# Extract of HUMAN's Environmental Statement 2018

## 1. Introduction

Company HUMAN Gesellschaft für Biochemica und Diagnostica mbH (HUMAN) is a globally acting manufacturer of in-vitro-diagnostic (IVD) reagents and devices. Offering a broad product portfolio and a distribution and service network in more than 150 countries, HUMAN represents a leading supplier within the international diagnostics market.

Founded 1972 in Germany, HUMAN has continuously grown and currently employs approximately 280 staff at sites in Wiesbaden and Magdeburg. Further 15 employees are located at the sales and service offices in India, PR China, UAE, Ethiopia, Panama and Singapore.

The portfolio focuses on clinical diagnostics as well as on hematology, ELISA and autoimmune assays.

Since 2004, HUMAN is part of Dr. Schmidt Biotech Group. In 2013, German IVD analyzer producer LABiTec GmbH, located close to Hamburg, was acquired.

'Made in Germany' is HUMAN's promise to quality. Research & development and modern manufacturing conditions in Germany are basis for growth, which is part of HUMAN's philosophy.

HUMAN complies with all applicable European Directives and Ordinances and therefore stands for product reliability and quality also outside of Europe.

Following the mission to offer reliable diagnostics in good quality for attractive prices HUMAN presents one of the most important players outside of Western Europe, Japan and the USA. Sales focus by 98% on emerging and developing countries.

HUMAN operates a sales network comprising more than 150 distributing partners and six own sales and service offices ensuring local client support. HUMAN is also well-approved supplier of many international NGOs.

Generating revenues of over 50 Million EUR in 2017 HUMAN operates profitably. HUMAN's business characteristics overview:

- Global player on in-vitro-diagnostics (IVD) sector offering a broad portfolio of laboratory diagnostic products.
- R&D and manufacturing with focuses on clinical chemistry, ELISA, hematology, as well as rapid tests and autoimmune assays.
- 3 sites in Germany: Wiesbaden (headquarters), Magdeburg (manufacture and R&D) and Ahrensburg close to Hamburg (subsidiary LABiTec)
- Sales focus on emerging and developing with sales network including more than 150 countries.

Being a manufacturer of IVD, HUMAN is regulated by the German Medical Products Law, which implements the obligations of the European IVD Directive (98/79/EC) into national law. Company HUMAN as manufacturer as well as the CE labeled products are registered at and supervised by the German pertinent authorities.

HUMAN's success is based on compliance with regulatory obligations and customer fulfillment. The long-term established quality management system, which is certified according to ISO 9001 and ISO 13485, represents a key pre-condition.

As owner, management and employees of HUMAN feel dedicated to environmental protection, an integrated environmental management system according to ISO 14001 und EMAS III (1221/2009/EC) was implemented in 2015 and maintained since then at the main sites in Wiesbaden and Magdeburg.

Environmental milestones for Wiesbaden site:

| | |
|---|---|
| 2005: | Renovation of heating and ventilation system of older building part |
| 2009: | Completion of new building part |
| 2009: | Installation of a geothermal unit for heating and air-conditioning within the new building part (heating capacity: 273 kW, cooling capacity: 233 kW) |
| 2009: | Installation of photovoltaic modules on new building part (peak capacity: 44 kW) |
| 2009: | Use of 50% renewable electricity |
| 2010-2013: | Interior modernization of old building part |
| 2011: | Roof renovation |
| 2012: | New cooling system for warehouse |
| 2014: | Use of 100% renewable electricity |
| 2015: | Installation of photovoltaic modules on old building part (peak capacity: 47 kW) Certification according to ISO 14001 und EMAS III |
| 2017: | Installation of chargers for E-Cars and E-Bikes |
| 2017: | Installation of LED lighting in parts of the warehouse |

Environmental milestones for Magdeburg site:

| | |
|---|---|
| 2012: | Use of 50% renewable electricity |
| 2013: | Installation of photovoltaic modules (peak capacity: 60 kW) and solar thermal unit (capacity: 15 kW) on the new building part |
| 2013: | LED illumination in new building part |
| 2014: | Use of 100% renewable electricity |

2014: Illumination conversion to LED in old building part

2015: Certification according to ISO 14001 und EMAS III

2016: Eco-Modernization (reduced electricity consumption) of major climate control unit

2018: Expansion of present photovoltaic unit from 60 kW to ca. 90 kW peak capacity on the new building part

2018: LED illumination in production area (old building part)

## 2. Environmental Policy

Expressing entrepreneurial responsibility, owner, management and employees of HUMAN feel highly obliged to the sustainable use of natural resources and environmental protection including the prevention of environmental impacts beyond HUMAN's company boundaries.

Therefore, a certified environmental management system for all sites is established and maintained, which implements the requirements of the International Standard ISO 14001 and the European EMAS Directive. According to these guidances Human reviews the environmental management system regularly with regard to HUMAN's obligation for continuous improvement of the environmental performance.

The environmental policy of HUMAN is characterized by its environmental guidelines. Environmental management measures are regularly aligned with the environmental policy and attached guidelines.

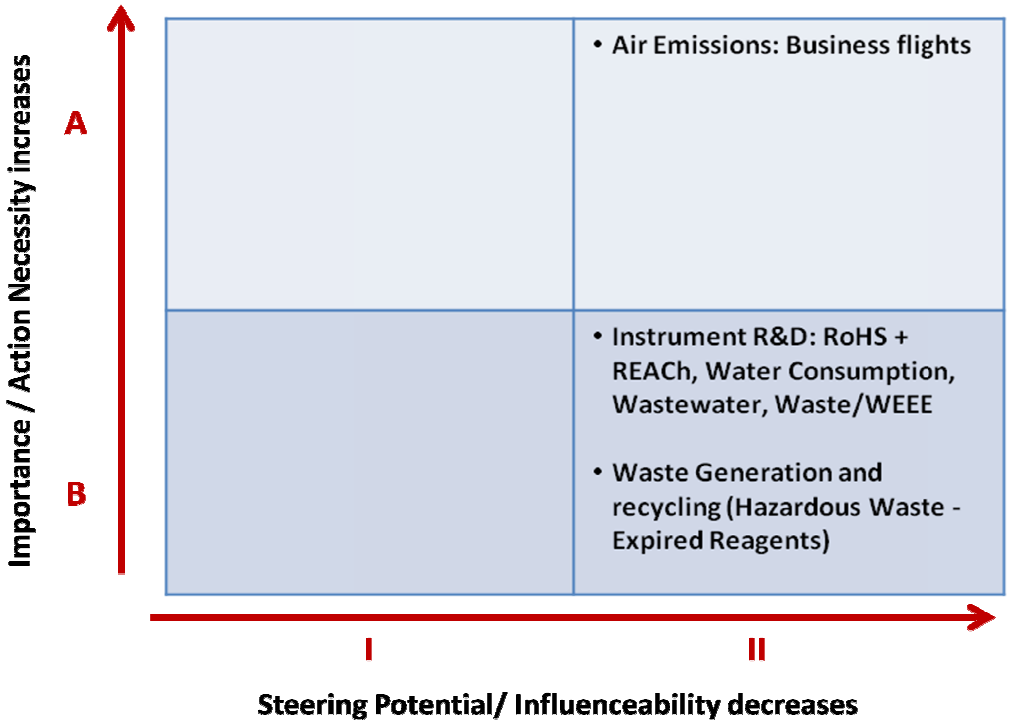
Environmental Guidelines:

- Compliance with all applicable environmental laws and regulations and other binding obligations of the Company are jointly guaranteed by all parties involved.
- In the design of business processes preferably renewable resources are used. The proportion of renewable energy generated at the HUMAN locations is increased to the extent possible.
- Decisions on investments, suppliers, products, intermediates and raw materials are made taking into account environmental effects.
- The planning of business travel and logistics accounts for steady reduction of the ecological footprint as well as attenuation of the climate change, as far as technically and economically feasible.
- The management of hazardous substances is designed such that the risk of environmental damage is minimized - including emergency situations.
- HUMAN employees are actively involved in the definition and implementation of measures to improve environmental performance. All Human employees contribute to a responsible environmentally friendly behavior of HUMAN.
- Suppliers and contractors are requested to consider the HUMAN environmental policy.
- HUMAN openly publishes information on environmental performance and welcomes suggestions from the public. The systematic environmental management is used to continuously improve the environmental performance of HUMAN, whenever possible also beyond the legally required level. It is achieved through a systematic operational environmental monitoring and targeted prevention of environmental impacts.

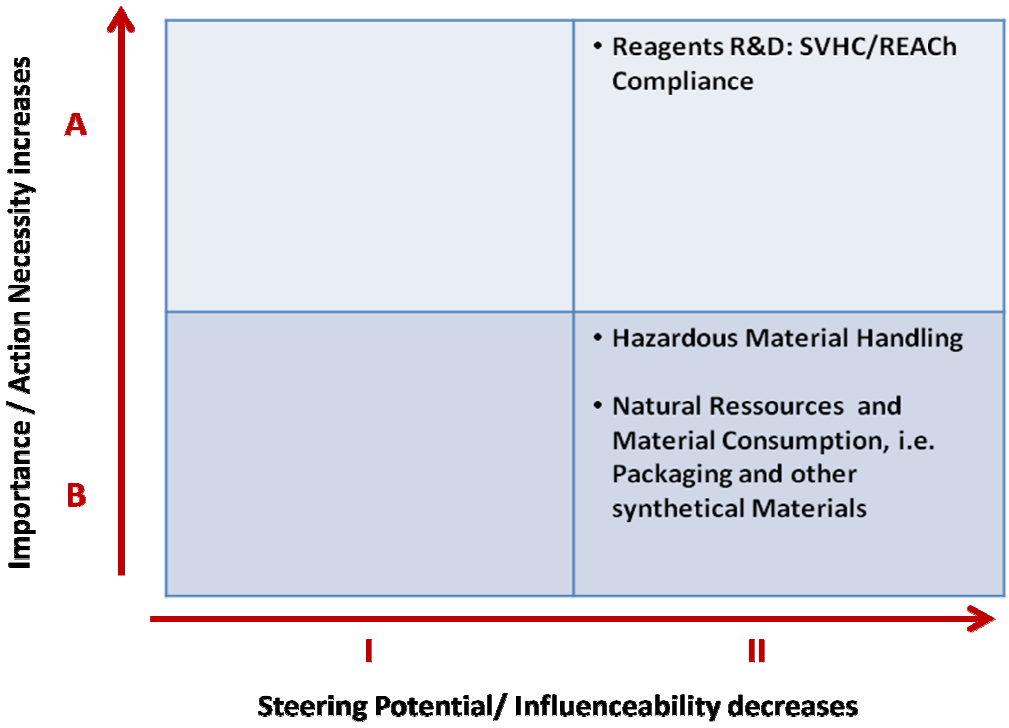
## 3. Environmental Aspects

The following environmental aspects are currently considered important at the HUMAN subject sites:

***Wiesbaden***




***Magdeburg***



# 4. Important Environmental Objectives 2017/2018

| *Objective* | *Action* | *Goal* |
|---|---|---|
| **Compensation of $CO_2$-Emmissions generated by business flights** | ⇒ Expenditure of up to 1% profit for compensation mea-sures<br>⇒ Reduction efforts with respect to business flights (i.e. by video conferencing) | Annual compensation of 750 t $CO_2$-Output at minimum – ***Goal achieved for 2017.***<br><br>***Compensation achieved via donations to Nature Foundations Bergwaldprojekt e.V. and Michael Succow (10 kEUR each). Compensation continuation is planned for 2018.*** |
| **Reduction of emissions generated by business travel (automotive)** | ⇒ Annual review and adjustment of HUMAN's internal guideline on company cars | Reduction of the average $CO_2$-Output to 105 g $CO_2$/km from newly-obtained company cars until 2020 – ***Action ongoing. Status 2018: 115 g $CO_2$/km*** |
| **Waste generation and recycling** | ⇒ Reduction of hazardous waste quantity | Improved separation of expired reagents into hazardous and non-hazardous waste and adequate disposal. Considerable quantity reduction of the hazardous fraction by 50%. – ***Goal has not been achieved until end of 2017 due to misunderstandings during separation of waste fractions. Improvement is striven for 2018.*** |
| **Use of natural resources and raw materials** | ⇒ Kit packages of self-produced reagents are planned to be changed to recycling cardboard only | ***To be achieved until end of 2019.*** |
| **Environmental Risks Handling of OEM Products** | ⇒ OEM: HUMAN CSR Guideline to be noticed by signature – Contacting new and missing OEM | ***To be achieved until August 2019.*** |
| **Environmental Communication** | ⇒ Environmental Newsletter for employees and clients | Improving environmental communication and awareness by releasing environmental news – ***First newsletter released in July 2018 (next in December 2018).*** |
| **Reduction of electricity consumption (i.e. by LED technology)** | ⇒ **Reduction < 12** kWh/TEUR at Wiesbaden site<br>⇒ **Reduction < 30** kWh/TEUR at Magdeburg site | ***To be achieved until end of 2020.*** |
| **Reduction of heating oil consumption at Wiesbaden site** | ⇒ **Reduction < 4,6** kWh/TEUR | ***To be achieved until end of 2020.*** |
| **Photovoltaic electricity generation** | ⇒ **Increase > 80 MWh/a** at Magdeburg site | ***To be achieved until end of 2019.*** |

# 5. Environmental Performance

Bold data are key indicators according to EMAS III.

## ***Wiesbaden Site***

Energy, Water and Material Consumption

| *Key figures* | *Unit* | *2013* | *2014* | *2015* | *2016* | *2017* |
|---|---|---|---|---|---|---|
| Electricity | MWh | 486.9 | 476.55 | 438.05 | 570.97** | 629.03** |
| Electricity /Turnover | kWh/kEUR | 9.28 | 8.49 | 8.72 | 11,10 | 12.09 |
| Heating energy | MWh | 261.29 | 197.78 | 172.14 | 208.95 | 248.76 |
| Heating energy /Turnover | kWh/kEUR | 4.98 | 3.52 | 3.43 | 4.06 | 4.78 |
| Diesel (for business rides) | MWh | - | - | 44.32 | 49.17 | 50.69 |
| Diesel /Turnover | kWh/TEUR | - | - | 0.88 | 0.96 | 0.97 |
| Total Energy Consumption | MWh | 748.19 | 674.33 | 654.51 | 829.09 | 928.49 |
| **Total Energy Consumption/ Turnover** | **kWh/kEUR** | **14.25** | **12.01** | **13.03** | **16.12** | **17.84** |
| On-site generation of geothermal energy (less electricity consumption of heat pump) | MWh | 846.36* | 781.07 | 818.49 | 880.18 | 886.79 |
| Additionally generated Electricity from photovoltaic modules No. 2 (used at the site) | MWh | - | - | 29.66 | 43.11 | 48.50 |
| Total Use of Renewable Energy (proportion of Green Electricity and geothermal energy) | MWh | 1093.22 | 1257.62 | 1286.20 | 1494.26 | 1564.32 |
| **Proportion of Renewable Energy Use out of the Total Energy Use*** ** | % | **68.56** | **86.41** | **85.60** | **85.27** | **83.93** |
| Additionally generated Electricity from further photovoltaic modules No. 1**** | MWh | 44.26 | 45.55 | 46.81 | 44.10 | 45.82 |
| Total Water Consumption | m³ | 1.002 | 927 | 903 | 888 | 886 |
| **Total Water Consumption/ Turnover** | **l/kEUR** | **19.09** | **16.51** | **17.98** | **17.27** | **17.03** |
| Paper Consumption | t | 5.49 | 4.00 | 3.00 | 4.00 | 3.00 |
| **Paper Consumption/Turnover** | **g/kEUR** | **104.59** | **71.24** | **59.74** | **77.79** | **57.65** |

* 3-year average

** Electricity meter exchange on 24.03.2016: The new digital meter displays raised power consumption (approx. 15%). This could mean that the power consumption during the past years might have been displayed too low.

***The total energy use comprises the total energy consumption plus the on-site generated and used energy.

****Not included within the proportion of renewable energy sources as not consumed on-site, but supplied into the local public electricity network.

Non-hazardous waste

| *Key figures* | *Unit* | *2013* | *2014* | *2015* | *2016* | *2017* |
|---|---|---|---|---|---|---|
| Total Non-hazardous Waste Generation | t | 51.53 | 54.70 | 44.85 | 40.62 | 37.70 |
| Total Waste Generation/Turnover | g/kEUR | 981.69 | 974.06 | 893.03 | 789.97 | 724.46 |

Hazardous waste

| *Key figures* | *Unit* | *2013* | *2014* | *2015* | *2016* | *2017* |
|---|---|---|---|---|---|---|
| Total Hazardous Waste Generation | t | 6.23 | 7.82 | 9.14 | 7.76 | 8.99 |
| **Total Hazardous Waste Generation/Turnover** | **g/kEUR** | **118.67** | **139.19** | **182.03** | **150.92** | **172.76** |

Air Emissions

| Key figures | Unit | 2013* | 2014* | 2015** | 2016** | 2017** |
|---|---|---|---|---|---|---|
| Greenhouse Gases | t $CO_2$-eq. | 740.08 | 647.03 | 653.55 | 547.59 | 543.68 |
| Greenhouse Gases (without business flights) | t CO2-eq. | 263.11 | 57.81 | 60.63 | 72.68 | 82.33 |
| **Total Greenhouse Gases/ Turnaround** | **kg $CO_2$-eq./kEUR** | **14.10** | **11.52** | **13.02** | **10.58** | **10.48** |
| $NO_x$ Emissions | kg | 2281.21 | 2458.25 | 2486.26 | 2001.88 | 1943.99 |
| **$NO_x$ Emissions/Turnover** | **g/kEUR** | **43.46** | **43.78** | **49.51** | **38.93** | **37,36** |
| $SO_2$ Emissions | kg | 1717.44 | 1890.59 | 1898.06 | 1532.54 | 1496.06 |
| **$SO_2$ Emissions/Turnover** | **g/kEUR** | **32.72** | **33.67** | **37.80** | **29.80** | **28.75** |
| PM 10 Emissions | kg | 67.04 | 32.88 | 35.68 | 31.68 | 31.06 |
| **PM 10 Emissions/Turnover** | **g/kEUR** | **1.28** | **0.59** | **0.71** | **0.62** | **0.60** |

* including Air Emissions generated by business flights (not recorded before)

** including Air Emissions generated by business flights and business rides (not recorded before)

## ***Magdeburg Site***

Energy, Water and Material Consumption

| Key figures | Unit | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Electricity* | MWh | 730.81 | 926.48 | 954.84 | 1030.56 | 1016.51 |
| Electricity/Turnover | kWh/kEUR | 23.32 | 27.36 | 32.706 | 32.62 | 31.31 |
| Heating energy | MWh | 564.20 | 801.11 | 914.58 | 975.63 | 1060.72 |
| Heating energy/Turnover | kWh/kEUR | 18.01 | 23.66 | 31.33 | 30.89 | 32.67 |
| Diesel (for business rides) | MWh | - | - | 8.21 | 14.61 | 16.90 |
| Diesel /Turnover | kWh/TEUR | - | - | 0.28 | 0.46 | 0.52 |
| Total Energy Consumption | MWh | 1295.01 | 1727.59 | 1877.64 | 2020.80 | 2094.12 |
| **Total Energy Consumption/ Turnover** | **kWh/kEUR** | **41.33** | **51.02** | **64.32** | **63.97** | **64.49** |
| Electricity generated by photovoltaic (PV) unit | MWh | 0.55 | 54.82 | 57.75 | 55.81 | 52.44 |
| Total Use of Renewable Energy (proportion of Green Electricity and PV electricity) | MWh | 324.74 | 1017.36 | 1012.60 | 1086.36 | 1068.95 |
| **Proportion of Renewable Energy Use out of the Total Energy Use**** | **%** | **25.07** | **57.21** | **52.32** | **52.31** | **50.19** |
| Total Water Consumption | $m^3$ | 4810 | 6440 | 7786 | 6773 | 7754 |
| **Total Water Consumption/ Turnover** | **l/kEUR** | **153.51** | **190.18** | **266.70** | **214.41** | **238.80** |
| Paper Consumption | t | 18.0 | 17.5 | 17.1 | 17.5 | 19.0 |
| **Paper Consumption/Turnover** | **g/kEUR** | **574.45** | **516.78** | **584.02** | **553.99** | **588.13** |

* Without the on-site generated used PV electricity.

** The total energy use comprises the total energy consumption plus the on-site generated and used energy.

Non-hazardous waste

| Key figures | Unit | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Total Non-hazardous Waste Generation | t | 66.54 | 57.01 | 60.11 | 60.13 | 66.79 |
| Total Waste Generation/Turnover | g/kEUR | 2123.44 | 1683.41 | 2058.96 | 1903.64 | 2056.89 |

Hazardous waste

| *Key figures* | *Unit* | *2013* | *2014* | *2015* | *2016* | *2017* |
|---|---|---|---|---|---|---|
| Total Hazardous Waste Generation | t | 13.03 | 13.62 | 21.67 | 26.59 | 24.14 |
| **Total Hazardous Waste Generation/Turnover** | **g/kEUR** | **415.84** | **402.20** | **742.27** | **841.75** | **743.43** |

Air Emissions

| *Key figures* | *Unit* | *2013* | *2014* | *2015** | *2016** | *2017** |
|---|---|---|---|---|---|---|
| Greenhouse Gases | t $CO_2$-eq. | 380.99 | 182.61 | 201.70 | 216.13 | 235.86 |
| **Total Greenhouse Gases/ Turnaround** | **kg $CO_2$-eq./kEUR** | **12.16** | **5.39** | **6.91** | **6.84** | **7.26** |
| $NO_x$ Emissions | kg | 469.80 | 64.16 | 76.05 | 78.05 | 90.70 |
| **$NO_x$ Emissions/Turnover** | **g/kEUR** | **14.99** | **1.90** | **2.61** | **2.47** | **2.61** |
| $SO_2$ Emissions | kg | 255.65 | 0.85 | 1.06 | 0.98 | 1.31 |
| **$SO_2$ Emissions/Turnover** | **g/kEUR** | **8.16** | **0.03** | **0.04** | **0.03** | **0.04** |
| PM 10 Emissions | kg | 62.06 | 8.18 | 10.11 | 9.76 | 12.38 |
| **PM 10 Emissions/Turnover** | **g/kEUR** | **1.98** | **0.24** | **0.35** | **0.31** | **0.38** |

* including Air Emissions generated by business rides (not recorded before)

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