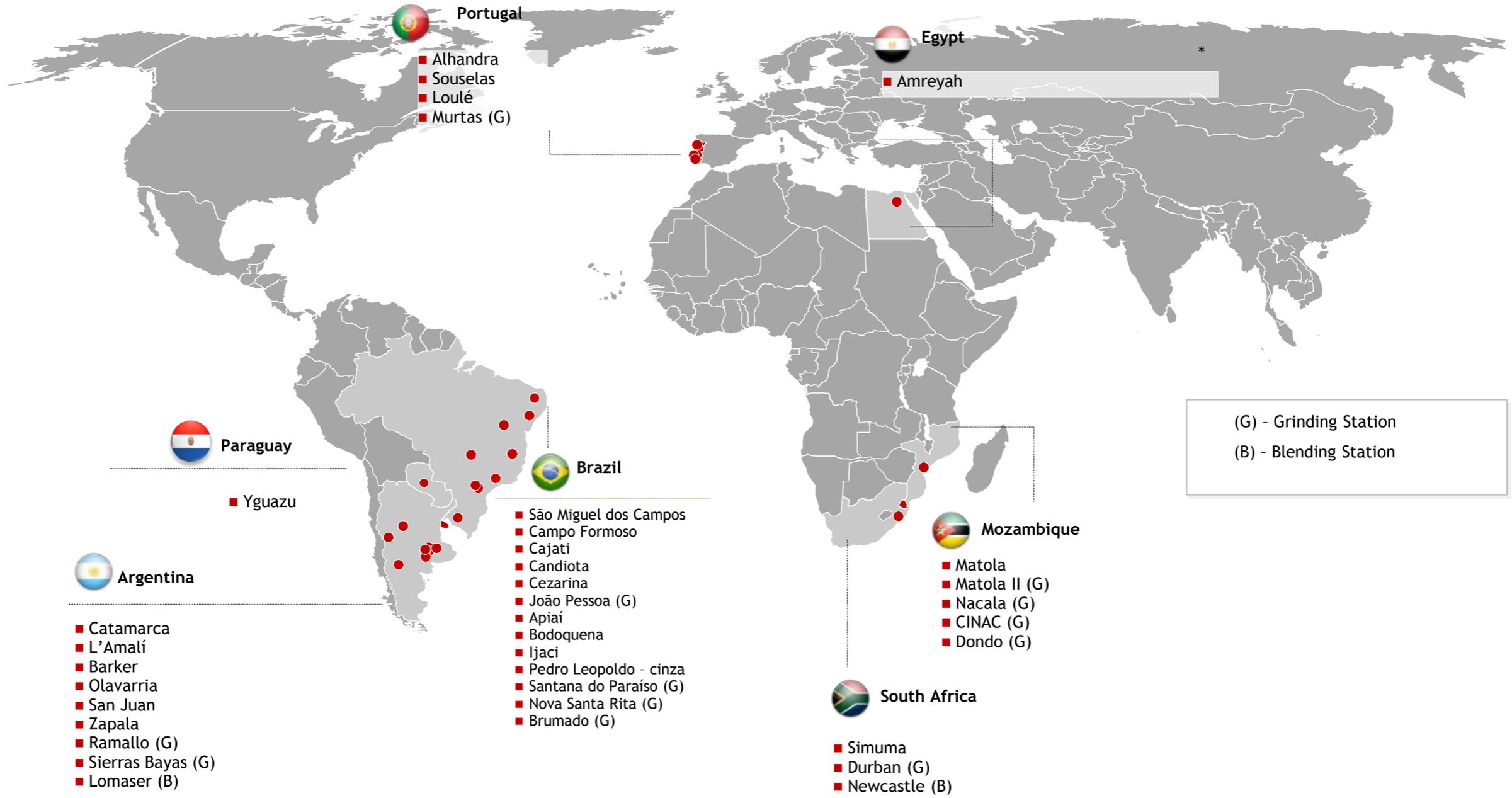


Geographic & Operational scope | Cement

InterCement cement operating units*



Note: To simplify, blending stations were included in the group of grinding plants in this report.

Baseline Year

Due to significant changes in the organizations' perimeter the "Post-merger base year 2007" is replacing the former "Kyoto base year 1990"

InterCement's baseline for CO₂ emissions reporting: "Post-merger baseline year 2007" is replacing the former **"Kyoto baseline year 1990"** (baseline year definition according to WBCSD/WRICO₂ and Energy Accounting and Reporting Standard for the Cement Industry, Version 3.1, 2011):

- InterCement's acquisition of CIMPOR in 2012 and subsequent merger of these two companies led to the change of baseline year for CO₂ emissions calculation, which, originally and until 2012, was measured against the **"Kyoto baseline year 1990"**. In the second half of 2012, following InterCement's takeover process several acquisitions /divestures took place. In the one hand, many plants were sold and excluded from the original perimeter and many others were integrated, for the first time, leading to a complete change to the original perimeter. Countries like Spain, Morocco, Tunisia, Turkey, India and China are no more part InterCement's operations, and their past emissions were removed from the consolidated emissions. On the other hand, completely new plants in Brazil, Argentina and Paraguay were integrated for the first time and their emissions were included in the consolidated emissions of the new company.
- The lack of reliable and accurate or even existent historical data back to 1990 for the new integrated plants justifies the use of a more recent **"Post-merger baseline year 2007"** which is when the new set of plants coming from InterCement started effectively to report. The progress against targets and year-to-year performance are now best measured using this "Post-merger baseline year 2007" since no solid data prior to this date was recovered.
- Being the "Kyoto baseline year 1990" an international milestone on climate change debate, it is still being used as a reference for the former plants which are still part of the current perimeter.
- The list of sites included in the calculation of the current consolidated emissions is exhibited in the slide "Geographic & Operational Scope" and reflects the new organizational boundary.

2017 Sustainability KPI's

CEMENT SUSTAINABILITY INITIATIVE - KEY PERFORMANCE INDICATORS											
SELECTION OF KEY PERFORMANCE INDICATORS (Cement Activity) SELEÇÃO DE KPI's (Atividade Cimento)											
	Performance							Targets		Ambitions	
	2007*	2012	2013	2014	2015	2016	2017	2017	2020	2025	2030
CLIMATE CHANGE & ENERGY ALTERAÇÕES CLIMÁTICAS & ENERGIA											
Plants using the WBCSD/WRI Cement CO2 Protocol (%) UOs utilizando o WBCSD/WRI Cement CO2 Protocol (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Direct CO2 emissions (gross/net) (million tonnes of CO ₂) Emissões absolutas globais (brutas / líquidas) de CO2 (milhões de toneladas de CO2)	15	15	16	17	16	14	14	na	na	na	na
	14	15	16	16	15	13	13	na	na	na	na
Direct CO2 emissions (gross/net) (kg CO ₂ /ton of clinker) Emissões específicas globais (brutas / líquidas) de CO2 (kg CO2 / tonelada de clínquer)	834	835	832	843	839	850	842	836	830	820	820
	826	815	808	813	812	822	810	787	750	720	720
Direct CO2 emissions (gross/net) (kg CO ₂ /ton of cementitious product) Emissões específicas (brutas / líquidas) globais de CO2 (kg CO2 / tonelada de produto cimentício)	620	590	583	583	595	603	603	566	530	505	505
	614	576	567	567	575	583	580	534	480	450	450
Energy efficiency of kilns (MJ/tonne of clinker) Eficiência energética global dos fornos de clínquer (MJ/t de clínquer)	3585	3655	3619	3703	3684	3725	3698	3 520	3 550	3 580	3550
ALTERNATIVE FUELS AND RAW MATERIALS COMBUSTÍVEIS E MATÉRIAS PRIMAS ALTERNATIVOS											
Alternative materials (clinker & cement) (%) Matérias-primas alternativas (clínquer e cimento) (%)	14%	13%	15%	15%	13%	12%	11%	14%	15%	15%	15%
Clinker-to-cement ratio (%) Taxa de incorporação de clínquer no cimento (%)	77%	73%	72%	73%	73%	73%	73%	67%	61%	60%	58%
Alternative fuels subst. for virgin fuels in kiln fuel (AF fossil & biomass) (%) Taxa de utilização de combustíveis alternativos (combustíveis alternativos fósseis e biomassa) (%)	7%	12%	13%	13%	15%	15%	17%	20%	29%	45%	50%
Biomass substitution for virgin fuels in kiln fuel (%) Taxa de utilização de biomassa (%)	5%	6%	5%	5%	6%	6%	6%	8%	10%	15%	20%
POLLUTANT EMISSIONS EMISSÕES POLUENTES											
Dust total emissions (t) Emissões totais de partículas (t)		3 325	2 770	3 151	2 134	2 630	2 040	-	-	-	-
Dust specific emissions (g/t clínquer) Emissões específicas de partículas (g/t de clínquer)		181	143	161	113	160	126	136	85	80	80
NOx total emissions (t) Emissões totais de NOx (g/t de clínquer)		28 411	30 780	31 091	31 832	30 898	30 633	-	-	-	-
NOx specific emissions (g/t clínquer) Emissões específicas de NOx (g/t de clínquer)		1 544	1 594	1 587	1 679	1 883	1 890	1360	1300	1250	1250
SOx total emissions (t) Emissões totais de SOx (g/t de clínquer)		4 265	5 042	5 964	5 641	4 714	4 365	-	-	-	-
SOx specific emissions (g/tonne clínquer) Emissões específicas de SOx (g/t de clínquer)		232	261	304	298	287	269	266	260	240	240
VOC/THC total emissions (t) Emissões totais de VOC/THC (t)		334	518	883	651	654	510	-	-	-	-
VOC/THC specific emissions (mg/tonne clínquer) Emissões específicas de VOC/THC (g/t de clínquer)		18	27	44	35	40	19	30	30	30	30
Hg total emissions (kg) Emissões totais de Hg (kg)		61	92	108	385	1769	577	-	-	-	-
Hg specific emissions (mg/tonne clínquer) Emissões específicas de Hg (mg/t de clínquer)		3	5	5	21	108	25	10	10	10	10
Cd+Tl total emissions (t) Emissões totais de Cd+Tl (t)		1,0	0,1	0,3	0,3	0,6	1,6	-	-	-	-
Cd+Tl specific emissions (mg/tonne clínquer) Emissões específicas de Cd+Tl (mg/t de clínquer)		56	6	14	18	34	72	50	50	50	50
Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V total emissions (t) Emissões totais de Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V (t)		4	3	5	4	5	10	-	-	-	-
Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V specific emissions (mg/tonne clínquer) Emissões específicas de Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V (mg/t de clínquer)		240	137	169	179	245	330	200	200	200	200
PCDD/F total emissions (mg) Emissões totais de PCDD/F (mg)		327	282	471	775	1 246	344	-	-	-	-
PCDD/F specific emissions (ng/tonne clínquer) Emissões específicas de PCDD/F (ng/t de clínquer)		18	15	24	41	76	32	20	20	20	20
% Clinker produced with monitoring (spot and/or continuous) of major and minor pollutant emissions % clínquer produzido em fornos com monitorização (pontual ou contínua) de poluentes principais e micro-poluentes		79,60%	79,70%	82,39%	72%	70%	83%	94%	100%	100%	100%
% Clinker produced with monitoring (continuous) of major pollutant emissions % clínquer produzido em fornos com monitorização contínua de poluentes principais		72%	100%	100%	99%	100%	100%	100%	100%	100%	100%
% Clinker produced by kilns with monitored pollutant "X" (cont. or discont.) % clínquer produzido em fornos com monit. (cont. ou desc.) do poluente "X":											
Dust		100%	100%	100%	99%	100%	100%	100%	100%	100%	100%
NOx		100%	100%	100%	99%	100%	100%	100%	100%	100%	100%
SO2		100%	100%	100%	99%	100%	100%	100%	100%	100%	100%
VOC/THC		84%	85%	88%	95%	93%	90%	97%	100%	100%	100%
PCDD/F		69%	70%	72%	81%	56%	76%	94%	100%	100%	100%
Hg		81%	82%	81%	86%	81%	100%	94%	100%	100%	100%
Cd+Tl		56%	57%	53%	81%	84%	85%	94%	100%	100%	100%
Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V		14%	18%	25%	57%	56%	59%	94%	100%	100%	100%
LOCAL IMPACTS / QUARRIES IMPACTOS LOCAIS / PEDREIRAS											
% of active quarries with quarry rehabilitation plans % pedreiras ativas, com Planos de Reabilitação Ambiental (PRAs) aprovados		56%	55%	65%	63%	65%	68%	72%	90%	100%	100%
Number and % of active quarries within, containing or adjacent to areas designated for their high biodiversity value (number and coverage), biodiversity value as defined by GRI EN11 Número e % de pedreiras ativas inseridas, contendo ou adjacentes a áreas classificadas por elevado valor em biodiversidade (valor em biodiversidade tal como definido na GRI EN11)		19 (24%)	19 (21%)	18(32%)	23(35%)	23(35%)	21(34%)	na	na	na	na
% of quarries with high biodiversity value (according to KPI 1) where biodiversity management plans are actively implemented % de pedreiras com elevado valor em biodiversidade (de acordo com KPI 1) com planos de gestão de biodiversidade ativamente implementados		42%	42%	44%	48%	48%	52%	57%	75%	100%	100%
LOCAL IMPACTS / WATER IMPACTOS LOCAIS / ÁGUA											
Specific Water Withdrawal All Plants (m3/t cem) Captação específica de água (todas as fábricas)		0,26	0,26	0,24	0,26	0,28	0,28	0,27	0,26	0,24	0,24
Specific Water Withdrawal Integrated Plants (m3/t cem) Captação específica de água (fábricas integradas) (m3/t cem)		0,26	0,28	0,27	0,30	0,30	0,31	0,27	0,26	0,24	0,24
Specific Water Withdrawal Integrated Plants (m3/t kk) Captação específica de água (fábricas integradas) (m3/t kk)		0,31	0,32	0,30	0,34	0,33	0,34	0,31	0,31	0,28	0,28
Specific Water Withdrawal Grinding Plants (m3/t cem) Captação específica de água (moagens) (m3/t cem)		0,09	0,11	0,10	0,09	0,07	0,16	0,07	0,06	0,05	0,05
LOCAL IMPACTS / NOISE IMPACTOS LOCAIS / RUÍDO											
Existence of "Noise studies" conducted periodically in the perimeter of the plant to determine the level of noise that is transmitted to the surroundings		81%	81%	75%	67%	71%	83%	89%	95%	100%	100%

2017 Sustainability KPI's

CEMENT SUSTAINABILITY INITIATIVE - KEY PERFORMANCE INDICATORS											
SELECTION OF KEY PERFORMANCE INDICATORS (Cement Activity) SELEÇÃO DE KPI's (Atividade Cimento)											
	Performance							Targets		Ambitions	
	2007*	2012	2013	2014	2015	2016	2017	2017	2020	2025	2030
OTHERS OUTROS											
MANAGEMENT SYSTEMS SISTEMAS DE GESTÃO											
ISO 9001 Certification		92%	89%	89%	87%	86%	86%	97%	100%	100%	100%
ISO 14001 Certification		69%	66%	66%	67%	70%	72%	85%	100%	100%	100%
OSHAS 18001 Certification		56%	55%	55%	56%	54%	67%	74%	95%	100%	100%
OCCUPATIONAL HEALTH & SAFETY (CSI CRITERIA) / SAÚDE OCUPACIONAL & SEGURANÇA (CRITÉRIO CSI)											
Own professionals fatalities Número de acidentes mortais para colaboradores próprios	-	2	0	1	0	1	2	0	0	0	0
Own professionals fatality rate Índice de mortalidade por 10.000 colaboradores próprios	-	0	0	1,1	0	1,43	2,73	0	0	0	0
Contractor's and subcontractor's fatalities Número de acidentes mortais para colaboradores terceiros (contratos e subcontratos)	-	6	7	7	3	1	4	0	0	0	0
Third-party fatalities Número de acidentes mortais para outros	-	1	1	0	0	0	0	0	0	0	0
Own professionals lost time incidents Número de acidentes com perda de dias de trabalho para colaboradores próprios	-	43	53	46	68	39	64	-	-	0	0
Own professionals lost time incident Frequency Rate Índice de frequência de acidentes com perda de dias de trabalho, por 1.000.000 horas trabalhadas, para colaboradores próprios	-	4,3	2,6	2,5	3,6	2,63	4,08	<1.46	<1	0	0
Contractors lost time incidents Número de acidentes com perda de dias de trabalho para colaboradores terceiros (contratos e subcontratos)	-	32	54	40	32	48	38	-	-	0	0
Contractors and subcontractors' (indirectly employed) lost time incidents per 1 million manhours Índice de frequência de acidentes com perda de dias de trabalho, por 1.000.000 horas trabalhadas, para contratos e subcontratos	-	-	-	-	100	87	147	-	-	0	0
Total no. of lost time incidents (directly and indirectly employed) Número total de acidentes (colaboradores próprios, contratos e subcontratos)	-	-	-	-	1.89	3,68	2,2	<1.46	<1	0	0
Own professionals lost working days Número de dias de trabalho perdidos para colaboradores próprios	-	2842	2616	2724	4999	1294	2310	-	-	0	0
Own professionals lost time incident Severity Rate Índice de gravidade para colaboradores próprios, por 1.000.000 horas trabalhadas	-	284,2	127,6	146	264,9	87	102	<35.5	<10	0	0
Contractors lost time incidents Número de acidentes com perda de dias de trabalho para colaboradores terceiros	-	32	54	40	32	48	38	-	-	0	0

*Baseline year for Energy and CO2 KPI assessment | Ano Base para avaliação de KPI relativos a CO2 e Energia

Safety 2012: CIM POR pre-merger with CY, IN, TR, ES, MA, TN.

Assurance Statements 2012-2016

ASSURANCE STATEMENT

Independent Limited Assurance Report on the CO₂ emissions and Pollutant Emissions data Key Performance Indicators reported by CIMPOR / InterCement for the year's 2012 and 2013

To the Board of Directors of CIMPOR

NATURE AND SCOPE THE MODERATE / REASONABLE ASSURANCE/VERIFICATION

At the request of CIMPOR / InterCement, we have carried out an independent limited review of CO₂ emissions and safety Key Performance Indicators reported by CIMPOR / InterCement for the cement sector.

CO₂ emissions, as calculated according to the WBCSD-CSI "Cement CO₂ Protocol" (Version 3.0, May 2011):

- Absolute gross / net CO₂ emissions
- Specific gross / net CO₂ emissions
- Specific indirect emissions, MWh, specific power consumption
- Percentage of fuels, raw materials and AFRs
- Clinker-to-cement ratio
- Specific thermal consumption
- Other certifications: ISO 9001, ISO 14001 and OHSAS 18001

Coverage rates and Emissions data, as calculated according to the WBCSD-CSI "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2005, version 1):

- KPI 1: Overall Coverage Rate
- KPI 2: Coverage Rate Continuous Measurement
- KPI 3a: Emissions Data Dust
- KPI 3b: Emissions Data NOx
- KPI 3c: Emissions Data SO₂

The KPIs have been prepared by, and are the responsibility of, CIMPOR / InterCement Management. Our responsibility consists of issuing conclusions about their consistency and reliability based on our review work described in the next paragraph.

The information in the Sustainability Report of CIMPOR / InterCement and its presentation are the responsibility of the directors or governing body and the management of CIMPOR. SGS ICS has not been involved in the preparation of any of the material included in the Sustainability Report.

Our work was performed based on verification standards established by the International Federation of Accountants, under the International Standard for Assurance Engagement (ISAE 3000) pertaining to limited assurance. We planned and performed the procedures set out below to obtain limited assurance as to certify the KPIs are free of material misstatements. A higher level of assurance would have required more extensive procedures.

- We assessed CIMPOR / InterCement reporting procedures for the KPIs with regard to their consistency with the WBCSD-CSI "Cement CO₂ Protocol" and "Guidelines for Emissions Monitoring and Reporting in the Cement Industry".
- At corporate level, we conducted interviews with the individuals responsible for the preparation and application of the reporting procedures as well as for the consolidation of data. At this level, we performed analytical procedures and verified, on a test basis, the calculations and data consolidation.
- At regional coordination level, we conducted interviews with the individuals responsible for the KPIs reporting and performed analytical tests.
- We selected a sample of 17 sites to be visited out of a total of 37, for CO₂ verification, representing approximately 78 % (2012) and 77 % (2013) of the overall CO₂ emissions, to balance assurance cost and a

representative coverage degree, considering roughly that 71% of emissions out of the remaining 21% (2012) and that 70% of emissions out of the remaining 23% (2013) are generated by installations within the EU ETS.

- We selected a sample of 16 sites to be visited out of a total of 21, for pollutant emissions verification, representing at least 60 % of the overall pollutant emissions.
- For each site we visited:
 - We reviewed site organization and procedures, especially those regarding KPI reporting;
 - We assessed the control procedures on key parameters, and
 - On a test basis, we performed reconciliation of reported data with the supporting documentation and verified the arithmetical accuracy of calculations.
- We analyzed the consolidated KPIs reported by CIMPOR / InterCement in the 2012 and 2013 Sustainability Report to verify the coherence with the results of our work.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS ICS affirm our independence from CIMPOR / InterCement, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment.

VERIFICATION/ ASSURANCE OPINION

Based on the results of our review, nothing has come to our attention that causes us to believe that:

- the CO₂ emissions reported for the cement sector have not, in all material respects, been prepared in accordance with the WBCSD-CSI "Cement CO₂ Protocol" (Version 3.0, May 2011);

- the pollutant emissions reported for the cement sector have not, in all material respects, been prepared in accordance with the WBCSD-CSI "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2005, version 1);

- the CO₂ emissions and the pollutant emissions, for the cement sector, contain material misstatements.

Signed:
For and on behalf of SGS ICS Portugal, Lda. Lisbon, May 16th, 2014

Luis Neves
Certification Manager

Luis Santos
Global Technical Reviewer

ASSURANCE STATEMENT

Independent Limited Assurance Report on the CO₂ emissions and Pollutant Emissions data Key Performance Indicators reported by CIMPOR / InterCement for the year's 2015 and 2016

To the Board of Directors of CIMPOR

NATURE AND SCOPE THE MODERATE / REASONABLE ASSURANCE/VERIFICATION

At the request of CIMPOR / InterCement, we have carried out an independent limited review of CO₂ emissions and safety Key Performance Indicators reported by CIMPOR / InterCement for the cement sector.

CO₂ emissions, as calculated according to the WBCSD-CSI "Cement CO₂ Protocol" (Version 3.0, May 2011):

- Absolute gross / net CO₂ emissions
- Specific gross / net CO₂ emissions
- Specific indirect emissions, MWh, specific power consumption
- Percentage of fuels, raw materials and AFRs
- Clinker-to-cement ratio
- Specific thermal consumption
- Other certifications: ISO 9001, ISO 14001 and OHSAS 18001

Coverage rates and Emissions data, as calculated according to the WBCSD-CSI "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2012, version 2.0):

- KPI 1: Overall Coverage Rate
- KPI 2: Coverage Rate Continuous Measurement
- KPI 3a: Emissions Data Dust
- KPI 3b: Emissions Data NOx
- KPI 3c: Emissions Data SO₂
- KPI 4a: Coverage Rate Dust
- KPI 4b: Coverage Rate NOx
- KPI 4c: Coverage Rate SO₂

The KPIs have been prepared by, and are the responsibility of, CIMPOR / InterCement Management. Our responsibility consists of issuing conclusions about their consistency and reliability based on our review work described in the next paragraph.

The information in the Sustainability Report of CIMPOR / InterCement and its presentation are the responsibility of the directors or governing body and the management of CIMPOR. SGS ICS has not been involved in the preparation of any of the material included in the Sustainability Report.

Our work was performed based on verification standards established by the International Federation of Accountants, under the International Standard for Assurance Engagement (ISAE 3000) pertaining to limited assurance. We planned and performed the procedures set out below to obtain limited assurance as to certify the KPIs are free of material misstatements. A higher level of assurance would have required more extensive procedures.

- We assessed CIMPOR / InterCement reporting procedures for the KPIs with regard to their consistency with the WBCSD-CSI "Cement CO₂ Protocol" and "Guidelines for Emissions Monitoring and Reporting in the Cement Industry".
- At corporate level, we conducted interviews with the individuals responsible for the preparation and application of the reporting procedures as well as for the consolidation of data. At this level, we performed analytical procedures and verified, on a test basis, the calculations and data consolidation.
- At regional coordination level, we conducted interviews with the individuals responsible for the KPIs reporting and performed analytical tests.

- We selected a sample of 8 sites to be visited out of a total of 38 (2015) and 38 (2016), for CO₂ verification, representing approximately 49 % (2015) and 55 % (2016) of the overall CO₂ emissions, to balance assurance cost and a representative coverage degree, considering roughly that 49 % (2015) and 55 % (2016) of emissions out of the remaining 36 % (2015) and that 34 % of emissions out of the remaining 45 % (2016) are generated by installations within the EU ETS.

- We selected a sample of 8 sites to be visited out of a total of 23, for pollutant emissions verification, representing at least 31 % of the overall pollutant emissions.

- For each site we visited:
 - We reviewed site organization and procedures, especially those regarding KPI reporting;
 - We assessed the control procedures on key parameters, and
 - On a test basis, we performed reconciliation of reported data with the supporting documentation and verified the arithmetical accuracy of calculations.
- We analyzed the consolidated KPIs reported by CIMPOR / InterCement in the 2015 and 2016 Sustainability Report to verify the coherence with the results of our work.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS ICS affirm our independence from CIMPOR / InterCement, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment.

VERIFICATION/ ASSURANCE OPINION

Based on the results of our review, nothing has come to our attention that causes us to believe that:

- the CO₂ emissions reported for the cement sector have not, in all material respects, been prepared in accordance with the WBCSD-CSI "Cement CO₂ Protocol" (Version 3.0, May 2011);

- the pollutant emissions reported for the cement sector have not, in all material respects, been prepared in accordance with the WBCSD-CSI "Guidelines for Emissions Monitoring and Reporting in the Cement Industry" (March 2012, version 2.0);

- the CO₂ emissions and the pollutant emissions, for the cement sector, contain material misstatements.

Signed:
For and on behalf of SGS ICS Portugal, Lda. Lisbon, Jun 30th, 2017

Isabel Berger
Certification Manager

Luis Santos
Global Technical Reviewer