# Module: Introduction

## Page: Introduction

### CC0.1

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

Mediclinic International (“the Group”) was founded in 1983 and is a private healthcare group with three geographical business platforms - Mediclinic Southern Africa (MCSA), Mediclinic Middle East (MCME) and Mediclinic Switzerland (MCCH). It has been listed on the JSE, the South African securities exchange, since 1986. The Group's head office is based in Stellenbosch, South Africa.

Mediclinic is focused on providing acute care, specialist-orientated, multi-disciplinary healthcare services. The Group’s core purpose is to enhance the quality of life of patients by providing comprehensive, high-quality healthcare services in such a way that the Group will be regarded as the most respected and trusted provider of healthcare services by patients, doctors and funders of healthcare in each of its markets.

In June 2015 Mediclinic acquired a 29.9% interest in Spire Healthcare, a London Stock Exchange listed and UK-based private healthcare group.

During February 2016 a combination of Mediclinic International Limited and Al Noor Hospitals Group plc by way of a reverse takeover was successfully completed. The combination resulted in the enlarged Mediclinic group with a continued primary listing on the London Stock Exchange and a secondary listing of the Company on the Johannesburg Stock Exchange and the Namibian Stock Exchange.

Today Mediclinic Southern Africa operates 50 hospitals and 2 day clinics throughout South Africa and 3 hospitals in Namibia with more than 8 000 inpatient beds in total; Hirslanden operates 16 private acute care facilities and 4 clinics in Switzerland with more than 1 600 inpatient beds; and Mediclinic Middle East (including the Al Noor facilities) operates 6 hospitals and 31 clinics with more than 700 inpatient beds in the United Arab Emirates.

In line with the CDP questionnaire being targeted at the top 100 companies in South Africa, this report only deals with Mediclinic Southern Africa (South Africa and Namibia). Almost 80% of the operational beds of Mediclinic International are located in Mediclinic Southern Africa.

### 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 |
| --- |

**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.

ZAR (R)

**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**

For CDP2017 data is reported for the 2016 calendar year, from 1 January 2016 to 31 December 2016. It is important to note that previous carbon footprint reports have been completed per the Mediclinic financial year, 1 April to 31 March. The change is to align with the London Stock Exchange reporting requirements and the proposed carbon tax in South Africa, which requires reporting according to a calendar year.

# 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**

(i) The job title of the individual or name of the committee
Chief Corporate Services Officer - Mr Gert Hattingh.

(ii) A description of their/its position in the corporate structure

Executive manager responsible for coordinating sustainable development throughout the Group and who advises the Board and the sub-committees on relevant matters, including compliance with the Group's policies and procedures on climate change.

## 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 |
|---|---|---|---|
| Management group | Monetary reward | Emissions reduction target | The Mediclinic Management Incentive Scheme depends on the level of achievement of the EBITDA targets, which in turn is achieved through costs savings. A reduction in fuel and electricity consumption and costs make a substantial contribution to EBITDA as well as managing natural resources responsibly. Reducing carbon emissions from reduced electricity consumption is therefore a strong incentive for management. Electricity and water makes 2% of the operational cost of Mediclinic Southern Africa. |
| All employees | Monetary reward | Efficiency target | Employee bonuses depend on the level of achievement of the EBITDA targets which in turn is achieved through costs savings. A reduction in fuel and electricity consumption and costs make a substantial contribution to EBITDA as well as managing natural resources responsibly. Reducing carbon emissions from reduced electricity consumption is therefore a strong incentive for all employees. |

## 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 | South Africa and Namibia | > 6 years | |

**CC2.1b**

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

At company level the Board mandated the Audit and Risk Committee to monitor the risk management process and systems of internal control of the Group.

The Enterprise-wide Risk Management ("ERM") policy defines the risk management objectives, risk appetite and tolerance, methodology, process and the responsibilities of the various risk management role players in the Group and is subject to annual review.

The objective of Group risk management is to establish an integrated and effective risk management framework within which important risks are identified, quantified, prioritised and managed in order to achieve an optimal risk/reward profile.

At asset or operational level the Group has an environmental policy to identify aspects of business that could have a significant impact on the environment. All business divisions within the Group are required to implement environmental management systems such as the ISO 14001 standard and have it certified by an internationally recognised body.

The Group Environmental Policy, aimed at minimising Mediclinic's environmental impacts, requires each operation to:

- identify and comply with relevant environmental legislation and regulations;
- identify and manage all risks and opportunities relating to the Group's impact on the environment with regard to water use and recycling, energy use and conservation, emissions and climate change, and waste management and recycling;
- define environmental management programmes to achieve continual improvement and create an environmental awareness among all employees;
- set objectives and targets to prevent pollution and minimise the Group's environmental impact;
- encourage reduction, re-use and re-cycling of general waste;
- manage healthcare risk waste; and
- nurse the use of resources.

A generic aspect register with baselines for healthcare risk waste, water, electricity, paper, hazardous waste, gases and climate change is captured in the Group's CURA risk management software.

**CC2.1c**

**How do you prioritize the risks and opportunities identified?**

The risk process consists of analysing risks relating to all environmental aspects that can be controlled or influenced and their associated impacts. A significance rating is allocated to each risk based on the likelihood of occurrence, severity as well as the extent of exposure. Risks with a very high rating will be addressed first and then the others.

Each hospital completes an online aspect survey on the CURA risk management software. Risk ratings are automatically calculated depending on the answer given in the CURA survey. High risks will be flagged when the exception report is drawn. All risks must be addressed in the environmental management programme with action plans on how to mitigate the risk. High risks will automatically be flagged inside CURA and a corrective action request will be issued to the hospital to be completed in the CURA risk management system.

A condition status is also assigned to each risk, i.e. controlled condition: everyday occurrence or uncontrolled condition: sporadic or emergency situation. The risk or aspect identification is used for the setting of environmental objectives intended to result in meaningful improvements in the organisation's environmental performance.

The Audit and Risk Committee regularly receives reports on and considers the activities of the Mediclinic Southern Africa as well as the risks captured in the risk management system, CURA when it meets three times a year and report its findings to the Board.

**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) Mediclinic International acknowledges that strategy, risk, governance, performance and sustainability are all inter-connected and that these should be addressed in an integrated manner. Through an integrated approach, Mediclinic International believes that it can continue to achieve financial growth, effectively manage risks, protect the environment and enhance social wellbeing at the same time, resulting in maintained trust and respect of all stakeholders.

Mediclinic International is committed to being a good corporate citizen and believes that sustainability must be integrated in its business strategy, focusing not only on its financial output, but also on managing and utilising social and environmental resources efficiently to ensure a sustainable business in the long term.

The Group's business strategy is informed by the Group Sustainable Development Policy, Group Environmental Policy and the Code of Business Conduct and Ethics that codify Mediclinic's long-standing commitment to conducting business responsibly. The policies are reviewed annually by management, with recommendations to the Board as part of the annual policy review.

Engagement and communication with stakeholders take place through a wide variety of communication vehicles that serve as an impact assessment to assess stakeholders' needs and to effectively respond thereto. These communication tools include patient, doctor and employee satisfaction surveys, patient experience programmes, regular meetings with service providers and healthcare funders, membership of industry associations and representation on government bodies, the investor function as well as 24-hour helplines for enquiries.

ii) Business strategy has been influenced by Mediclinic implementing a Corporate Sustainable Water Management Strategy, a water contingency plan to ensure that hospitals can continue operating smoothly, without interruption, for longer periods of time as well as a water contamination plan to mediate the low quality of municipal water from ineffective processes at purification plants. Mediclinic also expanded the Energy Initiative Committee function to the Natural Resources Committee to include all natural resources.

iii) Aspects of climate change that influenced strategy includes operational costs of running of facilities as approximately 73% of carbon emissions emanate from

electricity purchased. Other aspects include access to facilities and interruptions in service resulting from water shortage or flooding, electricity load shedding or incidents of extreme weather events. Weather-induced pandemics and disease outbreaks can cause high mortality rates and place additional stress on operations.

The Group Environmental Policy aims to minimise Mediclinic's environmental impacts and guides the identification and management of all risks and opportunities relating to water use and recycling, energy use and conservation, emissions and climate change, and waste management and recycling.

The Group's main environmental impacts are the utilisation of resources and waste which have a direct effect on carbon emissions. Items listed in the aspect register relating to regulatory compliance, healthcare risk waste, water, electricity, paper, hazardous waste, gases and climate change not only could have a significant impact on the environment, but also informs strategy on climate change related risks and opportunities.

iv) Short term strategy influenced by climate change relate to the setting of targets to reduce Mediclinic's energy consumption on bed days sold by 3.09% per year to meet government's target of reducing carbon emissions by 34% by 2020.

Water consumption and recycling is also monitored and measured in kilolitre per bed day sold. Initiatives to reduce water consumption include employee awareness training, monitoring of uncontrolled leakages and monitoring of garden irrigation cycles.

v) Long term strategy influenced by climate change relate to formally incorporating the material items on the environmental aspect register in the group risk management system CURA, thereby reporting environmental impacts at Board level. The user-friendly CURA risk management software is implemented at all 53 hospitals. Incorporating renewable energy in operations such as solar PV systems will provide Mediclinic with innovative, cost-effective methods of managing its carbon footprint while gaining valuable insights and knowledge. Flooding at hospitals also heightened Mediclinic's awareness of the effect of adverse weather events that could cause damage to infrastructure and interrupt business operations.

vi) Mediclinic believes that strategic advantage can be obtained through using resources responsibly, thereby managing and containing operating costs through reducing fuel and electricity consumption and associated carbon emissions. Further, it will ensure ongoing access to water and energy supplies. By managing Mediclinic's impact on the environment while providing quality of care and facilities it will be regarded as a respected and trusted provider of hospital services by patients, doctors, and funders of healthcare.

vii) In line with Mediclinic's strategy to reduce carbon emissions Mediclinic Southern Africa, during CY2016, started with the installation of solar PV systems at Mediclinic Hoogland, Mediclinic Welkom and Mediclinic Nelspruit to generate clean, renewable energy.

viii) Mediclinic is conscious of the Paris Agreement and set targets to reduce its energy consumption on bed days sold by 3.09% per year in line with government's target of reducing carbon emissions by 34% by 2020. Further, Mediclinic through its awareness campaigns, presented to employees what the impact of a 4℃ temperature rise will mean for SA – evolve or die. Other awareness campaigns focused on behavioural changes with the focus on air-conditioners that consume about 50% of electricity.

ix) Mediclinic uses the ISO 150001 planning standard – the new standard for water, electricity & gas recoupment & carbon tax in business planning.

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

**CC2.2c**

**Does your company use an internal price on carbon?**

No, but we anticipate doing so in the next 2 years

**CC2.2d**

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

**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)**

Direct engagement with policy makers
Trade associations

**CC2.3a**

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

| Focus of legislation | Corporate Position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| Other: Norms and Standards for Environmental | Neutral | Mediclinic engaged directly with the SA Department of Health regarding the National Norms and Standards relating to environmental health in South Africa in terms of National Health Act, 2003 (Act no 61 of 2003) | Mediclinic Southern Africa shared their knowledge and data about the handling and disposal of healthcare risk waste with ICAN. Sharing this |

| Focus of legislation | Corporate Position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| Health | | and gave input to the regulations, which were gazette on 18 February 2015. Mediclinic provided written commentary and input based on its vast experience in the healthcare industry and environmental compliance. ICAN (Infection Control Africa Network) is sponsored by the WHO (World Health Organisation) and is responsible to educate and network between countries in Africa for the prevention and control of outbreak of diseases. During CY2016 Mediclinic engaged with their president, Professor Shaheem Mehtar, who is a member of the advisory council to the Minister of Health of South Africa and is also actively involved at the University of Stellenbosch Medical Faculty Infection Control and Prevention. | knowledge had an indirect impact on legislation Norms and Standards for Environmental Health at Healthcare facilities. |

**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? |
|---|---|---|---|
| SAFHE (South African Federation of Hospital Engineering) | Consistent | SAFHE aims to promote more efficient management, planning, operation, maintenance and safety of healthcare facilities. SAFHE also organize and promote conferences and discussions on climate change, carbon footprint computation, environmental management and its impact on the healthcare | Mediclinic Southern Africa committed to establishing science based targets in October 2016. The custodian for setting the target for Mediclinic Southern Africa is the Environmental Systems Manager who is also responsible for the ISO 14001:2015 Environmental Management System |

| 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? |
|---|---|---|---|
| | | industry in South Africa. This is consistent with Mediclinic's view of integrating climate change into business strategy for sustainability. SAFHE formed an Infrastructure Unit Support System to provide benchmarks for the design and management of healthcare facilities, which include emissions, water, waste and energy consumption benchmarks. SAFHE is also actively involved on various committees of ECSA (Engineering Council of South Africa). SAFHE is currently establishing science based targets for healthcare in South Africa. The methodology that best fit the hospital industry is the sectorial based decarbonisation approach. To set the target, role players in the hospital industry in South Africa must agree on specific baselines and targets. The major role players are the state public hospitals and various private hospital groups who are all members of SAFHE. | international certification by the British Standards Institute, the Carbon Disclosure Project, the Water Disclosure Project, environmental sustainability and environmental performance of the Group. Mediclinic's Environmental Systems Manager is currently the President of SAFHE. Through the association discussions already started between the various role players for the development of science based baselines and targets for the hospital industry in South Africa. |

## 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**

## 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?**

Mediclinic engages with Government, Regulators, Industry Bodies and Business Partners on policy issues impacting the business including climate change. They meet on a regular basis with their associations to debate and give recommendations on various topics to ensure sustainability in their business models. Feedback on issues is reported as per Mediclinic's risk management framework.

### 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?**

Intensity 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 |
|---|---|---|---|---|---|---|---|---|

## 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 | Scope 2 (location-based) | 99.3% | 3.09% | Other: tCO2e per bed day sold | 2016 | 0.078875 | 2017 | No, but we anticipate setting one in the next 2 years | The tCO2e/bed day sold target of 3.09% per year (34%/11 = 3.09%) was set for Scope 2 (location-based) emissions for the 53 hospitals of Mediclinic Southern Africa only. Administration offices and other buildings are excluded from the target. |
| Int2 | Scope 2 (location-based) | 100% | 34% | Other: kWh per bed day sold | 2009 | 91.01 | 2020 | No, but we anticipate setting one in the next 2 years | The kWh/bed day sold target to meet government's target of a 34% reduction by 2020 from a 2009 base year was set for Scope 2 (location-based) emissions for the 53 hospitals of Mediclinic Southern Africa only. Administration offices and other buildings are excluded from the target. |

## 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 | 2.38 | No change | 0 | This target relates to electricity consumption at 53 hospitals only (Scope 2 - location-based only). |
| Int2 | Decrease | 3.50 | No change | 0 | This target relates to electricity consumption at 53 hospitals only (Scope 2 - location-based only). |

## 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 |
|---|---|---|---|---|---|---|---|

## 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 |
|---|---|---|---|
| Int1 | 100% | 80.28% | tCO2e/bed day sold decreased by 2.48% which did not reach the set target of 3.09%. |
| Int2 | 72.73% | 44.87% | From 2009 to CY2016 the kWh/bed day sold decreased by 15.25%. |

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 | 4 | |
| To be implemented* | 1 | 270.13 |
| Implementation commenced* | 3 | 1157.53 |
| Implemented* | 5 | 1152.89 |
| Not to be implemented | 0 | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Energy efficiency: Building services | Installed additional piping and insulation of chillers at Mediclinic Bloemfontein and Mediclinic Welkom to reduce electricity consumption. | 555.60 | Scope 2 (location-based) | Voluntary | 666666 | 2000000 | 1-3 years | 11-15 years | |
| Energy efficiency: Building services | Replaced 25 year old chiller and cooling towers with air cooled packaged units at Mediclinic Constantiaberg to reduce electricity consumption. | 183.00 | Scope 2 (location-based) | Voluntary | 220000 | 1100000 | 4-10 years | 11-15 years | |
| Energy efficiency: Building services | Mediclinic Sandton installed additional solar panels to pre-heat water going to the heat pump while Mediclinic Durbanville replaced 1 x heat pump with a 35kW high efficiency heat pump. Mediclinic installed a ring main with a solar paniel to reduce the number of geysers at the Doctor's Consulting rooms in Stellenbosch. All the initiatives are aimed at reducing electricity consumption. | 208.44 | Scope 2 (location-based) | Voluntary | 199540 | 710000 | 4-10 years | 11-15 years | |
| Energy efficiency: Building services | Mediclinic Panorama installed new chillers with a COP of 4-6 which is a lot better than the current COP of 2.5 to reduce electricity consumption. | 165.97 | Scope 2 (location-based) | Voluntary | 1991664 | 7500000 | 4-10 years | 11-15 years | |
| Energy efficiency: Building | Replaced fluorescent lighting at Mediclinic Emfuleni with energy efficient T5 lighting to reduce electricity | 39.88 | Scope 2 (location-based) | Voluntary | 47857 | 645438 | 11-15 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 | consumption. | | | | | | | | |

**CC3.3c**

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

| Method | Comment |
|---|---|
| Compliance with regulatory requirements/standards | All new equipment purchased makes use of refrigerants other than Freon or R22, which is being phased out in South Africa and Namibia. |
| Dedicated budget for energy efficiency | The Energy Initiative Committee measures the energy utilisation within the group to determine where savings can be achieved and it evaluates various new energy efficiency technologies. |
| Dedicated budget for low carbon product R&D | The Energy Initiative Committee investigates and implements solar photovoltaic (PV) systems to generate renewable energy at hospitals. |
| Financial optimization calculations | Rising electricity costs have been an incentive to reduce electricity consumption and resultant carbon emissions through investments in energy efficient equipment and alternative renewable energy sources. |
| Partnering with governments on technology development | Mediclinic Southern Africa is a listed and registered Energy Services Company (Esco) to implement the Eskom Demand Side Management (DSM) and Energy efficiency programmes at Mediclinic while making use of the available subsidies and rebates to defray capital costs of equipment. It also partnered with the NBI's Private Sector Energy Efficiency Project (PSEE) to share knowledge and leverage off the skills of experts. |

**CC3.3d**

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

**Further Information**

## 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 mainstream reports (including an integrated report) in accordance with the CDSB Framework | Complete | Mediclinic 2017 Annual Report, Sustainable Development Highlights, pg 64 - 68 | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC4.1/Mediclinic 2017 Annual Report.pdf | |
| In mainstream reports (including an integrated report) in accordance with the CDSB Framework | Complete | Mediclinic Sustainable Development Report 2017, pg 1 - 63 | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC4.1/Mediclinic_Sustainable_Development_Report_2017.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 |
|---|---|---|---|---|---|---|---|---|---|
| Carbon taxes | The long awaited South African carbon tax is envisaged to be implemented during 2018 at a rate of R120 per ton of CO2e above a basic tax-free threshold of 60 per cent during the first phase of implementation – until December 2020. Offsets of | Increased operational cost | 1 to 3 years | Direct | Very likely | Low | It is anticipated that only companies with Scope 1 emissions of more than 100 000 tCO2e per annum will be subjected to the carbon tax on stationary combustion. Further, diesel and petrol-related | Executive directors and senior executives at Mediclinic meet with the Industry Bodies who lobby the government regarding new legislation such as domestic carbon taxes. Mediclinic is managing the carbon tax risk as it gave input to research and | No direct costs are associated with government liaison other than staff salaries, travel and accommodation expenses. The outsourcing of the electro thermal deactivation or autoclaving of healthcare risk waste cost Mediclinic about |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | between 5% to 10% will allow emission-intensive and trade-exposed industries to invest in projects outside their normal operations to help reduce their carbon tax liabilities. From 2021, the five-year phase 2 will be applied. According to the draft Carbon Tax Bill released in November 2015 only scope 1 emissions are expected to be liable to tax, suggesting the direct impact on Mediclinic will be minimal. However, Eskom might be taxed too and will most likely pass on the costs, which will increase operational costs (electricity bills). Further, the carbon tax may prompt an increase in prices generally, leading | | | | | | greenhouse gas emissions will be included in the fuel tax regime. It is therefore anticipated that Mediclinic will have a nil liability in terms of carbon tax due to its small amount of Scope 1 emissions. | studies done by the South African National Treasury on the carbon tax. It provided its comments to the SA National Treasury Carbon Tax Policy Paper as well as gave input to the Carbon Offsets Paper. Mediclinic closed down four of its five operational incinerators due to environmental and financial reasons. The Group's healthcare risk waste is now treated by means of electro thermal deactivation or autoclaving and only anatomical waste is treated by incineration. The remainder of waste to incinerate has been outsourced to Healthcare Risk Waste (HCRW) service providers resulting in an increase in | R26.3 million annually. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | to reductions in the disposable income of consumers. | | | | | | | kilometres travelled by third parties and Scope 3 emissions. R22 HCFC refrigerant gas is captured through contractors or capturing plants thereby preventing the air-conditioning gas being released into the atmosphere. These actions are not expected to affect the likelihood or magnitude of the risk. | |
| Emission reporting obligations | The Department of Environmental Affairs (DEA) on 3 April 2017 gazetted regulations for mandatory reporting of greenhouse gas emissions under the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004). The purpose of the regulations is to | Increased operational cost | 1 to 3 years | Direct | Very likely | Low | It is estimated that penalties for non-compliance to submit GHG inventories and data would be capped at R5 000 000 for a first offence. However, there is no potential financial impact for Mediclinic as current resources would be able to cope | Mediclinic appointed external consultants to determine its organizational carbon footprint. This process is very time consuming and spreadsheets and processes to obtain the required data have been refined over the past few years. During CY2016 | Costs of about R225 000 per annum has been incurred relating to the appointment of external consultants to compile the carbon footprint and disclosure thereof as well as the external verification of the carbon inventory. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | introduce a single national system for annual greenhouse gas emissions reporting. The South African Revenue Service (SARS) will be the main implementing administrative authority on the tax liability assessment while the DEA will lead the monitoring, reporting and verifying emissions process, which will form the tax base. DEA will directly collect the process emissions information while the Department of Energy (DOE) will supply the energy combustion data. All information will feed into the National Atmospheric Emissions Inventory System (NAEIS). According to the draft Carbon Tax | | | | | | with the emissions reporting obligation. | Mediclinic had its Carbon Footprint Inventory verified by an independent third party to ensure it is free of material misstatements. TravelIT software is used to record all flight bookings resulting in more accurate calculation of Scope 3 emissions. In future consideration will be given to acquire carbon management software to integrate carbon management reporting with current operating systems. These actions are not expected to affect the likelihood or magnitude of the risk. | |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | Bill, companies will self assess and submit their emissions to SARS and if found to be incorrect, could be penalized. In order to assess the carbon tax accurately, reporting of GHG emissions will be required together with verification of the reported emissions. This will place a compliance burden on Mediclinic coupled with related additional costs for reporting and verification while non-compliance could be met with penalties. Further, emission reporting could lead to more stringent licence to operate criteria, e.g. for inclusion in the FTSE/JSE Responsible Investment Index. | | | | | | | | |

| 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 | The SA National Treasury introduced a levy for using non-renewable energy sources to cover generation costs for renewable energy. This levy was increased to 5.5c/kWh during the 2015 Budget Speech and is supposed to be withdrawn when the electricity shortage was over. However, the risk exists that this levy would not be withdrawn or could be increased in the future. The draft Carbon Tax Bill proposes that the carbon tax on diesel and petrol non-stationary emissions be included in the fuel tax regime. In order to assist SA's national power supplier (Eskom) with electricity supply, large | Increased operational cost | Up to 1 year | Direct | Very likely | Low | Based on current consumption levels a 2c/kWh increase in the non-renewable energy levy will increase operational expenses by an additional approx. R3.1 million per annum whereas repealing the 5.5c/kWh levy would reduce electricity costs by approx. R8.6 million per annum. | In order to reduce electricity consumption and manage costs fluorescent lighting was replaced with energy efficient T5 lighting at Mediclinic Emfuleni. The fluorescent tubes are not sent to landfill, but fully recycled as a recycling facility is now available in Johannesburg, South Africa. These actions are expected to reduce the magnitude of the risk. | Mediclinic spent capital of approximately R645 000 on the lighting retrofit. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | annual electricity cost increases have been experienced in the last few years as demand-side management schemes have been placed on the backburner. Mediclinic's operations are very dependent on energy supply and electricity outages or mandatory quotas could disrupt operations while paying levies or penalties for energy consumption will affect costs and profitability. | | | | | | | | |

**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 mean (average) temperature | Electricity consumption accounts for about 73% of Mediclinic Southern Africa's carbon emissions. About 55% of electricity is consumed by air conditioning units. A change in the mean average temperature will have an impact on the energy consumption and carbon emissions from air conditioning units of Mediclinic Southern Africa. | Increased operational cost | >6 years | Direct | Very likely | Low | Of the annual electricity bill of approximately R192 million air conditioning accounts for about R104 million. An increase in temperature resulting in a 2% energy consumption increase could cost Mediclinic approximately R2.1 million per year extra. | Energy is a key risk across the Group and various energy conservation and cost-efficient initiatives are implemented. To mitigate the risk of changing temperatures Mediclinic is looking to replace and upgrade inefficient air conditioning plants at the Group's largest electricity-consuming facilities. During CY2016 Mediclinic Constantiaberg replaced its 25 year old chiller and cooling towers with air cooled packaged units while Mediclinic Bloemfontein and Mediclinic Welkom installed additional piping and insulation of chillers to reduce electricity consumption. Mediclinic Panorama installed new chillers with a | Mediclinic spent capital of approximately R8.6 million to replace the chiller plants and R2 million on the piping and insulation. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | COP of 4-6 which is a lot better than the current COP of 2.5. Mediclinic has a policy stipulating that all air conditioners that are to be installed should have an energy efficiency rating (EER) of 8 or better and a detailed load calculation is required for decision making. These actions will reduce the magnitude of the risk. | |
| Change in precipitation pattern | Southern Africa is a water-scarce region, and everyone needs to play their part in the conservation of the purest and most valuable resource: water. Water plays a critical role in the effective functioning of any hospital – without | Inability to do business | 1 to 3 years | Direct | Likely | Medium-high | Temporary closure of hospitals due to water shortages will result in loss of income determined by the size of the hospital and the insurance coverage. Other costs relate to the repair of damage equipment and contracting of external catering and laundry services. | Bulk water storage facilities have been installed at hospitals and boreholes were sunk for strategic sustainability. Planned maintenance procedures were implemented for the measurement and control of water quality. Mediclinic Southern Africa instituted | Mediclinic Southern Africa spent capital of about R4.6 million on the water saving instrument washers and R1.34 million on the water saving washing machines for laundry. The autoclaves were installed at a capital cost of |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | continuous water supply, hospitals cannot ensure hygiene with an increase in infection control risk. Water shortages, no or limited supply, could cause the shutdown of strategic equipment resulting in limited services in the kitchen and laundry at hospitals in Southern Africa. Without water, there can be no hospital. | | | | | | Additional pharmaceutical cost could be incurred for treatment and curtailment of infections. A one week shut down of operations could result in loss of revenue of approximately R275 million based on current revenue levels. | initiatives to reduce water consumption, which include employee awareness training and monitoring of uncontrolled leakages. Further, Mediclinic installed efficient technologies such as water saving instrument washers at Mediclinics Durbanville, Wits Donald Gordon, Limpopo, Panorama, Howick, Gariep, Worcester, Windhoek en Emfuleni. Water saving washing machines for laundry were installed at Mediclinics Bloemfontein, Otjiwarongo, Panorama, Gariep & Stellenbosch and the greywater from laundry is recycled. Water saving Autoclaves were installed at 8 hospitals while Maceraters | about R2.5 million while the Maceraters (Vernacare) required capital of about R2 million. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | (Vernacare) for patient waste were purchased to replace bed pan washers at 17 hospitals. Other water savings initiatives include the shutting down of irrigation, replacing alien vegetation with indigenous flora and the installation of rainwater tanks to irrigate the gardens. The water savings from efficient technologies and recycling (autoclave and laundry) will reduce the magnitude of the risk. | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Reputation | Mediclinic is committed to protecting the environment, conserving natural resources and utilising resources in an effective and responsible way. To ensure the health and safety of its employees and clients it is adopting sound health, safety and environmental practices in all its business activities in Southern | Reduced demand for goods/services | Up to 1 year | Direct | About as likely as not | Low-medium | The potential financial implication of reputational risk will depend on the environmental incident and the severity of the issue resulting in a loss of customer confidence and support. Mediclinic's 2016 brand value is estimated at R11 653 million – according to Brand Finance South Africa. An estimated 1% loss in reputation could result in a loss of brand value of approx. R116.5 million together with actual revenue. http://www.bizcommunity.com/Article/196/82/150904.html | Mediclinic Southern Africa is committed to ensuring that its environmental management systems and practices are aligned with international best practices to safeguard its reputation and provide assurance about the environmental quality, safety and reliability of Mediclinic's processes and services. The ISO 14001:2004 Specification for | The ISO 14001:2004 Environmental Management System and certification costs Mediclinic Southern Africa approximately R2.3 million per annum. |

| Risk driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | Africa. | | | | | | | Environmental Management Systems is an environmental management system that encourages good management practices that limit the impact of industry on the environment. The purpose of the system is to conserve resources, use them effectively and to minimise waste. Categories managed in the environmental aspect | |

| Risk driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | register are the utilisation of resources and waste management, which include electricity, water, gases, paper, healthcare risk waste, hazardous waste and normal waste. 43 of Mediclinic's 53 hospitals are ISO 14001 certified by an external assurance provider (the National Quality Assurance London), as accredited by the United | |

| Risk driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Kingdom Accreditation Services. All the group's hospitals are ISO 14001 trained, follow the same environmental management practices and are subject to annual internal audits. Mediclinic is currently changing over to the latest standard revision ISO 14001:2015 and the hospitals will be audited according to the | |

| Risk driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | revision from July 2017. Adhering to the system procedures and processes has a direct effect on consumption and the group carbon emissions and is expected to reduce the likelihood and magnitude of the risk. | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Fuel/energy taxes and regulations | Anticipated increases in energy taxes or levies are likely to substantially increase the operational costs in South Africa. However, with energy savings Mediclinic can unlock large operational cost savings and benefit from potential tax allowances for energy-efficient equipment and renewable energy technologies. | Reduced operational costs | Up to 1 year | Direct | Virtually certain | Low | The potential financial implications will emanate from energy cost savings and tax allowances that can be claimed on the equipment. The renewable energy initiatives, once operational, will produce cost savings of approximately R1.5 million per annum and reduce carbon emissions by approximately 1158 tCO2e per annum. The energy efficiency initiatives implemented during the year had cost savings of about R200 000 and carbon emission savings of | In order to benefit from tax and regulatory opportunities while at the same time combat the above inflation increases experienced in energy tariffs, Mediclinic's Energy Initiative Committee measures the energy use within the group to determine where savings can be achieved and evaluates various new energy-efficient and renewable technologies. During CY2016 Mediclinic started with the installation of 3 solar PV systems at the Nelspruit, Hoogland and Welkom hospitals. This will bring the number of solar PV plants Mediclinic owns and operates to 6. Mediclinic Sandton | Mediclinic invested capital of about R6.9 million in the 3 solar PV plants under construction while the energy efficiency initiatives required capital investment of R710 000. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | approximately 208 tCO2e. | installed additional solar panels to pre-heat water going to the heat pump while Mediclinic Durbanville replaced 1 x heat pump with a 35kW high efficiency heat pump. Mediclinic also installed a ring main with a solar paniel to reduce the number of geysers at the Doctor's Consulting rooms in Stellenbosch. These initiatives are aimed at reducing energy consumption, costs and carbon emissions. | |
| Fuel/energy taxes and regulations | Incentives or subsidies available for energy efficient equipment will reduce the capital costs of installing new energy efficient equipment to save energy consumption and add to the | Reduced capital costs | 1 to 3 years | Direct | Very likely | Low | The potential financial implication from registering as an Esco results from the Eskom subsidies receivable on the energy equipment to be installed for energy consumption | In order to make use of the available incentives, subsidies and rebates from Eskom to defray capital costs, Mediclinic registered as an Energy Services Company (Esco) and is listed on the Eskom-DSM | Mediclinic paid a once off fee of R83 000 to register as an Esco with Eskom. Mediclinic paid R550 000 for the audit to be done by the PSEE. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | organization's South African bottom line. | | | | | | savings. Over the years Mediclinic received about R4.3 million in subsidies from Eskom. This makes a substantial contribution to the capital cost of the new equipment and makes financial calculations viable. However, currently no funding is available from Eskom. | database as such as part of the Eskom Demand Side Management (DSM) and Energy Efficiency Programme. To be able to register as an Esco Mediclinic had to demonstrate that it possesses the required technical competency, experience and expertise on energy management as well as project management expertise. During CY2016 Mediclinic collaborated with the NBI's Private Sector Energy Efficiency Project (PSEE) to identify energy waste in all hospitals. The audit recommendations will be reviewed before implementing the changes. | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Induced changes in natural resources | Changes in the availability of natural resources and a continued increase in the cost of resources may affect Mediclinic's cost of operation and competiveness in Southern Africa. | Reduced operational costs | 1 to 3 years | Direct | About as likely as not | Low | The potential financial impact will emanate from reducing the number of third party waste deliveries to landfill sites while service providers can use recycled materials in their production processes which is cheaper than using virgin materials. Incinerator gas and carbon emissions generated will also be reduced. During the year Mediclinic received income of about R480 000 from recycling activities based on the type of waste material recycled. | Mediclinic makes use of ISO 14001:2004 to manage and minimise waste that includes all waste streams. Where possible, empty glass vials and general waste are recycled with recycling bin projects implemented at 13 hospitals. A pilot project at Mediclinic Cape Gate in conjunction with SAVA (South African Vinyl Association) to recycle medical PVC (e.g. drip bags) with bins supplied by Adcock Ingram will be rolled out to the rest of the hospitals. Total waste recycled for the year was 1 | The 18 waste management companies used on site cost Mediclinic about R2.2 million per annum after taking the recycling income into account. This includes all transportation, employees on site to do the sorting and a management fee. Not all hospitals make use of waste management companies as some use private recyclers that collect. The recycling bin projects at hospitals was implemented at a cost of about R194 000. The bins to recycle medical PVC |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 283 tonnes, a decrease of 93 tonnes (6.75%) from the previous year. The group's healthcare risk waste (HCRW) is treated by means of electro thermal deactivation or autoclaving and only anatomical waste is treated by incineration. The total weight of HCRW for the year was 3 044.5 tonnes, approx. 1.5kg per bed day sold. Mediclinic Vergelen introduced The Newster NW10 Sterilisation System that treats potentially infectious and/or infectious HCRW and transforms the waste into sterilized and unrecognizable waste. Frictional Heat Treatment (FHT) technology is based on heat | (e.g. drip bags) are supplied for free by Adcock Ingram. The Newster NW10 Sterilisation System was purchased for a capital cost of about R1.26 million. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | generated by impact and friction of the HCRW. The residue obtained is sterilized, finely ground, dried and reduced in weight and volume. The use of on-site technologies reduces the facilities' costs for disposal, increases the hygiene quality, improves the safety of the personnel, contributes to reducing produced waste quantity and also reduces the environmental impact to near zero from the transport of infectious waste. | |
| Change in mean (average) precipitation | Mediclinic recognises water as a valuable resource where some 84% of South Africa's freshwater systems are | Reduced operational costs | Up to 1 year | Direct | Likely | Medium-high | The potential financial implications will arise from reduced water costs and security of water supply. By not | Mediclinic recognizes that Southern Africa can suffer from significant water shortages, therefore it monitors water | There are no direct costs associated other than staff salaries as the awareness campaigns to change human behaviour were |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | threatened and more than 40% are in a critical condition. It is envisaged that the amount of safe water at our disposal could drop by up to 40% in the next 15 years if we do not change the way we use water. South Africa and Namibia is currently facing the worst drought in 105 years, with dams at critical levels and diminishing rivers and streams. As a result, some of the hospitals are experiencing daily and sometimes weekly periods without water. By managing water consumption as well as the recycling thereof the water supply and costs are managed. | | | | | | shutting down operations, based on current revenue levels. approximately R275 million of revenue could be earned per week. | consumption closely. Various measures are in place to minimize water consumption, including reclaiming water, monitoring hot water consumption and installing water meters and control sensors. On average, Mediclinic hospitals are using about 638 litres of water/bed day sold, but this can vary between 430 litres to over 1000 litres per bed day. These consumptions are not sustainable and actions are taken to ensure that while patients are receiving the best possible care, Mediclinic is being responsible towards the environment and future resources. The biggest variable in | designed in-house which only required staff involvement. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | focusing on resources and prioritising actions is human behaviour. During a previous drought Mediclinic George proved that human behaviour can make a greater difference than machinery or technology – by reducing water consumption to 285 litres per bed day sold. Simple things like low flow shower heads, new laundry policies and awareness campaigns for staff, patients and visitors all had a dramatic effect on a heavily affected drought zone. Mediclinic also has star employees who are willing to generate workable solutions that are both gentler on resources and positively impact business. | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Through the Environmental Management System Mediclinic Kimberley extended the margin for theatre operations during a water outage from 4 hours to 36 hours. | |

**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 | Mediclinic Southern Africa is committed to managing the resources consumed and the associated | Reduced operational costs | Up to 1 year | Direct | More likely than not | Low-medium | The potential financial implications from being a sustainable brand and responsible corporate citizen will be impacted by an influx of patients due to greater customer confidence and loyalty and reduced operational costs for electricity, water, waste and resources. An estimated 0.5% gain in reputational benefits could result in an increase of revenue of approximately R72 million per annum based on current revenue levels. | In order to enhance Mediclinic's reputation as a sustainable brand and responsible corporate citizen it is annually measuring, | Mediclinic has spent about R225 000 per annum to appoint external consultants to compile the carbon footprint |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | environmental impacts and would like to be seen as a leader in environmental issues in the healthcare industry. The reputational benefits of being a sustainable brand and responsible corporate citizen will result in market growth and opportunities for expansion in Southern Africa. | | | | | | | assessing and verifying its carbon footprint and is publicly disclosing its practices and performance through the Carbon Disclosure Project. Mediclinic has set a target to reduce energy consumption on bed days sold by 3.09% per year to meet government's target of reducing carbon emissions by 34% by 2020. During CY2016 Mediclinic expanded the Energy Initiative Committee function to | and disclosure thereof as well as the external verification of the carbon inventory. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | the Natural Resources Committee to include all natural resources. Comprehensive waste management plans are in place and waste sent to landfill and recycled is quantified in the carbon footprint report and is monitored and managed on a continuous basis. A total of 5 251 (FY2016: 6 467) tonnes of normal waste was sent to landfill whereas a total 1 283 (FY2016: 1 376) tonnes or waste was recycled. | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Mediclinic is in the process of incorporating renewable energy in operations such as solar PV systems as innovative, cost-effective methods of managing its carbon footprint. Mediclinic believes that by managing and containing operating costs and by managing its impact on the environment while providing quality of care and facilities it will be regarded as a respected and trusted | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | provider of hospital services by patients, doctors, and funders of healthcare. | |
| Reputation | Mediclinic is committed to sound environmental stewardship and would like to be seen as an environmental leader in the transition to a low carbon economy. The reputational benefits of being a sustainable brand and responsible corporate citizen will result in market | Reduced operational costs | Up to 1 year | Direct | More likely than not | Low-medium | A reputation as a sustainable brand and responsible corporate citizen is reflected in the economic value Mediclinic creates and distributes to its stakeholders such as its employees and the local communities in which it operates. Mediclinic's 2016 brand value is estimated at R11 653 million – according to Brand Finance South Africa. An estimated 0.5% gain in reputational benefits could result in an increase of brand value of approx. R58 million together with actual revenue. http://www.bizcommunity.com/Article/196/82/150904.html | Mediclinic participates in the CDP Water Disclosure Project and has determined and verified its water baseline. It has set a water target for hospitals of 10% reduction in litres of water used per bed day sold by 2020 from a 2011 base year. During CY2016 it consumed 652 litres/bed day sold - a 8.3% reduction on | No direct costs were incurred with the water management strategy other than staff salaries. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | growth and opportunities for expansion in Southern Africa. | | | | | | | a baseline of 711 litres/bed day sold in 2011. Mediclinic updated its contingency plans, which are based on ISO 14001 principles and water has now been moved from a 'Strategic' to 'Life Support' category, bringing it in line with electricity and patient life support equipment like ventilators etc. Without a continuous water supply, a hospital cannot control its infection rate nor continue with daily operations. | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A water management strategy was put in place and includes the following initiatives: • Installation of hospital water meters • Implementation of detailed Water Contingency and Water Contamination Plans • Regular water quality testing by a national service provider • Leadership support to drive the change of human behaviour • Corporate program for the sink of boreholes at hospitals • | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct / Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Hospital design to include the grey and black water systems and to increase water backup supply • Hospital procurement equipment preference to closed water loop systems By implementing the water management strategy Mediclinic aims to secure ongoing access to water, manage the scarce resource responsibly and enhance its reputation as a responsible corporate citizen. | |

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 | Wed 01 Apr 2015 - Thu 31 Mar 2016 | 23841.37 |
| Scope 2 (location-based) | Wed 01 Apr 2015 - Thu 31 Mar 2016 | 159570.94 |
| Scope 2 (market-based) | Wed 01 Apr 2015 - Thu 31 Mar 2016 | 0 |

## 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) |

## 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 Fourth Assessment Report (AR4 - 100 year) |
| N2O | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R134a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R404a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R407a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R407c | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R408a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R410a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R417a | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: R507 | IPCC Fourth Assessment Report (AR4 - 100 year) |
| Other: HCFC-22 | IPCC Fourth Assessment Report (AR4 - 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 |
|---|---|---|---|
| Diesel/Gas oil | 2.6762 | kg CO2e per liter | Defra 2016 - Guidelines to Defra's GHG Conversion Factors for Company Reporting, Fuels, updated June 2016. Available: www.ukconversionfactorscarbonsmart.co.uk |
| Liquefied petroleum gas (LPG) | 2941.78 | Other: kg CO2e per tonne | Defra 2016 - Guidelines to Defra's GHG Conversion Factors for Company Reporting, Fuels, updated June 2016. Available: www.ukconversionfactorscarbonsmart.co.uk |
| Motor gasoline | 2.3025 | kg CO2e per liter | Defra 2016 - Guidelines to Defra's GHG Conversion Factors for Company Reporting, Fuels, updated June 2016. Available: www.ukconversionfactorscarbonsmart.co.uk |
| Natural gas | 0.18400 | Other: kg CO2e per kWh | Defra 2016 - Guidelines to Defra's GHG Conversion Factors for Company Reporting, Fuels, updated June 2016. Available: www.ukconversionfactorscarbonsmart.co.uk |
| Electricity | 1.00 | Other: kg CO2e per kWh | South Africa - Eskom Holdings SOC Limited Integrated Report 2016. Available: http://www.eskom.co.za/IR2016/Documents/Eskom_integrated_report_2016.pdf - p136 |

**Further Information**

## 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**

24687.06

## 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 have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure | Mediclinic owns and operates 3 solar PV plants, but do not purchase clean electricity from third parties. |

## 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 |
|---|---|---|
| 156780.67 | 0 | |

## 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?**

Yes

## 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 |
|---|---|---|---|---|
| Geographies – Hospitals belonging to Mediclinic International that are located outside of South Africa and Namibia, i.e. in the Middle East and Switzerland are excluded from the carbon footprint. | Emissions are not relevant | Emissions are not relevant | No emissions from this source | Information and data for the period in question is not yet confirmed due to recent acquisitions and about 80% of the operational beds of Mediclinic International are located in Mediclinic Southern Africa. |

## 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 | More than 2% but less than or equal to 5% | Metering/ Measurement Constraints | Various measurement techniques are undertaken across a large selection of hospitals (53) and administrative offices for a twelve month period. While the utmost care is taken to ensure absolute accuracy of measurement, it must be recognised that minor errors could occur in this exercise. Data |

| Scope | Uncertainty range | Main sources of uncertainty | Please expand on the uncertainty in your data |
|---|---|---|---|
| | | Data Management | used to calculate the emissions from fuel consumed in owned equipment and the vehicle fleet was derived from purchase records and not metered consumption. |
| Scope 2 (location-based) | More than 2% but less than or equal to 5% | Metering/ Measurement Constraints | Electricity is supplied by national electricity utilities and, therefore, Mediclinic is reliant on the accurate measurement of its electricity consumption by these utilities, assisted by Mediclinic's own meters for reconciliation. |
| Scope 2 (market-based) | Less than or equal to 2% | No Sources of Uncertainty | No emissions in this scope. |

**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 | Limited assurance | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC8.6a/Mediclinic Southern Africa 2017 - Verification Statement.pdf | Verification Statement Pages 1-3 | ISO14064-3 | 100 |
| Annual process | Complete | Reasonable assurance | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC8.6a/MC Verification_June2017.pdf | Data Verification Report Pages 1-17 | ISO14064-3 | 70 |

## 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 (%) |
|---|---|---|---|---|---|---|---|
| Location-based | Annual process | Complete | Limited assurance | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC8.7a/Mediclinic Southern Africa 2017 - Verification Statement.pdf | Verification Statement Pages 1-3 | ISO14064-3 | 100 |
| Location-based | Annual process | Complete | Reasonable assurance | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC8.7a/MC Verification_June2017.pdf | Data Verification Report Pages 1-17 | 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 |
|---|---|
| Year on year change in emissions (Scope 1) | Total Scope 1 emissions increased by 845.69 tCO2e or 3.55% when compared against FY2016, mainly as a result of an increase in the use of air-conditioning gas refills and gas consumption in operations, as well as an increase in the use of anaesthetic gases. This is offset by a decrease in diesel consumption in generators due to less power outages during CY2016. |
| Year on year change in emissions (Scope 2) | Total Scope 2 (location-based) emissions decreased by 2 790.27 tCO2e or 1.75% when compared against FY2016 mainly as a result of a focus on energy efficiency. |

## CC8.9

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

No

## CC8.9a

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

**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?**

No

## CC9.1a

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

| Country/Region | Scope 1 metric tonnes CO2e |
|---|---|
| | |

## 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) |
|---|---|
| Stationary fuel - generators | 218.62 |
| Stationary fuel - incinerators | 6.42 |
| Fugitive emissions | 3331.73 |
| Gas consumption and anaesthetics | 16061.16 |
| Mobile fuel - Vehicle fleet | 81.55 |
| Mobile fuel - Pool cars | 626.53 |
| Mobile fuel - Emergency vehicles | 4361.05 |
| Renewable energy | 0.00 |

**Further Information**

## 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?**

No

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) |
|---|---|---|---|---|

**CC10.2**

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

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) |
|---|---|---|

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**

## 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 | 0 |
| Steam | 0 |
| Cooling | 0 |

## CC11.3

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

22663.25

## CC11.3a

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

| Fuels | MWh |
|---|---|
| Diesel/Gas oil | 11355.35 |
| Liquefied petroleum gas (LPG) | 1114.75 |
| Motor gasoline | 10137.04 |
| Natural gas | 56.11 |

## 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 |
|---|---|---|---|
| Other | 423.93 | 0.00 | Grid-connected electricity generation owned and operated by Mediclinic. Mediclinic owns 3 solar PV systems for own consumption, but does not purchase low carbon electricity. |

## 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 |
|---|---|---|---|---|---|
| 157204.61 | 156780.68 | 423.93 | 423.93 | 423.93 | Mediclinic owns 3 solar PV systems for own consumption. |

## Further Information

## 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 | 0.63 | Decrease | Various energy efficiency initiatives including the installation of energy efficient lighting, chiller replacements and solar panels to assist water heating resulted in decreased Scope 2 emissions of 1152.89 tCO2e. Total Scope 1 & 2 emissions in the prior year was 183412.31 tCO2e. We therefore arrived at 1.39% through (1152.89 / 183412.31) * 100 = 0.63%. |
| Divestment | | | |
| Acquisitions | | | |
| Mergers | | | |
| Change in output | 0.46 | Increase | Scope 1 emissions increased as a result of an increase in bed days sold (0.73%) and revenue (6.82%) which required more air-conditioning gas refills and gas consumption in operations, as well as an increase in the use of anaesthetic gases. This is offset by a decrease in diesel consumption in generators due to less power outages during CY2016. Total Scope 1 & 2 emissions in the prior year was 183412.31 tCO2e. We therefore arrived at 0.46% through (845.69 / 183412.31) * 100 = 0.46%. |
| Change in methodology | 0.89 | Decrease | The emissions factor for purchased electricity from Eskom (Scope 2) decreased from 1.01 in 2015 to 1.00 kg CO2e per kWh in 2016. Total Scope 1 & 2 emissions in the prior year was 183412.31 tCO2e. We therefore arrived at 0.86% through (1637.38 / 183412.31) * 100 = 0.89%. |
| Change in boundary | | | |
| Change in physical operating | | | |

| Reason | Emissions value (percentage) | Direction of change | Please explain and include calculation |
|---|---|---|---|
| conditions | | | |
| Unidentified | | | |
| Other | | | |

**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?**

Location-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 |
|---|---|---|---|---|---|---|
| 0.0000126309 | metric tonnes CO2e | 14367000000 | Location-based | 7.38 | Decrease | Scope 1 & 2 emissions decreased by 1.06% mainly as a result of emission reduction initiatives (0.63%) while revenue earned increased by 6.82%, resulting in a decrease in the intensity figure for revenue. |

## 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 |
|---|---|---|---|---|---|---|---|
| 0.0897 | metric tonnes CO2e | Other: per bed day sold | 2022952 | Location-based | 1.78 | Decrease | Scope 1 & 2 emissions decreased by 1.06% mainly as a result of emission reduction initiatives (0.63%) while bed days sold increased by 0.73%, resulting in a decrease in the intensity figure per bed day sold. |

**Further Information**

# Page: CC13. Emissions Trading

## CC13.1

**Do you participate in any emissions trading schemes?**

No, and we do not currently anticipate doing so in the next 2 years

## 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 |
|---|---|---|---|---|---|
| | | | | | |

CC13.1b

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

**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 | 474.38 | Consumption of office paper Emission factors: Mondi Rotatrim Paper Profile - released May 2016 indicating electricity usage and CO2 emissions per tonne of paper. Tonnes of paper purchased provided by the service provider were used to calculate emissions according to the GHG Protocol using the provided emission factors. Assumptions: Paper purchased is recorded for all operations at Mediclinic – hospitals and administration offices. | 100.00% | |
| Capital goods | Not relevant, explanation provided | | | | Capital goods to provide health care relate to hospitals and equipment. No new hospitals were built during the year and additional equipment and beds make up a small percentage of Scope 3 emissions. |
| Fuel-and-energy-related activities (not included in Scope 1 or 2) | Relevant, calculated | 14729.54 | Transmission and Distribution losses from purchased electricity KWhs consumed were used to calculate emissions according to the GHG Protocol using Defra's 2016 emission factors for transmission & distribution, South Africa. Assumptions: Kilowatt hours of electricity purchased was calculated using the available records. | 100.00% | |
| Upstream | Relevant, | 6836.33 | Outsourced third-party transport Kilometres travelled | 100.00% | |

| 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 |
|---|---|---|---|---|---|
| transportation and distribution | calculated | | in third party vehicles were used to calculate emissions according to the GHG Protocol using Defra's 2016 emission factors for freighting goods and business travel - land. Assumptions: Kilometres travelled by third party vehicles was calculated using the available records. | | |
| Waste generated in operations | Relevant, calculated | 6811.38 | Waste to landfill and recycled Tonnes of wet waste to landfill and tonnes of municipal waste recycled were used to calculate emissions according to the GHG Protocol using Defra's 2016 emission factors for municipal waste and Friedrich and Trois (2013), GHG emission factors developed for the collection, transport and landfilling of municipal waste in South African municipalities. Assumptions: Waste from operations was calculated using the available records. | 100.00% | |
| Business travel | Relevant, calculated | 3141.62 | Business travel in rental cars, commercial airlines, hotel accommodation and travel claims. Car rental - kilometres travelled, car engine size and type of fuel used provided by service provider. Defra's 2016 emission factors for business travel - land used. Air travel - flight information provided by service provider, including class of travel, departure dates and destination of each leg. Carbon Calculated determined the distance travelled. Defra's 2016 emission factors for business travel - air used. Hotel accommodation - bednights provided by service provider. Emissions factor sourced from UNEP World Meteorological Organisation Climate Change And Tourism Report; A2.2.3 Accommodation. Travel claims - kilometres travelled provided by employees. Defra's 2016 emission | 100.00% | |

| 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 |
|---|---|---|---|---|---|
| | | | factors for business travel - land used. Emissions were calculated according to the GHG Protocol. Assumptions: It is assumed that there is one occupant per vehicle rented. All fights are booked through the company therefore there are no privately booked flights that are not accounted for. Hotel accommodation was based on estimated number of nights away on business travel and calculations were based on 1 person occupying a room per night. Emissions from travel claims were calculated using the available records. | | |
| Employee commuting | Relevant, calculated | 15522.44 | Employee commuting Kilometres travelled according to the mode of transport used to calculate emissions according to the GHG Protocol using Defra's 2016 emission factors and calculated as 0.92 tCO2e x 16 824 FTEs. Assumptions: A commuting survey was completed for the Mediclinic Group. A total of 4 781 surveys were used representing 28% of Mediclinic FTEs and 13 public holidays were included in the calculation. The emissions per FTE according to the surveys were extrapolated to reflect the number of FTEs for CY2016. | 100.00% | |
| Upstream leased assets | Relevant, calculated | 1972.79 | ER24 aircraft Litres of aviation fuel consumed provided by service provider was used to calculate emissions according to the GHG Protocol using Defra's 2016 emission factors for fuel. Assumptions: 3 fixed-wing aircraft were used by ER24. No helicopters have been operational since 1 May 2016. | 100.00% | |
| Downstream transportation and distribution | Not relevant, explanation provided | | | | Mediclinic purchased the third party transport which is reflected in upstream transportation and |

| 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 |
|---|---|---|---|---|---|
| | | | | | distribution. Patients pay for ER24 services through their medical aids, but Mediclinic leased the aircraft and is therefore reflected in upstream leased assets. |
| Processing of sold products | Not relevant, explanation provided | | | | Mediclinic provides health care and its services are not intermediate products that require further processing. It is not responsible for directly generating greenhouse gas emissions. |
| Use of sold products | Not relevant, explanation provided | | | | Mediclinic's services are final products that do not produce direct or indirect use-phase emissions from fuel or electricity use. |
| End of life treatment of sold products | Not relevant, explanation provided | | | | Mediclinic provide health care and the end-of-life emissions from products sold relate to waste disposal from operations that are accounted for under waste generated in own operations. |
| Downstream leased assets | Not relevant, explanation provided | | | | Mediclinic does not lease assets to third parties. |
| Franchises | Not relevant, explanation provided | | | | Mediclinic does not have any franchised operations. |
| Investments | Not relevant, explanation provided | | | | Mediclinic included all Southern African operations, which they own. |

| 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 |
|---|---|---|---|---|---|
| Other (upstream) | | | | | |
| Other (downstream) | | | | | |

**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 | Complete | Limited | https://www.cdp.net/sites/2017/38/11638/Climate Change | Verification | ISO14064- | 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 3 emissions verified (%) |
|---|---|---|---|---|---|---|
| process | | assurance | 2017/Shared Documents/Attachments/CC14.2a/Mediclinic Southern Africa 2017 - Verification Statement.pdf | Statement Pages 1-3 | 3 | |
| Annual process | Complete | Reasonable assurance | https://www.cdp.net/sites/2017/38/11638/Climate Change 2017/Shared Documents/Attachments/CC14.2a/MC Verification_June2017.pdf | Data Verification Report Pages 1-17 | ISO14064-3 | 70 |

**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 |
|---|---|---|---|---|
| Purchased goods & services | Change in output | 0.13 | Increase | Paper consumption increased from 220 tonnes in CDP2016 to 245 tonnes in CDP2017 as eye lined paper – from pharmacy script print outs – have been replaced with A4 pages for printing. The eye lined paper was not included in previous reporting. Further, |

| Sources of Scope 3 emissions | Reason for change | Emissions value (percentage) | Direction of change | Comment |
|---|---|---|---|---|
| | | | | Mediclinic's new SAP program requires that a 'job card' be printed after any organisational printing, further increasing the amount of paper being consumed. |
| Fuel- and energy-related activities (not included in Scopes 1 or 2) | Change in methodology | 40.87 | Increase | Emissions from transmissions and distribution losses from purchased electricity was included in the carbon footprint report for the first time. |
| Upstream transportation & distribution | Change in output | 2.11 | Increase | Emissions from third party transport increased as a result of increased economic activity and revenue (6.82%). |
| Waste generated in operations | Change in output | 4.36 | Decrease | Emissions from waste sent to landfill and recycled decreased as a result of more accurate record keeping. |
| Business travel | Emissions reduction activities | 3.08 | Decrease | Emissions from business travel decreased as a result of focussing on behavioural changes. |
| Employee commuting | Change in output | 1.61 | Increase | The average emissions per employee commuting (tCO2e/FTE) changed from 0.88 in CDP2016 to 0.92 in CDP2017. This change can be attributed to an increased number of respondents, a more diverse range of employees completing the survey and more FTEs using public transport thereby minimizing carbon per trip. |
| Upstream leased assets | Change in output | 0.04 | Increase | Emissions from ER24 aviation fuel increased as a result of increased economic activity and revenue (6.82%). |

## 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

## CC14.4a

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

## 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 |
|---|---|---|---|
| Compliance | 10 | 54% | Mediclinic engages with suppliers through written correspondence regarding the ISO 14001 standard and to comply with various legislation regarding management of the environment, GHG emissions, water, air quality, waste, healthcare and pharmaceutical waste. These environmental legislative requirements and procedures are incorporated in agreements where possible and include all building projects. Many of the suppliers have instituted environmental policies in their operations and compile their own carbon footprint. Many of the suppliers have also changed their products and packaging to be more sustainable. This enabled Mediclinic to achieve its sustainability KPI's and to maintain ISO 14001 certification for hospitals. |

## 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

# 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 |
|---|---|---|
| Koert Pretorius | Chief Executive Officer and Board Member | Chief Executive Officer (CEO) |

**Further Information**

**CDP 2017 Climate Change 2017 Information Request**