Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Philip Morris International Inc. (PMI) is the leading international tobacco company, with its headquarters in New York City, New York, U.S.A. and Operations Center in Lausanne, Switzerland.

On 31 December 2016, PMI owned and operated 48 manufacturing facilities and sold products in more than 180 markets.

In 2016, PMI recorded total cigarette shipment volume of 813 billion units, had revenues, including excise taxes, of US$ 74.9 billion, and held an estimated 27.9% of the international cigarette market excluding the People's Republic of China and the U.S. PMI's 2016 operating income was US$ 10.8 billion.

PMI has an unequalled brand portfolio led by Marlboro, the world's number one international selling cigarette brand, and L&M, the third most popular brand. Including Marlboro and L&M, six of our brands rank in the top 15 international cigarette brands in the world. We have a strong mix of international and local products that appeal to a wide range of adult smokers.

PMI's global workforce of approximately 79,500 employees is extremely diverse. We have historically expanded our business through a mixture of organic growth, geographic expansion and acquisitions, and have a successful track record of acquiring and integrating companies.

PMI is driven by four long-term goals that guide us as we grow our business in a responsible manner. Those goals are:

- to meet the expectations of adult smokers by offering innovative tobacco products of the highest quality available in their preferred price category;
- to generate superior returns to our shareholders through revenue, volume, income, and cash flow growth and a balanced program of dividends and share repurchases;
- to reduce the harm caused by tobacco products by supporting effective evidence based regulation and by developing products with the potential to reduce the risk of tobacco-related diseases; and
- to be a responsible corporate citizen and to conduct our business with the highest degree of integrity.

For more than a decade, PMI has dedicated significant resources to the development and scientific assessment of non-combustible alternatives to cigarettes. We refer to these products as Reduced-Risk Products because they have the potential to reduce the risk of smoking-related diseases.

RRPs is the term we use to refer to products that present, are likely to present, or have the potential to present less risk of harm to smokers who switch to these products versus continued smoking. We have a range of RRPs in various stages of development, scientific assessment and commercialization. Because our RRPs do not burn tobacco, they produce far lower quantities of harmful and potentially harmful compounds than found in cigarette smoke. We conduct rigorous scientific assessment of our RRP platforms to establish that they reduce exposure to harmful and potentially harmful constituents in smoke and, ultimately, that these products present, are likely to present, or have the potential to present less risk of harm to adult smokers who switch to them versus continued smoking. We draw upon a team of expert scientists and engineers from a broad spectrum of scientific disciplines and our extensive learnings of consumer preferences to develop and assess our RRPs. Our efforts are guided by the following key objectives: to develop RRPs that adult smokers who would otherwise continue to smoke find to be satisfying alternatives to smoking; for those adult smokers, our goal is to offer RRPs with a scientifically substantiated risk-reduction profile that approaches as closely as possible that associated with smoking cessation; to substantiate the reduction of risk for the individual adult smoker and the reduction of harm to the population as a whole, based on scientific evidence of the highest standard that is made available for scrutiny and review by external independent scientists and relevant regulatory bodies; and, to advocate for the development of science-based regulatory frameworks for the development and commercialization of RRPs, including the communication of scientifically substantiated information to enable adult consumers to make better health choices.

We are committed to responsibly delivering long-term sustainable growth and applying high standards wherever we operate. We also aim to be an industry leader in environmental sustainability and have set clear and measurable targets to improve our environmental performance. In 2010, we set ourselves the goal of reducing the carbon footprint of our value chain by 30% by 2020. Beyond 2020, we continue to work on developing company-wide emissions reduction targets based directly on climate science. In 2016 we submitted and in 2017 we got approved our 2030 and 2040 Science Base Targets based on a new baseline footprint analysis and a forecast on how industry trends and our Manufacturing, Fleet, Leaf and supply chain emission reduction programs could achieve in the mid-long term.

CC0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Fri 01 Jan 2016 - Sat 31 Dec 2016

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Albania
Algeria
Argentina
Australia
Bangladesh
Belgium
Bosnia and Herzegovina
Brazil
Bulgaria
Canada
Chile
China
Colombia
Costa Rica
Croatia
Czech Republic
Denmark
Dominican Republic
Ecuador
Egypt

Select country
El Salvador
Estonia
Finland
France
Georgia
Germany
Greece
Guatemala
Hong Kong
Hungary
India
Indonesia
Israel
Italy
Jamaica
Trinidad and Tobago
Japan
Jordan
Kazakhstan
South Korea
Kuwait
Latvia
Lebanon
Lithuania
Macau
Malaysia
Mexico
Moldova
Morocco
Netherlands
New Zealand
Nicaragua
Norway

Select country
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Luxembourg
Réunion
Romania
Russia
Senegal
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan
Tanzania
Thailand
Tunisia
Turkey
Ukraine
United Arab Emirates
United Kingdom
Uruguay
Venezuela
Vietnam
Armenia
Rest of world

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD($)

CC0.6

Modules

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.
If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The highest level of direct responsibility for climate change within PMI lies with the Product Innovation and Regulatory Affairs Committee of the Board of Directors. The Senior Vice-President Operations (SVP Operations) who is a member of PMI's Senior Management Team (our Corporate Executive Team) and reports to PMI's Chief Executive Officer, is delegated with operational responsibility.

The SVP Operations reviews PMI's objectives, strategies and action plans related to climate change with the CEO and the Product Innovation and Regulatory Affairs Committee of the Board of Directors.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Emissions reduction target Energy reduction target Efficiency target	The assessment of Environment, Health and Safety (EHS) results (which includes annual performance against our carbon footprint reduction targets) directly influences the annual performance rating of our SVP Operations and other members of our Corporate Executive Team. This covers the annual cash incentive compensation and long term restricted stock incentive compensation elements for those roles.
Management group	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction	Our CEO specifically covers EHS results (including carbon footprint reductions against targets) in the assessment of our annual company-wide performance that is reviewed by the Compensation and Leadership Development Committee of the Board of Directors. Accordingly, these results are included in our overall performance rating which determines the cash and stock bonus pool for the

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		target	management group and other eligible employees. Executive management covering EHS topics are specifically appraised each year for performance against targets, including those relating to climate change.
All employees	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target Other: Behaviour change related indicator	Specific company awards such as the Chairman's Award and Excellence Awards, which are either cash or stock, are available for Energy Managers, EHS Managers, project teams and other employees who are responsible for climate change related initiatives and improvements.
Energy managers	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency target	Managers, team members and others have energy efficiency and carbon footprint reduction targets set out in their annual performance objectives and are assessed against those targets in their annual performance appraisal. Energy efficiency and CO2 emissions reduction targets are set annually for at least three years for all of our manufacturing facilities.
Environment/Sustainability managers	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency target	Managers, team members and others have energy efficiency and carbon footprint reduction targets set out in their annual performance objectives and are assessed against those targets in their annual performance appraisal. Energy efficiency and CO2 emissions reduction targets are set annually for at least three years for all of our manufacturing facilities.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		Environmental criteria included in purchases	
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	Specific company awards such as “Above and Beyond the Call of Duty” (ABCD) awards for best practice initiatives in the areas of climate change, energy and carbon reduction.
Other: - employees in certain facilities such as our Operations Center	Monetary reward	Other: Behaviour change related indicator	Employees from the Operations Center are encouraged to use public transportation. The annual fee for half-price railway subscription as well as a monthly public transport allowance is paid by the company for those employees who choose to use public transportation rather than commute in their private cars to work.
All employees	Recognition (non-monetary)	Emissions reduction project Energy reduction project Efficiency project Other: Behaviour change related indicator	In 2016, many affiliates continued to perform voluntary awareness and promotion campaigns/ programs in order to increase employees’ active participation in EHS programs and to make carbon footprint reduction part of the company's culture. Awards and recognition for best practices form a core element of such campaigns.
Other: - employees in our Operations group (around 50,000 employees)	Recognition (non-monetary)	Emissions reduction project Energy reduction project Efficiency project Other: Behaviour change related indicator	Operations employees also have the opportunity to earn awards for best practice initiatives in the areas of climate change, energy and carbon reduction. This forms part of our Operations “Lead, Lean and Learn” (3L) program which encourages innovation, continuous improvement and employee engagement.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Global coverage with regional highlights: (Asia Pacific (AP), Latin America and Canada (LAC), Europe (EU) and Eastern Europe Middle East and Africa (EEMA). Material country and asset-specific risks are highlighted.	> 6 years	We manage risks and opportunities through a number of initiatives and programs – see Section 5 for further detail. A key example would be our comprehensive Energy Management Program that includes ambitious short-term and long-term CO2 reduction targets. Progress related to environmental and climate risks and opportunities, along with future steps to be taken to address these and implement appropriate measures, is communicated to The Board at least twice a year.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

Company Level:
Our risk/opportunity identification and management process covers our entire value chain. Annually it addresses regulatory, physical climate and market risks and opportunities, which can also include company reputation and changing customer demands through:

- Carbon footprint reduction initiatives: driving global programs to reduce energy consumption and CO2 emissions which help to manage regulatory, reputational, and financial risk exposure. CO2 reductions programs from manufacturing, offices and fleet are monitored quarterly. External footprint reviews are conducted every 2 years ensure risk/opportunity actions remain appropriate. Key developments and new products are assessed via Life Cycle Assessment (LCA) to identify risks/opportunities, and are incorporated into the footprint calculation.
- Marginal Abatement Cost Curve (MACC): developed in 2016 to prioritize renewable investments and calculate our internal carbon price based on over 70 opportunities.
- Climate change risk assessment (CCRA): In 2015, PMI performed a comprehensive CCRA for corporate and asset level physical risks and opportunities up to 2025-2030. The process included key assets such as factories/warehouses, supplier assets (including ports, warehouses, tobacco growing regions and suppliers). This information is reviewed with top management; it enables risk/opportunity identification and management at the company and asset level; includes regulatory climate change aspects and geopolitical risk.

Asset level:
Alongside the CCRA, we also have environmental risk assessments (ISO14001 based in most operations) to identify material risks/ opportunities. These include the need for flood risk management plans which we discuss with our insurers and use to develop mitigation plans. In tobacco agriculture, they form part of our Good Agricultural Practices program, and result in risk/opportunity identification and management through country- and supplier-specific action plans.

CC2.1c

How do you prioritize the risks and opportunities identified?

Material issues are identified in a multidisciplinary way and include those which:
• have the highest potential impact and a realistic probability of occurrence;
• are most relevant to our enterprises and geographic locations; and
• are most important to our stakeholders.

In carbon footprint terms we have initially prioritized actions for those areas of our business which constitute more than 5% of our footprint, although we quantify and assess improvement action down to 1%.

We have set a financial threshold of US$100K for materiality of environmental risk/opportunity at the asset level but in 2020+ risk forecasting terms, higher level risks are defined as those with a potential impact in excess of US$2M or a raw material impact in excess of 1000 metric tonnes of tobacco leaf.

We review our risk/opportunity action plans and priorities every year during our integrated business planning process which includes 3-year and longer-term plans for our carbon footprint and climate change strategies. We use external sources such as consultancy and risk mapping tools as well as IPCC and academic publications to keep our information current.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

I.How our business strategy has been influenced
Climate change is embedded within our overall business strategy and Code of Conduct, including a climate risks and opportunities management program. Climate change is integrated into normal business activities and forms part of our annual Long Range Planning process which reviews and sets business direction. The corporate EHS and Sustainability teams undertake annual strategy reviews based on prior year performance, regulatory/external developments, risk/opportunity assessments, stakeholder interest and business changes. The strategy is developed through functional management teams up to the Senior Management Team and CEO along with the Product Innovation and Regulatory Affairs Committee of Board of Directors and then cascaded. Our strategy is split into minimizing our impact on the environment through carbon footprint reduction initiatives (mitigation) and minimizing future environmental impact on our business through a climate change risk assessment process (adaptation).

II.Examples of how business strategy has been influenced
- Energy Management program that aims to reduce energy use and emissions across our factories and help us meet our science-based targets
- Agricultural supply chain widely spread around the world to mitigate climate related risks and tobacco leaf inventories to mitigate climate-related impacts.

III.Aspects of climate change that have influenced the strategy
- Regulation: PMI worldwide operations requires adapting to local regulatory. Drivers like EU Emissions Trading Scheme led us to introduce process changes in our factories like old equipment replacement to more efficient that reduces our energy load beneath the 20MW regulatory threshold.
- Need for physical adaptation: Tobacco leaf growing is strongly influenced by physical climate change such as changes in temperature, precipitation and cyclones. Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks.
- Reputation: Increased stakeholder interest in climate change adaptation as the effects of climate change become more apparent. PMI's strives to actively

manage its reputation through corporate sustainability and climate change strategy, programs and transparent communications including our website, UN Global Compact Communication on Progress, CDP disclosure, new products LCA (e.g. biodegradable filters) and packaging developments.

IV.How our short term strategy has been influenced

PMI's short-term strategy is focused on effective risk management, emissions reduction measures and renewable energy strategy development. Key aspects:

- Reforestation and Good Agricultural Practices like reducing wood use in tobacco curing, promoting efficient and sustainable fuel consumption and coal use elimination.
- Direct materials supplier program covering sustainability sourcing.
- Value chain and operations 30% emissions reduction by 2020 vs 2010 baseline.
- Energy Management Program consisting of a worldwide factory metering, Energy Saving Projects and tools for collaboration.
- 4-year green energy procurement roadmap developed with the company Ecofys
- Central governance for on-site renewable investments, based on a MACC tool to systematically calculate our internal carbon price and prioritize investments in renewable technologies.
- LCAs to understand impact from significant developments in cigarette/packaging components and new products.
- Carbon footprint review every 3 years to track progress.
- Action plans for mitigating risks highlighted in 2015's climate change risk assessment.

V.How our long term strategy has been influenced

PMI's long-term business strategy aims to further strengthen our focus on physical adaptation and meet our long-term emissions reduction targets. Highlights:

- Approved Science-based targets to reduce our value chain carbon footprint by 40% by 2030 vs 2010, and our operations' by 30% by 2030 and 60% by 2040.
- Climate change risk assessments to inform future management decisions in terms agricultural impacts and forecast physical changes that may occur in certain climates and countries (adaptation focus). Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks allowing to relocate tobacco crops.
- Customer and supplier sustainability strategies will be incorporated into ours to ensure that our value chain progress is aligned with our objectives.

VI.How this strategy gains us strategic advantage

As the leading international cigarette company, our climate change strategy has a key role in enabling our business efficiency which keeps us ahead of our competitors and supports our long term sustainability. Our KPIs are amongst the best in our sector and we are able to assure our investors that our risks and opportunities are well managed. We have taken steps to align with our customer expectations on climate change, including carbon footprint development and reductions and continue working with trade customers, such as Tesco (Tesco Supply Chain strategy for carbon footprint reduction), so that we can exceed their expectations. In terms of our products, having the right information to take decisions on potential strategic advantage by considering the environmental impacts of new products or product developments through LCA. We have implemented global capacity and footprint planning which improves our flexibility and resilience.

VII.Substantial business decisions influenced

a) Science-based emissions reduction targets and the UN Global Compact signature show our determination to play an active role in the sustainability agenda.
b) Allowing lower project paybacks to consider climate change impact reductions. More than 80 MUSD worth in sustainability projects were invested since 2010.
c) Green electricity purchasing, a key business decision since there is no payback for the green electricity cost.
d) Embedding Environmental Sustainability in our Good Agricultural Practices. Specifically we decided to aim by 2020 to: a 70% increase of efficiency in CO_2 emissions per kg of cured tobacco leaf vs 2010; zero coal usage for tobacco curing; no deforestation of old growth forest due to the growing and curing of tobacco we purchase.

VIII.The Paris Agreement and PMI's business strategy

We were involved in the CDP Road to Paris discussions attending and supported an ambitious deal at the UNFCCC COP21 climate conference in Paris in 2015.

Since then, we have continued to engage both internally and externally regarding our commitments on climate change adaptation and mitigation, including our development of science based targets and our support for the Paris Agreement.

IX.Application of 2-degree scenarios within our climate change and business strategy
Our mid and long term emission targets are in line with the 2-degree scenario, setting the base for supporting area targets like our fleet's emissions/km target.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price on carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

In 2016, a Marginal Abatement Cost Curve (MACC) tool was developed with the company DuPont Sustainable Solutions and an assessment in PMI was performed collecting more than 70 carbon reduction initiatives in our operations footprint. As a result an updated carbon price was set at 17 USD per tonne of CO2.

The internal carbon price is included in every investment that has potential impact in the environment as an attachment to the business plan. This carbon price improves the return on investment on those initiatives that use cleaner technologies and disincentive those initiatives that increase our carbon footprint. Besides, using an internal carbon price in our company is helping to raise awareness around environmental impacts.

As an example of carbon price usage, this year the implementation of 2 solar photovoltaic plants, 1 cogeneration and 1 biomass boiler were approved using internal carbon price and the MACC tool as main decision criteria.

Our current challenge is how to better filter projects that have impact in the environment and thus require using carbon price in their business plan. Currently we apply a financial threshold of 100kUSD along to our expertise to select the projects.

The carbon price will be updated every 1-2 years to reflect the upcoming opportunities for carbon reduction in our operations.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Trade associations
Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Trans-Atlantic Business Council	Consistent	Their Energy and Climate Working Group states: "Energy is irreversibly tied to climate. In this realm, transatlantic coordination of energy policies and climate action targets could yield substantial results, as both the US and the EU are the world's leading energy consumers."	Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.
National Center for Asia-Pacific Economic Cooperation	Consistent	APEC have supported the development of an energy strategy study which includes: "+Expand and Diversify Supply of Energy Resources; +Promote Conservation and Improve Efficiency; +Promote Open and Efficient Energy Markets; +Clean Energy Use and Technology Innovation"	Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.
US ASEAN Business Council	Consistent	Their Energy Committee covers broad energy improvement topics including energy efficiency and renewables.	Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.
EconomieSuisse	Consistent	Energy and Environment section: "Climate protection concerns us all and Swiss business is pointing the way. Based on voluntary measures it has successfully charted a path of CO2 reduction and continues to stay the course. Innovation in this sector is doubly advantageous: resource-friendly processes help cut costs and may evolve into business ideas. Regardless of any decision for or against certain technologies we promote a reliable, affordable, and environmentally friendly energy supply…."	Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

We work with not-for profit organizations and governments to support communities on environmental sustainability topics including sustainable forestry, reforestation, controlled use of pesticides in agriculture, sustainable rural living conditions and education; all of these can have an influence on climate change improvement, adaptation and mitigation.

Through specific contributions in 2016, PMI supported projects to protect and enhance natural resources, implement conservation agriculture, provide clean water, cater for food security, and improve the livelihoods of people living in rural communities. Selected examples include:

- Following the severe drought that affected South-Eastern African countries, PMI partnered with the Swiss Red Cross to support interventions promoting food security. In Malawi, the project provided school meals to children attending pre- and primary schools, promoted the creation of school gardens, and increased the knowledge on nutrition among teachers and community members. In Mozambique, activities focused on the distribution of seeds, fertilizers, irrigation equipment, and tools to local farmers, as well as on the delivery of trainings to strengthen their resilience to future crises and climate-related disasters.

- PMI contributed to the Bunyad Literacy Community Council project to provide access to clean drinking water for families living in Punjab and Sindh provinces in Pakistan, and to improve sanitation practices. The interventions included the installation of hand pumps, the provision of hygiene kits, and the organization of a health awareness campaign.

- In Mexico, PMI continued to support an initiative of the Natural Areas and Sustainable Development Civil Partnership aiming at creating and developing new business opportunities for small agricultural producers, while increasing their resources management capacity and knowledge of eco-technology solutions. A key component of the project was the implementation of sustainable backyard plots in homes and schools, with the objective of increasing water availability, diversify energy sources, and reduce waste and pollution.
- In Greece, PMI partnered with the American Farm School to provide training to young tobacco growers to assist them in land stewardship, through the development of environmental awareness and the promotion of efficient management of available natural resources for high quality product and revenue turnover.

- In Indonesia, PMI supported an initiative of the IDEP Selaras Alam Foundation aiming at raising awareness on good health and sanitation practices, providing solar-energy water pumps and purification systems as well as basic sanitation infrastructure, and advancing sustainable farming practices through the promotion of the permaculture approach.

- Working with the Ethiopia Red Cross Society, PMI provided food and clean water to young children and pregnant mothers in response to the severe drought that hit the country. The project also included awareness raising on good sanitation practices and the provision of hygiene materials.

We remain committed to the UN Global Compact which we signed-up to in 2015 and issued our first Communication on Progress in June 2016 which we use as an engagement tool along with signing up to UNGC Local Networks around the world; our next Communication on Progress will be published in September 2017. We are also part of the World Business Council for Sustainable Development (WBCSD), the WeMeanBusiness coalition, and since participating in the UNFCCC COP21 in Paris we have continued to engage externally regarding our commitments on climate change adaptation and mitigation, including our development of science based targets, and our support for the Paris Agreement.

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

PMI operates within an overarching Code of Conduct to a set of internal policies - our Principles and Practices. These policies cover our mandatory requirements and processes in relation to Environment, Health and Safety (EHS) and Sustainability, which includes our climate change strategy; corporate contributions; and interaction with government officials, amongst others. As part of these management controls, we conduct due-diligence to ensure consistency with our Code and Principles, and to check potential compliance and reputational issues when joining trade associations.

We belong to many carefully selected business and trade associations around the world. We work with these groups because they represent our industry and the larger business community in policy discussions on issues where we have a common interest or objective. Our support to these organizations and groups complies with applicable laws and our own principles and practices. We routinely evaluate our participation to ensure that the groups' objectives align with the long-term interests of PMI and its shareholders, and that their activities continue to reflect PMI's values and high standards of conduct. There are times when we may not agree with certain positions adopted by the organizations we support. In these instances, we may choose to withdraw our participation or support.

Other external facing activities related to climate change are also reviewed by our Corporate Affairs and Sustainability teams to ensure consistency with our climate change strategy.

For more information see:
https://www.pmi.com/resources/docs/default-source/our_company/membership-transparency-pmi.pdf?sfvrsn=72b08ab5_8

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Absolute target
Intensity target
Renewable energy consumption and/or production target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1+2 (market-based)	100%	30%	2010	914050	2020	No, but we are reporting another target which is science-based	The target covers 100% of scope 1 and 2 emissions and has a medium time frame (target year between 2020 and 2035) The target meets at least a 2.1% year-on-year emissions reduction between base year and target year.
Abs2	Scope 1+2 (market-based)	100%	40%	2010	914050	2030	Yes, and this target has been approved as science-based by the Science Based Targets initiative	The target covers 100% of scope 1 and 2 emissions and has a medium time frame (target year between 2020 and 2035 inclusive) The target meets at least a 2.1% year-on-year emissions reduction between base year and target year.
Abs3	Scope 1+2 (market-based)	100%	60%	2010	914050	2040	Yes, and this target has been approved as science-based by the Science Based Targets initiative	This target covers 100% of scope 1 and 2 emissions and has a long time frame (target year beyond 2035) The target meets at least a 2.1% year-on-year emissions reduction between base year and target year

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs4	Other: Scope 1+2 (market based) + 3 (upstream and downstream)	100%	40%	2010	7401498	2030	Yes, and this target has been approved as science-based by the Science Based Targets initiative	This target covers the entire value chain (Scope 1+2+3) and has a medium time frame (target between 2020 and 2035) The target meets at least a 2.1% year-on-year emissions reduction between base year and target year. In 2016, we finished a baseline footprint study with the company Quantis to better understand our scope 3 emissions. This resulted in a more accurate model using primary data from internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 7,031 to 7,401 '000 Tons CO2e), and key areas to reduce emissions were highlighted

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Other: Scope 1+2 (market based) + 3 (upstream and downstream)	100%	30%	Metric tonnes CO2e per metric	2010	7.910	2020	No, but we are reporting another target which	This is a publicly declared target to reduce our emissions from the entire value chain (Scope 1+2+3) by 30% per million cigarettes equivalent by 2020, against our 2010 baseline.

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
				tonne of product				is science-based	In 2016, we finished a baseline footprint study to better understand our scope 3 emissions. This resulted in a more accurate model using primary data from internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 6,324 to 7,910 kg CO2e/mio cig), and key areas to reduce emissions were highlighted

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	31	Decrease	33	Supposed split between scope 1&2 and scope 3 constant vs 2016

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity consumption	2010	906628	0%	2030	80%	This target covers all our manufacturing electricity consumption.

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Abs1	60%	90%	We have achieved 27% absolute reduction so far, against our 30% target
Abs2	30%	68%	We have achieved 27% absolute reduction so far, against our 40% target
Abs3	20%	45%	We have achieved 27% absolute reduction so far, against our 60% target
Abs4	30%	58%	We have achieved 23% absolute reduction so far, against our 40% target
Int11	60%	54%	We have made significant progress in implementing programs to reduce our Scope 3 emissions, with a focus on our agricultural suppliers. In 2016, we started collaborating with key suppliers to reduce our emissions across the value chain. We have a high level of confidence in our ability to meet our 2020 target
RE1	30%	44%	The entire EU region as well as some affiliates around the world are already purchasing green electricity. Our aim is to increase the amount of green electricity consumed to signal our interest in procuring renewable energy in the countries in which we operate.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

No

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	40	
To be implemented*	273	72734
Implementation commenced*	73	24435
Implemented*	178	64421
Not to be implemented	37	

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Transportation: fleet	At vehicle renewal, specifically sourcing more fuel efficient vehicles. Investment estimated at zero as no additional cost over and above buying a less efficient	1285	Scope 1	Voluntary	57129	0	<1 year	6-10 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	equivalent vehicle.								
Low carbon energy purchase	Additional certified green electricity procurement in the EU, over and above existing purchases from 2014. Investment is the current additional amount paid for green electricity.	11700	Scope 2 (market-based)	Voluntary	0	20000	>25 years	Ongoing	
Energy efficiency: Processes	General improvements from our Energy Management Program over and above individual examples shown below. We have invested over $10M, with individual projects usually averaging at a 3 year payback time.	11148	Scope 1 Scope 2 (location-based) Scope 2 (market-based)	Voluntary	3400000	10000000	1-3 years	11-15 years	
Energy efficiency: Building services	Philippines Factory: Transformer Baseload Reduction	233	Scope 2 (location-based)	Voluntary	11000	6600	4-10 years	16-20 years	
Energy efficiency: Building services	Philippines Offices: Solar-assisted Air-conditioning For factory Canteen	98	Scope 2 (location-based)	Voluntary	23000	95000	4-10 years	6-10 years	
Green project finance	Pakistan Factory: Solar Photovoltaic grid tied System (153.7 KW) to reduce power cuts and diesel electricity generation	135	Scope 2 (location-based)	Voluntary	41252	242485	4-10 years	16-20 years	
Energy efficiency: Building	Indonesia Factory: Chilled Water System Upgrade in our Printshop facility	728	Scope 2 (location-based)	Voluntary	97378	410200	4-10 years	11-15 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
services									
Energy efficiency: Processes	Kazakhstan Factory: Tobacco Dust Collection System flow rate optimization to save electricity from excessive conditioned air extraction	185	Scope 2 (location-based)	Voluntary	16624	251000	16-20 years	16-20 years	
Energy efficiency: Processes	Russia Factory: Heating by recovering free heat from gas generators and used for preheating domestic hot water	437	Scope 1	Voluntary	16500	39000	1-3 years	6-10 years	
Energy efficiency: Processes	Turkey Factory: Heat Recovery From production Vacuum Pumps	127	Scope 1	Voluntary	17000	32000	1-3 years	6-10 years	
Energy efficiency: Building fabric	Poland Factory: replacing of metal-halide lighting source for LED one in two production buildings	1000	Scope 2 (location-based)	Voluntary	99000	300000	4-10 years	11-15 years	
Energy efficiency: Building services	Lithuania Factory: Replacement of old chiller with high performance magnetic bearings Turbo Core type.	292	Scope 2 (location-based)	Voluntary	311231	120000	1-3 years	11-15 years	
Energy efficiency: Processes	Czech Republic Factory: Heat recovery from different process points (Exhaust gas, Flash Steam, Vacuum)	846	Scope 1	Voluntary	41000	126000	4-10 years	6-10 years	
Energy efficiency: Building services	Argentina Stemmery Factory: Steam System Equipment Upgrade	678	Scope 1	Voluntary	49900	1150000	16-20 years	>30 years	
Energy efficiency:	Brazil Factory: Pre-heating of water for boiler feed using boiler outlet	66	Scope 1	Voluntary	13371	3846	<1 year	11-15 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Building services	water, reducing fuel consumption								
Energy efficiency: Building services	Argentina Factory: Air compressors upgraded to high efficient VSD technology in our Factory	16	Scope 2 (location-based)	Voluntary	715	150000	>25 years	11-15 years	
Energy efficiency: Processes	Philippines Curing Tobacco Barns: Curing barns efficiency 1,900 upgraded barns. Improvements included installing wall and roof insulations using C48 cartons, installing Venturi furnace, heating pipes, chimney, damper, vents and window.	2519	Scope 3	Voluntary	111842	302400	4-10 years	11-15 years	
Energy efficiency: Processes	Mozambique Curing Tobacco Barns: Curing barns efficiency upgraded in 2,900 barns.	10829	Scope 3	Voluntary	108749	415609	4-10 years	11-15 years	
Low carbon energy installation	Mexico Barns: Conversion in all flue cured barns of fuel from wood to mango trees pruning branches from one of our suppliers.	8602	Scope 3	Voluntary			4-10 years	11-15 years	
Product design	White inner liner: Substitution of metalized paper that is used inside the cigarette package for a white paper. This project is the result of embedding environmental criteria in the innovation process for conventional and RRP products. Concepts like recyclability and reuse of packaging materials; Packaging weight/size are	10300	Scope 1 Scope 2 (location-based) Scope 3	Voluntary	384620	500000	4-10 years	3-5 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	considered in new products.								

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Our Energy Management Program (over US$80M investments from 2010-2016) is aimed to reduce our factories' energy consumption and help achieving greenhouse gas emissions targets. We have targeted a 30% reduction in our scope 1 and 2 carbon footprint by 2020 compared to our 2010 baseline and a 40% and 60% reduction by 2030 and 2040 respectively.
Employee engagement	Through our objective setting, Long-Range Planning process and via employee communications, sharing of tools, guidance and best practices. We gave senior management briefings to all operations employees on sustainability in 2016 and run specific focus days and campaigns.
Compliance with regulatory requirements/standards	We take the opportunity of regulatory developments to achieve energy/emissions reductions (e.g. Switzerland - carbon tax exemption following a process upgrade) and in particular when investing in new processes/facilities (e.g. requirements for renewable energy or energy efficiency) for new facilities in Italy, Mexico and our UK offices.
Lower return on investment (ROI) specification	We consider a longer rate of return (4 years or more) for certain energy savings and renewable energy projects. Using a Marginal Abatement Cost Curve (MACC) methodology, we set in 2016 a price on carbon and created a central governance for renewable investments.
Other	The examples included in 3.3b above are just a few of the Good Agricultural Practices (GAP) activities implemented during 2016. GAP is a broad program covering our tobacco suppliers in 4 themes – Governance, People, Crop and Environment. It includes programs such as Integrated Production Systems which supports farmers to improve yield and farm efficiency on a variety of crops (particularly food crops), not just tobacco. Through GAP we have environmental improvement programs in all

Method	Comment
	the countries where we source tobacco around the world these programs include: - Curing barn efficiency improvements - Fuel switching to greener fuels - Eliminating the use of coal - Increasing the use of biomass - Helping farmers become self-sufficient in their use of wood and in seeking traceable sources of sustainable wood.
Dedicated budget for other emissions reduction activities	We have developed a renewable energy strategy with an initial focus on low-carbon electricity uptake in the EU. We commenced the program in 2012 and continued to add more facilities during 2016. We continue to seek new opportunities to purchase greener energy.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Total estimated annual CO2e savings in metric tonnes CO2e from Implemented projects of 61,224 tons comes from 28,974 tons from scope 1 and 2 projects and 32,250 tons from selected scope 3 projects.

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communicatio	Complete	Pages 48 to 63	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC4.1/Philip_Morris_International_Communication_on_Progr	Our first Communicati

Publication	Status	Page/Section reference	Attach the document	Comment
ns			ess_2015.pdf	on on Progress to the UN Global Compact. In September 2017 a new progress report will be published.
In voluntary communications	Complete	Our website https://www.pmi.com/sustainability .The attachment gives selected copied content from our website	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC4.1/www.pmi.com - sustainability.pdf	A recent update on our website brings sustainability as a key topic for PMI
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	10K Filing page 5	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC4.1/PhilipMorrisInternational_10K_20160214.pdf	
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Page 3, section on Environment, Health and Safety - limited space in our report so we link readers to the climate change info on our website	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC4.1/PMI_2016AR_CompleteAnnualReport.pdf	

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	In various countries around the world, there are electricity and fuel-related levies or taxes and also CO2 related taxes such as the	Increased operational cost	3 to 6 years	Direct	Likely	Low	For our global operations, such levies and taxes are estimated at around US$2M	We are managing these risks by having a comprehensive Energy Management Program (energy and CO2 reduction	The costs associated are generally embedded in our Energy Management Program, with around US$10M already invested

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	climate change levy in the UK and the CO2 tax in Switzerland. We can expect such initiatives to increase.							program), including ambitious CO2 reduction targets for our manufacturing facilities. This program can provide the basis for carbon tax exemptions (e.g. our Swiss affiliate is already exempted due to its energy reduction results) and reductions in the cost to comply with the EU ETS. Standards for the design of new facilities which include low carbon building design (e.g. low carbon building materials and energy efficient lighting) help minimize our risk exposure. Drivers like EU Emissions Trading Scheme (EU ETS) and	specifically in energy monitoring and targeting and an associated $200k/yr management cost. The wider best practice sharing approach and individual energy/CO2 saving projects involve specific investments of approximately $10M per year.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								the Energy Efficiency Directive have led us to consider process changes in our factories, for example replacement of older combustion equipment to newer more efficient plant that can potentially reduce our energy load to beneath the 20MW regulatory threshold. For example during 2014-2016 we were able to delist 4 sites from EU ETS as they moved below the total combustion capacity threshold. For a factory in Russia, following our internal energy and CO2 reduction targets means that the	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								factory will already meet or exceed new state regulations such as the “Energy conservation and improving energy efficiency in the period up to 2020” law.	
Cap and trade schemes	CO2 related schemes such as the EU Emission Trading Scheme (EU ETS) are regulatory frameworks that pose risk of increased operating costs to PMI. PMI owned and operated 1 manufacturing center in Germany with total verified emissions of over 20,000 metric tonnes of CO2 in 2016 that is covered by the EU ETS. We have other	Increased operational cost	3 to 6 years	Direct	Likely	Low	Based on only 1 EU ETS factories in 2016, the annual cost of emissions allowances is expected to be up to $50K in the short term. We will likely onboard new sites into EU ETS during 2017 due to the new RRP production requirements. For Canada, in case the system is put in place as announced and reaches $50 per tonne in	We are managing these risks by having a comprehensive Energy Management Program (energy and CO2 reduction program), including ambitious CO2 reduction targets for our manufacturing facilities. This program can provide the basis for carbon tax exemptions (e.g. our Swiss affiliate is already exempted due to its energy	The costs associated are generally embedded in our Energy Management Program, with around US$10M already invested specifically in energy monitoring and targeting and an associated $200k/yr management cost. The wider best practice sharing approach and individual energy/CO2 saving projects involve specific

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	factories in the EU and EU accession countries which could also become subject to EU ETS following our new RRP products or country accession to the EU in the future. Although the cost of EU ETS carbon credits have been lower in the past several years due to a large surplus of allowances, the cost of allowances is expected to increase due to stricter regulations and more significant long-term reforms to reduce oversupply. According to the European Comission "Manufacturing						2022 the annual cost would be expected to be bellow $100k.	reduction results) and reductions in the cost to comply with the EU ETS. Standards for the design of new facilities which include low carbon building design (e.g. low carbon building materials and energy efficient lighting) help minimize our risk exposure. Drivers like EU Emissions Trading Scheme (EU ETS) and the Energy Efficiency Directive have led us to consider process changes in our factories, for example replacement of older combustion equipment to newer more efficient plant that can potentially	investments of approximately $10M per year.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	industry received 80% of its allowances for free in 2013. This proportion will decrease gradually year-on-year, down to 30% in 2020". This could result in an increase in the operating cost of purchasing allowances in the future. There is a clear international trend towards stricter climate regulations. In addition to EU ETS, other countries and regions are considering and, in some cases, developing similar programs, compatible with EU ETS, in an effort to form a global carbon market. Tighter regulations in this area could							reduce our energy load to beneath the 20MW regulatory threshold. For example during 2014-2016 we were able to delist 4 sites from EU ETS as they moved below the total combustion capacity threshold. For a factory in Russia, following our internal energy and CO2 reduction targets means that the factory will already meet or exceed new state regulations such as the “Energy conservation and improving energy efficiency in the period up to 2020” law.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	indirectly influence our supply chain with regard to energy supply, and increase in electricity prices. As an example, our sites in South Africa and Canada could be subject to future cap and trade schemes. Whereas the former is still under discussion, the later seems to be set at "$10 per tonne in 2018 and rise by $10 a year to reach $50 per tonne in 2022" according to the Government of Canada.								
Product labeling regulations and standards	Regulations requiring carbon labelling on products could impact PMI for both conventional	Increased operational cost	3 to 6 years	Direct	Unlikely	Low	Should product labeling be required for our future products we estimate a cost of over $250K	With respect to our products, potential significant developments in cigarette and packaging	We undertook LCA projects, including revisiting elements of our carbon footprint assessment at a

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	cigarettes and our Reduced-Risk Products (RRPs), which may include electronic components. The business effect could be in two categories a) increased operating cost and b) product differentiation (which could also be an opportunity for PMI).						excluding any additional manufacturing costs associated with labeling.	components or potential new products are assessed through a LCA process for risks and opportunities in relation to our carbon footprint. We use external experts to assist us in this process.	cost of approximately $100K in 2015 that resulted in a more accurate baseline and model in 2016. In 2016 Due to the ramping up of RRP products, a clear understanding on the impacts at design and once our first factories were up and running was needed. Therefore an external consultant worked with our EHS department to develop an LCA project around RRPs. As a result, the study has highlighted the impact that RRPs will have in our footprint and plans in product development, manufacturing,

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									distribution and rest of value chain have been implemented to mitigate their impact in our footprint.
Product labeling regulations and standards	Currently there are no global, climate change-related, labeling standards that could coherently be applied to tobacco products. If such requirements were introduced then uneven or inconsistent implementation by regulators could result in some adverse impacts on PMI.	Reduced demand for goods/services	3 to 6 years	Direct	Unlikely	Low	Should product labeling be required for our future products we estimate a cost of over $250K excluding any additional manufacturing costs associated with labeling.	With respect to our products, potential significant developments in cigarette and packaging components or potential new products are assessed through a LCA process for risks and opportunities in relation to our carbon footprint. We use external experts to assist us in this process.	We undertook LCA projects, including revisiting elements of our carbon footprint assessment at a cost of approximately $100K in 2015 that resulted in a more accurate baseline and model. In 2016 Due to the ramp up of RRP products, a clear understanding on the impacts at design and once our first factories were up and running was needed. Therefore a external consultant

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									worked with our EHS department to develop an LCA project around RRPs. As a result, the study has highlighted the impact that RRPs will have in our footprint and plans in product development, manufacturing, distribution and rest of the value chain have been implemented to mitigate their impact in our footprint.
General environmental regulations, including planning	Many of our factories are subject to general environmental regulations, including emissions limits and permitting. Any new factories and other facilities	Increased capital cost	3 to 6 years	Direct	Likely	Low	Tighter environmental regulation in the future could cost over $1M per year across our global facilities.	We are managing these risks by having a comprehensive Energy Management Program (energy and CO2 reduction program), including ambitious CO2	The costs associated are generally embedded in our Energy Management Program, with around US$10M already invested specifically in energy monitoring and

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	will need to ensure that environmental considerations are fully addressed at the design stage. For example, the Energy Efficiency Directive in the EU and other local regulations have an impact on the design of new facilities that we are currently building in Italy.							reduction targets for our manufacturing facilities. This program can provide the basis for carbon tax exemptions (e.g. our Swiss affiliate is already exempted due to its energy reduction results) and reductions in the cost to comply with the EU ETS. Standards for the design of new facilities which include low carbon building design (e.g. low carbon building materials and energy efficient lighting) help minimize our risk exposure. Drivers like EU Emissions Trading Scheme (EU ETS) and the Energy Efficiency Directive have	targeting and an associated $200k/yr management cost. The wider best practice sharing approach and individual energy/CO2 saving projects involve specific investments of approximately $10M per year.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								led us to consider process changes in our factories, for example replacement of older combustion equipment to newer more efficient plant that can potentially reduce our energy load to beneath the 20MW regulatory threshold. For example during 2014-2016 we were able to delist 4 sites from EU ETS as they moved below the total combustion capacity threshold. For a factory in Russia, following our internal energy and CO2 reduction targets means that the factory will already meet or exceed new	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								state regulations such as the “Energy conservation and improving energy efficiency in the period up to 2020” law.	
Emission reporting obligations	In various countries around the world we are subject to electricity and fuel related reporting obligations such as the National Greenhouse and Energy Reporting requirement in Australia and new tax code related regulations in the Ukraine and Germany.	Increased operational cost	3 to 6 years	Direct	Likely	Low	More environmental reporting obligations in the future could cost approximately $1M per year across our global facilities.	We have purchased and installed data collection and reporting software for our energy and climate change data. This covers all our manufacturing facilities and staff are trained as both data contributors and data validators. This system undergoes internal and external data audit.	Project costs of $1M, ongoing operational and maintenance costs of up to $200k per year.

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	Supply Chain-Tobacco Leaf: Tobacco leaf growing is strongly influenced by physical climate change such as changes in temperature, precipitation and cyclones (hurricanes and typhoons). PMI sources tobacco from more than 30 countries across the world. Increased drought / flooding could disturb the tobacco leaf life cycle stages (seedling, transplanting, growing, harvesting). The yield, quality and availability of the tobacco crop could be influenced by the seasonal frequency and the intensity of such extreme rainfall events and even	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low-medium	Depending on the size of the area impacted, the financial implications would vary significantly, however the incremental financial implications from these risks are currently assessed to be low (less than 10 million US$). However, in an extreme case where simultaneous crop failures or tobacco shortages occur the potential implications are around 100 million US$; such a situation is very unlikely.	Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks; tobacco crops can also be relocated if some growing areas become more favorable than others. In addition, our substantial inventories of tobacco leaf can help to mitigate short term impacts and adjustments to our procurement patterns can also be made. We are also researching drought tolerant seed varieties. Other tools that we use in	The data from our risk assessments identifies key areas which could be the base of longer term actions. We have already identified our key assets at risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	events. This could change our crop buying pattern and result in increased operational cost. Extreme rainfall may require pumping of excess water, similarly, extreme droughts could require long-term irrigation, both of which increase energy consumption, and the tobacco production cost. With respect to our supply chain, the transportation of raw materials and finished goods, as well as availability of ports could be interrupted; similarly damage to stocks in storage facilities such as warehouses would have knock-on impacts on the productivity of our manufacturing centers. Extreme rainfall could cause damage to buildings including						In 2016, despite being the warmest year ever recorded according to NASA, no significant issues in the growing areas where PMI Leaf is operating can be reported.	identifying significant risks and/or opportunities from climate change include the following: Climate change risk assessments, Facility risk management (insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation. The results of such assessments are used to inform our long term business planning. We have just embarked on an assessment of water risk to	estimated at $100,000. The cost of implementing GAP is estimated at several million US$. Insurance costs are not specific to climate change. In 2016, no relevant tobacco crops relocation occured due to the abscence of major climate change impacts in our leaf crops growing areas.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	our manufacturing centers which would increase our cost both in management and insurance fees. The risk of damaged goods and impacts on manufacturing centers and our supply chain could weaken our ability to efficiently supply products to our customers. Overall, the well-being of societies, for example farmers in tobacco growing areas, would be impacted. PMI's operations are widely spread, mitigating the effects of severe catastrophic climatic disruption. Furthermore, PMI's business continuity management plans are designed to mitigate the consequence of supply chain interruption and disruption caused by building							leaf production facilities and are planning to develop a water stewardship strategy which will incorporate the findings from the climate risk assessment in order to better understand our exposure to changes in water availability in the future at a catchment and thereby develop measures to support farmers and/or remove the risk from our supply chain.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	damage, and or stock/material damage.								
Change in precipitation extremes and droughts	Supply Chain: Clove is an important raw material for PMI to use in our local kretek brands. Indonesia produces over 70% of the world's cloves. It takes at least 5-7 years for clove trees to become productive and 20-40 years before they reach peak production. Yields are complex; harvests can vary by up to 60% over a 4 year harvest cycle. Clove production is weather sensitive, projected increases in temperature, dry-spell duration, intensification of the wet season and increasing soil-moisture levels would impact clove growing areas such as Indonesia (e.g.	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low-medium	Depending on the size of the area impacted, the financial implications would vary significantly, however the incremental financial implications from these risks are currently assessed to be low (less than 10 million US$). However, in an extreme case where simultaneous crop failures or clove shortages occur the potential implications are around 100 million US$; such a situation is	Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks; tobacco crops can also be relocated if some growing areas become more favorable than others. In addition, our substantial inventories of tobacco leaf can help to mitigate short term impacts. Adjustments to our procurement patterns can also be made. Other tools that we use in identifying significant risks and/or opportunities	The data from our risk assessments identifies key areas which could be the base of longer term actions. We have already identified our key assets at risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	damages to bud development; more pest and disease problems from increased rainfall, and oscillation between drought / flooding presenting difficulties to small scale farmers and clove trees). This would reduce the yield, supply and increase the price of cloves.						very unlikely. In 2016, despite being the warmest year ever recorded according to NASA, no significant issues in the growing areas where PMI Leaf is operating can be reported.	from climate change include the following: Climate change risk assessments, Facility risk management (insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation, including Water risk assessments. The results of such assessments are used to inform our long term business planning.	and resources estimated at $100,000. The cost of implementing GAP is estimated at several million US$. Insurance costs are not specific to climate change.
Change in mean (average) temperature	A change in the mean (average) temperature could affect our own	Increased operational cost	>6 years	Direct	Virtually certain	Low-medium	Depending on the size of the area impacted, the	Our agricultural supply chain is widely spread around the	The data from our risk assessments identifies key

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	operations and those of our suppliers globally (manufacturing, agriculture and other business operations). In terms of agricultural impact, the quality and yield of tobacco crop and other raw materials we use could be affected. While a slight increase in average temperature can lengthen the tobacco growing season in some regions, it can adversely impact the yield and quality of the crop where summers are long and already hot. An increase of average temperature may cause drought, which in turn results in crops needing irrigation. This would impact our energy consumption, and the tobacco production cost. Overall, change in						financial implications would vary significantly, however the incremental financial implications from these risks are currently assessed to be low (less than 10 million US$). However, in an extreme case where simultaneous crop failures or tobacco shortages occur the potential implications are around 100 million US$; such a situation is very unlikely. In 2016, despite being the warmest year ever recorded according to NASA, no	world, which helps to mitigate climate related risks; tobacco crops can also be relocated if some growing areas become more favorable than others. In addition, our substantial inventories of tobacco leaf can help to mitigate short term impacts. Adjustments to our procurement patterns can also be made. Other tools that we use in identifying significant risks and/or opportunities from climate change include the following: Climate change risk assessments, Facility risk management	areas which could be the base of longer term actions. We have already identified our key assets at risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources estimated at $100,000. The cost of implementing GAP is estimated at several million

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	mean (average) temperatures from climate change would also increase the use of air conditioning or heating systems, leading to increases in demand for energy. In 2016, despite being the warmest year ever recorded according to NASA, no significant issues in the growing areas where PMI Leaf is operating can be reported.						significant issues in the growing areas where PMI Leaf is operating can be reported.	(insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation, including Water risk assessments. The results of such assessments are used to inform our long term business planning.	US$. Insurance costs are not specific to climate change.
Sea level rise	Rising sea levels in leaf growing areas, as well as near to manufacturing and warehouse centers (e.g. the Netherlands, and some Asian manufacturing centers), could impact our leaf sourcing (yields and	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low	The financial implications of these risks vary depending on the asset that is impacted. The threat of flooding in the Netherlands and cyclones in the	Adjustments to our procurement patterns can be made and inventories managed. Other tools that we use in identifying significant risks and/or	The data from our risk assessments identifies key areas which could be the base of longer term actions. We have already identified our key assets at

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	quality) and disrupt our supply chain distribution. This could cause sourcing delays and manufacturing impacts which would result in reduction/disruption to production volumes. Rising sea levels could also impact ground water, which is used for consumption and irrigation. Water treatment processes (chemical/physical) for consumption, irrigation and for manufacturing use could be costly and increase our energy consumption. Rising sea levels could also leave people (farmers, manufacturing employees, and others) who live in low lying areas in danger of being flooded, resulting in people movement.						Philippines could cause damage in our manufacturing and warehouse sites (estimate US$10-20M for each location). Damage to raw materials and finished goods could escalate to around US$100M but that is considered very unlikely.	opportunities from climate change include the following: Climate change risk assessments, Facility risk management (insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation, including Water risk assessments. The results of such assessments are used to inform our long term business planning.	risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources estimated at $100,000. The cost of implementing GAP is estimated at several million US$. Insurance costs are not specific to climate change.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Induced changes in natural resources	Change in climatic variability and extreme events such as changes in the frequency and severity of heat waves, drought, floods and hurricanes could affect the distribution of pests and beneficial predators. This could affect the yield and quality of tobacco crops and of other raw materials we use. Areas at increased risk may include China, the Philippines, some African countries and the Eastern USA where we source tobacco. In 2016, despite being the warmest year ever recorded according to NASA, no significant issues in the growing areas where PMI Leaf is operating can be reported.	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low	Depending on the size of the area impacted, the financial implications would vary significantly, however the incremental financial implications from these risks are currently assessed to be low (less than 10 million US$). However, in an extreme case where simultaneous crop failures or tobacco shortages occur the potential implications are around 100 million US$; such a situation is very unlikely. In 2016, despite being the warmest	Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks; tobacco crops can also be relocated if some growing areas become more favorable than others. In addition, our substantial inventories of tobacco leaf can help to mitigate short term impacts. Adjustments to our procurement patterns can also be made. Other tools that we use in identifying significant risks and/or opportunities from climate change include the following: Climate change	The data from our risk assessments identifies key areas which could be the base of longer term actions. We have already identified our key assets at risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources estimated at $100,000. The cost of

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							year ever recorded according to NASA, no significant issues in the growing areas where PMI Leaf is operating can be reported.	risk assessments, Facility risk management (insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation, including Water risk assessments. The results of such assessments are used to inform our long term business planning.	implementing GAP is estimated at several million US$. Insurance costs are not specific to climate change.
Change in precipitation extremes and droughts	Specific impact of El Niño during 2016.	Reduction/disruption in production capacity	Up to 1 year	Direct	Virtually certain	Low	For our tobacco supply under direct contract with PMI, El Niño impacted in the following ways	Adjustments to our procurement patterns can be made and inventories managed. Our agricultural	The data from our risk assessments identifies key areas which could be the base of longer term actions.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							in 2016: In the Philippines, the impact was medium drought resulting in a volume reduction corresponding to an equivalent financial loss of less than US$ 500K as it affected only the southern growing region and the North could be irrigated thanks to deep wells. In 2016 Latin America, didn't facein any major loss due to El Niño during 2016.	supply chain is widely spread around the world, which helps to mitigate against climate related risks; tobacco crops can also be relocated if some growing areas become more favorable than others. In addition, our substantial inventories of tobacco leaf can help to mitigate against short term impacts. Adjustments to our procurement patterns can also be made. Other tools that we use in identifying significant risks and/or opportunities from climate change include the following: Climate change	We have already identified our key assets at risk of climate change impacts (both PMI owned and in our entire value chain). We invested around US$200,000 in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources estimated at $100,000. The cost of implementing GAP is estimated at several million US$. Insurance costs are not specific to

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								risk assessments, Facility risk management (insurance assessments), Environmental risk assessments (ISO14001), Due Diligence Assessments and Good Agricultural Practices (GAP) Assessments and implementation, including Water risk assessments. The results of such assessments are used to inform our long term business planning.	climate change.

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behavior	Today's consumers expect to see more sustainable products with a lower environmental impact. Ever increasing environmental awareness of consumers influences their product selection and buying decisions. It is widely believed that consumers will continue to place increased value on recyclability and the perceived environmental credentials of packaging – at the same time, demand for proof of sustainability claims could grow, for instance in the demand for	Reduced demand for goods/services	>6 years	Direct	Unlikely	Low-medium	Environmental reputation may become a more significant factor in our customers' purchasing decisions in the future, but at this time, we do not see this risk as significant. We are also aware that regulatory and reputational risk may impact the decisions of our stakeholders, specifically our consumers and shareholders. If these risks were to materialize then they could impact our business by several millions of dollars.	We manage this through corporate sustainability and climate change strategy, programs and transparent communications including our website, our UN Global Compact Communication on Progress, CDP disclosure, carbon footprinting of new products (e.g. biodegradable filters) and packaging developments. We are also looking at initiatives – including strengthening our product LCA – that can help us build closer cooperation within our value chain to help our stakeholders understand environmental	The internal costs associated with these actions are estimated at US $1-2M. Research costs for product developments such as for biodegradable filters can be US$ 1-2M.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	LCA data. Practices that impact climate change could be seen as a brand differentiator for consumers and the environmental reputation of companies and brands could play an increasing role in product demand. Litter from cigarette butts and packaging is an issue that comes under regular public scrutiny. In many of our markets, such as the Philippines, Japan and Switzerland, PMI actively supports programs and campaigns for responsible litter disposal.							impacts of different packaging alternatives.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behavior	Consumers' increased awareness and demands for environmental sustainability claims on the products they buy could drive more manufacturers to display their environmental performance on their packaged products. While this is an opportunity for manufacturers to develop more sustainable products and communicate to their consumers, it could be a challenge for PMI and in general for the tobacco industry due to packaging labeling restrictions on tobacco products. While	Reduced demand for goods/services	>6 years	Direct	Unlikely	Low-medium	Environmental reputation may become a more significant factor in our customers' purchasing decisions in the future, but at this time, we do not see this risk as significant. We are also aware that regulatory and reputational risk may impact the decisions of our stakeholders, specifically our consumers and shareholders. If these risks were to materialize then they could impact our business by several millions of dollars.	We manage this through corporate sustainability and climate change strategy, programs and transparent communications including our website, our UN Global Compact Communication on Progress, CDP disclosure, carbon footprinting of new products (e.g. biodegradable filters) and packaging developments	The internal costs associated with these actions are estimated at in excess of US $1M.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	this risk is not yet materialized, examples of packaging labeling restrictions are discussed or in some cases already in practice in Australia, EU and Canada.								
Reputation	There is a risk that society does not view our company positively with respect to our environment and climate change credentials. The investor and consumer perceptions about PMI's climate change actions could affect the reputation and consumer demand for our products and may limit investment	Reduced demand for goods/services	>6 years	Direct	Unlikely	Low	Environmental reputation may become a more significant factor in our customers' purchasing decisions in the future, but at this time, we do not see this risk as significant. We are also aware that regulatory and reputational risk may impact the decisions of our stakeholders, specifically our consumers and shareholders.	We manage this through corporate sustainability and climate change strategy, programs and transparent communications including our website, our UN Global Compact Communication on Progress, CDP disclosure, carbon footprinting of new products (e.g. biodegradable filters) and packaging developments	As an example we will have invested over US$80M in our Energy Management Program from 2010-16, typically an investment of around $10M each year on specific improvement projects.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	opportunities. While we consider this risk to be low, PMI focuses on mitigating this risk by continuously reducing our Scope 1, 2 and 3 emissions and focusing on other areas of environmental sustainability.						If these risks were to materialize then they could impact our business by several millions of dollars.	Our programs to drive our performance improvement, such as the Energy Management Program and our renewables strategy are particularly important.	
Fluctuating socio-economic conditions	Physical changes in climate such as global warming are projected to result in decreased water availability and crop productivity in many parts of the world. There is also a risk that the exacerbation of the recent economic crisis due to climate change could	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low	Fluctuating socio-economic conditions exacerbated by climate change related issues could increase price sensitivity and lead to the need to adjust product portfolios. If these risks were to materialize then they could impact our business by several millions of dollars.	General business risk management and forecasting - managing our supply chain and making adjustments to our procurement patterns and inventory management.	This is an internal cost within the general running of our business and is not separately quantifiable.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	disrupt tobacco growing / production capacity and also further impact consumer's disposable income. For example, Africa's vulnerability to climate change is linked to the strength of the agricultural industry in many African countries; PMI currently sources around 20% of its tobacco from Africa. Climate change could impact land and resource availability (due to migration to cities) as well as resulting in lower crop yields and quality. This in turn could impact PMI's tobacco								

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sourcing strategy.								
Increasing humanitarian demands	The risk that climate change related issues cause agricultural prioritization for food crops over non-food crops. Extreme weather conditions such as droughts and heavy precipitation, linked to the population size of communities could be disrupting factors to non-food production capacity, as the growing demand for food crops could be prioritized over non-food crops. Specifically in Africa there is a risk in some areas that shortages of wood could	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low-medium	It is possible that future regulatory initiatives could seek to prioritize agricultural food crops (in terms of water supply, land availability etc.) over non-food crops, thereby impacting the security of our supply chain. If this risk were to materialize then it could impact our business by many millions of dollars.	PMI has developed a Good Agricultural Practices (GAP) program to specifically address and minimize the impacts of tobacco farming and protect our supply chain in the long term. GAP includes a section on water use and minimization which also covers security of supply issues. Many projects that we are involved in support water security measures across communities, not just focused on tobacco growing (e.g. water dams in Malawi). In addition, during 2016 we continued to	This is largely an internal cost which is estimated at over US$1M per year. In terms of GAP activities, we have invested around $20M to date for one set of programs and in an average year expect to invest $2-5M

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	lead to prioritized consumption for other purposes and thereby restrict the use of wood as a fuel for curing tobacco.							implement initiatives such as Integrated Production Systems which supports farmers to improve yield and farm efficiency on a variety of crops (particularly food crops), not just tobacco. GAP also focuses on improving the sustainability of fuels used for curing tobacco.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	Expansion of EU ETS or similar schemes to other countries and regions (e.g. Australia, Mexico) or in the growth of other PMI factories in the EU or EU accession countries. There is the potential to use our experience of these schemes to enable performance ahead of allocated emissions and thereby generate carbon credits. Starting from 2 EU affiliates (Netherlands and Portugal (de-listed in 2016)) which were in the EU ETS in 2015, there is the potential to trade internally with other PMI affiliates and generate Energy and CO2 savings.	Reduced operational costs	3 to 6 years	Direct	More likely than not	Low	Estimated at up to US$1M based on current financial exposure in the EU and potential future inclusion of larger manufacturing centers such as in Russia.	We track this through our Energy Management Program and regulatory radar screen.. Specifically we have deployed energy monitoring and targeting software in our facilities so that energy intensities are understood by process and best practices can be shared. This means that the lessons learnt at regulated facilities can be readily applied in other locations. In 2016 a special focus has been put to establish benchmark our utilities	There is no incremental cost associated with the Energy Management Program as we are already implementing it for energy reduction purposes. However, the cost of this program is over US$80M from 2010-2016. The energy monitoring and targeting software also required installation of meters and has cost $10M overall with $200k spent in 2016 on software maintenance and upgrades.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								performance and to put special program to upgrade low performing systems in the next 3 years. Training is other pillar that has been reviewed in 2016 and regional coordinators have been sent to a learning factory training program that now is being replicated at every factory to refresh basic strategies for saving energy (performance tracking, pinch analysis, theoretical limit analysis, baseload reduction...).	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Subsidies for renewable Energy generation have been developed in different countries and we factor in these subsidy plans to our cost-benefit analyses for pertinent projects so that improved return on investment can potentially be delivered. Cost-Benefit analyses and renewable energy assessments have been performed in Turkey, Philippines, Portugal and Poland. We also have the potential to identify and support Clean Development Mechanism (CDM) project opportunities for our tobacco leaf suppliers.	Other: Reduced operational costs and Energy security	3 to 6 years	Direct	More likely than not	Low	Estimated at over US$1M.	We track this through our Energy Management Program and regulatory radar screen.. Specifically we have deployed energy monitoring and targeting software in our facilities so that energy intensities are understood by process and best practices can be shared. This means that the lessons learnt at regulated facilities can be readily applied in other locations. In 2016 a special focus has been put to establish benchmark our utilities	There is no incremental cost associated with the Energy Management Program as we are already implementing it for energy reduction purposes. However, the cost of this program is over US$80M from 2010-2016. The energy monitoring and targeting software also required installation of meters and has cost $10M overall with $200k spent in 2016 on software maintenance and upgrades.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								performance and to put special program to upgrade low performing systems in the next 3 years. Training is other pillar that has been reviewed in 2016 and regional coordinators have been sent to a learning factory training program that now is being replicated at every factory to refresh basic strategies for saving energy (performance tracking, pinch analysis, theoretical limit analysis, baseload reduction...).	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Compliance with country specific legislation provides PMI with the opportunity to reduce energy consumption and lower our CO2 emissions, and therefore reduce our operational cost. Such opportunities exist in the form of: a) Energy taxes, such as in Germany, which encouraged PMI to implement an Energy Management Program to ISO 50001 that will allow us to reduce energy tax costs. b) EU ETS - 2 EU affiliates (Netherlands and Portugal (de-listed in 2016)) have the potential to trade internally with other PMI affiliates that could generate Energy savings. Opportunities are linked to widening markets and EU ETS carbon trading processes to include EU accession countries where PMI has facilities. Also, in Switzerland our affiliate	Other: Reduced operational costs and Energy security	3 to 6 years	Direct	More likely than not	Low	Estimated at up to US$800,000 energy tax reduction in Germany based on ISO 50001 certification.	We track this through our Energy Management Program and regulatory radar screen.. Specifically we have deployed energy monitoring and targeting software in our facilities so that energy intensities are understood by process and best practices can be shared. This means that the lessons learnt at regulated facilities can be readily applied in other locations. In 2016 a special focus has been put to establish benchmark our utilities	The cost for ISO 50001 development and certification is estimated to be no more than US$50,000 per location.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	obtained CO2 tax exemptions due to energy saving objectives and programs that are in place within PMI. c) Energy Efficiency Directive – promoting energy reduction at source (all EU factories) and reviewing the potential for combined heat and power. d) Incentives & Infrastructure/Buildings upgrade – for renewable energy and buildings upgrade e) Energy Labeling Directive – for PMI's conventional products and potential future Reduced-Risk Products (which can have related electronic components).							performance and to put special program to upgrade low performing systems in the next 3 years. Training is other pillar that has been reviewed in 2016 and regional coordinators have been sent to a learning factory training program that now is being replicated at every factory to refresh basic strategies for saving energy (performance tracking, pinch analysis, theoretical limit analysis, baseload reduction...).	

CC6.1b

Please describe your inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Tobacco curing is an important step in tobacco production. Around 8 metric tonnes of wood can be used per tonne of flue-cured tobacco. Due to potential physical climate changes, such as an increase in temperature, PMI may have a reduced need for energy (tonnes of wood), or other energy sources (such as renewable technologies) could become more cost effective.	Increased production capacity	>6 years	Indirect (Supply chain)	About as likely as not	Low	The financial benefit is in terms of reduced fuel wood costs for tobacco farmers. However corresponding reductions in the cost of production can lead to a benefit for PMI in the order of US$10M.	To address Climate Change risks, we implemented our Good Agricultural Practices (GAP) program. This comprehensive program includes mandatory requirements for our tobacco suppliers and is supported by the PMI Leaf Department who provide specific guidance on implementation to regional agronomy teams. Curing Barn improvement case studies and guidance are provided. As a result of our work more than 450,000 farmers have access to guidance and ways to make their crops more resistant to climate	Barn efficiency improvement costs can be as little as a few hundred dollars per barn but overall carbon improvement programs for farmers run to approximately US$10M per year.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								change. While an increase in temperature may provide an opportunity to PMI in terms of reduced energy need, we already have focused programs to increase the efficiency of our curing barns. Just in recent years, (including 2016), we have helped our tobacco suppliers finance efficiency improvements for over 10,000 curing barns, generating an estimated saving of the equivalent of more than 500,000 trees equivalent.	
Change in mean (average) precipitation	Supply Chain-Tobacco Leaf: Tobacco leaf growing is strongly influenced by physical climate change such as changes in precipitation. PMI sources tobacco from around 30 countries across	Increased production capacity	>6 years	Indirect (Supply chain)	About as likely as not	Low	Increased tobacco yields can provide benefits in excess of US$10M.	We continually review promising tobacco leaf growing areas and assess if climate change elements could favor increased yield. We implement our Good Agricultural Practices (GAP). This comprehensive	The cost of this work is mainly internal time and resources, and is estimated at US$1M per year. Implementation of specific programs like continuous production is additional.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	the world. Increased precipitation could impact the tobacco leaf life cycle stages (seedling, transplanting, growing, harvesting). Water-short leaf growing areas could benefit from increases in precipitation (i.e. level, timing and variability) due to increases in soil moisture. This could positively impact the tobacco crop patterns; crop production capacity and quality. Continuous Production (crop production all year round) could become more applicable.							program includes mandatory requirements for our tobacco suppliers and is supported by the PMI Leaf Department who provide specific guidance on implementation to regional agronomy teams. We are also actively researched drought tolerant seed varieties in 2016.	
Change in mean (average) precipitation	Supply Chain-Clove production: Clove is an essential raw	Increased production capacity	>6 years	Indirect (Supply chain)	About as likely as not	Low	Increased clove yields can provide benefits in the order of	We review promising clove growing areas and assess if climate	The cost of this work is mainly internal time and resources, and is

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	material for PMI to use in our local kretek brands. Indonesia produces over 70% of the world's cloves. It takes at least 5-7 years for clove trees to become productive and 20-40 years before they reach peak production. Yields are complex; harvests can vary by up to 60% over a 4 year harvest cycle. Clove production is weather sensitive, and climate changes such as steady rainfall could provide steady wet season for clove growing areas increasing the clove production volume and improving the crop quality.						US$10M.	change elements could favor increased yield. We implement our Good Agricultural Practices (GAP). This comprehensive program includes mandatory requirements that we adapt for clove suppliers and is supported by the PMI Leaf Department who provide specific guidance on implementation to regional agronomy teams.	estimated at US$1M per year. Implementation of specific programs is additional.

CC6.1c

Please describe your inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	We expect that by tackling sustainability and climate change issues appropriately, our company reputation could be enhanced. Opportunities for PMI include the following: 1) Appropriate product labeling of sustainability performance for PMI's customers and consumers. Displaying such sustainability performance on our products could enhance the differentiation of PMI's brands and increase the company's competitive advantage. 2) Environmental information for our key accounts/ retailers, to meet the growing interest of our key accounts/ retailers in	Increased demand for existing products/services	1 to 3 years	Direct	About as likely as not	Low-medium	As an estimate, US$10M.	Corporate Sustainability and climate change strategy, programs and communications including our UN Global Compact Communication on Progress, our website, social media and this CDP disclosure. In terms of managing the opportunities put forward in the 'Description' column, 1) appropriate product labelling of sustainability performance for PMI's customers and consumers would be the outcome of a rigorous verified product LCA of PMI's products to identify their life cycle CO2 emissions performance. 2) To meet the	The internal costs associated with these actions are estimated at US$2M.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sustainability practices 3) Supply Chain engagement, leading performance in these areas could attract new investors and also increase our attractiveness as an employer.							growing interest of our key accounts/ retailers in sustainability practices, we continue to increase our emphasis on our products' LCA within our value chain and provide company information on our sustainability performance. 3) We are working towards strengthening our product LCA process to help us build closer cooperation within our supply chain and help our partners to understand the upstream environmental impacts of different material alternatives (e.g. for packaging components) and the direction PMI is taking in product	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								developments. In PMI, we closely follow consumer and market sustainability trends and engage with our suppliers on the development of new materials to be in line with these growing trends.	
Changing consumer behavior	Consumers are increasingly interested in climate change and sustainability aspects of products and many of our trade customers reflect that interest. By working with our customers, sharing company performance strategies and assessing changes due to product developments, we could provide more detailed information on our environmental performance. Specifically,	New products/business services	1 to 3 years	Direct	More likely than not	Low	Successful product developments could provide benefits of over US$10M.	Corporate Sustainability and climate change strategy, programs and communications including our UN Global Compact Communication on Progress, our website, social media and this CDP report, carbon footprint/LCA reviews of new product and packaging developments. Consumer insights research into the potential for eco product	The internal costs associated with these actions are estimated at US$2-5M.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	environmental performance information relating to individual product/packaging components could improve the differentiation of PMI's brands and increase our competitive advantage. Furthermore, trends in eco products increase the demand for, and availability of, new environmentally sustainable materials, or new usage of existing materials. An example of this in PMI includes the use of rice husk briquettes as fuel in the Philippines, and nut kernels as fuel in Indonesia.							developments.	

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Fri 01 Jan 2010 - Fri 31 Dec 2010	443186
Scope 2 (location-based)	Fri 01 Jan 2010 - Fri 31 Dec 2010	470864
Scope 2 (market-based)	Fri 01 Jan 2010 - Fri 31 Dec 2010	470864

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
ISO 14064-1
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fifth Assessment Report (AR5 - 100 year)
CH4	IPCC Fifth Assessment Report (AR5 - 100 year)
N2O	IPCC Fifth Assessment Report (AR5 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other:			See Attachment

Further Information

PMI 2016 conversion/emission factors attached

Attachments

https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/Fuel Conversion and GHG Emission Factors 2016.xlsx

Page: CC8. Emissions Data - (1 Jan 2016 - 31 Dec 2016)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

351990

CC8.3

Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We are reporting a Scope 2, market-based figure	

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
450261	314049	

CC8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	Less than or equal to 2%	Extrapolation	For some of our offices and warehouses there is no primary data available currently and therefore extrapolation from other sites in the region is used.
Scope 2 (location-based)	Less than or equal to 2%	Extrapolation	For some of our offices and warehouses there is no primary data available currently and therefore extrapolation from other sites in the region is used.
Scope 2 (market-based)	Less than or equal to 2%	Extrapolation	For some of our offices and warehouses there is no primary data available currently and therefore extrapolation from other sites in the region is used.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC8.6a/PMI GHG	Page 1 total Scope 1 and 2, Page 2 method	ISO14064-3	100

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
			Verification Statement 2016 external -.pdf	and scope, Page 3 specific Scope 1,2 and 3 numbers.		

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Market-based	Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC8.7a/PMI GHG Verification Statement 2016 external -.pdf	Page 1 total Scope 1 and 2, Page 2 method and scope, Page 3 specific Scope 1,2 and 3 numbers.	ISO14064-3	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Other: Operations EHS KPIs	Operations EHS KPIs - energy, water and waste data as well as production volume data (for normalization) and safety KPIs.
Year on year change in emissions (Scope 1 and 2)	As part of the verification process, our emission factors that are updated yearly using DEFRA, IEA and utility specific, are reviewed and the process to calculate new emissions verified. As a result the change in year on year change in emissions in scope 1 and 2.
Year on year emissions intensity figure	Production volumes and intensity figures were part of the third party verification process

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

3319

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Albania	105
Algeria	10
Argentina	8594
Armenia	147
Australia	1553
Bangladesh	104

Country/Region	Scope 1 metric tonnes CO2e
Netherlands	28389
Bosnia and Herzegovina	123
Brazil	15389
Bulgaria	218
Canada	3177
Chile	126
China	254
Colombia	2860
Costa Rica	1157
Croatia	334
Czech Republic	5317
Denmark	172
Dominican Republic	1215
Ecuador	1667
Egypt	583
El Salvador	313
Estonia	21
Finland	119
France	1481
Georgia	155
Germany	22524
Greece	3238
Guatemala	315
Hong Kong	143
Hungary	713
India	137
Indonesia	43589
Israel	1255
Italy	2301
Japan	6453
Jordan	562
Kazakhstan	4812

Country/Region	Scope 1 metric tonnes CO2e
South Korea	3199
Kuwait	111
Latvia	55
Lebanon	110
Lithuania	1821
Macau	1
Malaysia	13206
Mexico	11379
Moldova	88
Morocco	148
New Zealand	150
Nicaragua	16
Norway	50
Pakistan	8425
Panama	60
Paraguay	32
Peru	151
Philippines	47138
Poland	13568
Portugal	6440
Réunion	121
Romania	5163
Russia	39905
Senegal	1911
Serbia	5963
Singapore	568
Slovakia	471
Slovenia	131
South Africa	1490
Spain	1351
Sweden	269
Switzerland	3405

Country/Region	Scope 1 metric tonnes CO2e
Taiwan	349
Tanzania	21
Thailand	1519
Tunisia	49
Turkey	9152
Ukraine	8748
United Arab Emirates	604
United Kingdom	74
Uruguay	42
Venezuela	204
Vietnam	318
Rest of world	4389

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Manufacturing	229116
Vehicle Fleet	118487

Activity	Scope 1 emissions (metric tonnes CO2e)
Aircraft	3947
Offices	440

Further Information

Rest of World – includes offices (including our New York Headquarters and Swiss Operations Center) and private aircraft emissions for which our data is not broken down by country

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Argentina	13104	12366	35333	0

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Brazil	2154	2154	16044	0
Canada	2284	0	14418	14418
Colombia	1503	1503	8259	0
Costa Rica	104	104	1302	0
Czech Republic	12269	0	23757	23757
Dominican Republic	1741	1741	2987	0
Ecuador	662	662	1896	0
Germany	35186	132	72388	69406
Greece	12379	12379	19061	0
Indonesia	88239	99690	115919	0
Italy	2155	0	6288	6288
Jordan	2745	2745	4293	0
Kazakhstan	5248	5248	10588	0
South Korea	10408	9129	19423	0
Lithuania	4588	0	22461	22461
Malaysia	7038	7038	10154	0
Mexico	13212	13212	26089	0
Pakistan	1752	1752	4211	0
Philippines	40760	40760	70648	0
Poland	50531	2260	65707	54657
Portugal	7044	0	25037	25037
Romania	6446	2532	18087	0
Russia	34630	31205	78817	0
Senegal	2575	2575	4360	0
Serbia	15093	15093	20191	0
South Africa	3280	3280	3541	0
Switzerland	239	0	10034	10034
Turkey	30583	17279	69117	0
Ukraine	13084	13079	27748	0

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Venezuela	892	892	3562	0
Netherlands	12533	0	27721	27721
Rest of world	15800	15239	97384	23513

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By facility

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
Manufacturing	434460	298810
Offices and datacenters	15800	15239

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)

Further Information

Rest of World – includes our offices (including our New York Headquarters and Swiss Operations Center) and datacenters for which we do not separately enter by country. Rest of the world emissions and purchased electricity are estimates based on extrapolation from data from our sites.

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Heat	14033
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

1348824

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Jet kerosene	15149
Biogasoline	3227
Brown coal	41348
Diesel/Gas oil	250645
Distillate fuel oil No 4	40901
Motor gasoline	260865

Fuels	MWh
Natural gas	700917
Propane	0
Liquefied petroleum gas (LPG)	26264
Wood or wood waste	9508

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
Contract with suppliers or utilities, supported by energy attribute certificates	248841	0	Renewable energy (certified green electricity) procurement for the majority of our EU facilities commenced in 2014, all certificates are available for 2016
Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates	14418	0	Supply contract with HydroQuebec for our Canadian factory
Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates	14033	0.044	Emission factor due to the District Heating supply for our factory in Dresden

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
923345	922792	553	553	553	

Further Information

Total electricity consumed 825960 includes our manufacturing centres only and not offices and datacentres (Rest of the world in question CC10.1a) since our manufacturing data is primary data and offices & datacentres data is an estimate based on extrapolated data from our sites

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	4.2	Decrease	In 2016, 28974 tCO2e of Scope 1 and 2 emissions were reduced by our emissions reduction activities. Our total Scope 1 and 2 emissions in the previous year were 691,044 tCO2e. Therefore, we arrived at a 4.2% decrease: 28974/691044)*100 = 4.2.

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Divestment	0	No change	PMI did not have any divestments in 2016.
Acquisitions	0	No change	PMI did not have any acquisitions in 2016.
Mergers	0	No change	PMI did not have any mergers in 2016.
Change in output	1.6	Decrease	In 2016, 10786tCO2e of Scope 1 and 2 were reduced due to a decrease in output. Our total Scope 1 and 2 emissions in the previous year were 691,044 tCO2e. Therefore, we arrived at a 1.6% decrease: (10786/691044)*100=1.6%. The main drivers for this were a decrease in production volume in 2016 and kms driven by our vehicle fleet, partially offset by some increasing production complexity.
Change in methodology	1.7	Increase	In 2016, 12087 tCO2e of Scope1 were added due to a change in the fleet emission factors. We decided to change our emission factor for calculating emissions from our fleet from biofuel blend to 100% mineral to better represent the situation in most of the countries PMI uses its vehicles. Therefore, we arrived at a 1.7% increase [(12087/691,044)*100=1.7%]
Change in boundary	0	No change	PMI did not have any changes in boundary in 2016.
Change in physical operating conditions	0.4	Increase	In 2016, 2667 tCO2e of Scope 1 and 2 were increased due to the needs to transform our current factories into the production of RRPs. This transformation is impacting our emissions while these factories are still preparing or ramping up the production. Therefore, we arrived at a 0.4% increase:(2667/691044)*100=0.4%
Unidentified	0	No change	PMI did not have any unidentified changes to the inventory in 2016.
Other	0	No change	PMI did not have any other changes to the inventory in 2016.

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.000025	metric tonnes CO2e	26685000000	Market-based	3	Decrease	Decrease in absolute CO2e emissions by 3.6% (from 691,044 tCO2e in 2015 to 666,039 tCO2e in 2016), mainly driven by emission reduction activities in our manufacturing facilities offset and flat effect in net revenue. The intensity number is derived from our 2016 CO2e emissions divided by net revenues of US$26.7 billion. A combination of favorable pricing and judicious cost management drove strong currency-neutral financial results. The term “net revenues” refers to operating revenues from the sale of our products, excluding excise taxes, and net of sales and promotion incentives.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
8.38	metric tonnes CO2e	full time equivalent	79500	Market-based	2.8	Decrease	Decrease in absolute CO2e emissions by 3.6% (from 691,044 tonnes in 2015 to 666,039 tCO2e in 2016),

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
		(FTE) employee					mainly from our manufacturing facilities, while changing the total number of employees to 79,500. The intensity number is worked out from our 2016 CO2e emissions of 666,039 tCO2e divided by 79,500 FTE employees. The overall emissions reduction in manufacturing breaks down to: over 3.4% reduction in Scope 2 emissions (driven by both renewable energy uptake and energy efficiency projects); and 2.3% reduction in Scope 1 emissions from manufacturing (driven by fuel switching and energy efficiency projects). In 2015 we had 691,044 tonnes of CO2e emissions and 80,200 FTE employees.
0.61	metric tonnes CO2e	unit of production	859640	Market-based	1.9	Increase	This covers Scope 1 and 2 emissions from our manufacturing facilities only. We increase our CO2 intensity from 603kg CO2 per million cigarettes equivalent in 2015 to 614kg CO2 per million cigarettes equivalent in 2015. This was driven by our Energy Management Program activities, (details provided in section 3.3) and renewable energy projects offset by a decrease in production volumes. The intensity number is worked out from our 2016 CO2e emissions of 527,927 tonnes (for manufacturing) divided by 859.64 billion cigarettes equivalent production volume. In 2015 we had 543,914 tonnes of CO2e emissions and 902.479 billion cigarettes equivalent production volume.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

Yes

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Fri 01 Jan 2016 - Sat 31 Dec 2016	6526	0	10119	Facilities we own and operate

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

Through our Global Energy Management Program, paired with local reduction initiatives, we have targeted Energy and CO2 savings that will reduce the need for purchasing allowances. We balance our allowances purchased over a 3 year timeframe. Energy reduction has enabled 4 of our facilities to be removed from the EU ETS scheme in the last 3 years (moving below total combustion capacity thresholds).

We will likely onboard new sites into EU ETS during 2017 due to the new RRP production requirements.

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	3611000	Includes Tobacco (including the impact of curing tobacco) and direct materials, composing the cigarette, the pack and transport packaging (packaging, cigarette papers, acetate tow for	40.00%	Based on our current LCA. We continue our engagement process with direct materials and other suppliers in order to get more primary data. In 2016, we improved the model by using

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			filters, etc.). Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modeled using the Life Cycle Assessment (LCA) tool, Simapro. For our base year in 2010, we undertook a 3rd party review against ISO 14040 standards and now the GHG Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to used a mix of real data and extrapolated emissions from 2015 based on production volume changes.		primary data from our third party stemmeries, acetate tow suppliers and IMS calculation refinement based on USA 2002 Input/Output database and decarbonation of the economy. In 2014 we joined CDP Supply Chain to support this process and have continued in 2015, 2016 and 2017
Capital goods	Relevant, calculated	117500	Emission factors for infrastructure (taking the proxy of a chemical factory), were used from a life cycle assessment database, ecoinvent v2.2, and modeled in Simapro.	0.00%	Existing infrastructure emissions were calculated during our original carbon footprint calculation and we use that to estimate the carbon emissions related to the manufacture and transport of capital goods (equipment, machinery, buildings, facilities, and vehicles) purchased by PMI annually.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	144500	GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The emissions are calculated by multiplying fuel quantities and electricity purchased by upstream and Transmission and Distribution (T&D) GHG emission factors. When no emission factor is available for a specific country, the emission factor provided by UK	100.00%	The primary data used are the types and quantities of fuels and electricity used by PMI in 2016. Secondary data are used for upstream and T&D GHGs emission factors. For fossil and biogenic fuels, the emission factors are global without geographic differentiation. For electricity, T&D losses and heat losses, GHGs emissions are specific to each country or

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			Government (DEFRA) for the corresponding region is applied. Quality: The quality of the primary data used is high and the quality of the secondary data is medium. The quality of the emissions data is considered as medium.		region. The activity data come from PMI's internal reporting tool. The GHGs emission factors used are taken from DEFRA guidelines for GHG accounting - 2016 and ecoinvent v2.2.
Upstream transportation and distribution	Relevant, calculated	478000	Estimates for tobacco and direct materials transport. Our carbon footprint is based on actual data (primary data) and average industry data (secondary data) from information received from our suppliers invited to respond to the CDP supply chain program. Elements of our carbon footprint, have been modeled using the LCA tool, Simapro. For our base year in 2010, we undertook a 3rd party review against ISO 14040 series of standards and the draft Scope 3 Accounting and Reporting Standard as released by the WBCSD / WRI GHG Protocol Initiative. We have extrapolated these emissions from 2015 based on production volume changes.	25.00%	In 2016, we improved the model by using primary data for ocean and air transportation.
Waste generated in operations	Relevant, calculated	6500	GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The waste flows are broken down in over 50 different waste types and treatment methods. The waste-type specific method is used to calculate GHG emissions. Each treatment is associated with an emission factor to assess the GHGs emissions (secondary data) from the treatment (ecoinvent 2.2, IPCC 2007 GWP100). As per the Technical Guidance for Calculating Scope 3 Emissions of	100.00%	The primary data used for this category are the mass of waste generated in production centers, excluding office waste. The secondary data are the emission factors for the different waste treatment, taken from a life cycle assessment database, ecoinvent v2.2.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			the GHG Protocol (p.80), emissions from incineration with energy recovery and from recycling are not included in the assessment, to avoid double counting. An estimation of the emissions from the transportation of the waste to the recycling or incineration facility is performed. The emissions from this transportation step are calculated as follows: 0.134 (transport, lorry >16t, fleet average, RER, in CO2-eq / tkm) * 35 km (assumption) * mass of waste recycled or incinerated with energy recovery (in tonnes). It is assumed that the paper, cardboard and acetate tow sent to composting are fully degraded and therefore emit only biogenic CO2, not reported in the scope 1,2 and 3 of the GHG Protocol. The transportation of this waste to the composting facility is accounted for. Quality: The quality of the primary data used is high. However, due to the simplification involved in the modeling (no geographical differentiation on the waste treatment was made), therefore the overall quality of the emission is estimated as medium.		
Business travel	Relevant, calculated	98500	Through air miles accounting, using the DEFRA GHG Conversion Factors for Company Reporting - Air Passenger Transport Conversion Factors for “Premium Economy class” for 2016.	90.00%	Covering around 80 countries through PMI air miles accounting which is estimated at 90% of overall travel - this is then extrapolated to 100%.
Employee	Relevant,	70500	Estimated based on average commute	10.00%	Only some sites have undertaken mobility

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
commuting	calculated		distances and transport methods across 79,500 employees using data extrapolation from our own fleet of vehicles.		surveys of employees (commuting), therefore primary data is limited.
Upstream leased assets	Not relevant, explanation provided	0			In 2016, we finished a baseline footprint study with the expert company Quantis to better understand our scope 3 emissions. This resulted in a more accurate model using primary data. Primary data sources used in this study were internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 6,324 to 7,910 kg CO2e/mio cig), and key areas to reduce emissions were highlighted. Our upstream leased assets were confirmed as not material to our carbon footprint since their associated emissions are small in comparison to our total Scope 3 emissions and do not meet our 5% materiality threshold.
Downstream transportation and distribution	Relevant, calculated	72000	Distribution of finished goods; estimate based on 8 key markets extrapolated for the whole of PMI. Our carbon footprint is based on actual data (primary data) and average industry data (secondary data) from information received from our suppliers invited to respond to the CDP supply chain program. Elements of our carbon footprint, have been modeled using the LCA tool, Simapro. For our base year in 2010, we undertook a 3rd party review against ISO 14040	25.00%	Based on estimated distances for defined transport means in 8 key markets.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			series of standards and the draft Scope 3 Accounting and Reporting Standard as released by the WBCSD / WRI GHG Protocol Initiative. We have extrapolated these emissions from 2015 based on production volume changes.		
Processing of sold products	Not relevant, explanation provided	0			Our sold products are not processed, therefore, this is not relevant.
Use of sold products	Relevant, calculated	113500	This assumes the use of cigarette lighters. Our carbon footprint is based on actual data (primary data) and average industry data (secondary data) from information received from our suppliers invited to respond to the CDP supply chain program. Elements of our carbon footprint, have been modeled using the LCA tool, Simapro. For our base year in 2010, we undertook a 3rd party review against ISO 14040 series of standards and the draft Scope 3 Accounting and Reporting Standard as released by the WBCSD / WRI GHG Protocol Initiative. We have extrapolated these emissions from 2015 based on production volume changes.	25.00%	Based on estimated usage of lighter fuel per cigarette.
End of life treatment of sold products	Relevant, calculated	312800	Downstream waste treatment and street cleaning related to cigarette butts and waste packaging. Our carbon footprint is based on actual data (primary data) and average industry data (secondary data) from information received from our suppliers invited to respond to the CDP supply chain program. Elements of our carbon	10.00%	Based on Swiss market assumptions and extrapolation.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			footprint, have been modeled using the LCA tool, Simapro. For our base year in 2010, we undertook a 3rd party review against ISO 14040 series of standards and the draft Scope 3 Accounting and Reporting Standard as released by the WBCSD / WRI GHG Protocol Initiative. We have extrapolated these emissions from 2015 based on production volume changes.		
Downstream leased assets	Not relevant, explanation provided	0			In 2016, we finished a baseline footprint study with the expert company Quantis to better understand our scope 3 emissions. This resulted in a more accurate model using primary data. Primary data sources used in this study were internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 6,324 to 7,910 kg CO2e/mio cig), and key areas to reduce emissions were highlighted. Our downstream leased assets were confirmed as not material to our carbon footprint since their associated emissions are small in comparison to our total Scope 3 emissions and do not meet our 5% materiality threshold.
Franchises	Not relevant, explanation provided	0			There is no franchise business at this time.
Investments	Not relevant, explanation	0			In 2016, we finished a baseline footprint study with the expert company Quantis to better

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				understand our scope 3 emissions. This resulted in a more accurate model using primary data. Primary data sources used in this study were internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 6,324 to 7,910 kg CO2e/mio cig), and key areas to reduce emissions were highlighted. Our investments were confirmed as not material to our carbon footprint since their associated emissions are small in comparison to our total Scope 3 emissions and do not meet our 5% materiality threshold.
Other (upstream)	Not relevant, explanation provided	0			There are no other (upstream) emissions at this time.
Other (downstream)	Not relevant, explanation provided	0			There are no other (downstream) emissions at this time.

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2017/12/14712/Climate Change 2017/Shared Documents/Attachments/CC14.2a/PMI GHG Verification Statement 2016 external -.pdf	Page 1 total Scope 3, Page 2 method and scope, Page 3 specific Scope 3 category detail.	ISO14064-3	5

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in methodology	2	Increase	Corresponding to a 2.7% reduction in energy used in 2016 compared to 2015 due to energy reduction initiatives and the use of greener energy sources was totally offset by a change in methodology for our calculations where diesel and petrol emission factors have been updated from average biofuel based to 100% mineral to be closer to the reality in most of the markets where we operate our fleet.
Waste generated in operations	Emissions reduction activities	16	Decrease	Corresponding to a decrease in total waste quantities from waste reduction initiatives and a decrease in our disposal ratio from 5.7% in 2015 to 4.8% in 2016. An example of waste reduction initiatives is our C48 carton box recycling that is used several times for tobacco transport and then sent back to the supplier for recycling.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

- We have engaged with several key account customers on sustainability topics, including with Tesco to support their own carbon footprint reduction target for their supply chain. We also regularly engage on sustainability topics with other key accounts and stakeholders through questionnaire responses and presentations. We will measure our success through direct feedback from our customers where in some cases, sustainability topics form a part of our business relationship review.

- We prioritize our customer engagement based on the alignment between the customer's sustainability targets and PMI sustainability targets.

- Our measure of success is based on the increase interest from our key customers on getting more information from our environmental program and on how to

participate to help further reduce our emissions (e.g. local logistic network optimization programs)

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
Emissions reduction incentives	37	70%	Covers Direct Material suppliers representing around 70% of Direct Materials total spend. Also the majority of our main tobacco and logistics services providers. We have used our carbon footprint calculation to identify the main climate change impacts of our purchased materials. In our direct materials (non-tobacco) area we identified acetate tow and consumer board & paper as significant contributors from a raw materials perspective to our carbon footprint and this is why we prioritized engagement with suppliers in these areas. We engaged with key suppliers in these two areas through direct discussions and since 2014 by means of CDP Supply Chain program. Based on our carbon footprint we invited suppliers covering tobacco, paper/board, acetate tow and also distribution/logistics in 2016 expanded our invitee list in 2016. In the medium term we will use this forum to drive decreases in our value chain emissions to reduce our emissions intensity by 30% by 2020. Main engagement areas: • Tobacco leaf suppliers – through Good Agricultural Practices (GAP) collaboration which covers mandatory requirements for managing energy and climate change (mitigation and adaptation) . Implementation of GAP leads to the definition of key areas for improvement where we put initiatives in place to take action, we call these Sustainable Tobacco Production (STP) initiatives which we work on with our suppliers. • Direct Materials suppliers – through procurement and product development activities which include the definition of parameters of environmental performance for different raw material components. • Equipment manufacturers – through an industry colloquium which helps target energy efficiency developments for our manufacturing equipment. Through engagement and information exchange we aim to increase the proportion of our carbon footprint that is based on primary data rather than LCA. By 2020 we expect primary data to cover at least 80% of our value chain emissions. Our measure of success is based on the emissions reduced in our supply chain (around 12% reduction from 2015 scope 3 emissions) and CDP supply chain A- rating, with 88% of our suppliers responding beating our 80% target.

CC14.4c

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

In 2016, we finished a baseline footprint study with the expert company Quantis to better understand our scope 3 emissions. This resulted in a more accurate model using primary data. Primary data sources used in this study were internal databases, CDP supply chain program data from our suppliers, and direct interaction with our suppliers. As a result, an overall increase in 2010 baseline occurred (from 6,324 to 7,910 kg CO2e/mio cig), and key areas to reduce emissions were highlighted

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Andre Calantzopoulos	Chief Executive Officer (CEO)	Chief Executive Officer (CEO)

Further Information

Module: FBT

Page: FBT1. Agriculture

FBT1.1

Are agricultural activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?

Yes

FBT1.1a

Please explain why agricultural activities are not relevant to your climate change disclosure

FBT1.2

Are the agricultural activities that you have identified as relevant undertaken on your own farm(s), elsewhere in your value chain, or both?

Elsewhere in value chain

FBT1.2a

Please explain why agricultural emissions from your own farms are not relevant

We do not own or operate farms

FBT1.3

Do you account for greenhouse gas emissions from agricultural activities undertaken on your own farm(s) as part of the global gross Scope 1 emissions figure reported in CC8.2, and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?

FBT1.3a

Please select the form(s) in which you wish to report the greenhouse gas emissions produced by agricultural activities (agricultural emissions) undertaken on your own farm(s)

FBT1.3b

Please report your total agricultural emissions produced on your own farm(s) and identify any exclusions in the table below

Scope	Agricultural emissions (metric tonnes CO2e)	Methodology	Exclusions	Explanation	Comment

FBT1.3c

Please report your agricultural emissions produced on your own farm(s), disaggregated by category, and identify any exclusions in the table below

Emissions category	Agricultural emissions (metric tonnes CO2e)	Methodology	Exclusions	Explanation	Comment

FBT1.3d

Please explain why you do not account for greenhouse gas emissions from agricultural activities undertaken on your own farm(s), and describe any plans for the collection of this data in the future

FBT1.4

Do you implement agricultural management practices on your own farm(s) with a climate change mitigation and/or adaptation benefit?

FBT1.4a

Please identify agricultural management practices undertaken on your own farm(s) with a climate change mitigation and/or adaptation benefit. Complete the table

Activity ID	Agricultural management practice	Description of agricultural management practice	Climate change related benefit	Comment

FBT1.4b

Does your implementation of these agricultural management practices have other impacts? Complete the table

Activity ID	Impact on yield	Impact on cost	Impact on soil quality	Impact on biodiversity	Impact on water	Other impact	Description of impacts	Comment

FBT1.4c

Do you have any plans to implement agricultural management practices in the future?

FBT1.4d

Please detail your plans to implement agricultural management practices in the future

FBT1.5

Is biogenic carbon pertaining to your own farm(s) relevant to your climate change disclosure?

FBT1.5a

Please report biogenic carbon data pertaining to your own farm(s) in the table below

CO2 flux	Emissions/ Removals (metric tonnes CO2e)	Methodology	Exclusions	Explanation	Comment

FBT1.6

Do you account for greenhouse gas emissions from agricultural activities in your value chain as part of the Scope 3 category "Purchased goods and services" reported in CC14.1 of the core climate change questionnaire?

Yes

FBT1.6a

Please report these agricultural emissions from your value chain and identify any exclusions in the table below

Scope	Agricultural emissions (% of the emissions reported in the category “Purchased goods and services”)	Exclusions	Explanation	Comment
Scope 3	41-50%	None	Emissions from tobacco farming which includes curing tobacco, agricultural machinery, building materials, fertilizers and crop protection agents, etc.	

FBT1.6b

Please explain why you do not account for greenhouse gas emissions from agricultural activities in your value chain as part of the Scope 3 category “Purchased goods and services” reported in CC14.1 of the core climate change questionnaire

FBT1.7

Do you encourage your agricultural suppliers to undertake any agricultural management practices with a climate change mitigation and/or adaptation benefit?

Yes

FBT1.7a

Please identify agricultural management practices with a climate change mitigation and/or adaptation benefit that you encourage your suppliers to implement. Complete the table

Activity ID	Agricultural management practice	Description of agricultural management practice	Your role in the implementation of this practice	Explanation of how you encourage implementation	Climate change related benefit	Comment
1	Other: Good Agricultural Practices Program	Full scope - GAP defines the principles and measurable standards to be met by all those who grow and supply tobacco to PMI. These principles and standards are organized around three focus areas (pillars): Crop, Environment, and People (Agricultural Labor Practices (ALP)). Governance is the foundation of these pillars and incorporates the management processes that must be put in place to successfully implement GAP. The Environment pillar covers sustainable water management, soil management/conservation, energy and raw material efficiency, waste management, biodiversity and the sustainable use of wood.	Financial Knowledge sharing Operational Procurement	We mandate GAP implementation for suppliers of tobacco to PMI. Our Leaf Department supports our suppliers in implementation and, where we directly contract farmers, our field technicians provide direct support.	Emissions reductions (mitigation) Increasing resilience to climate change (adaptation)	

FBT1.7b

Does the implementation of these agricultural management practices in your value chain have other impacts? Complete the table

Activity ID	Impact on yield	Impact on cost	Impact on soil quality	Impact on biodiversity	Impact on water	Other impact	Description of impacts	Comment
1	Evaluated -	Evaluated -	Evaluated -	Evaluated -	Evaluated -	Evaluated -	Full scope - GAP comprehensively	

Activity ID	Impact on yield	Impact on cost	Impact on soil quality	Impact on biodiversity	Impact on water	Other impact	Description of impacts	Comment
	beneficial impact	beneficial impact	beneficial impact	beneficial impact	beneficial impact	beneficial impact	covers economic, labour practices and environmental topics.	

FBT1.7c

Do you have any plans to engage with your suppliers on their implementation of agricultural management practices?

Yes

FBT1.7d

Please detail these plans to engage with your suppliers on their implementation of agricultural management practices

GAP is mandatory for all suppliers of tobacco to PMI, as is reflected in all PMI's and its affiliates' supply contracts. PMI expects all of its' suppliers to continuously improve in the implementation of GAP principles and standards, working with the farmers from whom they purchase.

Suppliers are required to conduct annual self-assessments of their GAP implementation and are provided with a management tool and set of measurable standards against which they rate themselves. Further, the information resulting from the farm by farm monitoring of the measurable standards is consolidated into Key Performance Indicators that are used to assess suppliers' improvement in GAP over time.

Farmers' and suppliers' progress in GAP implementation is now monitored both internally and externally by third parties who will complete a formal GAP assessment to verify supplier self-assessments every three years. Additionally, for the People Pillar of GAP (Agricultural Labor Practices (ALP)), a non-governmental organization has also guided our efforts to set up a monitoring system with a third party who is completing a detailed assessment of suppliers' ALP Program implementation. The results of our ALP program assessments are available on our website.

Further Information

Page: FBT2. Processing

FBT2.1

Are processing activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?

Yes

FBT2.1a

Please explain why processing activities are not relevant to your climate change disclosure

FBT2.2

Are the processing activities that you have identified as relevant undertaken in your direct operations, elsewhere in your value chain, or both?

Both direct operations and elsewhere in value chain

FBT2.2a

Please explain why emissions from processing activities in your direct operations are not relevant

FBT2.3

Do you account for emissions from processing activities in your direct operations as part of the global gross Scope 1 emissions figure reported in CC8.2 and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?

Yes

FBT2.3a

Please report these emissions from processing activities in your direct operations and identify any exclusions in the table below

Scope	Emissions from processing activities (metric tonnes CO2e)	Exclusions	Explanation	Comment
Scope 1	6660	None	Emissions from PMI owned and operated Stemmeries (tobacco processing).	
Scope 2	3651	None	Emissions from PMI owned and operated Stemmeries (tobacco processing).	

FBT2.3b

Please explain why you do not account for emissions from processing activities in your direct operations, and describe any plans for the collection of this data in the future

FBT2.4

Do you account for emissions from processing activities in your value chain as part of the Scope 3 category "Purchased goods and services" and/or "Processing of sold products" reported in CC14.1 of the core climate change questionnaire?

Yes

Further Information

Page: FBT3. Distribution

FBT3.1

Are distribution activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?

Yes

FBT3.1a

Please explain why distribution activities are not relevant to your climate change disclosure

FBT3.2

Are the distribution activities that you have identified as relevant undertaken in your direct operations, elsewhere in your value chain, or both?

Both direct operations and elsewhere in value chain

FBT3.2a

Please explain why emissions from distribution activities in your direct operations are not relevant

FBT3.3

Do you account for emissions from distribution activities in your direct operations as part of the global gross Scope 1 emissions figure reported in CC8.2 and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?

Yes

FBT3.3a

Please report these emissions from distribution activities in your direct operations and identify any exclusions in the table below

Scope	Emissions from distribution activities (metric tonnes CO2e)	Exclusions	Explanation	Comment
Scope 1	118487	None - PMI operated vehicles only	These emissions are for PMI's total vehicle fleet which does include some benefit vehicles (estimated at 10%).	
Scope 2				

FBT3.3b

Please explain why you do not account for emissions from distribution activities in your direct operations, and describe any plans for the collection of this data in the future

FBT3.4

Do you account for emissions from distribution activities in your value chain as part of the Scope 3 category "Upstream transportation and distribution" and/or "Downstream transportation and distribution" in CC14.1 of the core climate change questionnaire?

Yes

Further Information

Page: FBT4. Consumption

FBT4.1

Are emissions from the consumption of your products relevant to your climate change disclosure?

Yes

FBT4.1b

Please explain why emissions from the consumption of your products are not relevant to your climate change disclosure

FBT4.1a

Do you account for emissions from the consumption of your products as part of the Scope 3 category "Use of sold products" and/or "End of life treatment of sold products" in CC14.1 of the core climate change questionnaire?

Yes

Further Information

CDP 2017 Climate Change 2017 Information Request