include CSR & environment as a parameter. SCG's GHA in Scandinavia is Spirit Air Cargo Handling Group AB. Spirit is part of SAS Ground Handling. SCG's shipping company, TRUST Forwarding, is 100% owned by SCG and its environmental data for 2011 and results are included in SCG's data and results.

The most significant environmental aspects derive from emission from using fossil jet fuel in cargo operations. The impact of this aspect will be reported from 2011 as grammes of CO_2 per ton kilometer (TK). Other key environmental aspects derive from emission from using fossil fuel in road transports, energy consumption in buildings and waste. In 2011, SAS Cargo, in cooperation with SAS, started an energy campaign for buildings that covers all areas of SAS.

Results and focus areas

The focus areas for SCG in 2011 where additional fuel for returned cargo, usage of fossil fuel by trucks and energy consumption. Work on these aspects has also led to improved contracts with suppliers regarding environmental aspects.

In 2008, SAS Cargo established an environmental goal for road transports provided by external transporters. It was found that SCG had worked with too poor underlying data, lack of updates from suppliers and as a result we decided to restart our measuring from 2012.

SAS Cargo's road transports are conducted in a network system, meaning that if demand and production decline, it is not possible to adapt the number of transports to the same degree. This can result in reduced capacity utilization and thus a higher relative environmental impact.

In 2011, SCG implemented a new Revenue Management System. This will enhance the possibility of planning and estimating the amount of cargo per departure for flights and trucking. Improved precision raises the possibility to optimize the amount of fuel, which leads to reduced emissions.

Energy was accorded special focus in 2011, which gave SCG a much better overview of consumption and a better possibility to see positive or negative results earlier in the process. This resulted in changes to the measuring equipment, improved distribution of measurements and a saving on energy consumption and costs. See energy results on ***pages 34–35***.

The focus on trucking, return cargo and energy will continue in 2012.

Key environmental figure for SAS Cargo Groups' operations

Aspect	Aspect Input (1) 2010[1)]	Aspect Input (1) 2011[1)]	unit (1)	Production Input (2) 2010	Production Input (2) 2011	unit (2)	Relationship (1) to (2)	Relationship (1) to (2) Goal, %	Result 2010	Result 2011	Result 2010, %	Result 2011, %
CO_2 – Jet fuel used	3,279,946,134	3,460,140,598	Kg CO_2	3,317,314,191[2)]	3,438,030,141[3)]	TK[4)]	g CO_2 per TK		989	1,006		1.8

1. Data from Route Hierarchy Report.
2. Cargo's share was 15.7%.
3. Cargo's share was 15%.
4. TK is tonne kilometer. TK includes passengers, freight and mail as compared to the Airline's "PK" which is passengers only. PK is thus slightly less than a 10th of TK with corresponding higher emissions per grams per kilometer.

Others

Commercial, Sales, Support, Administration, Brand & Marketing etc.

All units and departments at SAS, such as Commercial with Products, Inflight and Network, Sales, Brand & Marketing, Administration and Support, Purchasing, and Environment & CSR has SAS environmental policy as an important part of their daily work. This may involve ecology and ethics in conjunction with food and services, weight reduction of products and equipment, waste from food and service on board, possibilities for customers to offset CO_2 or calculate their personal CO_2 impact, more attention to disposable items and giveaways (e.g. toys), support for savings programs or fleet renewals. Other areas addressed by activities are external and internal information, follow-up of suppliers and, in particular, better follow-up of improvement activities.

Results and focus areas

Product & Services

During the year, there was increased focus on sustainability issues in product development. For example, a large number of weight-reducing measures were evaluated for the products offered on board in combination with more environmentally compatible products on board and on the ground. A result of this was a weight-saving on board of 176,159 kg in 2011. Other specific examples are that passenger seats in the 737 will be replaced during 2012 by new lightweight seats, from May 2012, and the decision on the purchase of lightweight trolleys that will add to the good savings results. The new seats will result in a weight reduction of about 360 kilo per aircraft, which will have a positive effect on the fuel efficiency of the aircraft.

The opportunity for customers to offset the CO_2 footprint from their travel via the Scandinavian Airlines website is used by less than 1% of customers and the third-party approved emissions calculator is used to a large extent.

Another focus area is waste. Sorting and waste disposal from service and products on board is a challenge. The challenge lies in the fact that the equipment on board has a given size and is certified for the purpose of being on board so that it is impossible to simply expand or make changes to create space. There is also a restriction in disposing of 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.

In 2012, the focus will be on implementing lightweight seats and lightweight carts, as well as the large logistical challenge of collecting used newspapers. SAS distributes about 25,000,000 newspapers annually and many different airports and suppliers must be involved in a large network of varying solutions to achieve this.

Purchasing

In 2010, SAS's central purchasing function began a review of contracts with suppliers and products that could be considered to have considerable effect on the environment and society. In 2011, the focus was on such issues as working with the selected suppliers and developing a self-assessment/evaluation tool that, in 2012, will gather information from our selected suppliers. Existing contracts will be reviewed to ensure that the suppliers meet SAS's procurement demands, such as compliance with the UN principles in the UN Global Compact and the SAS Code of Conduct. Naturally, the extent to which suppliers meet SAS's environmental requirements is also assured in new contracts.

SAS has a total of approximately 15,000 suppliers, of which a few hundred are assigned priority according to how they directly or indirectly have a significant negative impact from a sustainability perspective. The process involves environmental and social risk evaluation of the supplier, the product's country of origin, mode of transport, and the extent to which the supplier works with responsibility issues and improvements in the area of the environment and society. The aim is to use dialogue and cooperation to create a greater awareness of the suppliers' actual environmental and social impact and to create the best possible conditions to reduce the negative effects.

Network

Network & Partners is responsible for designing traffic program which determines, e.g. fuel consumption, noise and turnaround times. This means Network has an indirect impact on fuel consumption, noise and towing of aircraft. Therefore this department plays a very important role in supporting Network, Asset Management and Operations in fleet assignment, fleet forums, fleet renewal activities and flight operation improvement projects, e.g. fuel save program.

Facility Management

SAS' Facility Service supplier, Coor, has the day-to-day operation and maintenance of all of SAS's buildings and premises in Scandinavia, including follow-up of energy, waste management, purification plants, environmental regulations and reporting to the authorities. This is governed in agreements between SAS Group Facility Management and Coor. Coor is contractually obligated to initiate improvement measures and, along with SAS Group Facility Management, follow up on a continuing basis when potentials for improvements and any unforeseen incidents are evaluated. SAS Group Facility Management has primary responsibility for all facility-related requirements being met, which also includes environmental responsibility. Coor is ISO 14001-certified in all of the Nordic countries.

No incidents were reported in 2011, but during the year, the Group was reported to the police by the Norwegian Climate and Pollution Agency (Klif) for possessing fire-fighting equipment containing Perfluorooctane sulfonate (PFOS) in certain areas of its operations and for the emission of PFOS that occurred in conjunction with the filling of a rented hangar at Oslo-Gardemoen with foam in 2010. The Group is currently awaiting the findings of the ongoing investigation in 2012.

Environment & CSR

The task of Environment & CSR is to support SAS Group management in environmental or other CSR-related matters, both internally and externally. In addition to this Environment & CSR have the responsibility for ETS/MRV, the ISO14001 and EMAS certification as such and the preparation for Biofuel. The department channel and collect information through a network in SAS Group called "Sustainability Network". The focus in 2011 was ETS/MRV, supporting fuel save, ISO14001/EMAS follow-up, energy plan and campaign, Biofuel, supplier evaluation and fleet renewal.

Energy

SAS Facility Management, together with Environment & CSR in 2011, conducted work in 2011 with a comprehensive energy plan for all buildings owned or leased by SAS.

The plans were prepare in cooperation with the supplier Coor Service Management. The plans include an audit of buildings to identify what immediate measures can be taken, or what medium-size investments can be made with a repayment period during the five years that the plans apply, and an energy campaign to be run from 2011 to 2015. The plans also include development of registration procedures for energy consumption and the possibility of follow-up and continuous reporting.

The energy plan is driven by five-part strategy:
1. Facility service provider working with error-fixing and adjusting devices;
2. Focus, error-fixing and reporting;
3. Energy included in internal audits and inspections;
4. Campaigns and
5. Space utilization and optimization.

No environmental related investments were undertaken in 2011.

Follow-up and reporting are conducted for all of SAS, but the focus is on the main bases in Denmark, Finland, Norway and Sweden. The energy campaign, "Spara för att bevara" (energy campaign slogan), commenced in February 2011. An energy planning group measures, conducts a follow-up through environmental audits and inspections, and ensures that the focus is maintained on the areas of highest priorities.

All of the operations have developed energy plans to reduce energy consumption. The goal for 2011 was to reduce the consumption of energy by 7% and the savings have resulted in 8.3%, corresponding to 16,265,200 kwh.

Target is broken down to 7% in 2011, 4% in 2012, 2% in 2013 and then 1% for the remaining two years. SAS has "pinpointed" 4–6 buildings in each country. These buildings are identified as the largest energy consumers; hence they have become "focus" buildings. All focus buildings are monitored on a monthly basis.

You can see the focus building result and improvement on the next page.

Unsorted waste, hazardous waste and water

Since hazardous waste is strictly controlled by national authorities and, as a result of environmental impact and fees, is internally controlled and evaluated by both SAS and suppliers, this has an "automatic" focus throughout the year. Data for SAS's total water and waste quantities derives from a common data base with Coor. Although waste did not have the same attention levels as energy in 2011, SAS will continue working on improvement of sorting and recycling of newspapers and aluminum cans in 2012.

Key environmental figures for Scandinavian Airlines operations regarding Energy, Waste and water

Norway	2010 Result	2010 FTE[1)]	2010 Per/FTE	2011 Result	2011 FTE[1)]	2011 Per/FTE	2011 Result, %	2011 Goal, %	2011–2015 Goal, %
Energy – kWh									
Electricity – kWh	34,550,700[2)]	5,462	6,326	31,497,000	5,333	5,906	–8.8	–7.0	–15.0
Heating – kWh	26,385,400	5,462	4,831	24,079,900	5,333	4,515			
As of heating-oil – kWh	1,038,100[3)]	5,462	190	566,900	5,333	106			
Water – m^3	41,267	5,462	8	36,980	5,333	7			
Unsorted waste – kg	522,000	5,462	96	420,648	5,333	79			
Hazardous waste – kg	60,000	5,462	11	47,843	5,333	9			

Sweden	2010 Result	2010 FTE[1)]	2010 Per/FTE	2011 Result	2011 FTE[1)]	2011 Per/FTE	2011 Result, %	2011 Goal, %	2011–2015 Goal, %
Energy – kWh									
Electricity – kWh	39,209,800	4,087	9,594	36,434,700	4,086	8,917	–8.3	–7.0	–15.0
Heating – kWh	35,420,700	4,087	8,667	31,969,400	4,086	7,824			
Water – m^3	51,716	4,087	13	48,122	4,086	12			
Unsorted waste – kg	109,000	4,087	27	171,640	4,086	42			
Hazardous waste – kg	169,000	4,087	44	94,241	4,086	23			

Denmark	2010 Result	2010 FTE[1)]	2010 Per/FTE	2011 Result	2011 FTE[1)]	2011 Per/FTE	2011 Result, %	2011 Goal, %	2011–2015 Goal, %
Energy – kWh									
Electricity – kWh	22,676,400	4,800	4,724	22,416,700	4,759	4,710	–7.6	–7.0	–15.0
Heating – kWh	38,809,100	4,800	8,085	34,389,200	4,759	7,226			
Water – m^3	52,462	4,800	11	58,723	4,759	12			
Unsorted waste – kg	89,000	4,800	19	57,580	4,759	12			
Hazardous waste – kg	68,000	4,800	14	29,665	4,759	6			

Total	2010 Result	2010 FTE[1)]	2010 Per/FTE	2011 Result	2011 FTE[1)]	2011 Per/FTE	2011 Result, %	2011 Goal, %	2011–2015 Goal, %
Energy – kWh									
Electricity – kWh	96,436,900	14,349	6,721	90,348,400[4)]	14,178	6,372	–8.3	–7.0	–15.0
Heating – kWh	100,615,200	14,349	7,012	90,438,500[4)]	14,178	6,379			
As of heating-oil – kWh	1,038,100[3)]	14,349	72	566,900	14,178	40			
Total Energy – kWh	197,052,100			180,786,900					
Total Water – m^3	145,445	14,349	10	143,825	14,178	10			
Total Unsorted waste – kg	720,000	14,349	50	649,868[5)]	14,178	46			
Total Hazardous waste – kg	297,000	14,349	21	171,749[6)]	14,178	12			

Reduction targets and reduction results are shown with minus. Calculations of heating is climate adjusted. Method: Swedish Meteorological and Hydrological Institute's service "Energy Index".

1. FTE = The average number of employees in 2011 in total and broken down by country. Source: note 3 on ***page 64*** in SAS Annual Report 2011.
2. 2010 data adjusted due to method change and identified errors in connection with system change.
3. Included in heating.
4. Improvement work and review of buildings.
5. Better sorting and reporting.
6. Better routines for purchasing in terms of volume and type.

KWh/m² focus buildings

The table shows the 17 focus buildings selected for follow-up in regard to the energy plan. SAS monitors kilowatt hours (kwh) per square meter on a monthly basis. The table shows a year-end view of kwh/m² and the reduction is a result of employee involvement and adjustment of existing equipment.

Country	Building	KWh/m² 2010	Tot kWh 2010	KWh/m² 2011	Tot kWh 2011
Denmark	SAS Huset (office)	307[5]	1,860,500[5]	276	1,675,800
Denmark	Hangar 1	355[5]	6,288,700[5]	348	6,170,800
Denmark	Hangar 3	376[5]	4,174,800[5]	323	3,581,100
Denmark	Hangar 4	469[5]	7,961,600[5]	427	7,261,700
Denmark	Hangar 5	495[5]	4,947,700[5]	387	3,872,900
Denmark	SAS Cargo & Oxford[1]	527[5]	2,116,700[5]	485	1,950,016
Denmark	Total		61,485,500[5]		56,805,900
Sweden	Sverigehuset (office)	446	3,092,300	440	3,053,300
Sweden	Hangar 1 "Tekniska Basen" Stockholm-Arlanda	248	11,275,900	227	10,322,300
Sweden	Hangar 2[2]	630	6,252,400	590	5,858,400
Sweden	Hangar 4[3]	195	3,376,900	209	3,628,500
Sweden	GOT Hangar 402[4]	504	5,368,400	449	4,783,300
Sweden	Total		74,630,500		68,404,100
Norway	Hangar "Teknisk Base" Oslo	380[5]	23,037,200[5]	341	20,708,900
Norway	SAS Cargo	246[5]	4,781,300[5]	235	4,566,300
Norway	Fornebuveien 38-40 (Office)	216[5]	1,536,600[5]	200	1,422,400
Norway	Fornebuveien 42-44 (Office)	155[5]	499,000[5]	131	421,600
Norway	Hangar 6 Stavanger	217[5]	6,395,100[5]	201	5,939,900
Norway	Driftsbygget Øst (Garage)	313[5]	3,202,100[5]	261	2,671,900
Norway	Total		60,936,100[5]		55,576,900
SK	**Total**		**197,052,100**[5]		**180,786,900**

1. DK SAS Cargo/Oxford has a higher kwh/m² than other similar buildings because it has shared heat consumption with Oxford, which has several large flight simulators.
2. Hangar 2 at ARN has higher kwh/m² than other similar buildings because the share of hangar space is higher.
3. Hangar 4 at ARN has increased productivity in 2011 and has therefore increased.
4. The hangar at GOT has a higher kwh/m² than other similar buildings because the share of hangar space is higher.
5. Figure adjusted due to method change and identified errors in connection with system change.

Key environmental figures SAS Group's ground and office activities[1]

	2011	2010
Energy consumption, GWh	193	216
Water consumption, 1,000 m³	154	159
Unsorted waste, tonnes	840[2]	906
Hazardous waste, tonnes	223[3]	311
Fuel consumption, 1,000 liters	3,317[4]	3,668
Glycol consumption, m³	2,731[5]	5,559

1. Pertains to the Group's total ground and office activities (SAS, Widerøe, Blue1, SAS Tech, SGH, SAS Cargo and administration, staff functions and management). Also pertains to services for other airlines.
2. Better sorting and reporting.
3. Better routines for purchasing in terms of volume and type.
4. The reason for difference between the reported 3,540 in the SAS annual report 2011 and the 3,317 in this sustainability report is a calculation error discovered too late for annual report print.
5. Warm winter in 2011 and optimized mixture and use of glycol.

"The sun is shining and the lights are on. Why?"

This comment is not entirely unusual in a large company such as SAS. This is one of the reasons behind the so-called Energy Project, which was initiated in partnership with our property services supplier, COOR, in late 2010. The aim is to reduce energy consumption by 15% by 2015 compared with 2010.

A decisive success factor is a commitment from all employees. Along with an increased focus on the issue comes a clear improvement, which lowers costs but also reduces our environmental impact, or at least reduces our consumption of renewable energy which can be used somewhere else.

With relatively few adjustments to the buildings' lighting and heating systems, better use of premises, clearer information about preferred behavioral changes and incentives to conserving energy, the goal of reducing energy consumption by 7% in 2011 was surpassed. The result was a saving of 8.1%, which corresponds to about 16,030,300 kWh.

In 2011, no investments were made to realize the savings. Instead, the full focus was on modifying the existing systems and creating behavioral changes. Overall communication and commitment from employees has been crucial in fulfilling the objectives. Examples of commitment have taken the shape of improvement proposals. There have been a number of obvious "at home" activities that should naturally also be done at work, such as turning off lights when leaving the room, turning down the heat instead of just opening the window, closing doors (and primarily aircraft hangar doors) during the cold season, printing less and so forth.

The effort will continue in 2012 and the goal is to achieve another 4% reduction during the year.

Corporate social responsibility

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

The SAS Group's social responsibility primarily comprises 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 in the customer offering.

Cultural development

Development of social responsibility builds on a number of focus areas as the basis for developing the SAS corporate culture.

SAS's strategic cultural work is therefore focused on increasing employee satisfaction and commitment, 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 to customers and strengthen SAS's competitiveness.

Leadership development

With regard to developing social responsibility, management is key in setting examples and interpreting and implementing SAS's strategies. SAS strives for clear leadership characterized by 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 2011, SAS continued to develop a "role model" for all managers in the organization. It contains an assessment module that once a year will show whether managers live up to the requirements and a leadership program for the requisite know-how.

Both the assessment module and several parts of the SAS leadership program that were conducted during 2011 and are planned to continue during 2012. A master's degree course for a number of managers in cooperation with the BI Norwegian Business School was conducted in 2011.

Organizational development

During 2011, additional steps in the organization development where taken. The Group gained a new CEO and a new organization was implemented with focus on actions that ensure clearly controlled, efficient processes that lead to better profitability.

Adjustment and redundancy

During the year, SAS carried out previously communicated cost reductions within the framework of Core SAS. Redundancy among the personnel has been handled through negotiations with labor unions that follow national laws and agreements.

During the year, a number of pilots and cabin crew were recruited. This will also be the case for handling the future redundancy connected to the 4Ecxellence strategy.

Geographical breakdown of employees, %	2010	2011
Norway	35	35
Denmark	31	31
Sweden	26	27
Other	5	4
Finland	3	3

The SAS Group's operations are concentrated in the Scandinavian countries.

Cooperation with labor union organizations

Cooperation 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.

Work environment and sick leave

SAS's goal is that the work environment be as good as possible and that sick leave and the number of injuries be continuously reduced.

During 2011, total sick leave in Scandinavian Airlines amounted to 7.0%, in Blue1 at 4.7% and in Widerøe at 5.8%.

Sick leave is relatively high and an area of constant focus for SAS. The results show that sick leave is especially high among flight personnel and within SGH. One explanation is that these personnel groups are in an environment with greater interaction with many people, a higher degree of changing work indoors and outdoors and more heavy tasks, while it is also not possible to work on board an aircraft with a mild cold, which might be manageable in an administrative environment.

In a national comparison, sick leave is highest in Norway, which in part can be explained by different national rules.

Long-term sick leave, 60 days and above, represents in total nearly half of the total sick leave. Staff and administration areas Group IT and Finance have low sick leave.

Scandinavian Airlines' sick leave	DK	NO	SE	Total
No. of employees December 2011[1]	5,163	4,562	4,324	14,049
of which women, %	35.4	36.8	37.4	36.5
Total sick leave, %	5.9	9.6	5.7	7.0
Long-term sick leave (more than 59 days), %	42.2	53.2	46.0	48.1
Sick leave for women, %	7.9	12.2	7.4	9.2
Sick leave for men, %	4.8	8.1	4.7	5.8
Sick leave employees <30 years, %	3.6	5.0	5.5	4.7
Sick leave employees 30–39 years, %	6.9	10.3	4.5	7.5
Sick leave employees 40–49 years, %	5.7	9.5	5.7	6.9
Sick leave employees 50–59 years, %	6.0	10.3	5.9	7.3
Sick leave employees 60 years and above, %	5.0	9.5	6.7	7.0

1 Deviations from the information in the financial accounting for full-time equivalents, FTE.

SAS Group's sick leave [1)]

Scandinavian Airlines Flight Operations

	DK	NO	SE
No. of employees December 2011[1)]	1,791	1,584	1,249
of which women, %	48.3	52.8	51.3
Total sick leave, %	**10.1**	**11.4**	**8.2**
Long-term sick leave (more than 59 days), %	43.0	53.3	49.3
Total number of occupational injuries with more than one day's sick leave	44	17	5
Occupational injury frequency lost time-to-injury rate (H-value)[4)]	**18.2**	**6.8**	**2.6**

SAS Ground Handling

	DK	NO	SE
No. of employees December 2011[1)]	2,182	2,117	1,724
of which women, %	28.0	28.4	31.1
Total sick leave, %	**4.6**	**9.8**	**6.2**
Long-term sick leave (more than 59 days), %	43.5	53.8	41.6
Total number of occupational injuries with more than one day's sick leave	107	42	20
Occupational injury frequency lost time-to-injury rate (H-value)[4)]	**33.3**	**11.1**	**6.6**

SAS Technical Operations

	DK	NO	SE
No. of employees December 2011[1)]	546	498	562
of which women, %	2.6	4.0	7.0
Total sick leave, %	**3.9**	**5.1**	**3.1**
Long-term sick leave (more than 59 days), %	27.0	40.9	39.6
Total number of occupational injuries with more than one day's sick leave	10	3	3
Occupational injury frequency lost time-to-injury rate (H-value)[4)]	**10.4**	**3.8**	**3.1**

The Group's Administrative Functions [2)]

	Commercial & Sales Total	Infrastructure Total	HR & Communications Total	Legal, Insurance & Public Affairs Total	Finance Total
No. of employees December 2011[1)]	932	275	232	16	220
of which women, %	59.5	34.2	62.6	48.4	54.5
Total sick leave, %	**4.3**	**1.7**	**4.4**	**0.8**	**3.2**
Long-term sick leave (more than 59 days), %	58.6	31.9	67.3	0.0	49.3

The SAS Group[3)]

	Scandinavian Airlines	Blue1	Widerøe
No. of employees December 2011[1)]	14,049	352	1,260
of which women, %	36.5	44.4	34.0
Total sick leave, %	**7.0**	**4.7**	**5.8**
Long-term sick leave (more than 59 days), %	48.1	23	2.8
Total number of occupational injuries with more than one day's sick leave	251	13	8
Occupational injury frequency lost time-to-injury rate (H-value)[4)]	**12.8[5]**	**14.6**	**4.2**

1. Deviations from the information in the financial accounting for full-time equivalents, FTE.
2. Registration and follow-up of the total number of occupational injuries within the administrative functions is not organized in the same way for operating activities.
3. Staff & other is the post remaining after a division of employees in reported groupings. These employees are included in key figures for Scandinavian Airlines, but are not reported separately.
4. Lost-time-to-injury rate (H-value): No. of occupational injuries per million work hours.
5. Lost-time-to-injury rate for Scandinavian Airlines, excl. administrative functions.

Occupational injuries

The number of occupational injuries in SAS has risen to 272 (327). The highest occupational injury frequency is present in SGH in Denmark, within Cargo and Spirit and among flight personnel. Within all three areas, however, it is worth noting that Sweden stands out with comparably low numbers of injuries. 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 is possible, flextime, health insurance, etc. It is each company's or unit's responsibility to ensure a well-functioning working environment.

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

Company health services

Besides medical staff, the company health services or health, safety and environment (HSE) department that includes the whole Group, employs therapists, stress and rehabilitation experts, ergonomics and engineers. The department also has developed and 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 Group, investments are made in different forms of health-promoting activities both in the workplace and during leisure time.

Diversity and equality

The SAS Group's 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 govern working hours, pay and other terms of employment in great detail. With the same conditions for the same tasks, there is complete equality between men and women in these issues as well.

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, 96% are men, and among captains, the share is 97%. At the same time, the recruitment base for female pilots is small, since few opt for the profession. When it comes to cabin crew, 79% are women.

Senior management in the Group is dominated by men. SAS Group Management consist of one woman and six men (seven as of the first half of 2012). The figure for the Top100 management forum is approximately 23% women.

Each year, equal treatment plans are drawn up 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.

Employee surveys

PULS, SAS' annual employee survey, was conducted at the end of the year. The response rate was 78%, which, is the highest response frequency ever. More than 13,000 employees responded to the questionnaires that were sent out.

The result of the survey shows that job satisfaction at SAS is rising at 66 (62). Measures were taken at all levels in the Group to create action plans and activities that have together contributed to increase job satisfaction. All parts of the Group present increasing job satisfaction except Blue1, which had a lower result in 2011. Of all the operations, Widerøe has the highest job satisfaction. The survey generally indicates a continued strong commitment, as loyalty and motivation are high among employees in SAS.

Approximately 71 percent of SAS's employees replied that they had performance reviews during the past 12 months.

Human resource development

Human resources development is an important, ongoing activity in the entire SAS Group. 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 for hazardous goods, passengers' rights, IT security and food safety, etc.

SAS has approximately 1,000 managers on different levels in the Group. More than half of the managers are located in operations with direct customer contact such as sales, airport services and onboard service. The managers' skills development is based and evaluated on SAS's role model for leadership. A systematic survey is continuously ongoing in the whole Group, 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 program. The manager process is based on the "role model", which reflects general personal attributes as well as SAS's business objectives. Evaluation focuses on the individual's performance, ability to change, leadership, potential and ambition.

Training in the Code of Conduct and SAS's environmental efforts is continuous. During the year, 76% of SAS's employees have conducted e-learning in Code of Conduct and 38% have conducted e-learning in SAS's environmental work.

SAS's employees had access to nearly 110 different web-based courses during the year. Within SAS, virtually all employees are involved in e-learning, both flight personnel and ground employees.

Contract negotiations and disputes

2011 was marked by a stable dialog between SAS's management and the labor union organizations about issues in connection with implementation of the Core SAS strategy and the updated 4Excellence strategy.

SAS was involved in one conflict during the year when pilots at Blue1 went out in strike.

During the year, and based on a historic incident, SAS has been involved in disputes relating to sustainability, including use and release of PFOS in connection with a incident at a leased out hangar at Oslo-Gardermoen in 2010. All legal disputes of material importance are reported in the statutory Report of the Board of Directors ***pages 46–51*** in SAS Group Annual Report 2011.

Social involvement and humanitarian work

SAS has an agreement on commercial basis with the Swedish government in the case of an emergency, to make available two specially equipped Boeing 737s as air ambulances within the framework of the Swedish National Air Medevac (SNAM).
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. Maintenance and development of the concept is conducted in collaboration between the Swedish Transport Agency, The National Board of Health and Welfare, Västernorrland County Council and SAS. In Norway, collaboration is conducted between the Armed Forces and SAS.

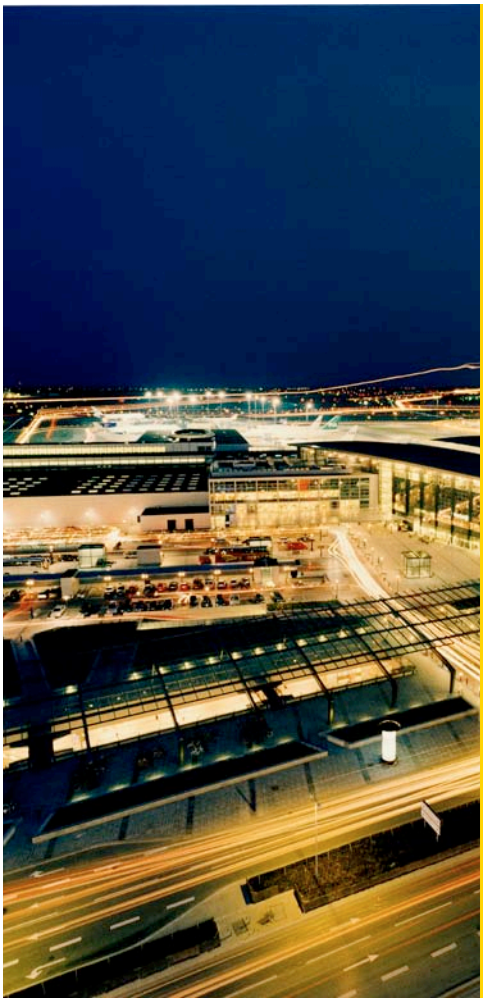
SAS's personnel participated in a number of fundraisers for Save the Children. SAS was a sponsor of the organization in 2011. In Norway, a decision was also taken to donate the proceedings from the collection of recyclable cans to Save the Children.

As in earlier years, Widerøe's employees and Widerøe together organized a trip for children with cancer to Copenhagen and Norrköping.

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.

ISO 26000

SAS has carefully followed the development of the new standard related to social responsibility, ISO 26000. In 2011, an evaluation of its content and its viability for SAS reporting was started. The standard comprises a number of areas and aspects of which a business shall value the relative importance.



Ultra-fine particles

In 2011, work was conducted to reduce the occurrence of particle-based pollution at Copenhagen-Kastrup. This was the result of an investigation into air quality at the ramp, particularly ultra-fine particles, that was conducted by the Danish National Environmental Research Institute (DMU) in 2010, which identified a periodic raised concentration of ultra-fine particles.

A working group has been established comprising employee and employer representatives and external expertise in the area. The aim is to identify activities that reduce the occurrence of particle-based pollution and thus improve the air quality.

No parameters
In 2011, the occurrence of ultra-fine particles around specific aircraft parking gates at the airport was studied and the result shows that the average concentration is higher than the busiest roads in Copenhagen. However, 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. The measurements also show other particle-based pollution is lower than the legislative limits.

Danish Working Environment Authority
The relevant authorities are informed. The Danish Working Environment Authority is involved in the work and, for example, has issued orders to ensure rules regarding idling for ground vehicles. Cooperation between the Working Environment Authority and the Occupational Medical Clinic has commenced to undertake a major study of the work environment-related aspects of ultra-fine particles.

Changed procedures
A campaign is introduced to ensure compliance with the rules and procedures and best practices. This involves use of the auxiliary power unit (APU), aircraft start-up procedures, the number of engines used for taxiing to and from the runway, etc. In addition, work is under way to accelerate the shift to more energy-efficient ground vehicles that are electricity-driven and the modification of existing vehicles to reduce particle-based pollution. In 2012, the work group will look at the further potential for optimizing use of the gates depending on the effect of wind conditions on the occurrence of ultra-fine particles and increased knowledge among employees on how to avoid being exposed to particle-based pollution.

An international issue
Ultra-fine particles are naturally not only an issue for Copenhagen-Kastrup. At Oslo-Gardermoen, measurements will be conducted in 2012. The issue is addressed in international forums such as IATA, ACI and N-ALM. In the future, international cooperation will be important to identify how the occurrence of ultra-fine particles can be reduced in the further development of jet fuel's sulfur content and the extensive work that is in progress to commercialize sustainable alternative jet fuels.

SAS has strategies, targets and activities in a number of these areas. The seven main areas of the standard are:
1. Organization governance
2. Human rights
3. Labor practices
4. The environment
5. Fair operating practices
6. Consumer issues, and
7. Community involvement and development

Below is a summary of the seven main areas and how they can be applied at SAS. Several of the areas are addressed in greater detail in other sections of this Sustainability Report.

Organization governance. SAS' approach to governance is to have a manual structure where guidance, rules and policies – including our Code of Conduct - are fully accessible to everyone employed regardless of position, education programs to bring knowledge for the individual and an organization to safely, efficiently and economically to produce the services offered by the company.

Human rights. Being based in Scandinavia where the thirty human rights articles are well integrated into national laws creates a good base from which to base human right issues. Integrating requirements based on UN Global Compact articles and the ILO conventions into supplier contracts – not all of whom are based in countries with a similar legal base – and having firm policies and processes for own employees are two ways that SAS uses to ensure compliance with human rights.

Labor practices. Firmly linked to the human rights issues are labor practices. SAS has well documented human resource (HR) policies and regulations fully accessible to all employees. Health, safety and environment (HSE) processes and union agreements and cooperation with regular meetings and dialogs are our way of ensuring good labor practice. Included is also instruction and learning for employees, where every employee is trained in his/her work and in safety issues, and have access to information and training beyond minimum requirements.

The environment. SAS has comprehensive policies and processes dealing with the environment aspects of the companies' services, this is a focus area and comprehensively covered in this report and in our Carbon Disclosure Project reporting.

Fair operating practices. SAS has policies and training for managers and employees, including an e-learning program on SAS Code of Conduct, to ensure our compliance in such areas as anti-corruption, conflict of interest and political involvement plus fair competition and respect of property rights.

Christmas flight for children in Tallinn

For 25 years, SAS in Norway has sent a Christmas flight to various destination sin the world. In recent years, the relief packages have gone to the city district of Kopli in Tallinn, Estonia. Also in 2011, SAS filled an aircraft with gifts to the residents of Kopli. 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.

Consumer issues. SAS is a provider of transport services, and works extensively to ensure our customers legitimate needs. Safety is paramount to our work and is a core subject. Access to services for persons with reduced mobility, ensuring that information to guide customers is available and resolving each travelers issues in case of traffic delays or grievances are all part of our organizations daily work.

Community involvement and development. SAS has several community involvements ranging from creating employment opportunity to engaging in environment issues on a wider basis such as participating with other actors and organizations to bring about improvements, to sponsoring sport activities and engaging with Save the Children and WWF. Working with industry actors such as IATA and AEA to promote the political idea of a global agreement on a sectoral approach for aviation on CO_2 emissions and cooperating with Avinor and NHO Luftfart to update the report Sustainability and Social Benefit (Bærekraftig og samfunnsnyttig luftfart). SAS contributes to several school and universities with lectures, information for essay papers and theses each year.

Financial responsibility

SAS is convinced that it is impossible to have economically sustainable operations in the long term without being socially and environmentally responsible. The connection between sustainable development and the bottom line is obvious to SAS.

An analysis of the SAS Group's 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 short, 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 the SAS Group pays for CO_2 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. One way to look after the company's assets is to have positive and improving relations with employees and in a responsible fashion ensure maintenance of aircraft and other plant and equipment. Conversely, long-term sustainable profitability and growth are essential for being able to meet and preferably surpass environmental standards and demands for social responsibility and for ethical conduct placed on SAS. If the financial resources are lacking for long-term investment and maintaining extensive sustainability work, progress in these areas will not be realized.

SAS aims to show how its strategic sustainability work helps to create long-term value. This means that the ability to work to improve SAS's long term environmental performance has a positive impact on the Group's earnings. The ability of the SAS Group to increase its revenues relies on the ability to retain current customers as well as attract new ones.

One of the aims of systematic and proactive sustainability work is to prevent or at least reduce the risk of being surprised by new and tougher government and market demands. This is crucial, in view of the fact that bad press and direct costs in the form of fines and civil damages can also result in indirect costs owing to a tarnished brand and poor market image. The ultimate consequence may then be that customers abandon SAS for other operators.

Financial aspects of environmental responsibility

SAS's environmental work has several overriding purposes: Besides making resource use more efficient and improving environmental performance, it includes ensuring that the Group's 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. For 2011, these increased by 2,4% to MSEK 7,384. Correspondingly, the SAS Group also pays MSEK 1,345 in safety costs, which for most other modes of transportation are financed by taxes.

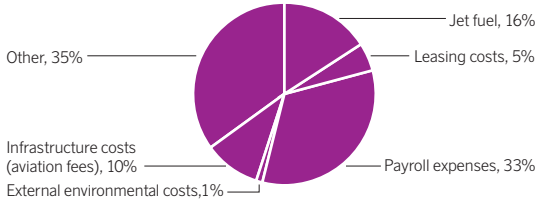
Environment-related costs

The SAS Group's external environment-related costs increased by 14.5% to MSEK 407 during 2011. These costs consisted of environment related taxes and charges that are often linked with the aircraft's 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 40.9 (50.1). The decline is primarily a result of less glycol used at the end of 2011.

The SAS Group has no known major environment-related debts or contingent liabilities, for example in the form of contaminated soil.

Breakdown of costs in 2011



Environmental related savings

Scandinavian Airlines has an ambitious fuel-saving program. The goal for the program, launched in 2005, is a fuel-efficiency enhancement of 6–7% by 2011 compared with the period June 2005 to July 2006. At year-end, improvement of 4.5% had been attained since the introduction of the program. This corresponds to approximately MSEK 350.

Environment-related investment

The investment made by the SAS Group in accordance with the Group's policies shall be both environmentally and economically sound, thus contributing to the Group's value growth and helping to ensure that the Group can meet adopted future environmental standards. It should be noted that investment not emphasized in this section may also have a positive impact on the environment.

Investment that can clearly be linked to structured environmental work is disclosed in this section.

Investments in 2011 totaled MSEK 2,041 (2,493), of which MSEK 3.6 (10.9) consisted of environment-related investments primarily in the form of replacement of diesel-run tractors with electric ones at SGH.

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 a environmental-related investment since its a integrated part in SAS continuous aircraft maintenance plan. It is however supporting 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, approximately 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 Group's commitment to and support of the development and dissemination of green technologies such as bio-based jet fuel and environmentally adapted flights. In 2011, 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 a more efficient use of air space.

The SAS Group engages in technology development benefiting the entire industry. However, the Group conduct no proprietary research and development. The Group and its airlines also play 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.

Financial aspects of social responsibility

SAS's first social responsibility is to its own employees and the communities dependent and affected by SAS's operations. For employees this includes issues concerning human resources development, pay and work environment. In addition, the Group 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's contribution to the economy

SAS's airline operations are are creating employment and value. According to the report "Civil Aviation in Scandinavia – value and importance" from 2004, each employee in SAS's airline operations generates approximately one more job opportunity in other industries and companies indirectly creating employment for many in the Scandinavian countries.

In 2011, the SAS Group paid wages and salaries totaling MSEK 12,500 (13,053), of which social security expenses were MSEK 1,742 (1,691) and pensions MSEK 1,465 (1,637). SAS endeavors to achieve market pay for all employee groups.

Courses and training

To retain and develop employee skills, extensive training programs are carried out each year. During 2011, SAS's employees attended an estimated 579,000 (468,000) hours of training, of which the major part pertains to obligatory training. A growing share of SAS's 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.

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. The SAS Group's companies employ various methods to prevent short-term and long-term sick leave.

SAS's own calculation of costs for sick leave at Scandinavian Airlines is MSEK 263 (290).

Sustainability-related charges, costs and investments

MSEK	2011	2010	2009
Infrastructure			
Infrastructure charges	7,384	7,210	7,466
Security costs	1,345	1,309	1,373
Environmental costs[1]			
External environment-related costs	407	356	364
of which environment-related charges	78.8	66.3	76.2
of which environment-related taxes	328	289	288
Other environment-related costs	40.9	50.1	38.4
Environment-related investment			
Airline operations	0.0	7.0	15.6
Ground operations	3.6	3.9	0.9
Total	3.6	10.9	16.5
Share of SAS's total investment in %	0.2	0.4	0.4

1 Environmental costs have been adjusted to reflect the changed Group structure.

GRI Sustainability Reporting

GRI's Sustainability Reporting Guidelines, version 3, stipulates that the SAS Group should determine which entities' performance will be reported in the Sustainability Report. The entities included in the SAS Group's Sustainability Report 2011 are presented in the introduction of SAS Group's Accounting Principles for Sustainability Reporting on ***pages 58–60***. The reporting boundary, including changes compared to previous reports, is disclosed in the of SAS Group's 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 Group has self-declared our reporting to be Application Level A+. Deloitte AB has checked our reporting and has confirmed it to be Application Level A+.

Regarding disclosure of management approach, as required by GRI, the SAS Group has chosen to report on management approach as an integrated part of the SAS Group's Annual Report 2011 and SAS Group's Sustainability Report 2011. See below for further details regarding references to SAS management approach:

All page references herein refer to the SAS Group Sustainability Report 2011 unless otherwise specified.

Guideline on Management Approach
A general description of the SAS Group's approach to responsibility for sustainable development can be found on ***pages 4–7, 8–11, 14, 37 and 43*** where the SAS Group defines social, environmental, and economical responsibility, including the SAS Group's comprehensive objectives governing the Group's operations. Strategies, values, and extracts from policies guiding the operations of the SAS Group can be found on ***pages 5 and 14*** (policies, with relevance for sustainability, can also be found on the SAS Group's homepage, www.sasgroup.net).

On ***page 3***, a description of the organization and management of the SAS Group's sustainability work can be found. Relevant information concerning both positive and negative aspects of the SAS Group's performance is disclosed throughout the report, the most significant aspects are commented on in the Board of Directors' Report on ***pages 46–51*** in the SAS Group Annual Report 2011. Risks and opportunities are included in both the SAS Group Annual Report 2011, on ***pages 32–34***, and on ***page 5***.

Economic responsibility
Information regarding financial results can be found on ***page 1*** and on ***page 46*** and onward in SAS Group Annual Report 2011. Information concerning the SAS Group's economic responsibility is provided on ***pages 42–44***, where the SAS Group's indirect economic impact is described. Information regarding market shares etc. is located on ***page 25***, in SAS Group Annual Report 2011.

Environmental responsibility
The SAS Group's 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_2 and NO_X, and noise. This information can be found on ***pages 1, and 21–27***. Targets and results of the SAS Group's environmental work are disclosed on ***pages 14–16, and 22–35***. On ***page 3***, the organization and management of the SAS Group's sustainability work are described, together with processes for feedback and reporting of environmental data.

Social responsibility
Labor practices and decent work: Relevant information regarding the SAS Group's approach to labor practices and decent work is presented on ***pages 5 and 36–41***. Policies regarding labor practices and decent work are disclosed on SAS Group's homepage (www.sasgroup.net). The process for handling questions regarding labor practices and managing feedback and reporting of labor data is described on ***page 5***.

Human rights: Relevant information regarding the SAS Group's approach to human rights can be found on ***page 5*** and in the GRI Cross-reference list.

Society: Relevant information regarding the SAS Group's approach to communities, corruption, public policy, anti-competitive behavior, and compliance, can be found on ***page 5*** and in the SAS Group's 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 46–51*** in SAS Group Annual Report 2011.

Product responsibility: The SAS Group mainly offers services. Where relevant, information regarding service responsibility is disclosed as a part of the SAS Group's social responsibility on ***pages 36–41*** otherwise they are commented on in the GRI Cross-reference list.

Sustainability Report – GRI Cross Reference List

Core Indicator	Page reference	Reported	Comments
Profile			
Strategy & Analysis			
1.1 Statement from the most senior decisionmaker of the organization about the relevance of sustainability to the organization and its strategy	AR11 pages 4–5. SR11 page 2.		
1.2 Description of key impacts, risks, and opportunities.	AR11 pages 32–34, SR11 pages 8–13.		Description of major risks identified and corresponding actions are described on pages 32–34 (AR11). The impact of aviation and the SAS Group on the environment is described on pages 8–13 (SR11).
Organizational Profile			
2.1 Name of reporting organization	SR11 back cover.		
2.2 Primary brands, products, and/or services.	AR11 pages 24–29, SR11 pages 22, 24, 26, 28, 30, 32 and 33.		Primary brands are presented on pages 24–29 (AR11), 22, 24, 26, 28, 30, 32 and 33 (SR11).
2.3 Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	AR11 pages 14, 24–29 and 95. SR11 page 3.		Operational structure on pages 3 (SR11) and 95 (AR11), Joint Ventures and Partners on page 14 (AR11). Airlines and operating companies on pages 24–29 (AR11).
2.4 Location of organization's headquarters.	SR11 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.	AR11 pages 24–25 and 26–29. SR11 page 37.		The main markets for the SAS Group is described on page 24–25 (AR11). Each subsidiary provides a description of main markets on pages 26–29 (AR11). A map detailing all locations is to be found on page 24 (AR11). Geographical breakdown of employees is described on page 37 (SR11).
2.6 Nature of ownership and legal form.	AR11 pages 38–39, 102–103 and 108		Largest shareholders on pages 102–103 (AR11) and legal form on page 108 (AR11).
2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	AR11 pages 24–25 and 26–29.		The main markets for the SAS Group is described on page 24–25 (AR11). Each subsidiary provides a description of main markets on pages 26–29 (AR11). A map detailing all locations is to be found on page 24 (AR11).
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.	AR11 pages 26–29, 52, 55 and 64–65.		• Number of employees on pages 64–65 (AR11) (Note 3) • Net sales on page 52 (AR11) • Total capitalization broken down in terms of debt and equity on page 55 (AR11) • Passengers served on pages 26–29 (AR11).
2.9 Significant changes during the reporting period regarding size, structure, or ownership including: • The location of, or changes in operations, including facility openings, closings, and expansions; and • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations)	AR11 pages 6–7.		
2.10 Awards received in the reporting period.	AR11 pages 2–3. SR11 page 15.		
Report Parameter			
Report Profile			
3.1 Reporting period (e.g., fiscal/calendar year) for information provided.	Sustanability Report 2011 front cover.		
3.2 Date of most recent previous report (if any).	SR11 inside front cover.		Previous reports can be obtained from the SAS Group webpage (www.sasgroup.net).
3.3 Reporting cycle (annual, biennial, etc.)	AR11 page 108.		
3.4 Contact point for questions regarding the report or its contents.	Sustanability Report 2011 inside front cover.		Inquiries regarding the Annual Report are handled by Investor Relations and inquiries regarding the Sustainability Report are handled by the Director of Environment and Sustainability.
Report Scope and Boundary			
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.	SR11 pages 56–58 (Accounting Principles for Sustainability Reporting 2011) and this report (Sustainability Report – GRI Content Index).		Accounting Principles for Sustainability Reporting 2011 and Sustainability Report – GRI Content Index are available on the SAS Group webpage www.sasgroup.net under the headline "Sustainability".
3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	SR11 inside front cover and pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		

AR11 = SAS Group Annual Report 2011 SR11 = SAS Group Sustainability Report 2011 Reported Partially reported Not reported

Core Indicator	Page reference	Reported	Comments
3.7 State any specific limitations on the scope or boundary of the report.	SR11 inside front cover and pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		
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.	AR11 pages 58–63. SR11 pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		The accounting principles of the SAS Group Annual Report is described on page 58–63 (AR11). If the Sustainability Report deviates from these principles that will be described in the Accounting Principles for Sustainability Reporting 2011.
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.	AR11 pages 58–63. SR11 pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		The accounting principles of the SAS Group's Annual Report is described on page 58–63. If the Sustainability Report deviates from these principles that will be described in the Accounting Principles for Sustainability Reporting 2010.
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).	AR11 pages 46–51 and 58–63. SR11 pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		Any significant re-statements regarding the financial report is disclosed in the Board of Directors Report on pages 60–65 or in the accounting principles on pages 58–63 (AR11). Re-statements regarding the Sustainability Report is disclosed in Accounting Principles for Sustainability Reporting 2011.
3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	SR11 pages 56–58 (Accounting Principles for Sustainability Reporting 2011).		
GRI Content Index			
3.12 Table identifying the location of the Standard Disclosures in the report. Identify the page numbers or web links where the following can be found: • Strategy and Analysis 1.1 – 1.2; • Organizational Profile 2.1 – 2.10; • Report Parameters 3.1 – 3.13; • Governance, Commitments, and Engagement 4.1 – 4.17; • Disclosure of Management Approach, per category; • Core Performance Indicators; • Any GRI Additional Indicators that were included; and • Any GRI Sector Supplement Indicators included in the report.	SR11 pages 45–56.		
Assurance			
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).	AR11 page 101. Sustainability Report page 55.		The Auditor's Report of the Annual Report can be found on page 101 (AR11). The auditor's review of sustainability report can be found on page 55 (SR11).
Governance			
Governance			
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.	AR11 pages 89–93. Sustainability Report page 3.		The Corporate Governance report on pages 89–93 (AR11) discloses detailed information on governance structure. On page 3 (SR11) it is possible to find the Sustainable Development organization and management 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).	AR11 pages 96–97.		Fritz H. Schur, the SAS Group Chairman, does not hold any executive position in the SAS Group.
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.	AR11 pages 96–97.		A majority of the members of the Board of Directors are defined as independent from major shareholders as described on pages 96–97 (AR11). 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.	Annual Report 2001 pages 89–93. Sustainability Report page 37.		The annual meeting is the main mechanism for shareholders to provide recommendations or direction to the board of directors which is described on pages 89–93 (AR11). The SAS Group have union representatives on the Board of Directors as described on page 37 (SR11).
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).	AR11 pages 64–65.		As stated on pages 64–65 (AR11) the executive compensation only consists of a fixed part as of 2010.

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Core Indicator	Page reference	Reported	Comments
4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided.	AR11 pages 89–91 and 96–97.		A majority of the members of the Board of Directors are defined as independent from major shareholders as described on pages 96–97 (AR11). The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on pages 89–91 (AR11).
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.	AR11 pages 89–93 and 96–97.		The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on pages 89–93 (AR11). The Board of Directors prior and current engagements are disclosed on pages 96–97 (AR11).
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.	AR11 page 13. Sustanability Report 2011 pages 5 and 14.		
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.	AR11 page 90. Sustainability Report page 3.		The Board of Directors have sustainable development on their agenda as described on page 90 (AR11). The organization and structure of the SAS Group's sustainability work is described on page 3 (SR11)
4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	AR11 pages 89–93.		The Nomination Committee evaluates the work, competence and composition of the Board of Directors on an ongoing basis as described on page 92 (AR11). The Annual Meeting is the main forum for all shareholders evaluation of the board of directors as described on pages 89–90 (AR11).
Commitments to External Initiatives			
4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization.	SR11 pages 28 and 30.		The SAS Group 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 Group's Code of Conduct and the SAS Group's Purchasing Policy. The SAS Group's commitment to the UN Global Compact is described on page 5. Examples of how the precautionary approach has been applied is described on page 28 (SR11) regarding SGH's deicing activities and on 30 (SR11) 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.	SR11 pages 4–7, 12 and 56–58 (Accounting Principles for Sustainability Reporting 2011)		
4.13 Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: • Has positions in governance bodies; • Participates in projects or committees; • Provides substantive funding beyond routine membership dues; or • Views membership as strategic.	SR11 pages 5–7 and 43.		The SAS Group and its subsidiaries are members of several industry and business organizations. The memberships stated on page 5–7 (SR11) and 43 (SR11) are considered the most important ones.
Stakeholder Engagement			
4.14 List of stakeholder groups engaged by the organization.	SR11 pages 6–7.		
4.15 Basis for identification and selection of stakeholders with whom to engage.	SR11 pages 6-7.		General selection criterions are not used due to the fact that the SAS Group never denies a stakeholder an opportunity for dialogue.
4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	SR11 pages 6-7.		The approach to stakeholder engagement is described on page 6–7 (SR11). In the table on page 6–7 (SR11) 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.	SR11 pages 6–7.		

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Performance Indicators	Page reference	Reported	Comments
Economic			
Economic Performance			
EC1 Economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	AR11 pages 52–53. Sustainability Report page 42–44.		Economic value generated and distributed is disclosed on pages 52–53 (AR11). Sustainability specific economic values are disclosed on pages 42–44 (SR11).
EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change.	SR11 pages 8–13 and 42–44 .		Perspectives on climate change, including risks and opportunities, are described on pages 8–13 (SR11). The SAS Group's activities to handle climate change is described throughout the sustatainability report. The financial implications of environmental related costs are described on pages 42–44 (SR11).
EC3 Coverage of the organization's defined benefit plan obligations.	AR11 page 71.		The SAS Group's defined benefit pensions are disclosed in note 15 on pages 71 (AR11) in accordance with IAS 19.
EC4 Significant financial assistance received from government.	AR11 pages 102–103.		The SAS Group 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 the SAS Group as reported on pages 102–103 (AR11).
Market Presence			
EC6 Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.			The SAS Group promotes the consideration of locally based suppliers. Fuel is for example never sourced from only one supplier since the SAS Group's Purchasing Policy promotes using multiple suppliers for significant purchases. Catering and waste disposal is for example usually provided by locally-based suppliers. However, the SAS Group does not collect data on group level on this indicator.
EC7 Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	SR11 page 37.		More than 90% of SAS Group employees are based in the Nordic countries as described on page 37 (SR11). The SAS Group 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, the SAS Group does not collect data on group level on this indicator.
Indirect Economic Impacts			
EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	SR11 pages 40–41.		The SAS Group's 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, the SAS Group does not collect data on group level on this indicator. Examples of humanitarian assistance and partnerships are described on page 40–41 (SR11).
EC9 Understanding and describing significant indirect economic impacts, including the extent of impacts.	SR11 pages 43–44.		Research and development is described on page 43 (SR11). The SAS Group's contribution to the economy is described on page 44 (SR11).
Environmental			
Materials			
EN1 Materials used by weight or volume.	SR11 pages 1, 23–25, 27 and 31–32.		Materials used are reported on the following pages: Jet Fuel – page 23, 24, 27 and 32(SR11). Diesel/Petrol – page 29 and 31 (SR11). Glycol – page 29 (SR11).
EN2 Percentage of materials used that are recycled input materials.			Since the main input for the SAS Group is fuel this indicator is not considered material.
Energy			
EN3 Direct energy consumption by primary energy source.	SR11 pages 1, 23, 24, 27, 29 and 31–32.		The jet fuel consumed by the Group's airlines is the completely dominant source of energy for the SAS Group. All certified jet fuels are fossil based. Direct energy consumption is reported on the following pages: Jet Fuel – page 23, 24, 27 and 32 (SR11). Diesel/Petrol – page 29 and 31 (SR11).

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Performance Indicators	Page reference	Reported	Comments
EN4 Indirect energy consumption by primary source.	SR11 pages 1, 24–25, 27 and 34–35.		The SAS group reports energy use in kWh or GWh, as applicable. The SAS Group 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 the SAS Group.
EN5 Energy saved due to conservation and efficiency improvements.	SR11 pages 15, 17 and 21–27.		The SAS Group's airlines reports on efficiency as fuel consumption relative to passenger kilometers on pages 21–27 (SR11). The fuelsave programs are described on pages 15, 17, 22, 24 and 26 (SR11)
EN6 Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	SR11 pages 15, 17, 19, 20 and 21–27.		The SAS Group's airlines reports on efficiency as fuel consumption relative to passenger kilometers on pages 21–27 (SR11). The fuelsave program is described on pages 15, 17, 22, 24 and 26 (SR11). The possibility for the customer to offset the CO_2 emissions from their flight is described on page 19 (SR11). The research for a jet fuel partly based on renewable resources is described on page 20 (SR11).
EN7 Initiatives to reduce indirect energy consumption and reductions achieved.	SR11 page 19.		Indirect energy consumption (excluding purchased electricity) is not considered material for the SAS Group. 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_2-compensated.
Water			
EN8 Total water withdrawal by source.	SR11 pages 1, 24–25, 27 and 33–34.		Water withdrawal as a total figure is disclosed on page 24–25, 27 and 34 (SR11). Dividing it by source is not deemed material.
Biodiversity			
EN11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	SR11 pages 6–7 and 11.		The SAS Group's impact on biodiversity is described on page 11 (SR11). The SAS Group does in general not own land. On locations where the SAS Group's operations can have an indirect significant impact on biodiversity the Group involves in dialogues with the airport operators as described on pages 6–7 (SR11). The SAS Group, 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 http://www.staralliance.com/en/about/initiatives/environment/
EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	SR11 pages 6–7 and 11.		The SAS Group's impact on biodiversity is described on page 11 (SR11). The SAS Group does in general not own land. On locations where the SAS Group's operations can have an indirect significant impact on biodiversity the Group involves in dialogues with the airport operators as described on pages 6–7 (SR11).
Emissions, Effluents, and Waste			
EN16 Total direct and indirect greenhouse gas emissions by weight.	SR11 pages 1, 21–27, 29 and 31–32.		The SAS Group reports on direct greenhouse gas emissions for the airlines on pages 1, 21–27, 29 and 31–32 (SR11).
EN17 Other relevant indirect greenhouse gas emissions by weight.			The SAS Group 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 Group's 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.	SR11 pages 15, 17 and 19–27.		Greenhouse gas emissions are the most significant environmental impact of the SAS Group. Thus, initiatives to reduce greenhouse gas emissions are presented throughout the report. Reductions achieved, both absolute and relative, are presented on pages 15, 17 and 19–27 (SR11).
EN19 Emissions of ozone-depleting substances by weight.	SR11 page 13.		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 13 (SR11). Any emissions of halons will be disclosed in the Sustainability Report.

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Performance Indicators	Page reference	Reported	Comments
EN20 NO_x, HC and other significant air emissions by type and weight.	SR11 pages 1, 23, 24 and 27.		The SAS Group reports NO_x emissions. Other types of emissions are not considered material in relation to the emissions of CO_2 and NO_x.
EN21 Total water discharge by quality and destination.			The SAS Group does not report on discharges to water due to the fact that the Group's normal operations does not cause any material discharges.
EN22 Total weight of waste by type and disposal method.	SR11 pages 1, 25, 27 and 34–35.		Waste is separated into unsorted waste and hazardous waste.
EN23 Total number and volume of significant spills.	AR11 page 50. SR11 pages 22, 24, 26 and 28–29.		All significant spills are disclosed in the Sustainability report and/or the Report by the Board of Directors.
Products and Services			
EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Sustanability Report 2011 pages 12 and 14–35.		The purpose of the SAS Group's environmental efforts are all focused on reducing the environmental impact of the services provided. Examples are SAS goal to reduce total flight emissions by 20% in 2015 compared with 2005 can be found on page 17 (SR11) and SAS work on alternative sustainable jet fuel can be found on page 20 (SR11).
EN27 Percentage of products sold and their packaging materials that are reclaimed by category.			The products sold by the SAS Group are not considered material.
Compliance			
EN28 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	AR11 pages 50–51. SR11 pages 22, 24 and 26.		The SAS Group discloses significant fines subsidiary by subsidiary and/or in the Report by the Board of Directors.
Transport			
EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	SR11 pages 1 and 21–35.		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 the SAS Group.
Overall			
EN30 Total environmental protection expenditures and investments by type.	SR11 page 44.		SAS Group discloses sustainability-related charges, costs and investments on page 44 (SR11). Due to long history of reporting on internal definitions that are similar but not exactly as prescribed in the indicator protocol.
Social Performance: Labor Practices & Decent Work			
Employment			
LA1 Total workforce by employment type, employment contract, and region.	AR11 page 64. Sustanability Report 2011 pages 37–38.		The workforce, in terms of number of employees, are reported in accordance with the SAS Group's Accounting Principles for Sustainability Reporting 2011. The SAS Group 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.			The SAS Group does not report detailed turnover figures. Employee turnover is not deemed an significant key performance indicator on aggregated group level.
Labor/Management Relations			
LA4 Percentage of employees covered by collective bargaining agreements.	Sustanability Report page 37.		In general, all SAS Group 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.	Sustanability Report 2011 page 39.		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. Specific examples of negotiations are specified on page 39 (SR11).
Occupational Health and Safety			
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.	Sustanability Report 2011 page 39.		Joint management-worker health and safety committees covers all employees in the SAS Group.
LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	AR11 pages 1 and 26–29. Sustanability Report pages 37–38 and 44.		
LA8 Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Sustanability Report 2011 page 39.		The HMS-department described on page 39 (SR11) assists all SAS Group personnel regarding health issues, for example stress or HIV/AIDS.
Training and Education			
LA10 Average hours of training per year per employee by employee category.	Sustanability Report 2011 page 44.		The SAS Group report total hours of training, not per employee or employee category.

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Performance Indicators	Page reference	Reported	Comments
LA11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	SR11 pages 37, 39 and 44.		The SAS Group's efforts on skills management is described on pages 37, 39 and 44 (SR11). Programs to support employees in career transitions is available through both the SAS Group's 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.	SR11 page 39.		All employees have the right to get annual performance and career development reviews. The percentage of employees receiving annual performance and career development reviews is provided on page 39 (SR11).
Diversity and Equal Opportunity			
LA13 Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	AR11 pages 64 and 96–99. Sustainability Report 2011 pages 37–38.		The board of directors and management is presented on pages 96–99 (AR11). Gender breakdown of employees is presented on pages 64 (AR11) and 37–38 (SR11). No further indicators of diversity is aggregated on group level.
LA14 Ratio of basic salary of men to women by employee category.	SR11 page 39.		A vast majority of all SAS Group 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 39 (SR11). Thus, no indicator on salary ratio is reported.
Social Performance: Human Rights			
Investment and Procurement Practices			
HR1 Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	SR11 page 33.		The SAS General Terms & Conditions includes clauses regarding Global Compact's 10 principles. A specific review of the most significant supplier contracts has been initiated to evaluate how the suppliers are working with sustainability related issues as described on page 33 (SR11). It is the SAS Group's intention to report this indictor in more detail in coming years.
HR2 Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	SR11 page 33.		The SAS General Terms & Conditions includes clauses regarding Global Compact's 10 principles. A specific review of the most significant supplier contracts has been initiated to evaluate how the suppliers are working with sustainability related issues as described on page 33 (SR11). It is the SAS Group's intention to report this indictor in more detail in coming years.
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.	SR11 page 5.		The SAS Group provides an e-learning program regarding Code of Conduct. The percentage of employees that have completed the program is reported on page 5 (SR11).
Non-Discrimination			
HR4 Total number of incidents of discrimination and actions taken.	AR11 page 94.		Incidents can be reported three ways. Through the whistleblower function which is described on page 94 (AR11), through safety representatives and through management and HR represantatives. Due to the potential confidentiality of the information incidents reported is not publicly reported.
Freedom of Association and Collective Bargaining			
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.	SR11 page 5.		The SAS Group 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. The SAS Group endeavors to act responsibly in the countries and contexts where the Group operates. This means, among other things, that the Group 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 by each subsidiary every year as described on page 5 (SR11).

AR11 = SAS Group Annual Report 2011 SR11 = SAS Group Sustainability Report 2011 Reported Partially reported Not reported

Performance Indicators	Page reference	Reported	Comments
Child Labor			
HR6 Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	SR11 page 5.		The SAS Group 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. The SAS Group endeavors to act responsibly in the countries and contexts where the Group operates. This means, among other things, that the Group 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 by each subsidiary every year as described on page 5 (SR11).
Forced and Compulsory Labor			
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.	SR11 page 5.		The SAS Group 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. The SAS Group endeavors to act responsibly in the countries and contexts where the Group operates. This means, among other things, that the Group 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 by each subsidiary every year as described on page 5 (SR11).
Security Practices			
HR8 Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.			The SAS Group 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 the SAS Group, that are responsible for group-wide security, are, as all SAS Group employees, introduced to the SAS Group's Code of Conduct.
Indigenous Rights			
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 2011.
Social Performance: Society			
Community			
SO1 Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	SR11 pages 6–7.		The SAS Group is constantly involved in stakeholder dialogues to be able to assess and manage the impact on communities which is described on page 6–7 (SR11).
Corruption			
SO2 Percentage and total number of business units analyzed for risks related to corruption.	SR11 page 5.		The SAS Group considers all business where valuable resources are handled to be at risk related to corruption. Thus, all employees are covered by the Group's 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.
SO3 Percentage of employees trained in organization's anti-corruption policies and procedures.	SR11 page 5.		The SAS Group provides an e-learning program regarding Code of Conduct. The percentage of employees that have completed the program is reported on page 5 (SR11) All key personnel have been educated in SAS Competition Law Compliance Program
SO4 Actions taken in response to incidents of corruption.	AR11 pages 33 and 50.		The SAS Group discloses all significant legal actions, including corruption, see pages 33 and 50 (AR11) for further details. The SAS Group 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.

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Performance Indicators	Page reference	Reported	Comments
Public Policy			
SO5 Public policy positions and participation in public policy development and lobbying.	SR11 pages 5 and 14. SAS Group's Code of Conduct		The SAS Group's 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 Group functions are responsible for all communication affecting overarching issues in the SAS Group." Moreover, the public affairs department manage all communication activities with authorities and politicians. Many of the organizations in which SAS Group is a member (AEA and IATA) carry out lobby activities. However, the SAS Group 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 the Group's expense or provide assistance in the form of funds or resources from the Group. For more information, see also the SAS Group's Code of Conduct available at www.sasgroup.net under the heading "Sustainability".
Anti-Competitive Behavior			
SO7 Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	AR11 pages 33 and 50.		The SAS Group has an extensive program, SAS Competition Law Compliance Program, to ensure that professional business relations are conformed to in the SAS Group. The SAS Group discloses all significant legal actions, including anti-competitive behavior, anti-trust, and monopoly practices, see pages 33 and 50 (AR11) for further details.
Compliance			
SO8 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	AR11 pages 33 and 50. SR11 page 22.		The SAS Group discloses significant fines subsidiary by subsidiary and in the Report by the Board of Directors.
Social Performance: Product Responsibility			
Customer Health and Safety			
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.	AR11 page 30. SR11 pages 18, 20 and 21–27.		The SAS Group does mainly offer services. Thus, life cycle analysis per se is not performed. However, the SAS Group's environmental impact chiefly compromises air emissions from the airline operations, see pages 21–27 (SR11) for further details. To reduce the environmental impact the SAS Group is, among other things, involved in the development of jet fuel based on renewable resources, as described on page 20 (SR11) and co-operation with Air Traffic Control, as described on pages 18 and 20 (SR11). Flight safety is a main concern of the SAS Group, where all SAS Group airlines are certified in accordance to IOASA (IATA Operational Safety Audit). Further details about the SAS Group's approach to customer safety can be found on page 30 (AR11).
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.	AR11 page 30.		The SAS Group reports a risk index for SAS Scandinavian Airlines and deviations in accordance with ICAO's rules and regulations on page 30 (AR11). The SAS Group consider flight safety to be the most relevant indicator for customer health and safety.
Products and Service Labeling			
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 have substantial information requirements. The SAS Group 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.	AR11 pages 9 and 26–29. SR11 pages 2 and 15.		The SAS Group publishes results of their customer satisfaction surveys or other measures on customer satisfaction per entity and in total.
Marketing Communications			
PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	SR11 page 5.		The SAS Group Code of Conduct and SAS Competition Law Compliance Program both include the subject of marketing and communications.
Compliance			
PR9 Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	AR11 pages 33 and 50.		The SAS Group discloses all significant legal actions, including fines for non-compliance concerning the provision and use of services, see pages 33 (AR11) and 50 (AR11) for further details.

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Auditors Report

Auditor's Review Report on the SAS Group's Sustainability Report

(This is the translation of the original signed auditor's report in Swedish.)

To the readers of the SAS Group's Sustainability Report

Introduction
We have been engaged by the Executive Management of the SAS Group to review the SAS Group's Sustainability Report for the year 2011. Our review covers the Sustainability Report 2011, pages 1–54 and 56–58. The Board of Directors and the Executive Management are responsible for ongoing activities regarding the environment, health & safety, quality, social responsibility and sustainable development, and for the preparation and presentation of the Sustainability Report in accordance with the applicable criteria. Our responsibility is to express a conclusion on the Sustainability Report based on our review.

The Scope of the Review
We have performed our review in accordance with RevR 6 Assurance of Sustainability Reports issued by Far. A review consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability Report, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with IAASB's Standards on Auditing and Quality Control and other generally accepted auditing standards in Sweden. The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

The criteria on which our review are 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. We consider these criteria suitable for the preparation of the Sustainability Report.

Our review has, based on an assessment of materiality and risk, e.g. included the following procedures

a. an update of our knowledge and understanding of the SAS Group's organization and activities,
b. an assessment of suitability and application of the criteria regarding the stakeholders' need for information,
c. an assessment of the outcome of the Company's stakeholder dialogue,
d. interviews with the responsible management, at group level, subsidiary level, and at selected business units in order to assess if the qualitative and quantitative information stated in the Sustainability Report is complete, accurate and sufficient,
e. shared internal and external documents in order to assess if the information stated in the Sustainability Report is complete, accurate and sufficient,
f. an evaluation of the design of the systems and processes used to obtain, manage and validate sustainability information,
g. analytical procedures of the information stated in the Sustainability Report,
i. a reconciliation of financial information with the Company's Annual Report for the financial year 2011,
j. an assessment of the Company's declared application level according to GRI guidelines,
k. an assessment of the overall impression of the Sustainability Report, and its format, taking into consideration the consistency of the stated information with applicable criteria,
l. a reconciliation of the reviewed information with the sustainability information in the Company's Annual Report for the financial year 2011,

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

Stockholm, March 30, 2012

Deloitte AB

Elisabeth Werneman
Authorized Public Accountant

Sofie Wadstein
Expert Member of Far

Bureau Veritas' statement to the sustainability report 2011

Bureau Veritas Certification has performed EMAS verification on SAS Group against the verification criteria REGULATION (EC) No 1221/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001

The requirements for the system elements have been audited through our contract and certification of SAS Group against ISO 14001 certified for the first time September 2010. The extra system requirements in EMAS with respect to ISO 4001 have been audited together with the verification of the SAS Annual Sustainability report 2011.

Bureau Veritas Certification (accreditation number 6002) has verified the SAS Annual Sustainability Report 2011 against the EMAS III requirements. All the substantially statements in the sustainability report as well as the nature and correct presentation of all the data against the key performance indicator requirements in EMAS III, annex IV. Bureau Veritas has got an external verifier to verify – on a spot check basis – the data in the report versus original vouchers, measurements etc. and got their documentation for their verification.

The verification has proved that the SAS Group fulfills all EMAS requirements.

March 30, 2012

Klaus Behrndt
EMAS verifier
Bureau Veritas Certification

Accounting Principles for Sustainability Reporting 2011

The SAS Group's airlines, Scandinavian Airlines, Widerøe and Blue1 transported 27.2 million passengers to 128 destinations in 2011. The Group's home market is the Nordic Region. The Group also comprises of operations for aircraft maintenance, ground handling and post/air freight.

For the financial year of 2011, the SAS Group 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 Ground Handling (SGH), SAS Technical Operations and SAS Cargo Group (SCG).
- Widerøe including ground operations.
- Blue1 including ground operations.

"SAS" or "SAS Group" is used throughout the report when the total operations are referred to. Within environmental responsibility the SAS Group strive to separate between airline and ground operations. Thus, the following divisions have been made:

- Scandinavian Airlines comprises the airline operations in the SAS Consortium, i.e., airline operations under the brand SAS.
- Widerøe comprises Widerøe's airline operations. The environmental impact of Widerøe's ground operations is accounted for in SAS ground and office activities.
- Blue1 comprises Blue1's airline operations. The environmental impact of Blue1's ground operations is accounted for in SAS ground and office activities.
- SAS ground and office activities include the activities in SAS Ground Handling (SGH), SAS Technical Operations and SAS Cargo Group (SCG) and the ground operations of Widerøe and Blue1. In addition, the premises used by the SAS Group in Scandinavia are included.

During 2009 and 2010 there has been a substantial reorganization within SAS. The Sustainability report is structured in order to mirror the new organization. This includes presenting Scandinavian Airlines environmental impact in total and not divided on country organizations. However, the environmental index will be presented divided into the previous country organizations up until 2011.

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. The SAS Group's structure is presented on ***page 95*** in the Annual Report 2011.

Sustainability reporting

The SAS Group's Sustainability Report has been prepared in accordance with the SAS Accounting Principles for Sustainability Reporting. The presentation and disclosures are partly based on Deloitte's (Sweden) Checklist for preparation and evaluation of voluntary reporting of environmental, ethical and social information ("Checklista för upprättande och utvärdering av information om miljö, etik, socialt ansvar och bolagsstyrning" Utgåva 2008, www.deloitte.se). SAS Group has also applied the Global Reporting Initiative's (GRI) Sustainable Reporting Guidelines, version 3.0. GRI cross-references are available on ***page 46–56***. These indicate where the GRI-indicators are found in the SAS Sustainability Report 2011, 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 as disclosed below, that has been taken into account in preparing the SAS Group's Sustainability Report 2011.

Reporting Principles for Defining Content

1. *Materiality:* The information in a report should cover areas and indicators that reflect the organization's significant economic, environmental, and social impacts or that would substantively influence the assessments and decisions of stakeholders.
   The SAS Group's Approach: In the preparation of the Sustainability Report all information considered material, by external or internal factors, has been included. Materiality can be defined by stakeholder requests but also by the SAS Group's most important aspects of sustainability or the SAS Group's approach to responsibility for sustainable development.

2. *Stakeholder inclusiveness:* The reporting organization should identify its stakeholders and explain in the report how it has responded to their reasonable expectations and interests.
   The SAS Group's Approach: The SAS Group has identified its most important stakeholders from a sustainability perspective. These are described on ***pages 6–7*** in the Sustainability Report together with main communication channels for each stakeholder group. The sustainability report includes the information deemed most important for the main stakeholders.

3. *Sustainability context:* The report should present the organization's performance in the wider context of sustainability.
   The SAS Group's Approach: The SAS Group has decided to describe its sustainability aspects in a context of external interest and stakeholder demands on the Group's operations as well as SAS' opinion of its own impact. Due to stakeholder demands, environmental responsibility is given the most space in SAS's Sustainability Report.

4. *Completeness:* Coverage of the material areas and indicators and definition of the report boundary should be sufficient to reflect significant economic, environmental, and social impacts and enable stakeholders to assess the reporting organization's performance in the reporting period.
   The SAS Group's Approach: SAS' ambition to report a fair and complete picture of the operation is based on the stakeholders demands and expectations that the group's material financial, environmental and social impact is presented. This is clear from the stakeholder dialogues that SAS carry out. In order to achieve this SAS have an internal network, SAS Group Sustainability Network that contains representatives from the companies and units with the biggest sustainability impact. Furthermore, SAS have since many years a well developed organization and process for how the sustainability work is carried out and reported.

Reporting Principles for Defining Quality

5. *Balance:* The report should reflect positive and negative aspects of the organization's performance to enable a reasoned assessment of overall performance.
   The SAS Group's Approach: The SAS Group disclose both success and failure regarding the Group's approach to sustainable development. The SAS Group has a tradition of openly disclose all material issues and performances, both positive and negative.

6. *Comparability:* Issues and information should be selected, compiled, and reported consistently. Reported information should be presented in a manner that enables stakeholders to analyze changes in the organizations performance over time, and could support analysis relative to other organizations.
   The SAS Group's Approach: The purpose with these accounting principles is to make the reported information as comparable as possible. Limitations in scope and changes in accounting principles are described. In some cases, indicators are not perfectly translatable to GRI's "Indicator Protocols". The reason is usually that the SAS Group for a long time have used uniform definitions of social and environmental indicators that might not conform completely to GRI principles. In other circumstances, it can be attributed to the fact that the SAS Group has not historically reported on the demanded data. In "Cross reference list for GRI" all deviations from GRI's "Indicator Protocols" are explained.

7. *Accuracy:* The reported information should be sufficiently accurate and detailed for stakeholders to assess the reporting organization's performance.
   The SAS Group's Approach: It is important that the information reported is as correct as possible. See the description in the segment "10. Reliability" below, for how the SAS Group ensures the accuracy of reported information. In these accounting principles it is possible to find accounting and compilation principles for most of the indicators disclosed in the SAS Group's Sustainability Report as well as the definitions of concepts used in the Sustainability Report.

8. *Timeliness:* Reporting occurs on a regular schedule and is available in time for stakeholders to make informed decisions.
   The SAS Group's Approach: The SAS Group's Sustainability Report is distributed annually.

9. *Clarity:* Information should be made available in a manner that is understandable and accessible to stakeholders using the report.
   The SAS Group's Approach: The ambition is to briefly describe the most important impacts on the operations by environmental and social aspects, which is considered to be of interest for the major stakeholder groups. Due to the number of different stakeholders, complex operations, and limited space the SAS Group has chosen to use a non-technical language and avoid detailed descriptions. Furthermore, the structure of the Sustainability Report is similar from year to year.

10. *Reliability:* Information and processes used in the preparation of a report should be gathered, recorded, compiled, analyzed, and disclosed in a way that could be subject to examination and that establishes the quality and materiality of information.
The SAS Group's Approach: Formally, the managing director (MD) of each legal unit has the main responsibility for the sustainability reporting. They are in general assisted by HR and/or sustainability coordinators who are responsible for analyzing and reporting data from their respective units into reporting templates, which are sent to the Group's environmental and sustainability function.

The central environment and sustainability function consolidate the information for the whole Group and review and analyze the information and compares it with data from previous years. Certain information, primarily related to production data, taxes and charges are collected from other group functions.

Assessment of sustainability goals and the fulfillment of these goals according to the Global Compact principles are made by self-assessments on entity-level in conjunction with a dialogue with the Group´s environment and sustainability function.

The Group's external auditors have performed an independent review of the SAS Group's Sustainability Report. The review was conducted in accordance with Far (the institute for the accountancy profession in Sweden) "RevR 6 Assurance of sustainability reports". The scope of the auditors' independent review is described in detail in their Review Report on ***page 55***.

Scope of the sustainability report
The SAS Group's Sustainability Report should contribute to the evaluation and understanding of the SAS Group's operations. The report is an overview of the SAS Group's structured sustainability work. The goal of the SAS Group's Sustainability Report 2011 is to disclose all information necessary to provide the reader with a fair overview of the Group's environmental, social, and financial responsibilities.

The SAS Group has a long tradition of reporting on environmental indicators. The Group, which work within several different countries with several different companies constantly works to achieve comparable environmental and social indicators. In the SAS Group's opinion, deviations in reported data with regards to the principles described by the Group are not material, and the information provided gives a fair presentation of the Group's sustainability approach and impact.

To the extent possible, entities within the SAS Group report on financial impacts of environmental and social responsibilities.

The SAS Group Annual Report 2011 includes a general overview of the Group's environmental work and the sustainability information in the Board of Director's Report on ***pages 50–51*** in the Annual Report 2011 is tailored to the requirements prescribed by EU directive (2003/51/EC).

The utmost responsibility for the sustainability aspects of the SAS Group, and their integration in operational activities, lies with Group Management. The Sustainability Report was approved by the SAS Group Management in March 2012. The SAS Group Board of Directors submitted the annual report in March 2012, and was informed of the sustainability report.

Limitations
The main principle for sustainability reporting is that all units and companies controlled by the SAS Group are accounted for. This means that sustainability-related data for divested companies owned by the Group 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.

The SAS Group has a number of production indicators (such as passenger kilometers and available seat kilometers). In some cases there will be differences regarding definitions, resulting in reduced possibility to compare information between the Annual Report and the Sustainability Report.
Standard definitions for environmental and social data have been applied throughout the entire Group. 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:

Sick leave for Blue1 have been adjusted for 2010 due to change of method.

Energy figures have been adjusted for 2010 due to improved data capture and reporting from suppliers.

FTE in the tables regarding key environmental figures for Scandinavian Airlines, SAS Ground Handling and SAS Technical Operations has been changed in 2010 from average number of employees during the year to total number of employees in December. The figures used in these tables now reflect the figures presented in the social data.

For previous changes, see Accounting Principles for previous periods.

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[2]: 0.8 or actual density.
  - Diesel: 0.84
  - Petrol: 0.73
  - Heating oil: 0.84
- CO_2 factor (per weight unit of fuel):
  - Jet A/A-1[2]: 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_x), factors (per weight unit of fuel):
  - Jet A/A-1[1] Between 0.00694 and 0.01932
  - Heating oil: 0.005
- Unburnt hydrocarbons (HC) factors (per weight unit of fuel):
  - Jet A/A-1[1] Between 0.0 and 0.0318

1. Varies per aircraft/engine combination.
2. Fuel density and CO_2 factor for Jet A/A-1 is calculated according to approved MRV-plan.

Environmental index
SAS have set goals for the airline operations for environmental index until 2011 relating to an organizational division that no longer exists, where Scandinavian Airlines is divided into four production units. To uphold the comparability to previous years the environmental index will be reported based on production units until 2011. For the environmental index RPK will still be used as the production factor to uphold comparability. Due to the characteristics of the Group's operations, SAS has chosen to construct an environmental index for flight operations. Based upon the estimated environmental impact the factors have, a weighting has been assigned which affect the impact that factor has on the entity's eco-efficiency. This weighting is based upon scientific findings and the SAS Group´s own notion on the factor's environmental impact.

The environmental index (eco-efficiency) is calculated in two steps:

$$\text{Environmental impact} = a \times \frac{\text{Variable 1 current year}}{\text{Variable 1 base year}} [\ldots] + n \times \frac{\text{Variable Z current year}}{\text{Variable Z base year}}$$

Where a...n is the assigned weighting (see below) and 1...Z is the significant environmental aspect in question.

$$\text{Environmental index} = \text{Environmental impact} \times \frac{\text{Production base year}}{\text{Production current year}}$$

The lower the value, the lower the environmental impact per unit produced.

Flight operations

Environmental aspect	Weighting	Production factor
Carbon dioxide	50%	Revenue Passenger Kilometer (RPK)
Nitrogen oxides	40%	
Weighted noise contour	10%	

The high weightings for carbon dioxide and nitrogen oxides are based on the scientific findings summarized in the IPCC report Aviation and the Global Atmosphere.

Climate index
The climate index is calculated by taking the quantity of emissions of carbon dioxide and nitrogen oxides in relation to production. Even though there are no consensus regarding the weighting between the different greenhouse gases' effect on total impact on climate change, SAS have chosen to base the calculation on the assumption from, among others, Cicero that 1.5 is a reasonable multiplicator given the knowledge available "today". Read more about Cicero, that has e.g. provided basic data for IPCC, on 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_2 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%	Revenue Passenger Kilometer (RPK)
Nitrogen oxides	33%	

Both the Environmental index and Climate index are 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:

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

Number of employees:
In the Sustainability Report the number of employees for Scandinavian Airlines is based on the number of persons during the month of December and sick leave statistics calculated for the whole year. This being employees having a budgeted or actual schedule and/or have been sick during the period. For Widerøe and Blue1 average number of employees (FTE) is reported in the Sustainability Report.

Sick leave:
Sick leave for Scandinavian Airlines is reported as the number of hours being sick in relation to actual or planned working hours. For Widerøe and 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 59 days in Scandinavian Airlines and Blue1. 56 days in Widerøe) is reported as a percentage of total sick leave.

Principles for reporting and calculation of external and other environmentally related costs
Where it is 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.

Fuel efficiency index Scandinavian Airlines
Fuel efficiency on existing aircraft types is calculated using a fuel efficiency index (FEI), that compares fuel consumption on comparable flights over time. The index is constructed so that the average of FEI for all flights of a given aircraft type equals 1 during a base period selected as June 2005–July 2006. When tracking FEI over time for comparable flights with the same aircraft type, it is possible to monitor the development of fuel-saving.

Calculation method
FEI can be calculated for individual flights and is then calculated as an average for an aircraft type, a production unit or all of Scandinavian Airlines. The FEI is calculated for individual flights covering about 35% of all Scandinavian Airlines flights, selected as the most frequently flown routes for each aircraft type and considered to be a representative sample of all flights. To account for the fuel-saving during a given period expressed in kilos of fuel, Scandinavian Airlines considers the fuel actually burned during the period and the FEI improvement since base period and calculates the fuel that would have been burned if there had been no FEI improvement. The difference is the estimated saving volume. As an example, assuming an actual burn of 1,000,000 tons of fuel in a 12-month period and average FEI was 0.96 in the same period, the calculation will be as follows: Savings (ton) = 1,000,000/0.96 – 1,000,000 = 41,666 tons when using 2005–2006 as base period.

Savings in relation to another period can also be calculated. For example, Scandinavian Airlines can compare fuel-savings in 2010 due to FEI improvement since 2009. Assuming there was an average FEI of 0.958 in 2009 and 0.954 in 2010 and an actual burned volume of 1,000,000 tons in 2010, the calculation of saved volume in 2010 (compared with 2009) is as follows: Savings (ton) = 1,000,000 x (0.958/0.954) – 1,000,000 = 4,192 ton. By considering the individual months separately, it is possible to arrive at slightly different numbers.

Data sources for Fuel Efficiency Index
The FEI for each flight is calculated with data from the following sources:
- The "Flight Summary Report" transmitted by Data Link after each flight provides the actual fuel burn.
- The PALCO load control system provides actual payload, which is used to correct for variations in payload.
- The Flight Planning System provides the average forecast wind, which is used to correct for the influence of wind.
- Figures from the FMIS database on average normalized burn figures, per city pair and aircraft type during the base period is used as reference when calculating the FEI value for individual flights. The city pairs in the database have been selected as the most frequently operated city pairs per aircraft type. These city pairs are assumed to be a representative sample of all flights, which allows the assumption that the measured FEI improvement is valid for all flights.

FEI values outside the range 0.7–1.4 (0.8–1.2 for long haul flights) are regarded as outliers and are not included in averages. Less than 0.5% of the FEI values are outside the range.

Sustainability-terms, definitions & concepts

A

Acetate Acetic acid (CH_3COOH). 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 degree considered carbon neutral. EU's renewables directive (2009/28/EC) and biofuels directive (2003/30/EC) defines 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_2) A colorless gas that is formed in combustion of all fossil fuels. The airline industry's CO_2 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 clorofluorocarbons that may also contain hydrogen and /or bromide. A class of stable chemical compounds mostly known under 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 lack of approve 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_2 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 eco-efficiency 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 eco-efficiency with respect to noise and other emissions such as of NOX 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 unchanged 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 are 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 Great Britain and the environmentally related fiscal CO_2-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
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 economical perspective. www.globalreporting.org
Green Approach In a Green Approach, the approach begins from 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, that have both 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 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_2 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_X) Formed during combustion in all in 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 combusters (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_X 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 in concentrations of 0.005% per weight or higher since 2007 in Norway. Regulation work ongoing in EU and USA.
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.
RPK (used in the sustainability-related reporting) Revenue 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.
RTK Revenue Ton Kilometers, utilized (sold) 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_2 Sulfur dioxide (see definitinon).
Sulfur dioxide (SO_2) 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 nutrification/ 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^2 that is subjected to a noise footprint of 85 dB(A) or more in connection with takeoff.

Our vision:
To be **valued for excellence** by all stakeholders

Our mission:
We provide **best value for time and money to nordic travelers** whatever the purpose of their journey

Our brand promise:
Service And **Simplicity**

We have ambitious targets

Our goal is to achieve sustainable profitability through:

- SAS is to be Number 1 – The Nordic region's most valued airline by reaching new heights in customer satisfaction ratings
- Unit cost shall be reduced 3–5% annually
- Our employee satisfaction is to be in the Top Five in the entire Nordic transportation sector
- We are to reduce our flight emissions by 20%.

To secure an efficient return on investment.

We will achieve this with our 4Excellence strategy:

Commercial Excellence
– Continue to offer most value for time and money

Operational Excellence
– Increase efficiency and reduce CASK

Sales Excellence
– Promote loyalty among companies and customers

People Excellence
– Conditions for change work

4EXCELLENCE

Accelerated 4Excellence in 2012–2013 → Some 30 initiatives will generate SEK 5 billion

SAS is increasing the tempo within the framework of 4Excellence, which will generate a total of SEK 5 billion in revenue and cost improvements in 2012–2013, and achieve an earnings effect of SEK 2 billion by 2012.

Of the total earnings effect of SEK 5 billion, SEK 3.5 billion pertains to cost savings in all of the four areas. Activities in Commercial Excellence and Sales Excellence will generate revenue of SEK 1.5 billion.

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