

Carbon Calculated Report: Qualified Greenhouse Gas Inventory



Client: Sanlam

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Overview of Sanlam's Carbon Dioxide Equivalent (CO₂e) Emissions

Reporting period:

Financial year 2010 (January 01- December 31)

Carbon footprint calculation conducted on:

Sanlam Head Office, Bellville, Cape Town; Sanlynn; Sanlam Investment Management (SIM); Glacier; Sanlam Sky and Hyde Park

Methodology:

Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard

Total Sanlam employees covered by report as at December 2010:	4 942
Total Sanlam employees	7 293
Percentage Sanlam employees covered by report:	68 %
Total square metreage of offices reported as at December 2010:	120 872

Scope 1 Direct Emissions	Metric tonnes of CO ₂ e
Fuel from equipment owned or controlled	41.01
Air conditioning and refrigeration gas refills	0.00
Vehicle fleet	Info not available
TOTAL SCOPE 1 EMISSIONS	41.01

Scope 2 Indirect Emissions	
Purchased electricity	44 534.55
TOTAL SCOPE 1 & 2 EMISSIONS	44 575.55

Scope 3 Indirect Emissions	
Business travel in rental car (including chauffer services)	206.94
Business travel in commercial airlines	3 441.51
Business travel in hotel accommodation	173.39
Third-party vehicle fleet	57.34
Employee commuting	6 899.91
Consumption of office paper	698.36
Courier (Fedex, Berco and UTI)	199.21
TOTAL SCOPE 3 EMISSIONS	11 676.66

TOTAL SCOPE 1, 2 & 3 EMISSIONS (GHG PROTOCOL)	56 252.21
Non-Kyoto Protocol GHG emissions ¹	1 925.84
TOTAL SANLAM 2010 EMISSIONS CO₂e (METRIC TONNES)	58 178.05

Emissions per full-time employee at (t/FTE)	11.77
Emissions per square metre of office space (t/m ²)	0.48

¹ Non-Kyoto Protocol GHG emissions are reported separately according to GHG Protocol (see section 5).



Abbreviations and Glossary of Terms

A/C	Air conditioning
Baseline year	An historical year used to compare preceding year's emissions.
CO₂	Carbon dioxide
CO₂e	Carbon dioxide equivalent – standardisation of all greenhouse gases to reflect the global warming potential relative to carbon dioxide.
CDP	Carbon Disclosure Project
Defra	United Kingdom Department of Environment, Food and Rural Affairs.
Direct emissions	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
Emission factors	Specific value used to convert activity data into greenhouse gas emission values. Presented in specific units, e.g. kgCO ₂ /km travelled.
FTEs	Full-time employees
GHG	Greenhouse gases
GHG Protocol	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organisation.
GWP	Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
HCFC	Hydrochlorofluorocarbon
IPCC	International Panel on Climate Change
Indirect emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g. purchasing of electricity.
Operational boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organisational boundary	Determination of which business units of an organisation will be included in a carbon footprint calculation.
Optional information	Information relating to emissions that are recommended but not compulsory under the GHG Protocol, e.g. emissions from air travel.
Relevant emissions	Emissions generated as a result of the business activities of the reporting company.
Required information	Information relating to emissions that are compulsory under the GHG Protocol, namely direct emissions and indirect emissions from purchased electricity.
Scope 1 emissions	Emissions resulting from equipment owned or controlled by a reporting company.
Scope 2 emissions	Emissions resulting from consumption of electricity purchased by a reporting company.
Scope 3 emissions	Emissions resulting from other activities of a reporting company, such as commuting travel, business air travel, paper consumption.
UNEP	United Nations Environment Programme
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute



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Section A: Introduction

This report constitutes the fourth carbon footprint report commissioned by Sanlam and should be compared against the previous carbon footprint calculations for Sanlam. All reports have been prepared using the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard methodology.

This report covers emissions emanating from the business activities of Sanlam's Head Office building in Bellville, Cape Town, its offices in Hyde Park and Sanlynn (both in Gauteng) as well as Sanlam Investment Management (SIM), Sanlam Sky and Sanlam Glacier. This covers a staff complement of some 4 942 full-time employees (FTEs), equivalent to 67.76% of Sanlam Group South African full-time employees (excluding Santam, advisors and field staff). A total of 120 872 square meters (m²) of office space is covered by this report. Although Sanlam has operations in other parts of Africa, India, the United States of America (USA) and the United Kingdom (UK), these were considered materially insubstantial in terms of number of employees and associated emissions. Sanlam's short-term insurance subsidiary, Santam, is responsible for its own carbon footprinting requirements.

The GHG-emitting activities covered by the report include direct emissions resulting from fuel used by Sanlam-owned or controlled equipment, air conditioning and refrigeration gas refills; indirect emissions from purchased electricity (referred to as Scope 1 and 2 emissions respectively); and selected indirect emissions resulting from Sanlam's business travel activities (flights, overnight accommodation and rental cars), third-party vehicle fleet, its employee commuting patterns, consumption of office paper and courier transport (referred to as Scope 3 emissions). It is important to highlight that under the GHG Protocol, the reporting of both direct emissions and indirect emissions resulting from purchased electricity are compulsory. All other indirect emissions are reported on a voluntary basis.

Carbon Calculated has gone to all reasonable lengths to ensure that the primary information provided by Sanlam is correct. Carbon Calculated cannot be held responsible for any inaccuracies that this information might contain. A large portion of the data was audited by Ernst and Young Inc. prior to final carbon footprint calculations. This report, in its entirety, is both material and complete and is intended for Sanlam's internal use only. Information may, however, be extracted for reporting purposes, such as for submission into international and/or national greenhouse gas registries and sustainability reporting. It can also be presented for third-party verification purposes if desired.

The GHG Protocol

The GHG Protocol is a multiple-stakeholder partnership of business, NGOs and governments led by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). It is the best source of information about corporate GHG accounting and reporting, and draws on the expertise and contributions of individuals and organisations from around the world. The GHG Protocol is the most widely-used standard for mandatory and voluntary GHG Programmes and is compatible with other international GHG standards such as ISO 14064. It is also analogous to the generally-accepted financial accounting standards for the consistent accounting reporting purposes of companies.



Section B: Required Information

1. Company Description

The Sanlam Group was established in 1918 as a life insurance company and has, over the past 91 years, diversified to become a leading financial services group in South Africa. The head office is located in Bellville, Cape Town, with business interests located throughout South Africa, Africa, India, Australia, the USA and the UK. This Carbon Footprint Report does not include Sanlam Group subsidiaries.

Sanlam's core operations lie in the life and long-term insurance sector and asset management sector. Through its subsidiary, Santam, Sanlam is also in the short-term insurance sector. Sanlam currently employs 11 620 people, inclusive of commissioned sales advisors and subsidiaries, and is listed on both the Johannesburg and Namibian Securities Exchanges.

In 2007, Sanlam was listed on the Socially Responsible Index (SRI) of the Johannesburg Securities Exchange. The company also participates in the Carbon Disclosure Project, and was ranked fifth in the South Africa CDP 2010 Performance Index.

2. Inventory Boundaries

2.1 Organisational Boundary

Definition: Organisational Boundaries

Organisational boundaries determine which business units (core, subsidiaries, franchises, etc.), facilities, or physical places of operation, owned or controlled by the reporting company, are included in the carbon footprint. The more complex the company structure, the more important are the boundaries of an organisation for the clear definition and scope of the report.

Relevant emission activity data is currently only available for the Sanlam Head Office, Sanlynn, SIM, Glacier, Sanlam Sky and Hyde Park. As such, these operations constitute the organisational boundary for this report and account for 67.76% of all Sanlam Group South African FTEs. Total FTEs covered in this report is 4 942, inclusive of 160 fixed term contractors but exclusive of advisers or field staff. There is an increase in the number of FTEs covered by this report compared to the 2009 Carbon Footprint Report from 4 424 to 4 942 as this 2010 Carbon Footprint Report incorporates the following businesses: Sanlam Healthcare Management, Blue Ink, MiWay and Coris Capital. A total of 120 872 metre squared (m²) of office space is covered by this report. This incorporates 92% (85 637m²) of Sanlam Head Office. The remaining 8% (9 722m²) of office space at head office is utilised by external service providers for example Mugg and Bean.

The inclusion of Sanlam Sky into the Organisational boundary of the 2010 Carbon Footprint Report represents an improvement on the 2009 Carbon Footprint Report.

As already indicated, Santam, an organisation in which Sanlam holds a 51% shareholding, reports its carbon emissions independently.

2.2 Operational Boundary

Definition: Operational Boundaries

Operational boundaries determine the actual business activities of the reporting company that generate emissions; which of these activities should be included in the calculation; and, how these activities should be classified (i.e. direct or indirect emissions).



Greenhouse Gas (GHG) emissions resulting from the following activities have been calculated:

- Equipment owned or controlled by Sanlam (e.g. generators)
- Operation of air-conditioning (A/C) units and refrigerators
- Consumption of purchased electricity
- Business travel in rental cars and chauffeur services
- Business travel in commercial airlines
- Business travel in overnight accommodation
- Third party vehicle fleet
- Commuting patterns of staff
- Consumption of office paper
- Courier transportation

The inclusion of courier transportation by Berco, UTI and Fedex into the Operational Boundary of the 2010 Carbon Footprint Report represents an improvement on the 2009 Carbon Footprint Report. The calculation of emissions from flights by class is also an improvement from 2009.

Emissions associated with purchased electricity, and diesel use (for generators etc.), air conditioning, office paper and employee commuting have been reported and calculated for the following buildings: Head Office, Sanlynn, SIM, Glacier, Sanlam Sky and Hyde Park.

Sanlam Head Office has tenants within the building and therefore is responsible for 92% of emissions from the building. Purchased electricity and fuel from generators is represented on the Overview on page 3 as 92% from Head Office and all other buildings are responsible for 100% of the emissions.

Emissions associated with all business travel, courier and third party fleet vehicles has been calculated from original data provided for all of Sanlam Group's operations (excluding Santam). The carbon emissions have been extrapolated from this data to reflect, as accurately as possible, emissions from the above-mentioned buildings relative to FTEs at a percentage of 67.76%.

2.3 Reporting Period

The reporting period of this report is for the 2010 financial year (January 1 2010 – December 31 2010).

3. Information on Sanlam's Emissions

3.1 Total Scope 1 & 2 Emissions

The GHG Protocol requires carbon footprint calculations to include all direct emissions under Scope 1, and indirect emissions from purchased electricity under Scope 2, as compulsory reporting. Other activities under indirect emissions, Scope 3, are voluntarily reported. Refer to Appendix A for a diagram to illustrate direct and indirect emissions and the different scopes of reporting.

Emission Factors:

Emission factors convert activity data (e.g. amount of fuel used, kilometres driven, and kilowatt hours of purchased electricity) into a value indicating carbon dioxide equivalent (CO₂e) emissions generated by that particular activity.

Default values are used by the GHG Protocol to assist businesses that are unable to develop accurate customised values. These default values are representative averages based on the most extensive data sets available and are largely identical to those used by the Intergovernmental Panel on Climate Change (IPCC), the premier authority on greenhouse gas accounting practices at the global level.

The GHG Protocol recommends, however, that businesses should use customised values whenever possible, as industrial processes or the composition of fuels used by businesses may differ with time and by region. This report largely uses the latest emission factors provided by the UK government's Department of Environment, Food and Rural Activities (Defra), July 2005, June 2007, April 2008, September 2009 and October 2010. These have been adopted by the GHG Protocol as *de facto* emission factors and are updated on a regular basis.

In reporting emissions generated by the consumption of electricity purchased from Eskom, the emissions factor provided by the utility's annual report (2010) has been used to give local context accuracy.



Definition: Scope 1 Emissions

Emissions from sources owned or controlled by the reporting company, e.g. generators, refrigeration, air-conditioning units.

Definition: Scope 2 Emissions

Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the reporting company, e.g. an electricity utility such as Eskom.

Definition: Direct and Indirect Emissions

Under the GHG Protocol, emissions are categorised as 'direct' when they are generated from activities or sources within the reporting company's organisational boundary and which the company owns or controls. 'Indirect' sources are those emissions related to the company's activities that are emitted from sources owned or controlled by another company, e.g. purchased electricity, rental cars, commercial airlines or paper.

3.2 Emissions of each GHG

All emissions are calculated as carbon dioxide equivalent gases (CO₂e), as required by the GHG Protocol.

SCOPE 1: DIRECT EMISSIONS FROM SANLAM 2010				
Scope	Description	Emissions Factors ²	Total Consumption	Metric tonnes of CO ₂ e emissions
1	Equipment owned or controlled by Sanlam e.g. generators	2.672 kg CO ₂ e/litre	16 494 litres of diesel	44.07 ³
	Emissions from A/C and refrigerant gas refills (Kyoto protocol gases)	EFs differ according to different gases	0 kg	0.00
	Vehicle fleet	Information not available ⁴	-	-
SCOPE 2: INDIRECT EMISSIONS FROM PURCHASED ELECTRICITY FOR SANLAM 2010				
Scope	Description	Emissions Factors	Total Consumption	Metric tonnes of CO ₂ e emissions
2	Purchased electricity	1.03 kg CO ₂ e/kWh ⁵	46 142 042 kWh	47 526.30 ⁶

² Emission factors provided by UK Government Department of Environment, Food and Rural Affairs (Defra), Guideline to Defra's GHG Conversion Factors for Company Reporting; Annexes Updated October 2010. Available from: <http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm>

³ Total diesel usage at Head Office is 14 342 litres. Sanlam is directly responsible for the usage of 92% of diesel at the Head Office building, which is represented in the Overview on page 3. All other buildings are responsible for 100% of diesel usage.

⁴ Data for fleet vehicles was not available. Although this value is immaterial to the overall carbon footprint (1.84 tonnes CO₂e in the 2009 Carbon Footprint Report) it does cause the report to be incomplete. It is recommended that fleet data be incorporated into the 2011 Carbon Footprint Report.

⁵ Eskom emission figures per kWh of electricity generated from 2010 report. See: http://financialresults.co.za/2010/eskom_ar2010/corp_tables_enviro.htm.

⁶ Total electricity usage at Head Office is 36 307 723.64 kWh. Sanlam is directly responsible for the usage of 92% of purchased electricity at the Head Office building, which is represented in the Overview on page 3 and in the table (second line of Head Office consumption on page 10) representing the breakdown of emissions from purchased electricity by building. All other buildings are responsible for 100% of purchased electricity.



BREAKDOWN OF INDIRECT EMISSIONS FROM PURCHASED ELECTRICITY BY BUILDING					
Building	Total Consumption (kWh)	Metric tonnes of CO ₂ e emissions	FTE	kWh/FTE	CO ₂ e/FTE
Head Office total	36 307 723.64	37 396.96	2 982	12 176	12.54
Sanlam responsible total ⁶	33 403 105.75	34 405.20	2 982	11 202	11.53
Sanlynn	2 758 065.60	2 840.81	282	9 780	10.07
SIM	2 722 944.00	2 804.63	350	7 780	8.01
Glacier	503 286.55	518.39	352	1 430	1.47
Sanlam Sky	2 568 380.00	2 645.43	532	4 828	4.97
Hyde Park	1 281 642.50	1 320.09	444	2 887	2.97
Total	43 237 424.39	44 534.55	4 942	8 749	9.01

Carbon Dioxide Equivalent (CO₂e)

Due to the varying ability of greenhouse gases to trap heat in the atmosphere, some are more harmful to the climate than others. Each greenhouse gas has a “global warming potential” (GWP), which refers to its heat trapping potential relative to that of CO₂. Therefore, to provide a comparable final figure, all emissions are reported as a relative figure to CO₂, i.e. as CO₂e values.

The six main greenhouse gases covered by the GHG Protocol and reported as CO₂e are:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)

3.3 Methodologies Used

This calculation was conducted in alignment with the GHG Protocol, using the following tools:

- CO₂ emissions from business travel (GHG Protocol)
- CO₂ emissions from fuel-use combustion (GHG Protocol)
- CO₂ emissions from transport or mobile services (GHG Protocol)
- Individual CO₂ emissions from purchased electricity (GHG Protocol)
- CO₂ emissions from employee commuting (customised survey by Carbon Calculated. Calculations finalised using GHG Protocol's CO₂ emissions from business travel)
- CO₂ emissions resulting from the purchasing of office paper (customised by Carbon Calculated using paper manufacturers' environmental profiles and GHG Protocol's individual CO₂ emissions from purchased electricity, heat and steam)

3.4 Specific Exclusions

The following exclusions of emission sources (and their explanations) are described below:

Scope 1 - direct emissions:

- Business travel in corporate jets – no aircraft owned by Sanlam.
- Fleet vehicles- information not available

Scope 3 - indirect emissions:

- Travel claims by employees using private vehicles for business purposes – information not available.
- Suppliers' activities – except for Sanlam's business travel services (air, car rental and accommodation) courier, third party travel and office paper.
- End-use of services sold by the reporting – Sanlam's products are financial products and, by definition, are not responsible for directly generating greenhouse gas emissions.



Section C: Optional Information under the GHG Protocol

4. Relevant Scope 3 Emissions

Definition: Scope 3 Emissions

Scope 3 emissions are indirect emissions, other than purchased electricity, which can be described as relevant to the activities of the reporting company. Under the GHG Protocol it is not compulsory to report them. Certain GHG reporting registries, however, require that some Scope 3 emissions be reported under different circumstances.

The following table outlines Scope 3 emissions generated during Sanlam's 2010 financial year. Please refer to the footnotes below the table for further details.

INDIRECT EMISSIONS FROM SANLAM 2010					
Scope	Description ⁷	Variable	Emissions factor ⁸	Total consumption	Metric tonnes of CO ₂ e
3	Business travel - rental cars (P2P and Avis) ⁹	Petrol vehicle <1.4 litres	0.17411 kg CO ₂ e/km	279 km	0.05
		Petrol vehicle 1.4 – 2 litres	0.21600 kg CO ₂ e/km	1 354 627 km	292.77
		Diesel vehicle 1.4 - 2 litres	0.24717 kg CO ₂ e/km	35 186 km	9.40
		Petrol vehicle >2 litres	0.30052 kg CO ₂ e/km	16 535 km	3.17
		TOTAL CAR RENTS		1 409 478 km	305.39
	Business travel - commercial airlines ¹⁰	Less than 463km (Domestic)	0.17328 kg CO ₂ e/km	1 203 365 km	227.29
		463 – 3700km (short-haul Business)	0.14004 kg CO ₂ e /km	3 925 404 km	599.19
		463 – 3700km (short-haul Economy)	0.09336 kg CO ₂ e/km	25 546 074 km	2 599.63
		Greater than 3700km (long-haul Business)	0.242 kg CO ₂ e/km	4 418 907 km	1 165.62
		Greater than 3700km (long-haul Economy)	0.08345 kg CO ₂ e/km	5 096 170 km	463.55
		Greater than 3700km (long-haul First Class)	0.3338 kg CO ₂ e/km	64 374 km	23.42
		TOTAL FLIGHTS		40 254 295 km	5 078.69
	Business travel – hotels	Bed nights	19 kg CO ₂ e/bed night ¹¹	13 467 nights	255.87

⁷ Data provided for business travel, third party vehicles and courier transport is for the entire Sanlam Group. According to FTE numbers, 67.76% of the group is covered in this report and thus 67.76% of the total group emissions from business travel, third party vehicle fleet and courier transport are represented in the Overview on page 3.

⁸ Emission factors provided by UK Government Department of Environment, Food and Rural Affairs (Defra), Guideline to Defra's GHG Conversion Factors for Company Reporting; Annexes. Updated October 2010. Available at: <http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm>, unless stated otherwise.

⁹ Avis car rental provides carbon emissions per vehicle hired. It was unclear from where the emissions were sourced and thus Carbon Calculated calculates emissions using emission factors provided by Defra. Emission factors are linked to car group as follows: Group A, B, C, D, E, G, H, I, J, O and P: 0.216 (1 185 536km = 156.25 tonnes CO₂e), F, K and L: 0.30051 (16 535 km = 3.17 tonnes CO₂e); M: 0.17411 (279 km= 0.05 tonnes CO₂e) and N: 0.24717 (35 186km = 8.70 tonnes CO₂e). Point to Point Chauffeur car groups were as follows: Group A and B: 0.216 (169 091km = 36.52 tonnes CO₂e) and C: 0.24717 (2 851km=0.70 tonnes CO₂e).

¹⁰ A 9% uplift factor is included in total carbon emissions from flights to take into account non-direct routes and delays/circling. This is in accordance with the IPCC Aviation and Global Atmosphere 8.2.2.3.

¹¹ Emission factors provided by UNEP World Meteorological Organisation Climate Change And Tourism Report; A2.2.3 Accommodation; 9-Jul-08, Hotel data extracted from raw data sheet using total bed nights.



	Third party vehicle fleet	Ontime ¹²	0.20825 kg CO ₂ e/km ¹³	310 343 km	64.63
		Kwathlano	0.20825 kg CO ₂ e/km	44 741 km	9.32
		Siba	0.20825 kg CO ₂ e/km	51 257 km	10.67
		TOTAL FLEET		406 341 km	84.62
	Employee commuting ¹⁴	Various	Various according to transportation mode	1.396 tonnes CO ₂ e per FTE	6 899.91
	Third party production of office paper (Mondi Rotatrim) ¹⁵	Emissions to air at production – per tonne paper	1 129 kg CO ₂ e/t	170.79 tonnes ¹⁶	192.82
		Indirect emissions from purchased electricity by paper producer – per tonne of paper	1.03 kg CO ₂ e/kWh ¹⁷ x 606 kWh/t	170.79 tonnes	106.60
	Third party production of office paper (Sappi Typek) ¹⁸	Emissions to air at production – per tonne paper	3 462 kg CO ₂ e/t	82.30 tonnes ¹⁹	284.92
		Indirect emissions from purchased electricity by paper producer – per tonne of paper	1.03 kg CO ₂ e/kWh ²⁰ x 1345 kWh/t	82.30 tonnes	114.01
		TOTAL PAPER		253.09 tonnes	698.36
	Courier transport	Berco ²¹ : Road	0.59065 kg CO ₂ e/t km	9 163.58 t km	5.41
		Berco: Air	1.48848 kg CO ₂ e/t km	4 527.04 t km	7.34
		Fedex ²² : Air (short-haul)	1.48848 kg CO ₂ e/t km	25 t km	0.04
			0.61931 kg CO ₂ e/t km (long haul)	5 125.41 t km	3.40
		UTI ²³ : Road	0.59065 kg CO ₂ e/t km	470 196.22 t km	277.72
		TOTAL COURIER		489 037.30 t km	293.97

¹² Data was unavailable for December. It was not possible to estimate one month as there would have been lower usage considering the holiday period.

¹³ It was not possible to establish the vehicle type from the data provided. An emission factor for average car unknown fuel was therefore used.

¹⁴ A commuting survey was completed for Sanlam and Santam. Unfortunately the data was combined and could not be separated. It was agreed that a weighted average of the previous three years would be used to estimate emissions as a result of employee commuting. For further information, refer to Appendix B.

¹⁵ Emission factors provided by Environmental Profiles for Mondi Rotatrim Business Paper, released March 2010.

¹⁶ Total paper purchased by Sanlam were 68 011 reams of A4 Mondi Rotatrim office paper, totalling 170 tonnes of paper (400 reams = 1 tonne of paper) and 153 reams of A3 Mondi Rotatrim office paper, totalling 0.77 tonnes of paper (200 reams = 1 tonne of paper). **This figure is inclusive of policy paper.** Paper purchased for policy printing in 2010 totalled 38 003 reams of A4 paper. It is estimated that 25% (9 500 reams= 23.75 tonnes) of this paper is Mondi Rotatrim.

¹⁷ Eskom emission figures per kWh of electricity generated from 2010 report. See:

http://financialresults.co.za/2010/eskom_ar2010/corp_tables_enviro.htm

¹⁸ Emission factors provided by Environmental Profiles for Sappi Typek, released April 2010.

¹⁹ Sanlam purchased 32 710 reams of A4 Sappi Typek office paper, totalling 81.77 tonnes of paper (400 reams = 1 tonne of paper). In addition, a total of 105 reams of Sappi Typek A3 office paper, totalling 0.53 tonnes of paper (200 reams = 1 tonne of paper) was purchased. This figure is inclusive of policy paper. Paper purchased for policy printing in 2010 totalled 38 003 reams of A4 paper. It is estimated that 75% (28 502 reams = 71.26 tonnes) of this paper is Sappi Typek.

²⁰ Eskom emission figures per kWh of electricity generated from 2010 report. See:

http://financialresults.co.za/2010/eskom_ar2010/corp_tables_enviro.htm

²¹ Berco courier travel was provided as air and road transportation. Distances were provided for some months. Other distances were calculated for air freight by estimating the closest airport to the destination on www.airrouting.com. Distances by road were calculated using the average road distance from Google maps. The emission factor is for transport of freight provided by Defra as an average vehicle less than 3.5 tonnes with an estimated load of 40%. The freight flight emission factor is relative to the distance flown and includes a 9% uplift factor. The flight or road distance was multiplied by the weight of the package in tonnes to get tonne kilometres.

²² Fedex provided flight kilometres travelled per delivery. This was multiplied by the weight of the package in tonnes to get tonne kilometres. All Fedex courier travel is by air.

²³ UTI courier did not provide any distances. All courier travel was calculated assuming road freight transport. Distances were calculated using the average distance from Google Maps. The emission factor is for transport of freight provided by Defra as an average vehicle under 3.5t with an estimated load of 40%. The road distance was multiplied by the weight of the package in tonnes to get tonne kilometres. It was not possible to establish exact distances from courier base to destination. The resulting carbon emissions for all courier transport are thus estimations.



Air Travel and the Multiplier Effect

The GHG Protocol uses emissions factors for air travel based on size of aircraft, occupancy levels and fuel consumption proposed by the UK government's Defra paper. It should be highlighted that these assumptions do not cater for the increased global warming effects of aviation that are higher than the impact of CO₂ emissions alone - "due to water vapour, sulphate or soot particles, indirect effects of nitrogen oxide emissions on the concentration of ozone and methane, or through the induced formation of clouds".

As a result of excessive emissions during take-off and landing, different factors are used in calculating emissions of short-, medium- and long-haul flights, in accordance with the GHG Protocol. Many organisations then multiply these emissions by a multiplier factor to provide a more realistic quantification of the global warming effect of aviation emissions. To date there is no universally-accepted multiplier factor, although it is believed that between 2 and 5 would be accurate. WWF, the global conservation organisation, for example, uses a multiplier effect of 2.7. This report does not include a multiplier effect for air aviation emissions.

The IPCC Aviation and the global Atmosphere 8.2.2.3 states that 9-10% should be included to take into account non-direct routes (i.e. not along the straight line distances between destinations) and delays/circling. Airline industry representatives have indicated that the percentage uplift for short-haul flights should be higher and for long-haul flights will be lower; however specific data is not currently available to provide separate factors. A 9% uplift factor has been used for all flights in this report.

4.1 "Base-Year" Information

Base-year Calculations

A base year is the historical year against which a reporting company's emissions are tracked and compared over time. It is typically the earliest relevant point in time for which a company has reliable data. The base year should be recalculated as additional or new and relevant data becomes available that would affect the baseline year figure and its comparability with future emission activities.

This report constitutes Santam's fourth carbon footprint. The following tables compares emissions year-on-year. Each year Santam has increased the reporting boundary by including additional buildings and activities into the report and increasing the percentage of FTEs covered by the report. It is important to establish the definition for FTE as it will vary year on year. For further details for 2010, refer to Section 2.1 page 7. The reporting boundaries must be considered when comparing different years' emissions

COMPARISON OF EMISSIONS AND INTENSITY IN 2007, 2008, 2009 and 2010				
	2007	2008	2009	2010
Organisational boundary	Head Office	Head Office, Hyde Park, Sanlynn, SIM	Head Office, Hyde Park, Sanlynn, SIM and Glacier	Head Office, Hyde Park, Sanlynn, SIM, Sanlam Sky and Glacier
Full-time employees (FTE)	2 996	4 116	4 424	4 942
Total Group FTEs	5 251	6 029	5 906	7 293
Square metreage (m ²)	101 250	124 124	127 348	120 872 ²⁴
Activity				
Equipment owned or controlled	32	40	34	41
A/C and refrigeration gas refills	194	0	0	0
Vehicle fleet	0	Not available	2	Not available
Scope 1 TOTAL	225	40	36	41
Purchased electricity	25 919	27 700	38 651	44 535
Business travel – rental cars	246	275	267	207

²⁴ Total square metres of building space has been recorded in square metres as follows: Head Office: 85 637, Sanlynn: 8 443, SIM: 6 276, Glacier: 3 433, Sanlam Sky: 8 600 and Hyde Park: 8 483.



Business travel – commercial airlines	2 896	3 739	3 085	3 442
Business travel – accommodation	Not reported	155	168	173
Third party vehicle fleet	Not reported	18	Not reported	57
Employee travel Claims	129	247	Not reported	Not reported
Employee commuting	3 446	5 446	6 806	6 900
Consumption of office paper	330	368	323	698 ²⁵
Courier information	Not reported	Not reported	Not reported	199
Scope 3 TOTAL	7 048	10 248	10 649	11 677
Non-Kyoto gas	61	891	1 184	1 926
Total	33 252.96	38 879.03	50 520	58 178.05
Intensity: t CO ₂ e/FTE	11.10	9.45	11.42	11.77
Intensity: t CO ₂ e/m ²	0.33	0.31	0.40	0.48
Intensity: % t CO ₂ e from electricity	78%	71%	76%	77%
Kilowatt hours consumed	35 998 000	34 674 941	37 524 766	45 027 39
Kilowatt hours per FTE	12 015	8 424	8 482	8 748

5. Emissions from GHGs not covered by the Kyoto Protocol

In South Africa, the greenhouse gas HCFC22 (Freon or R22) continues to be used as a gas refill in air-conditioning and refrigerant equipment. Freon, however, is not included among Kyoto Protocol GHGs as it and other HCFC gases are presumed to be being phased out under the international Montreal Protocol on Ozone Depleting Gases. While the GHG Protocol's Scope 1, 2 and 3 emissions are strictly for GHGs that fall under the Kyoto Protocol, provision is made for separate reporting on other GHGs that might be under consideration by international treaties such as the Montreal Protocol.

NON-KYOTO PROTOCOL GHG EMISSIONS FOR 2010			
Gas	Kilograms	Emission Factor	Metric tonnes of CO ₂ e
Freon (R22)	1 064	1 820 ²⁶	1 925.84

6. Water consumption

Although water does not have a direct carbon result, it is felt that as an overall sustainability practice, recording water consumption is an important awareness raising tool. The total water consumption per building for 2010 is recorded in kilolitres in the following table.

WATER CONSUMPTION BY BUILDING IN KILOLITRES FOR 2010 ²⁷						
Sanlam Head Office	Sanlynn	SIM	Glacier	Sanlam Sky	Hyde Park	Total
292 361	5 095	10 421	2 058	13 759	3 724	327 417

²⁵ The increase in paper can be attributed to the fact that A3 paper and policy was incorporated into the 2010 Carbon Footprint Report calculations unlike previous years. Paper data (A3 and A4) was provided per building within the boundary of this report. Policy data is a group value and has not been calculated per building as it is assumed policy documentation would be printed at Sanlam's Head Office and all policy paper would therefore fall within the boundary of this report.

²⁶ The GWP for R22 is 1810, provided by UK Government Department of Environment, Food and Rural Affairs (Defra), Guideline to Defra's GHG Conversion Factors for Company Reporting; Annexes Updated October 2010. Available at: <http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm>

²⁷ Water consumption figures were provided following an audit on municipal accounts for water and electricity apart from Glacier. Glacier's water was estimated from municipal accounts from May to November 2010. A daily consumption rate was calculated at 5.64 kilolitres and this was extrapolated up to 365 days. Glacier's water figure is therefore estimated.



7. Information on Offsets and Sanlam's "Green" journey

Sanlam has not offset any of its GHG emissions through either the purchasing of renewable energy or any other offsetting mechanism. Sanlam has however gone to great measures in sourcing and influencing suppliers that will assist them in their "green journey". This is particularly evident in procurement and supply chain. An example is in business travel sector where Sanlam contributes towards the carbon tax associated with flights on some airlines like Mango.

8. Carbon Equivalencies

As it is difficult to fully understand the concept of one tonne of carbon, it is useful to consider the total carbon as an equivalency²⁸. The total carbon of the 2010 Sanlam Carbon Footprint Report, 58 178.05 tonnes CO₂e, is equivalent to the statements below:

- Annual greenhouse gas emissions from 11 407 passenger vehicles.
- CO₂ emissions from 135 298 barrels of oil consumed.
- CO₂ emissions from the electricity use of 7 060 (middle-income American) homes for one year.
- Carbon sequestered by 1 491 745 tree seedlings grown for 10 years.
- Carbon sequestered annually by 12 405 acres of pine forest.
- Carbon sequestered annually by 576 acres of forest preserved from deforestation.
- Greenhouse gas emissions avoided by recycling 20 271 tons of waste instead of sending it to landfill.
- Annual CO₂e emissions of 0.014 coal fired power plants.

Please view the website references below for an explanation of the above statements.

9. Verification of GHG Inventory

The data supplied and the emissions calculated from Scope 2 were audited and verified by Ernst and Young Inc.

10. Facilities covered by GHG Inventory

Sanlam offices covered in this report:

- Sanlam Ltd Head Office: 2 Strand St, Bellville, Western Cape
- Hyde Park: Sanlam Campus, 3a Summit Rd, Dunkeld West, Western Cape
- Sanlynn: 35 Alkantrant Rd, Lynnwood Manor, Pretoria, Gauteng
- SIM: 55 Willie van Schoor Ave, Tyger Valley, Western Cape
- Glacier: Tuscan Park Block A, cnr Old Oak Road and Twist Street, Durbanville, Western Cape
- Sanlam Sky Solutions: Sanlam Business Park, 13 West Street, Houghton, Gauteng

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²⁸ Source: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>



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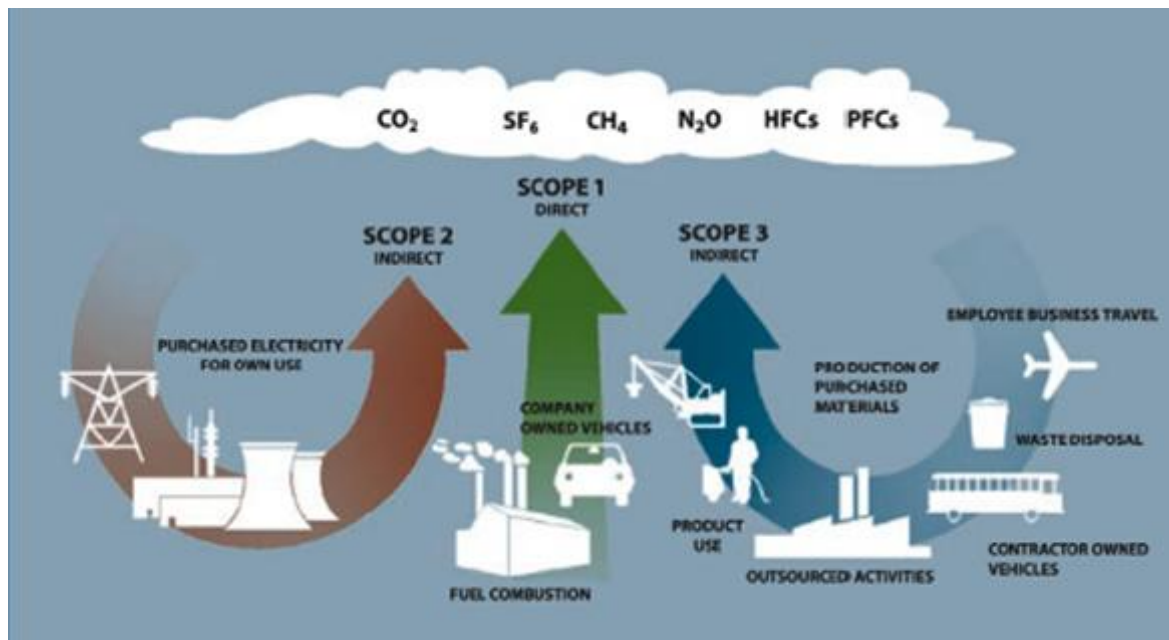
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Appendix A: Diagram illustrating Direct vs. Indirect Emissions



Source: GHG Protocol and SAP:

https://cw.sdn.sap.com/cw/community/sustainabilityatsap/carbon_footprint/blog/2009/05/12/saps-approach-to-reducing-our-total-carbon-footprint



Appendix B: Detailed Results of Employee Commuting Survey

The data for the 2010 commuting survey for Sanlam and Santam was combined. It was not possible to separate the data and it was decided that a weighted average of the previous three years be used. The majority (50%) of the weighting would be for 2009 as the boundary was the most similar to that of 2010. A weighting of 30% was given for 2008 and 20% for 2007.

The emissions from commuting were calculated by extracting the total carbon as reported in the overview page of each report. This total was divided by the number of employees covered in the report to get a value of tonnes of CO₂e per FTE. The table below indicates these calculations:

YEAR	TOTAL EMISSIONS	FTE IN REPORTING BOUNDARY	EMISSIONS PER FTE	WEIGHTING	AVERAGE WEIGHTED EMISSION PER FTE
2007	3 446.18	2 996	1.150	20%	1.396
2008	5 446.24	4 116	1.323	30%	
2009	6 805.61	4 424	1.538	50%	

Total FTEs covered in the 2010 report equate to 4 942. Thus the average emission per FTE (1.396) multiplied by the number of FTEs results on carbon emissions of 6 899.91 tonnes CO₂e as represented in the Overview on Page 3.



Details of the 2010 combined commuting survey

The commuting survey was sent to Sanlam and Santam employees. The total number of respondents to the questionnaire was 2 561 of which 2 461 surveys were used. Twelve public holidays were used in the calculation for 2010.

EMPLOYEE COMMUTING EMISSIONS SURVEY 2010 FOR SANLAM AND SANTAM					
Scope	Description	Engine size / Variable	Emissions factor ²⁹	Total consumption (km)	Metric tonnes of CO ₂ e emissions
3	Petrol vehicle	Less than 1.4 l petrol	0.17411 kg/km	2 971 272.68	431.41
		1.4 – 2.0 l petrol	0.2155 kg/km	10 475 043.18	2 262.61
		Greater than 2.0 l petrol	0.30051 kg/km	1 046 725.87	304.38
		Average petrol vehicle	0.21185 kg/km	194 002.82	32.25
		Average (unknown fuel)	0.20825 kg/km	126 079.34	19.12
	Diesel vehicle	Less than 1.7 l diesel	0.14689 kg/km	129 509.56	19.02
		1.7 – 2.0 l diesel	0.18268 kg/km	1 221 602.57	210.50
		Greater than 2.0 l diesel	0.24717 kg/km	924 710.40	221.37
		Average (if not known) diesel	0.19666 kg/km	44 350.00	8.25
	Other transport	Walking / cycling	0 kg/km	976 235.32	0
		Train	0.05651 kg/km	951 540.03	53.77
		Bus	0.13514 kg/km	1 171 572.81	158.33
		Mini-bus / taxi	0.018 kg/km	3 150 365.35	56.71
		Motorbike	0.0879 kg/km	30 012.00	2.64
			0.10667 kg/km	119 044.00	12.70
			0.1401 kg/km	168 156.00	23.56
			0.1193 kg/km	188 650.89	22.51
TOTAL				23 888 872.82	3 596.94

²⁹ Emission factors from Defra October 2010
Sanlam - Carbon Footprint Report 2010
Date: May 2011



Appendix C: Detailed Results of Emissions in tonnes CO₂e per Building

	INFORMATION AVAILABLE		Head Office	Sanlynn	SIM	Glacier	Sanlam Sky	Hyde Park	Group	Total
	Reporting period	Jan-Dec 10								
	Total Group employees									7 293
	Full-Time Employees (FTE's)	(number)	2 982	282	350	352	532	444		4 942
	Total metreage	(m ²)	85 637	8 443	6 276	3 433	8 600	8 483		120 872
	EBITDA									
DIRECT Scope 1:	Generators, Boilers, Furnaces	Diesel	35.26	3.21	0.56	0.06	-	1.92		41.01
	Vehicle Fleet									-
	Refrigeration & A/C									0
	TOTAL SCOPE 1:		35.26	3.21	0.56	0.06		1.92		41.01
INDIRECT Scope 2:	Purchased electricity		34 405	2 841	2 805	518	2 645	1 320		44 534.55
	TOTAL SCOPE 2&1:		34 440.45	2 844.01	2 805.19	518.44	2 645.43	1 322.02		-
Scope 3:	Car Rentals								206.94	206.94
	Air Travel								3 411.51	3 441.51
	Hotel								173.39	173.39
	Third Party vehicle fleet								57.34	57.34
	Commuting Survey								6 899.91	6 899.91
	Office and policy paper		213.14	10.57	53.53	17.75	14.17	2.16	387.04	698.36
	Courier Fedex								2.37	2.37
	Courier Berco								8.64	8.64
	Courier UTI		-	-	-	-	-	-	188.19	188.19
	SCOPE 3:		213.14	10.57	53.53	17.75	14.17	2.16	11 676.66	11 676.66
	TOTAL		34 653.59	2 854.59	2 858.73	536.19	2 659.60	1 324.18	11 676.66	56 252.21
Non-Kyoto	Freon (R22)		-	561.10	88.69	-	325.80	950.25		1 925.84
	GRAND TOTALS		34 653.59	3 415.69	2 947.42	536.19	2 985.40	2 274.43	11 676.66	5 8178.05 tonnes CO ₂ e
Water (kilolitres)			292 360.88	5 094.55	10 420.46	2 057.86	13 758.98	3 723.95		327 416.68
	CO ₂ e per FTE		11.62	12.11	8.27	1.52	5.61	5.12		11.77
	CO ₂ e per m ²		0.40	0.40	0.46	0.16	0.35	0.27		0.48

Sanlam is responsible for 92% of Head Office diesel and electricity.

The boundary of this footprint includes 67.76% of group business travel, courier and third party fleet relative to FTEs.