CARBON FOOTPRINT 2013

Vieira de Almeida & Associados

VIEIRA DE ALMEIDA & Associados Sociedade de Advogados, RL

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About this report

This report presents Vieira de Almeida & Associados (VdA)´s carbon footprint in 2013.

Calculations followed *The Legal Sector Alliance Carbon Footprint Protocol*, adapted to the Portuguese reality.

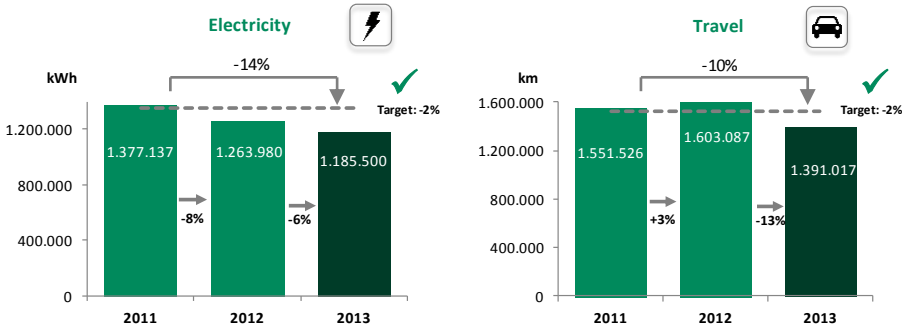
EXECUTIVE SUMMARY

VdA´s Carbon Footprint 2013

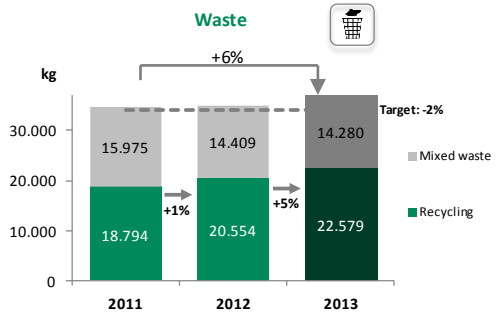
Consumption

In 2013, VdA significantly improved its efficiency levels, both in office electricity consumption and business travel, surpassing its reduction objectives (-2% regarding 2011 results). The total production of waste increased. As such, the firm´s goal was not met in this particular area, despite the increase of its recycling rate and the decrease of mixed waste production.

The adoption of quantified reduction goals is in accordance with the Legal Sector Alliance´s (LSA) principles. VdA is a member of LSA.

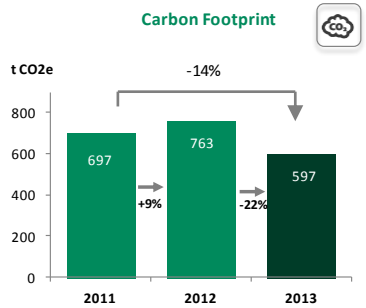


Note: Business travel includes the firm´s motorbikes, airplane trips, train trips, taxi trips, rental vehicles and employees´ cars used for business purposes.

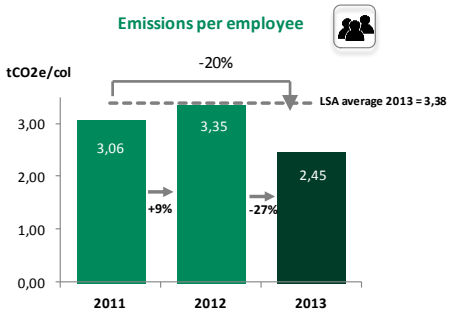


Emissions

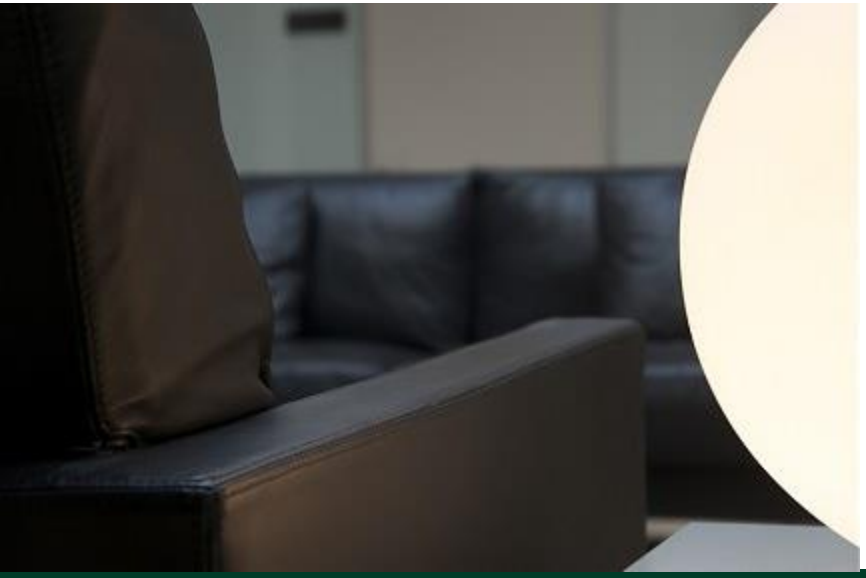
VdA´s carbon footprint registered an overall 22% reduction in comparison with 2012 (less 166 t CO_2e). This was due to the combined effect of a reduced electricity consumption and increased use of electricity generated by renewable sources.



VdA's emissions per employee are lower than the average values reported by the Legal Sector Alliance's members for the same period of time.



VdA´s total carbon emissions in 2013 are equivalent to 5 540 car return trips between Lisbon and Oporto.



ABOUT THE GREEN PROJECT AND VdA´s CARBON FOOTPRINT

VdA´s profile

VdA is one of the major law firms in Portugal, providing legal advice in 17 areas of practice for over 35 years, with offices in the Portuguese cities of Lisbon and Oporto, and a team of 244 members (172 lawyers and 72 members as support staff).

VdA also advises abroad, through VdAtlas, the firm's international platform through which VdA keeps professional partnerships with local partners, with a special focus in the Portuguese-speaking markets, namely Mozambique, Angola and Brazil.

Office	Employees		
	Lawyers	Support staff	Total
Lisboa	167	70	237
Porto	5	2	7
TOTAL	172	72	244

Fig. 1 – VdA: advising in Portugal and international partnerships 2013

The Green Project

VdA was the first Portuguese law firm to have established a formal CSR and Pro Bono programme, managed by a Pro Bono committee which sets an annual plan of action and monitors its execution. The programme focuses on two axes of intervention: environmental responsibility and social responsibility. Activities under the scope of environmental responsibility are taken forth through the Green Project (Projeto Verde), an internal programme which focuses on sustainable development and eco-efficiency and aims to minimize the firm's activity's environmental impact by optimizing resources consumption, namely energy and materials.

Assessing the carbon footprint, i.e. greenhouse gas emissions associated to a firm's activity, and how to reduce it, proves to be one of the main indicators on eco-efficiency for a firm due to the range of aspects it analyses.

Fig. 2 – VdA's *Pro Bono* and Corporate Social responsibility programme

In 2011 VdA became one of the 249 members of the Legal Sector Alliance (LSA), an international organization made up of law firms committed to fighting climate change by adopting sustainable practices and reducing their carbon footprints.

VdA´s Carbon Footprint

VdA's professional daily activity is responsible for direct and indirect emissions of greenhouse gases (GHG or carbon) the most important of which is carbon dioxide (CO2).

GHG emissions result majorly from energy consumption either at the firm's premises or in business travel. Although less relevant in quantitative terms, there are also other emissions with a higher greenhouse effect than CO2. These are methane (CH4), and fluorinated gases.

The carbon footprint is the result of the overall measuring of these emissions according to established international calculating methods.

GHG emissions resulting from human activity is acknowledged as the main source of climate change at present. Its assessment and reduction in all sectors of activity is therefore a main tool in fighting the problem.

VdA measures its carbon footprint in accordance with *The Legal Sector Alliance Carbon Footprint Protocol guidelines,* since 2011.

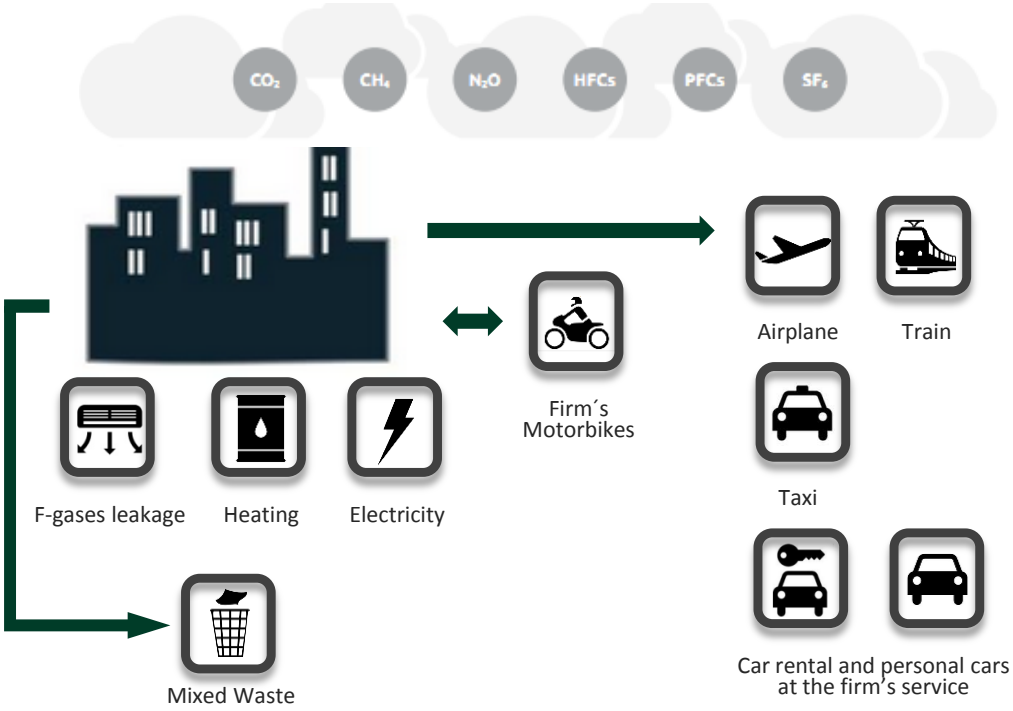


Fig. 3 – VdA's carbon footprint: activities and emissions sources

Direct Emissions

Direct emissions are emissions occurring from sources owned or controlled by VdA.

Such is the case of diesel combustion in the firm's premises' heating boilers, of gas leakage from air conditioning and refrigerators equipment, or petrol consumption by the firm's motorbikes.

Indirect Emissions

Indirect emissions are also emissions occurring from VdA's activity, but from sources owned by third parties.

Such is the case of electricity consumption at the offices (whose GHG emissions occur at the power plants), of aviation or any other transports' fuels consumption regarding business travelling (except for the firm's motorbikes), or non recycled waste sent to landfills, which generate methane emissions.

VDA's CARBON FOOTPRINT 2013

Consumption

In 2013, VdA's resource consumption levels registered a favorable evolution. The firm´s performance surmounted the goals (-2% against 2011 levels) defined for electricity and business travel. Regarding waste production, the goal has yet to be met.

Electricity consumption in the offices – the major source of individual emissions – has been reduced by 6%. The major reduction (-6%) resulted from the general consumption in the Lisbon office, which amounted to 62% of the total electrical consumption, and is the building´s management responsibility. The consumption per floor, controlled by VdA, registered a 4% reduction.

Regarding mobility there was a reduction of all means of travel. The most significant reduction was in taxi trips and use of rental cars. Globally, the travelled distance was reduced by 14% against 2012 levels.

The production of waste registered a global increase of 5%. However, this number is a result of the increase of recycled waste, which entails less environmental impact. The recycling rate reached 60% in 2013, against 50% in 2011.

Tab. 1 –VdA´s Carbon Footprint: resource consumption 2011-2013

	Unit	2011	2012	2013	Δ '12-13 (%)
Energy	**kWh**	**1.377.137**	**1.263.980**	**1.185.500**	**-6%**
Electricity	kWh	1.377.137	1.263.980	1.185.500	-6%
Travel	**km**	**1.517.335**	**1.568.464**	**1.347.003**	**-14%**
Airplane	km	1.358.044	1.396.324	1.197.514	-14%
Train	km	34.545	41.035	34.145	-17%
Taxi	km	25.455	16.984	13.285	-22%
Rent-a-car	km	28.758	31.364	21.557	-31%
Own car on firm's service	km	70.532	82.757	80.501	-3%
Waste	**kg**	**34.769**	**34.963**	**36.859**	**5%**
Recycling	kg	18.794	20.554	22.579	10%
Mixed waste	kg	15.975	14.409	14.280	-1%

Detailed information about operational consumption data is displayed in Attachment II.

Emissions

In 2013, VdA´s carbon footprint amounted to 597 t CO_2e (tons of carbon dioxide equivalent), a decrease of 166t (-22%) in comparison with 2012. Emissions per employee ratio registered a bigger reduction (-27%), as a result of an increase in the total number of employees.

Tab. 2 –VdA´s Carbon Footprint : global results 2011-2013

	2011	2012	2013	Δ'12-'13 (%)
Number of employees	228	228	244	7%
Gross office area (m2)	5.871	5.871	5.928	1%
Total emissions (t CO2e)	697	763	597	-22%
Emissions per employee (t CO2e/employee)	3,06	3,35	2,45	-27%

Efficient electricity consumption (-6%) and a decrease in business travel (-13% km/km) contributed to the reduction of VdA´s carbon footprint. Furthermore, the weather conditions throughout the year favored the production of renewable electricity (wind and hydropower), to the detriment of fossil fuels, thus reducing the carbon content of grid electricity (-18% compared to 2012).

Tab. 3 –VdA´s Carbon Footprint: emissions per source 2011-2013

	Unit	2011	2012	2013	Δ'12-'13 (%)
Scope 1	**t CO2e**	**49**	**34**	**33**	**-2%**
On-site combustion (office heating)	t CO2e	43	28	26	-8%
Own fleet (motorbikes)	t CO2e	6	6	7	26%
Use of f-gases	n.d.	n.d.	n.d.	n.d.	n.d.
Scope 2	**t CO2e**	**472**	**550**	**421**	**-24%**
Electricity	t CO2e	472	550	421	-24%
Scope 3	**t CO2e**	**177**	**178**	**143**	**-20%**
Business travel	t CO2e	164	171	134	-22%
Airplane	t CO2e	140	146	112	-23%
Train	t CO2e	1	1	1	12%
Taxi	t CO2e	5	3	2	-22%
Rent-a-car	t CO2e	5	6	4	-32%
Own car on firm's service	t CO2e	13	15	14	-3%
Waste treatment	t CO2e	13	7	9	19%
TOTAL	**t CO2e**	**697**	**763**	**597**	**-22%**

Breakdown by emission source

The breakdown of emissions by source maintained the same pattern as registered in 2011 and 2012.

Electricity consumption in offices is still the predominant source (71%), followed by business travel (23%).

Travelling by airplane is the largest source for business travel emissions (84%). Use of own car in the firm's service is the second largest cause for emissions in this category (11%).

The increase of emissions related to waste treatment is due to a change in the accounting methodology. In fact, the production of mixed waste – sent to landfill and incineration – registered a slight decrease (-1%).

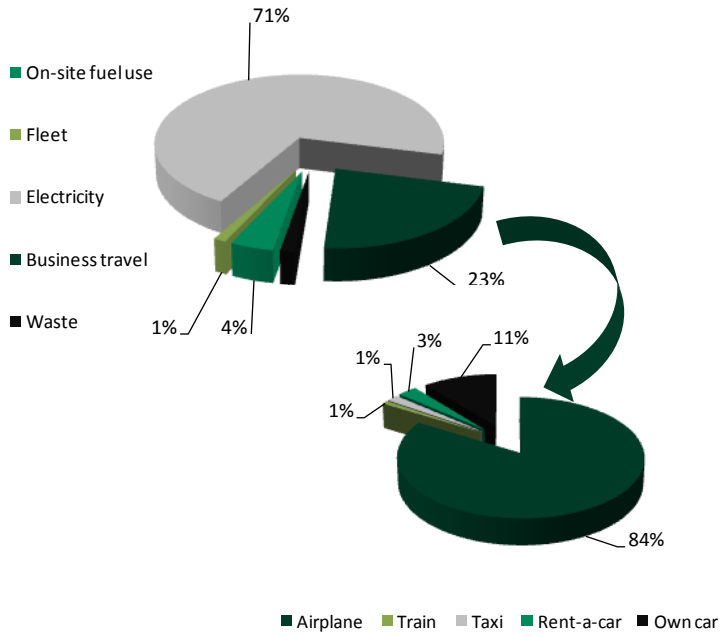


Fig. 4 – VdA´s Carbon Footprint 2013: breakdown by emission source.

Benchmark analysis

In 2013, VdA´s emissions per employee were lower than the average values reported by the Legal Sector Alliance's members for the same period .

Despite LSA´s members average values amelioration, VdA´s ratio still outperforms its peers.

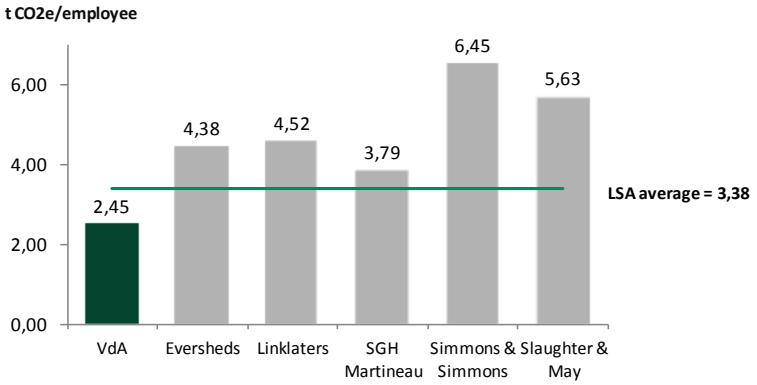


Fig. 5 VdA's carbon footprint 2013: peer comparison.

As regards sources breakdown, VdA's results are in line with the sector: electricity consumption represents the major contribution, followed by air travel. Data reported by LSA (referring mainly to firms in the UK) differs only on the weight given to on-site combustion, justified by accrued heating needs.

ADDITIONAL INFORMATION

Sources of electricity consumed

Electricity sources, and therefore its carbon content, depend on the supplier and vary according to the way each one produces and/or acquires the electricity provided to the final client. In Portugal, electricity sources are highly dependent on the meteorological conditions, which determine the amount of energy produced in hydro and wind power plants. This is a relevant variable in determining VdA´s carbon footprint, since office electricity consumption is responsible for an average of 70% of the emissions.

In 2013, 42% of the overall electricity consumed by VdA's offices came from renewable sources, which had a relevant impact in the carbon footprint: the electricity related emissions registered a 24% decrease, resulting from both consumption reduction (-6%) and electricity carbon content reduction(-18%).

The firm's main supplier in Lisbon and Oporto is Iberdrola. In its website (www.erse.pt), the Regulator for Energy Services (Entidade Reguladora dos Serviços Energéticos - ERSE) provides access to up to date information on electricity sources and emissions concerning each supplier in the Portuguese market.

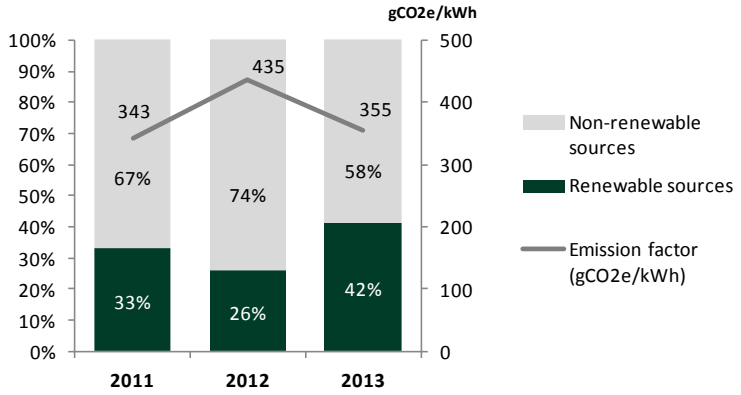


Fig. 6 – VdA's electricity source and carbon content in 2013.

Business Travel

By analyzing the data collected it was possible to determine a set of indicators regarding business travel at the firm.

Tab. 4 – Business travel at VdA in 2013: main indicators.

	Number of trips			Average distance (km/trip)		
	2011	2012	2013	2011	2012	2013
Airplane	426	396	393	3.188	3.526	3.047
Short haul	10	18	11	300	317	374
Medium haul	322	262	289	1.780	1.693	1.763
Long haul	94	116	93	8.317	8.165	7.354
Train	77	97	116	449	423	294
Taxi	1.177	1.412	1.174	22	12	11
Rent-a-car	74	72	43	389	436	501
Own car on firm's service	252	333	299	280	249	269

Note: Airplane trips are considered as single trips (one-way or return). The 2011/2012 data was adjusted to guarantee information comparison.

The number of airplane trips registered a decrease and, more important, there was a decrease in the average distance travelled (-14%).

The number of rental car and personal car trips were reduced, being preferred for longer travel distances.

Carbon offsetting

VdA established a protocol with Mafra's National Park (Tapada Nacional de Mafra) in the scope of which 500 pine trees are planted on an annual basis in a 2 ha area.

This initiative's estimated capacity for carbon capture is of 60 tons of CO_2.

Paper consumption

Use of paper is a significant environmental impact of law firms´ activity. As such, the Legal Sector Alliance recommends each firm to take action in monitoring and reducing its use.

Through VdA´s Green Barometer – an eco-efficiency trimestral monitoring internal system – the firm began, in 2013, to monitor the use of paper in its offices and chose this theme as a Green Project 2014 priority.

Tab. 5 – Paper consumption at VdA: main indicators 2013

	2013
Total consumption	
kg	13.999
# sheets	3.197.862
Consumption per employee	
kg/employee	57
# sheet/employee	13.106

Note: Includes writing and printing paper reams, notebooks, envelopes, business cards and hardcovers, which represent more than 95% (% w/w) of the paper products purchased by VdA.

Opportunities for improvement

Consumption and Emissions Reduction

The 2013 carbon footprint results show the implementation of efficient practices since the end of 2012. These were focused on behavioral change and initially targeted for the decrease of the offices´ electricity consumption.

Simultaneously, with the implementation of the Green Barometer, the firm started to report internally, on a regular basis, the quantified results of the adopted practices, thus contributing to its widespread acceptance. The next steps, will include the development of action-oriented activities, to boost the areas with a less positive performance, namely paper use and waste production.

Regarding business travel, and despite the ongoing incentive to travel by train, it is important to evaluate the possibility of replacing some of the business travels by phone conferences or video conferences, thus reducing car travels.

Calculating VdA´s carbon footprint

A part of the improvement targets for the calculus of VdA´s carbon footprint, identified in previous reports, have been accomplished.

Areas for further improvement are:

- To request Oporto´s building management for information on electricity and fuel consumption in the common areas;
- To obtain data on the use of fluorinated gases;
- To obtain more accurate data on the weight of waste produced in each office.

Regarding the expansion of the carbon footprint accounting scope employee commuting (house-work travelling) might be considered, in line with the LSA's guidelines on the subject.

ATTACHMENTS

Accounting methodology

VdA's carbon footprint was calculated according to The Legal Sector Alliance Carbon Footprint Protocol's guidelines.

This protocol adapts the guidelines defined by The Greenhouse Gas Protocol to the legal sector and is the international methodological reference to calculate carbon emissions in this sector.

Emissions scope

VdA's carbon emissions accounting only considered the firm's activity in Portugal (at Lisbon and Oporto´s offices). Funchal´s office closed in 2012. No activities or premises existing under the scope of VdAtlas international platform were considered, as both, the former and the latter, are under the responsibility of the local partners.

All direct (scope 1) and indirect (scope 2 and scope 3) sources of emissions indicated by the LSA Carbon Footprint Protocol have been accounted for.

In scope 3 we further added emissions coming from mixed waste disposal, as the LSA stresses the importance of including this source of emission when calculating the carbon footprint and reference data for Portugal is available.

Also in line with the LSA Carbon Footprint Protocol's recommendations, we did not take into account emissions coming from any products or services produced or taken forth by third parties (except for travelling services), as these emissions are considered to be under the responsibility of the respective sectors of activity.

Additional information on paper consumption is presented, in line with LSA recommendation. However, paper life cycle emissions are not included in the carbon footprint calculation.

Calculation parameters

The calculation considered all of the six greenhouse gases covered by the Kyoto Protocol and the results are presented in CO2 equivalent, making use of the Global Warming Potential (GWP) values published by the Intergovernmental Panel on Climate Change (IPCC - Second Assessment Report).

Emissions have been quantified on the basis of representative data of VdA's activity in 2013 (please refer to the following section), to which the emission factors as defined by the IPCC's were added, although having been adapted to the Portuguese reality according to data published by the national official entities.

The following criteria were applied:

•Electricity – annual emission factors, regarding 2013, as published by ERSE (Regulator for Energy Services) for each supplier, applied to the amount of energy supplied;

•Air travelling – differentiated emission factors per passenger.km for each type of journey (short, medium and long haul). In line with LSA Protocol's guidelines, Radiative Forcing Index (RFI) was not applied.

•Train travelling – emission factor representing the Portuguese average rail network;

•Rent a car and own car travelling – emission factor representing the average light passenger vehicle (petrol or diesel) on the road in Portugal;

•Waste treatment – emission factor reflecting emissions occurring along the total period for waste degradation in a landfill (30 years). Emissions regarding recycling and energy recovery are considered void, as they are allocated to the respective sector of activity and not to the waste treatment sector.

Data collection: procedures and assumptions

Data regarding VdA's activity in 2013 has been obtained in the following manner:

•On-site fuel consumption – This is calculated from the costs charged by the condominium on the basis of the occupied area and on the average annual price of diesel for heating in 2013 (source: Directorate General for Energy and Geology).

•Fuel consumption by the firm's vehicles – This is calculated from the accounting system register and from the average annual price of fuel in 2013 (source: Directorate General for Energy and Geology).

Only fuel consumption by the firm's motorbikes was considered (deliveries). No fuel supply for any of the partners' vehicles was taken into account.

•Electricity consumption at the firm's premises – Data obtained from the electricity bills issued by the condominium (Lisbon and Oporto offices).

In the Lisbon office's premises, consumption by floor is included, as invoices are issued on monthly readings of individual meetering systems. Consumption in common areas is also included (lounges, lifts and cold air system) as invoices issued by the condominium take into account the area in use by the firm.

•Air travelling – Travelling register. Distances calculated on the point of origin-point of destination pair approach, accrued of the adjustment factor (non direct routes and waiting for landing).

•Train travelling – Calculated from the accounting system register, identifying the point of origin– point of destination pairs by way of identifying the usual cost of train trips between the main train stations (Lisbon, Oporto, Coimbra, Faro and Aveiro).

- •Travelling by taxi - Calculated from the accounting system register and on the average price of travelling by taxi per km, considering taxi pricing in 2013 regarding travelling in a light passenger four-seat car during the day in the city, with no supplement charges. (source: Directorate General for Economic Activities and Antral).
- •Rent-a-car travelling – Obtained from the accounting system register and from the km registered at the service's provider invoices. No fuel supply was taken into account in order to avoid double accounting.
- •Business travel in own car – Calculated from the accounting system register and the fixed value payable per km. No fuel supply was taken into account in order to avoid double accounting
- •Waste production – Calculation based on daily records of the number of waste bags per waste type and an average weight per bag ratio.

Data collection limitations

It was not possible to collect data on the following subjects regarding the year 2013:

•Energy consumption (fuel and electricity) in common areas at the Oporto office;

•F-gases use in air-conditioning and refrigerating equipment;

•Distance travelled by rental cars outside of Portugal.

Operational data used to calculate VdA's carbon footprint for 2011-2013

		2011	2012		2013	
Scope 1	**Unit**			**Δ '11-12 (%)**		**Δ '12-13 (%)**
Office fuel consumption	**l**	**15.624**	**10.208**		**9.760**	
Heating diesel	l	15.624	10.208	-35%	9.760	-4%
Own fleet fuel consumption	**l**	**2.393**	**2.424**		**3.081**	
Gasoline - Motorbikes	l	2.393	2.424	1%	3.081	27%
Use of f-gases on office equipment	**kg**					
f-gases leakage	kg	n.d.	n.d.	n.d.	n.d.	n.d.
Scope 2						
Office energy consumption	**kWh**	**1.377.137**	**1.263.980**		**1.185.500**	
Electricity	kWh	1.377.137	1.263.980	-8%	1.185.500	-6%
Scope 3						
Business travel in third party vehicles						
Airplane	pkm	1.358.044	1.396.324	3%	1.197.514	-14%
Short haul	pkm	2.998	5.709	90%	4.111	-28%
Medium haul	pkm	573.255	443.487	-23%	509.478	15%
Long haul	pkm	781.792	947.127	21%	683.925	-28%
Train	pkm	34.545	41.035	19%	34.145	-17%
Taxi	vkm	25.455	16.984	-33%	13.285	-22%
Rent-a-car	vkm	28.758	31.364	9%	21.557	-31%
Own car on firm's service	vkm	70.532	82.757	17%	80.501	-3%
Office waste production		**34.769**	**34.963**	**1%**	**36.859**	**5%**
Recycling	kg	18.794	20.554	9%	22.579	10%
Mixed waste	kg	15.975	14.409	-10%	14.280	-1%

Notes:
Fuel consumption at the firm's premises does not include the Oporto office.
Fuel consumption by the firm's vehicles does not include the partners' vehicles.
F-gases leakage: data not available.
Electricity: Total consumption (floors + common areas). Does not include Oporto's office's common areas.
Rent-a-car: Does not include distance travelled outside of Portugal
Waste: Estimated annual production per employee in 2011 and 2012. Since 2013, data is based on daily registers of number of waste bags and an average ratio kg/bag.

Maria João Gaspar – Sustainability Consultancy
mjoaogaspar@gmail.com | Tel: +351 92 509 73 35

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