Qualified Greenhouse Gas Inventory

Sanlam 2012 Carbon Footprint Report

Prepared by Carbon Calculated

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Alex Hetherington
Mobile: +27 (0)82 411 3191
Email: alex@carboncalculated.co.za

Nici Palmer
Mobile: +27 (0)82 549 7930
Email: nici@carboncalculated.co.za

Tel: +27 (0)21 685 7155 **Fax:** +27 (0)86 5817979 **Web:** www.carboncalculated.co.za

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Overview of Sanlam's 2012 Carbon Dioxide Equivalent (CO_2e) Emissions

Reporting period: *Financial year 2012 (January 01 – December 31)*

Carbon footprint calculation conducted on: *Sanlam Head Office[1]; Sanlam Sky, Houghton; Hyde Park; SIM Building, Bellville; Sanlynn, Pretoria and Glacier, Bellville.*

Methodology: *Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard*

Total full-time Sanlam employees[2] covered by report	4 986
Total Sanlam employees	7 175
Percentage Sanlam employees covered by report	69%
Total square metreage of offices reported	121 417

Scope 1 Direct Emissions	**Metric tonnes of CO_2e**
Equipment owned or controlled	38.93
Air conditioning and refrigeration gas refills	2.60
Vehicle fleet	0.00[3]
TOTAL SCOPE 1 EMISSIONS	**41.53**
Scope 2 Indirect Emissions	
Purchased electricity	41 539.66
TOTAL SCOPE 1 & 2 EMISSIONS	**41 581.19**
Scope 3 Indirect Emissions[4]	
Business travel in rental cars[5]	184.92
Business travel in commercial airlines	3 144.35
Business travel in hotel accommodation	247.58
Third-party vehicle fleet	63.29
Employee commuting	6 179.41
Consumption of office paper	404.42
Courier services	162.84
TOTAL SCOPE 3 EMISSIONS	**10 386.81**
TOTAL SCOPE 1, 2 & 3 EMISSIONS (GHG PROTOCOL)	**51 968.01**
Non-Kyoto Protocol GHG emissions[6]	518.90
TOTAL SANLAM 2012 EMISSIONS CO_2e (METRIC TONNES)	**52 486.91**
Scope 1 & 2 emissions per full-time employee (t/FTE)	8.34
Total emissions per full-time employee (t/FTE)	10.53
Scope 1 & 2 emissions per metre squared of office space (t/m^2)	0.34
Total emissions per meter squared of office space (t/m^2)	0.43

[1] Usage of Scope 1 and 2 emissions of Sanlam Head Office building is reported as 91.77% as per area utilised.
[2] Total FTE's provided by Ike Ndlovu via email (2013/02/13).
[3] Bellville reported petrol usage of an Opel Corsa but petrol was recorded under equipment owned as it was understood that Sanlam did not have any fleet vehicles and fleet vehicles have not been incorporated in past reports for Sanlam.
[4] Business travel, courier and third-party vehicle fleet data has been extrapolated in the Emissions Overview page to reflect fulltime employee figures covered by this report, which represents 69% of the group data.
[5] Although carbon footprint figures were provided by Avis, given that the emission factors used were not provided, Carbon Calculated conducted its own calculations using 'average petrol car' as the emission factor according to Defra.
[6] Non-Kyoto Protocol GHG emissions are reported separately according to GHG Protocol.

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Section A: Introduction

This 2012 report constitutes the sixth carbon footprint commissioned by Sanlam and should be compared against the company's previous carbon footprint calculations. 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 in Bellville, Cape Town, as well as buildings at SIM, Sanlynn, Sanlam Sky, Hyde Park and Glacier. This covers a staff complement of some 4 986 full-time employees (FTEs) and 121 417 meter squared (m^2) of office space. Although Sanlam has operations in other parts of Africa, India, the United States of America and the United Kingdom, 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, fleet vehicles and air conditioning and refrigeration gas refills; indirect emissions from purchased electricity (referred to as Scope 1 and 2 emissions respectively); and indirect emissions resulting from Sanlam's business travel activities, third-party vehicle fleet, its employee commuting patterns, courier usage and the consumption of office paper (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 but Carbon Calculated takes no responsibility for any inaccuracies that this information might contain. 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 is understood that Sanlam will present this report for third-party verification purposes.

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 95 years, become a diversified one-stop financial services business. 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.

A listed company on both the Johannesburg and Namibian Securities Exchanges, Sanlam's core operations lie in the life and long-term insurance sector, as well as asset management. Through its subsidiary, Santam, Sanlam is also in the short-term insurance sector.

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 (CDP), and was ranked in the top ten percent of the CDP Leadership Index in 2012, achieving an average disclosure and performance score of 97.

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 organisations for the clear definition and scope of the report.

Relevant emissions activity data is currently only available for the Sanlam Head Office, Sanlynn, SIM Glacier, Sanlam Sky and Hyde Park offices. As such, these operations constitute the organisational boundary for Scope 1 & 2 emissions and account for 69% of all Sanlam Group South African FTEs.
Total FTEs covered in this report is 4 985, exclusive of advisors or field staff. All Scope 3 emissions are reported for the Sanlam Group's entire South African operations and then extrapolated in Emissions Overview page to reflect the percentage of FTEs covered by this report.

A total of 121 417[7] square metres of office space is covered by this report, which includes Sanlam's use of 91.77% (85 664m^2) of the Sanlam Head Office building. The remaining 8.23% is utilised by independent tenants.

[7] Total office space in square metres is as follows: Head Office: 85 664, SIM: 6 276.75, Glacier: 3 774.2, Hyde Park: 8 483, Sanlam Sky: 8 600 and Sanlynn Pretoria: 8 619.

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:

Scope 1

- Equipment owned or controlled by Sanlam (e.g. generators)
- Operation of air-conditioning (A/C) units and refrigerators
- Operation of Sanlam-owned fleet vehciles

Scope 2

- Consumption of purchased electricity

Scope 3

- Business travel in rental cars
- Business travel in commercial airlines
- Business travel hotel accommodation
- Operation of third-party vehicle fleet
- Commuting of staff
- Consumption of office paper
- Courier transportation

Scope 1&2 emissions have been calculated for the reporting buildings, i.e. Sanlam Head Office, SIM, Sanlynn, Glacier, Hyde Park and Sanlam Sky.

The Sanlam Head Office building has several tenants within the building, with Sanlam responsible for 91.77% of emissions from the building. These have been accounted for on the Emissions Overview page, on page 3 of this report.

All Scope 3 emissions have been calculated for all Sanlam Group South African operations, and then extrapolated on the Emissions Overview page according to percentage of FTEs covered by this report (69%).

2.3 Reporting Period

The reporting period of this report is for the financial year 2012 (January 01 2012 to December 31 2012).

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.

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.

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 (CO_2e) 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), May 2012. 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 integrated report (2012) has been used to give local context accuracy.

3.2 Emissions of each GHG

All emissions are calculated as carbon dioxide equivalent gases (CO_2e), as required by the GHG Protocol.

DIRECT EMISSIONS FROM SANLAM 2012				
Scope	**Description**	**Emissions Factors**[8]	**Total Consumption**	**Metric tonnes of CO_2e emissions**
1	Equipment owned or controlled by Sanlam e.g. generators	2.6769 kg CO_2e/litre	11 841.91 litres of diesel[9]	31.70
		2.3144 kg CO_2e/litre	2 996.45 litres of petrol	6.93[10]
		1.5326 kg CO_2e/litre	3.37 litres of LPG	0.01[11]
		2724.42 kg CO_2e/tonne	0.11 tonnes[12] of natural gas	0.29
	Emissions from A/C and refrigerant gas refills (Kyoto protocol gases)	1300 kg CO_2e/kg	2 kg of HCFC	2.60

INDIRECT EMISSIONS FROM PURCHASED ELECTRICITY FOR SANLAM 2012				
Scope	**Description**	**Emissions Factors**	**Total Consumption**	**Metric tonnes of CO_2e emissions**
2	Purchased electricity	0.99 kg CO_2/kWh[13]	41 959 254.45 kWh[14]	41 539.66

ELECTRICITY CONSUMPTION BY BUILDING FOR SANLAM FOR 2012							
	Head office	**Sanlynn**	**SIM**	**Glacier**	**Sanlam Sky**	**Hyde Park**	**Total**
kWh	32 408 776	3 239 312	2 033 770	598 345	2 518 000	1 161 051.74	**41 959 254.45**
tCO_2e	32 084.69	3 206.92	2 013.43	592.36	2 492.82	1 149.44	**41 539.66**

Carbon Dioxide Equivalent (CO_2e)

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 CO_2. Therefore, to provide a comparable final figure, all emissions are reported as a relative figure to CO_2, i.e. as CO_2e values.

The six main greenhouse gases covered by the GHG Protocol and reported as CO_2e are:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous Oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)

[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 May 2012. Available from: http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm

[9] Total diesel consumption at head office is 11 800 litres. Sanlam is responsible for 91.77% of head office diesel. This is represented in the Emissions Overview on page 3. All other buildings are responsible for 100% of their diesel usage.

[10] Total petrol consumption at head office is 660.84 litres. Sanlam is responsible for 91.77% of head office diesel. This is represented in the Emissions Overview on page 3. All other buildings are responsible for 100% of their petrol usage.

[11] Head Office consumed 3 600 kilograms. Sanlam is responsible for 91.77% of Head Office diesel. This is represented in the Emissions Overview on page 3. All other buildings are responsible for 100% of their LPG usage. Total Sanlam LPG consumption was 6 447.73 kilograms, which was converted to litres by a conversion factor of 1914.

[12] A total of 116.8 kilograms of natural gas was consumed at the Head Office. Sanlam is responsible for 91.77%.

[13] Eskom emission figures per kWh of electricity generated in South Africa from the Eskom 2011 Annual Report. See: http://financialresults.co.za/2011/eskom_ar2011/add_info_tables.php

[14] Total electricity consumption at Head Office is 32 408 7760 kWh. Sanlam is responsible for 91.77% of Head Office electricity consumption. This is represented in the Emissions Overview on page 3. All other buildings are responsible for 100% of their electricity usage. Kilowatt hours were calculated from municipal accounts.

3.3 Methodologies Used

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

- CO_2 emissions from business travel (GHG Protocol)
- CO_2 emissions from fuel-use combustion (GHG Protocol)
- CO_2 emissions from transport or mobile services (GHG Protocol)
- Individual CO_2 emissions from purchased electricity (GHG Protocol)
- CO_2 emissions from employee commuting (customised survey by Carbon Calculated. Calculations finalised using GHG Protocol's CO_2 emissions from business travel)
- CO_2 emissions resulting from the purchasing of office paper (customised by Carbon Calculated using paper manufacturers' environmental profiles and GHG Protocol's individual CO_2 emissions from purchased electricity, heat and steam)
- CO_2 emissions from water consumption (emissions associated with pumping and distribution of water using indicative figures obtained from Friederich et al, using water distribution characteristics found in eThekwini Municipality[15]

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.

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), third party chaffeur, courier services and office paper.
- End-use of services sold by the reporting company – Sanlam's products are financial products and, by definition, are not responsible for directly generating greenhouse gas emissions.

[15] Friederich, Pillay and Buckley, 2007, The Use of LCA in the Water Industry and the Case for an Environmental Performance Indicator, Water SA, Vol. 33

Section C: Optional Information under the GHG Protocol

4. *Relevant Scope 3 Emissions*

The following table outlines Scope 3 emissions generated during Sanlam's 2012 financial year. Please refer to the footnotes below the table for further details.

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.

INDIRECT EMISSIONS FROM SANLAM 2012					
Scope	**Description**	**Variable**	**Emissions factor[16]**	**Total consumption**	**Metric tonnes of CO_2e**
3	Business travel - rental cars	Total kilometres travelled	0.20864 $kgCO_2e/km$[17]	1 318 168 km	266.11
	Business travel - commercial airlines[18]	Less than 463km	0.16685 $kgCO_2e/km$	1 012 796.73 km	184.19
		463 – 3700km economy class	0.13612 $kgCO_2e/km$	2 956 476.13 km	438.65
		463 – 3700km business class	0.09074 $kgCO_2e/km$	22 606 211.19 km	2 235.90
		Greater than 3700km business class	0.23066 $kgCO_2e/km$	4 946 752.59 km	1 243.71
		Greater than 3700km economy class	0.07954 $kgCO_2e/km$	4 083 170.80 km	354.01
		Greater than 3700km premium economy class	0.12726 $kgCO_2e/km$	211 485.61 km	29.34
		Greater than 3700km first class	0.31816 $kgCO_2e/km$	112 503.93 km	39.02
		TOTAL FLIGHTS		35 929 396.98 km	4 524.82
	Business travel - hotel accommodation	Bed nights	19kg CO_2e/bed night[19]	18 751 nights	356.27
	Third party vehicle fleet	OnTime	0.20188 $kgCO_2e/km$	337 453 km	68.13
		Kwathlano	0.20188 $kgCO_2e/km$	113 684 km	22.95
		TOTAL THIRD PARTY FLEET		451 137 km	91.08
	Employee commuting	Various	Various according to transportation mode	1.239 tCO_2e/FTE	6 178.17[20]
	Third party production of paper[21]	Emissions to air at production – per tonne paper	992 $kgCO_2e/t$[22]	249.08 tonnes[23]	247.09

[16] Unless otherwise indicated, 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 May 2012. Available at: http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm, unless stated otherwise.

[17] Emissions factor based on average size petrol car. Car rental figures (Avis and P2P) provided by Sanlam but it was unclear what emissions factors were used, thus Carbon Calculated recalculated emissions from rental cars.

[18] A 9% uplift factor is included 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.

[19] 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.

[20] Details of the 2012 Sanlam employee commuting survey are found in Appendix B. Emissions from Sanlam employees are extrapolated using 4 985 fulltime employees.

[21] No indication was given for the use of 'policy paper' as in previous years, thus all paper (A4 and A3) usage was considered 'office paper'.

	(Mondi Rotatrim)	Indirect emissions from purchased electricity by paper producer – per tonne of paper	0.99 kg/kWh[24] x 638kWh/t	249.08 tonnes	157.33
		TOTAL PAPER			404.42
	Courier transport[25]	Berco: Road	0.53561 tCO_2e/t.km	6 866.21 t.km	3.68
		Fedex: Air	0.64099 tCO_2e/t.km	2 671.14 t.km	1.87
		UTI: Road	0.53561 tCO_2e/t.km	427 158.26 t.km	228.79
		TOTAL COURIER		436 695.60 t.km	234.33

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 CO_2 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.

5. *'Base-Year' Information*

This report constitutes the sixth carbon footprint commissioned by Sanlam.

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.

[22] Emission factors provided by Environmental Profiles for Mondi Rotatrim Business Paper, released April 2011.
[23] Total paper purchases were 99 093 reams of Mondi Rotatrim A4 and 270 reams of A3 office paper, totalling 249.08 tonnes of paper (A4 paper: 400 reams = 1 tonne of paper; A3 paper: 200 reams – 1 tonne of paper).
[24] Eskom emission figures per kWh of electricity generated in South Africa from the Eskom 2011 Annual Report. See: http://financialresults.co.za/2011/eskom_ar2011/add_info_tables.php
[25] Freight emission factor for a delivery vehicle undert 3.5tonnes, unknown fuel type, with an average loading of 40%. Freight transported by air includes a 9% uplift factor. For intracity courier service where distances were not provided, an average of 25km was assumed.

COMPARISON OF EMISSIONS AND INTENSITY IN 2009, 2010, 2011 and 2012				
	2009	**2010**	**2011**	**2012**
Organisational boundary	**Head office; Hyde Park; Sanlynn; SIM; Glacier**	**Head office; Hyde Park; Sanlynn; SIM; Glacier; Sanlam Sky**	**Head office; Hyde Park; Sanlynn; SIM; Glacier; Sanlam Sky**	**Head office; Hyde Park; Sanlynn; SIM; Glacier; Sanlam Sky**
Full time employees (FTE)	4 424	4 942	4 934	4 986
Total Group FTEs	5 906	7 293	7 256	7 175
Square metreage (m^2)	127 348	120 872	107 170	121 417
Activity				
Equipment owned or controlled	34	30	60	39
Air conditioning and refrigeration gas refills	0	0	43	2.60
Purchased electricity	38 651	44 535	42 294	41 540
Business travel – rental cars	267	207	202	185
Business travel – commercial airlines	3 085	3 442	2 769	3 144
Business travel – hotel accommodation	168	173.39	185	248
Third party vehicle fleet	Not reported	57	61	63
Employee commuting	6 806	6 900	6 888	6 179
Consumption of office paper	323	698[26]	394	404
Courier	Not reported	188	191	163
Non-Kyoto gas	1 184	1 926	521	519
Total Scope 1&2	**38 687**	**44 565**	**42 397**	**41 581**
Total Scope 1,2,3 & Non-Kyoto gases	**50 520**	**58 167**	**53 608**	**52 487**
Scope 1&2 Intensity: t CO_2e/FTE	8.75	9.02	8.59	8.34
Scope 1&2 Intensity: t CO_2e/m^2	0.304	0.369	0.396	0.342
Intensity: % t CO_2e from electricity	77%	77%	79%	79%
Kilowatt hours/FTE	8 482	8 161	8 659	8 415

6. 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 GHG's 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.

Sanlam recorded usage of 286.69 kg of Freon gas refills during the 2012 financial year. This totalled 518.90 tonnes of CO_2e.

DIRECT EMISSIONS FROM NON-KYOTO PROTOCOL GHG'S FOR SANLAM 2012					
Scope	**Description**	**Units**	**Emissions Factor**	**Total Consumption**	**Metric tonnes of CO_2e emissions**
1	Emissions from A/C refrigerants (Non-Kyoto Protocol)	Kilograms HCFC22/ R22 (Freon)[27]	GWP 1 810	286.69	518.90

7. Water

The GHG Protocol does not require water usage to be recorded in a carbon inventory. The incorporation of water usage as a record of usage is recommended, however, as it can be used as an awareness-raising tool.

WATER CONSUMPTION BY BUILDING[28] FOR SANLAM FOR 2012 (kilolitres)						
Head office	**Sanlynn**	**SIM**	**Glacier**	**Sanlam Sky**	**Hyde Park**	**TOTAL**
83 592.74	1 914.00	158 735.99	4 638.82	20 939.98	6 770.92	276 592.46

8. Information on Offsets

Sanlam has not offset any of its GHG emissions through either the purchasing of renewable energy or any other appropriate offsetting mechanism.

9. Verification of GHG Inventory

An independent verification party has not verified this report. It is recommended that this Carbon Footprint Report be verified.

[27] 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 May 2012. Available at: http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm

[28] Total water consumption at head office is 91 089 kilolitres. Sanlam is responsible for 91.77% of head office water. All other buildings are responsible for 100% of their water usage.

10. Facilities covered by GHG Inventory

Sanlam offices covered in this report include:

- Sanlam 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, Western Cape
- SIM, 55 Willie van Schoor Ave, Tyger Valley, Western Cape
- Glacier, Tuscan Park, Block A, Old Oak Rd, Durbanville, Western Cape
- Sanlam Sky, Sanlam Business Park, 13 West St, Houghton, Gauteng

11. Contact Persons

Nici Palmer
Carbon Calculated, Founding Member
nici@carboncalculated.co.za
Telephone: +27 21 685 7511 Cell: 082 549 7930
Website: www.carboncalculated.co.za

Alex Hetherington
Carbon Calculated, Founding Member
alex@carboncalculated.co.za
Telephone: +27 21 685 7511 Cell: 082 411 3191

Andrew Cole
Carbon Calculated, Business Manager
andrew@carboncalculated.co.za
Telephone: +27 21 671 2150 Cell: 079 483 3208

Ike Ndlovu
Head: Group Sustainability Management, Sanlam Group Limited
Ike.Ndlovu@sanlam.co.za
Telephone: +27 11 778 6312 Cell: 082 655 8050

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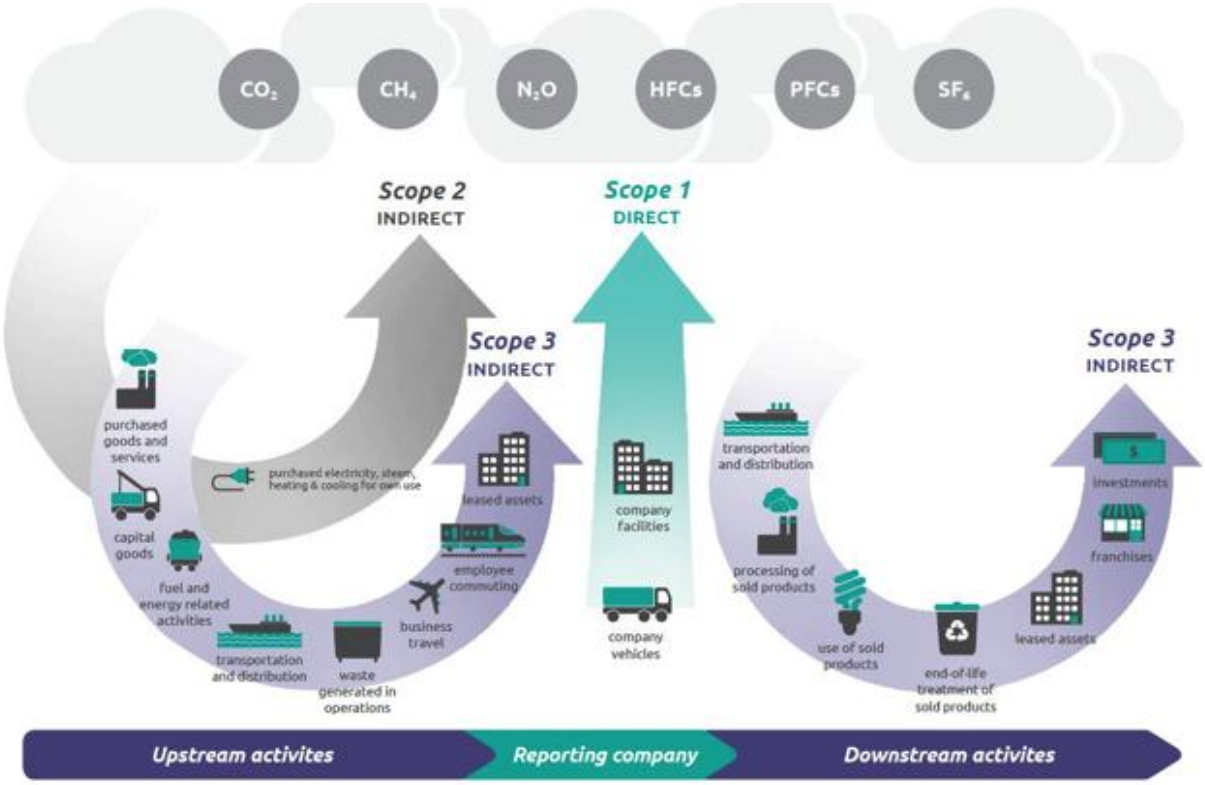
Appendix A: Diagram illustrating Direct vs. Indirect Emissions[29]



[29] 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 total number of respondents to the questionnaire was 2 143 inclusive of Sanlam and Santam. A total of 1 281 Sanlam specifc surveys were used, 43 Sanlam surveys were spoilt and therefore not used. This equates to 26% of Sanlam fulltime employees. Twelve public holidays were used in the calculation for 2012.

RESULTS OF EMPLOYEE COMMUTING EMISSIONS SURVEY 2012					
Scope	**Description**	**Engine size / Variable**	**Emissions factor[30]**	**Total consumption**	**Metric tonnes of CO_2e emissions**
3.	Private Petrol vehicle	Less than 1.4 l petrol	0.16522 kg CO_2e / km	1 341 034	201.72
		1.4 – 2.0 l petrol	0.20765 kg CO_2e / km	4 806 026	904.56
		Greater than 2.0 l petrol	0.29794 kg CO_2e / km	432 426	116.36
		Average petrol (if not known)	0.20188 kg CO_2e / km	77 260	15.44
	Private diesel vehicle	Less than 1.7 l diesel	0.14297 kg CO_2e/ km	62 766	8.63
		1.7 – 2.0 l diesel	0.17755 kg CO_2e / km	1 034 759	174.08
		Greater than 2.0 l diesel	0.23563 kg CO_2e / km	86 703	20.09
	Average vehicle unknown fuel		0.19469 kg CO_2e / km	68 389	13.34
	TOTAL private vehicle			7 909 364	1 454.19
	Other transport modes	Walking/Cycling	0 kg CO_2e / km	517 707	0.00
		Train	0.05818 kg CO_2e / km	629 475	36.62
		Bus	0.12380 kg CO_2e / km	524 226	64.90
		Mini-bus / taxi	0.01730 kg CO_2e / km	518 270	8.97
		Motorbike	0.08772 kg CO_2e / km	31 184	2.74
			0.10641 kg CO_2e / km	35 593	3.79
			0.11903 kg CO_2e / km	28 560	3.40
			0.13981 kg CO_2e / km	93 022	13.01
			TOTAL		**1 587.61**
			Total surveys		**1 281**
			Carbon per survey		**1.2394**
			Total fulltime employees		**4 986**
			TOTAL Carbon for Sanlam employee commuting		**6 179.41**

[30] Emission factors from Defra May 2012: http://www.defra.gov.uk