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# HIGHLIGHTS 2015

*Novartis is a global healthcare company based in Basel, Switzerland, with roots dating back more than 150 years. We provide healthcare solutions that address the evolving needs of patients and societies worldwide. Novartis products are available in more than 180 countries and they reached nearly 1 billion people globally in 2015. About 123 000 employees of 144 nationalities work at Novartis around the world.*

**49.4bn**
Net sales (USD)

**8.9bn**
Group R&D spending, amounting to 18% of net sales (USD)

**41%**
Novartis Group company managers are women

**30%**
Our commitment to cut greenhouse gas emissions Scope 1 + 2 by 2020 vs. 2010

**USD 1**
Price of one treatment per month in the Novartis Access portfolio

**300m**
Pediatric antimalarials delivered without profit since 2009

**110 638**
Associates completed Code of Conduct e-training and certification

**100%**
Of top 20 conditions causing the global disease burden addressed by our portfolio

**7.6m**
People reached through social business initiatives

**Cover**
Dr. Chang As Xinh, 37, updates records in his office at a community hospital in northeast Vietnam. Dr. Xinh is one of just 15 doctors who deliver medical care to more than 40 000 mostly ethnic H'mong people here.

**Joerg Reinhardt**
Chairman of the Board of Directors

# Dear reader,

In 2015, Novartis completed our portfolio transformation, helping improve our ability to grow and sharpen our focus on innovation. At the same time, we took a series of strategic and operational measures to strengthen and streamline our corporate responsibility activities in the areas of access to healthcare, environmental protection and ethical business practices.

Our corporate responsibility efforts are a long term commitment, and we consider them essential to being a trusted leader in changing the practice of medicine. As a leading science-based healthcare company, we have two main responsibilities: to discover and develop innovative medicines and therapies, and to improve access to healthcare.

In September 2015, we launched the Novartis Access portfolio, which aims to address the high burden of noncommunicable diseases in low- and lower-middle-income countries. Working closely with our stakeholders, we are striving to make this social business venture commercially sustainable, helping patients gain stable and affordable access to medicines and taking pressure off healthcare systems in low-income countries.

Last year we also strengthened the Board of the Novartis Foundation by adding leading experts who will help sharpen the foundation's focus on developing efficient healthcare delivery models, which support our company's overall access-to-medicine efforts to create scale and increase impact. The Novartis Foundation took additional steps to interrupt the transmission of leprosy, and Novartis renewed our pledge with the World Health Organization to extend our donation of multidrug therapy medicines to help eliminate this disease.

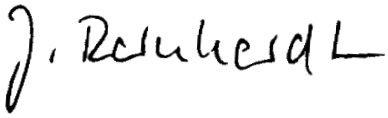
Tackling malaria remains a focus of our company. Since launching the Novartis Malaria Initiative in 2001, we have delivered 750 million treatments of our antimalarial drug *Coartem* without profit. And we are continuing to work to develop innovative treatments against malaria and other neglected tropical diseases.

We also set new environmental targets in 2015. We aim to reduce our greenhouse gas emissions substantially by 2030 through the increased use of renewable energy sources and the simultaneous reduction of our carbon footprint, supporting global efforts to control climate change.

Additionally, to further strengthen our culture, we launched a Group-wide ethics program designed to firmly embed our corporate values into our business practices. This reflects our conviction that we are measured not only by our business performance, but also by how we achieve our results.

In collaboration with our stakeholders, and with the support of our associates, I am confident that we can further improve our corporate responsibility efforts. These efforts should create shared value for our company and society, and contribute to the United Nations' Sustainable Development Goals.

Sincerely,



**Joerg Reinhardt**
Chairman of the Board of Directors

**Joseph Jimenez**
Chief Executive Officer

# Dear reader,

Corporate responsibility (CR) is an important element of our strategy and plays a key role in our effort to discover new ways of extending and improving people's lives. In our Corporate Responsibility Performance Report 2015, we discuss the progress we made in important areas, including steps to improve access to healthcare and to ensure we are doing business in a responsible manner.

A major achievement in 2015 was the launch in September of an innovative business approach that will increase people's access to affordable medicines in low- and lower-middle-income countries. Novartis Access is a portfolio of 15 medicines to treat chronic diseases such as cancer and diabetes, and will be offered to governments and other public-sector healthcare providers at a cost of USD 1 per treatment per month.

We reached about 66 million patients in 2015 through our various access initiatives, ranging from philanthropy to social business ventures. For example, the Novartis Malaria Initiative – one of the largest access-to-medicine programs in the world – has distributed 300 million pediatric antimalarial medicines since 2009. And we continue to work to eliminate leprosy through a major new Novartis Foundation program to reduce the likelihood of infection in India, Indonesia, Myanmar, Nepal, Sri Lanka and Tanzania.

We continued in 2015 to reinforce our culture of integrity, even as we felt the ongoing effects of pockets of bad behavior from the past. We are committed to working with integrity and to upholding high ethical standards. To help us improve, we launched a new initiative to strengthen our approach to culture, compliance, reporting and commercial relationships.

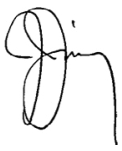
On the environmental front, Novartis committed to new targets to further reduce the footprint of our activities. The primary goal is a 30% cut in global greenhouse gas emissions by 2020, based on 2010 levels, plus reductions in water consumption and non-recyclable waste.

Identifying and addressing important topics is central to how we manage CR. During the year we reconfirmed the findings of our major CR materiality analysis of 2013, which identified access, ethics, and research and development as the most material issues.

We are proud of our progress in 2015, but we know there is still more to do. We will continue to intensify our sustainability efforts, learning and adapting alongside our partners so that together we can contribute to solving big societal challenges, such as climate change and the lack of access to healthcare.

I believe Novartis is already making a difference, and we remain committed to further improving the health of people around the world.

Sincerely,



**Joseph Jimenez**
Chief Executive Officer

# KEY PERFORMANCE INDICATORS 2015

## Financial

**KEY FIGURES** [1, 2]
(in USD millions, unless indicated otherwise)

| | 2015 | 2014 | % Change USD | % Change Constant currencies |
|---|---|---|---|---|
| Net sales to third parties from continuing operations | **49 414** | 52 180 | –5 | 5 |
| Operating income from continuing operations | **8 977** | 11 089 | –19 | –2 |
| Return on net sales (%) | **18.2** | 21.3 | | |
| Net income from continuing operations | **7 028** | 10 727 | –34 | –18 |
| Net income/loss from discontinued operations [3] | **10 766** | –447 | | |
| Net income [3] | **17 794** | 10 280 | 73 | 91 |
| Basic earnings per share [4] (USD) from continuing operations | **2.92** | 4.39 | –33 | –17 |
| Basic earnings per share [3, 4] (USD) from discontinued operations | **4.48** | –0.18 | | |
| Total basic earnings per share [3, 4] (USD) | **7.40** | 4.21 | 76 | 94 |
| Core operating income from continuing operations | **13 790** | 14 473 | –5 | 10 |
| Core return on net sales (%) | **27.9** | 27.7 | | |
| Core net income from continuing operations | **12 041** | 12 653 | –5 | 9 |
| Core earnings per share [4] (USD) from continuing operations | **5.01** | 5.19 | –3 | 10 |
| Free cash flow from continuing operations | **9 259** | 10 934 | –15 | |
| Free cash flow | **9 029** | 10 762 | –16 | |

## Innovation

**KEY FIGURES** [5]

| | 2015 | 2014 |
|---|---|---|
| Projects entering portfolio [6, 7] | **25** | 13 |
| Ongoing Phase III programs [8] | **37** | 37 |
| US FDA breakthrough therapy designations [9] | **0** | 2 |
| Major submissions (US, EU, JP) [10] | **14** | 15 |
| Major approvals (US, EU, JP) [10, 11] | **20** | 14 |
| New molecular entity (NME) approvals [12] | **6** | 4 |

[1] All information in this Corporate Responsibility Report reflects the continuing operations of the Novartis Group after reflecting the various changes in the Group's portfolio of activities which took place during 2015 and prior years. For comparability purposes all prior year data has been restated to also only reflect continuing operations. See the Novartis Annual Report 2015 for an explanation of our continuing operations.

[2] The Annual Report 2015 includes non-IFRS financial measures such as core results, constant currencies and free cash flow. Novartis believes that investor understanding of the Group's performance is enhanced by disclosing these non-IFRS measures. Core measures exclude items that can vary significantly from year to year, such as the impact of certain significant exceptional and other items related to disposals and acquisitions, as well as other exceptional items over a USD 25 million threshold. Constant currency calculations have the goal of eliminating exchange rate effects so that an estimate can be made of underlying changes in the consolidated income statement excluding the impact of fluctuations in exchange rates. Free cash flow is an indicator of the Group's ability to operate without additional borrowing or the use of existing cash. Further details of non-IFRS measures, including reconciliation tables, can be found starting on page 165 of the Novartis Annual Report 2015.

[3] Net income from discontinued operations and net income of the Group include exceptional divestment gains. Continuing and discontinued operations are defined on page 147 of the Novartis Annual Report 2015.

[4] 2015 weighted average number of shares outstanding: 2 403 million (2014: 2 426 million)

[5] Includes Pharmaceuticals, Sandoz biosimilars and Alcon ophthalmic pharmaceuticals only

[6] Includes clinical Phase II programs only, post proof of concept. First patient, first visit (FPFV) has occurred. Also includes small molecules, biologics; new fixed-dose combinations of existing active pharmaceutical ingredients (APIs); and new target indications, defined as new disease or new line of treatment (e.g., first- vs. second-line). Counted by indication and not compound

[7] This number has been adjusted due to an internal reporting error. In 2014, we reported it as 30.

[8] Includes projects with FPFV in a Phase III study but not yet filed in the US, EU or Japan

[9] Therapies under development by Novartis designated as breakthrough therapies by the US Food and Drug Administration

[10] Includes small molecules, biologics; new fixed-dose combinations of existing APIs; and new target indications, defined as new disease or new line of treatment (e.g., first- vs. second-line)

[11] This number has been adjusted due to an internal reporting error. In 2014, we reported it as 13.

[12] Continuing operations

# Social

## ACCESS

| | Patients reached (thousands) | | | People reached (thousands)[1] | 2015 value USD (millions)[2] |
|---|---|---|---|---|---|
| | **2015** | 2014 | 2013 | **2015** | |
| **Research & development** | | | | | |
| Novartis Institute for Tropical Diseases, Novartis Institutes for BioMedical Research neglected disease programs, and Pharmaceuticals development on malaria, tuberculosis and neglected diseases | | | | | **42** |
| **Patient assistance** | | | | | 2015 value USD (millions)[3] |
| Novartis Patient Assistance Foundation Inc. | **43** | 61 | 85 | | 707 |
| *Glivec* patient assistance | **62** | 61 | 55 | | 1 251 |
| *Tasigna* patient assistance | **8** | 6 | 4 | | 230 |
| *Exjade* patient assistance | **11** | 8 | 7 | | 43 |
| Alcon medical missions[4] | **394** | 439 | 549 | | 43 |
| Alcon US patient assistance | **8** | 9 | 12 | | 13 |
| Malaria/*Coartem* | **64 098** | 70 028 | 102 274 | | 112 |
| Leprosy (World Health Organization) | **305** | 308 | 244 | | 6 |
| Pediatric pneumonia/amoxicillin dispersible tablets | | 500 | | | |
| Fascioliasis/*Egaten*[5] | **14** | 233 | 153 | | < 1 |
| Emergency relief (medicine donations) | | | | | 1 |
| **Total** | **64 943** | **71 653** | **103 383** | | **2 406** |
| **Health systems strengthening** | | | | | |
| Novartis Foundation | | | | **4 456**[6] | 13 |
| Novartis research capacity-building programs | | | | **1** | 6 |
| Social business: Healthy Family in India, Kenya, Vietnam and Indonesia[7] | 981 | 788 | 239 | **7 621** | |
| **Total** | **981** | **788** | **239** | **12 078** | **19** |
| **Grand total** | **65 924** | **72 441** | **103 622** | **12 078** | **2 467** |

## PEOPLE[8]

| | 2015 | 2014 | 2013 | 2015 target |
|---|---|---|---|---|
| Full-time equivalent positions/headcount[9] | **118 700 / 122 966** | 117 809 / 122 113 | 119 362 / 122 447 | |
| Voluntary turnover (%) | **7.3** | 7.0 | 6.2 | |
| Overall turnover (%) | **13.5** | 13.0 | 10.6 | |
| Voluntary turnover of superior performers (%) | **5.5** | 5.1 | 4.3 | |
| Internal hires/external hires (%) | **44.8 / 55.2** | 44.4 / 55.6 | | |
| Women in management: % of management[10] / % of Board of Directors | **41 / 27** | 40 / 18 | 38 / 14 | |
| Associate nationalities | **144** | 147 | 143 | |
| Annual training hours per employee | **27.3** | 27.0 | | |
| Associates represented by a trade union or covered by a collective bargaining agreement (%)[11] | **42** | 43 | 43 | |
| Lost-time injury and illness rate, LTIR (per 200 000 hours worked)[12] | **0.11** | 0.12 | 0.13 | < 0.14 |
| Total recordable case rate, TRCR (per 200 000 hours worked)[12, 13] | **0.40** | 0.43 | 0.45 | < 0.46 |

[1] Via training and service delivery
[2] Operating costs
[3] Wholesale acquisition cost plus logistics costs for some programs
[4] Retail value for surgical products
[5] Manufacturing, testing and full-time equivalent costs
[6] Includes potential catchment of population in certain districts in Tanzania
[7] People reached through health awareness activities
[8] Continuing operations
[9] Headcount reflects the total number of associates in our payroll systems. Full-time equivalent adjusts headcount for associates working less than 100%. All data are as of December 31, 2015; December 31, 2014 and December 31, 2013
[10] Management defined locally
[11] Non-management associates, according to a survey conducted every two years
[12] Data include Novartis associates and third-party personnel managed by Novartis associates
[13] Includes all work-related injury and illness, whether leading to lost time or not

## ETHICS[1]

| | **2015** | 2014 | 2013 |
|---|---|---|---|
| Novartis associates trained and certified on the Code of Conduct[2] | **110 638** | 108 290 | 98 793 |
| Misconduct cases reported / allegations substantiated[3] | **1 299 / 755** | 1 547 / 1 131 | 1 274 / 943 |
| BPO allegations per category (%)[4] | | | |
| *Fraud* | **48** | 44 | 34 |
| *Professional practices* | **29** | 29 | 29 |
| *Employee relations* | **24** | 20 | 31 |
| *Conflict of interest* | **7** | 7 | 7 |
| *Information protection* | **5** | 5 | 6 |
| *Quality assurance* | **7** | 3 | 3 |
| *Research and development* | **1** | 1 | 1 |
| *Other* | **4** | 3 | 3 |
| Dismissals and resignations related to misconduct | **343** | 620 | 391 |
| Suppliers posing an elevated risk under responsible procurement[5] | **475** | 428 | 296 |
| Suppliers with active follow-up[5, 6] | **249** | 222 | 191 |
| Suppliers audited[5] | **100** | 78 | 29 |
| Regulatory inspections without major findings (%) | **98.4** | 97.9 | 98.5 |

## ENVIRONMENT[1]

| | **2015** | 2014 | 2013 | 2015 target | 2015 achievement |
|---|---|---|---|---|---|
| Energy use (million gigajoules), on site and purchased | **17.1** | 17.0 | 17.6 | | |
| GHG emissions, Scope 1, combustion and process (1 000t$CO_2$e) | **388.5** | 395.0 | 412.4 | | |
| GHG emissions, Scope 1, vehicles (1 000t$CO_2$e) | **142.3** | 148.3 | 156.7 | 30% reduction based on 2010 | 31% based on 2010 |
| GHG emissions, Scope 2, purchased energy (1 000t$CO_2$e) | **819.9** | 818.6 | 812.2 | | |
| GHG emissions, Scope 3, business travel (1 000t$CO_2$e) | **231.0** | 186.2 | 240.3 | | |
| Total GHG emissions, Scope 1 and Scope 2 (1 000t$CO_2$e) | **1 350.7** | 1 361.9 | 1 381.3 | 17%[7] reduction based on 2008 | 20.5%[7] |
| GHG offsets (1 000t$CO_2$) | **67.3** | 65.2 | 67.2 | | |
| GHG emissions (Scope 1 and Scope 2) per sales (t$CO_2$e per million USD) | **27.3** | 26.1 | 26.6 | | |
| GHG (Scope 1 and Scope 2) per associate (t$CO_2$e) | **11.4** | 11.4 | 11.6 | | |
| Halogenated volatile organic compounds (VOCs) (t) | **63.0** | 86.0 | 102.6 | 90.0 | 63.0 |
| Non-halogenated VOCs (t) | **524.6** | 634.6 | 826.9 | 700.0 | 524.6 |
| Non-hazardous waste recycled (%) | **75** | 65 | 62 | | |
| Hazardous waste recycled (%) | **68** | 68 | 65 | | |
| Non-hazardous waste not recycled (1 000 t)[8] | **20.5** | 21.2 | 22.2 | 15% reduction based on 2010 | 22.7% based on 2010 |
| Hazardous waste not recycled (1 000 t)[9] | **56.3** | 60.2 | 70.3 | 10% reduction based on 2010 | 21.6% based on 2010 |
| Water use (million $m^3$) | **91.9** | 92.5 | 95.0 | | |
| Water discharge (million $m^3$) | **16.6** | 17.0 | 17.2 | | |

[1] Continuing operations
[2] Active Novartis associates with email addresses, trained via e-learning, including associates who left during the year
[3] Reporting has changed from assessing cases to assessing allegations. Because one case can have more than one allegation, the assessment per allegation is higher than the previously reported assessment per case. Furthermore, numbers are based on the date a misconduct case is reported, whereas previously they were based on the date a misconduct case was assigned for investigation. 2014 data have been restated following the new methodology.
[4] One case can fall under several categories, so the total is greater than 100% and category figures total more than the stated number of cases. Investigation reports are received on an ongoing basis, which potentially leads to a reassessment of the allegation category and related figures.
[5] Includes new suppliers and new products, services or sites from existing suppliers; figures include data on labor rights, HSE and animal welfare
[6] Follow-up includes more information requested, audits or on-site assessments
[7] Including offsets
[8] Reduction target is based on non-hazardous waste intensity per full-time equivalent
[9] Reduction target is based on hazardous waste intensity per tons produced

**Juergen Brokatzky-Geiger**
Global Head, Corporate Responsibility

# MANAGING CORPORATE RESPONSIBILITY AT NOVARTIS

*An interview with Juergen Brokatzky-Geiger, Global Head, Corporate Responsibility*

**Why is corporate responsibility (CR) so important to Novartis, and how does the company approach it?**
Corporate responsibility is a core part of our business strategy, and we take it very seriously because millions of patients around the world have significant unmet medical needs. Novartis helps people live longer, healthier lives by discovering and developing innovative medicines, and making them available to people around the world – an inherent social remit that guides our CR work. CR is what our stakeholders demand and expect from us, but it's also an essential ingredient of good business that is key to our long term success.

We focus our CR efforts on two main areas: expanding access to healthcare and doing business responsibly. On the access front, we work to reach people by controlling and eliminating diseases, pioneering new business approaches, and discovering new treatments and solutions to improve health in developing countries. At the same time, we know it's important to maintain the highest ethical standards. To that end, in 2015 we took additional steps to strengthen our integrity and compliance.

This combination of science and responsible business helps Novartis generate trust and build value for our company, our shareholders and our society.

**How does Novartis prioritize CR work?**
Quite simply, we listen and respond to our stakeholders. In 2013, we conducted a materiality analysis by interviewing nearly 100 individuals inside and outside the company – everyone from representatives of patient organizations, non-governmental organizations and health institutions, to customers, academics and others – to measure the importance of specific CR topics. Our research revealed three leading priorities that impact our stakeholders and are critical to Novartis: access to healthcare, governance and ethical business practices, and research and development (R&D). We swiftly responded by assigning sponsors to each of these areas, and building and implementing action plans based on stakeholder feedback. In 2015, we re-examined our materiality results, and they continue to inform our approach to CR.

**How is CR governed at Novartis?**
Our Board of Directors established the Governance, Nomination and Corporate Responsibilities Committee of Novartis in 2014 to oversee our strategy and governance on CR topics. On an operational level, the CR Board coordinates activities across the company through representation from all relevant functions and divisions. To address access-related questions, we also created a dedicated Access to Medicine Committee, chaired by our Chief Executive Officer and made up of senior business leaders, that determines and assesses ways to expand access to healthcare.

**Did these changes in CR governance have a meaningful impact?**
Yes. In fact, these newly established committees helped drive the creation of Novartis Access – one of our greatest achievements in 2015 and a first in the industry. Launched in September, Novartis Access aims to improve the accessibility and affordability of treatments for noncommunicable diseases (NCDs) in about

*Corporate responsibility is an essential ingredient of good business that is key to our long-term success*

30 countries around the world. Through this program, we're offering governments and other public-sector healthcare providers a portfolio of 15 medicines to treat NCDs at a price of USD 1 per treatment per month. Novartis Access is designed to be commercially sustainable over the long term, and it incorporates many key learnings from our "Healthy Family" social business programs in countries including India.

**What were some other key CR highlights in 2015?**

In 2015, we continued to pursue approaches to expand access to our medicines. Notably, we cemented our status as a leading innovator in malaria treatment by securing World Health Organization prequalification for a higher dosage strength of *Coartem,* our antimalarial medicine. *Coartem* 80/480mg reduces the number of pills that patients have to take, and it's the first and only high-strength malaria treatment available for public-sector procurement.

We also created a USD 1 million Health Education & Capabilities Fund to support internal health education, disease awareness and capability building, primarily in Africa. We continued educating and inspiring up-and-coming scientists through our Next Generation Scientist Program for post-graduate students. And we further engaged our associates by introducing a corporate volunteering platform, which "matches" employee volunteers with CR projects that they're also able to pitch.

Additionally, we unveiled and began pursuing an ambitious agenda for our environmental work. In June, we established a 2030 vision on environmental sustainability, supported by new targets spanning four areas: energy and climate, water and micropollutants, materials and waste, and environmental sustainability management. To help achieve our goals, the Executive Committee of Novartis approved our first-ever internal carbon pricing strategy.

Last year the Novartis Foundation also refocused its strategy and welcomed new members to its Board of Trustees. Joerg Reinhardt, Chairman of the Novartis Board of Directors, was appointed Chairman of the Novartis Foundation Board of Trustees. The foundation also added two external board members with fresh perspectives: Prof. Peter Piot of the London School of Hygiene & Tropical Medicine and Dr. Rebecca Weintraub of Harvard Medical School.

**How is Novartis preparing to deal with challenges and dilemmas to come?**

I'm confident we're well equipped to continue taking action on what matters most to our company and our stakeholders. We have ongoing calls with investors to ensure we're meeting their needs. And to confirm we're still heading in the right direction, we concluded 2015 by completing a review of our materiality analysis. Through an online survey and webinars, our stakeholders verified that access, governance and ethics, and R&D remain our top priorities.

We are working on addressing some of the new, trending topics that surfaced, including corporate tax disclosure, youth unemployment, and increased transparency in our non-financial disclosures. We plan to conduct another materiality analysis in 2017 to help guide our long term strategy.

Stakeholder feedback will continue to shape how we report on CR, and we're pleased to have moved our 2015 CR Performance Report to the "comprehensive" GRI reporting level.

**What are you looking forward to in 2016?**

We plan to build on the work we initiated last year. With the groundwork in place, we'll continue to strengthen and advance these programs throughout the year. Watching them evolve and ultimately succeed will be incredibly rewarding.

The following pages capture some of our additional achievements last year. I know 2016 will be just as momentous as we strive to remain a leader in CR.

*Trending CR topics in 2015: corporate tax disclosure, youth unemployment, and increased transparency in non-financial disclosures*

# NOVARTIS CORPORATE RESPONSIBILITY STRATEGY

Novartis has a sound strategy to navigate a world with a growing, aging population and continuously evolving healthcare needs. Our mission and vision complement our strategy, and together they support the creation of value over the long term for our company, our shareholders and society.

**Our mission** is to discover new ways to extend and improve people's lives. We use science-based innovation to address some of society's most challenging healthcare issues. We discover and develop breakthrough treatments and find new ways to deliver them to as many people as possible. We also aim to provide a shareholder return that rewards those who invest their money, time and ideas in our company.

**Our vision** is to be a trusted leader in changing the practice of medicine.

**Our strategy** is to use science-based innovation to deliver better patient outcomes. We aim to lead in growing areas of healthcare. We maintain substantial investment in research and development aimed at areas of unmet medical need. We seek to develop medicines and products that can produce positive real-world outcomes for patients. We are expanding our presence in the emerging markets of Asia, Africa and Latin America, where there is fast-growing demand for access to high-quality medicines and healthcare.

**NOVARTIS CORPORATE RESPONSIBILITY STRATEGY**


**Our corporate responsibility strategy**

We focus our corporate responsibility work in two key areas: expanding access to healthcare and doing business responsibly. This combination of responsible business and making our medicines accessible is directly linked to our company mission, vision and strategy.

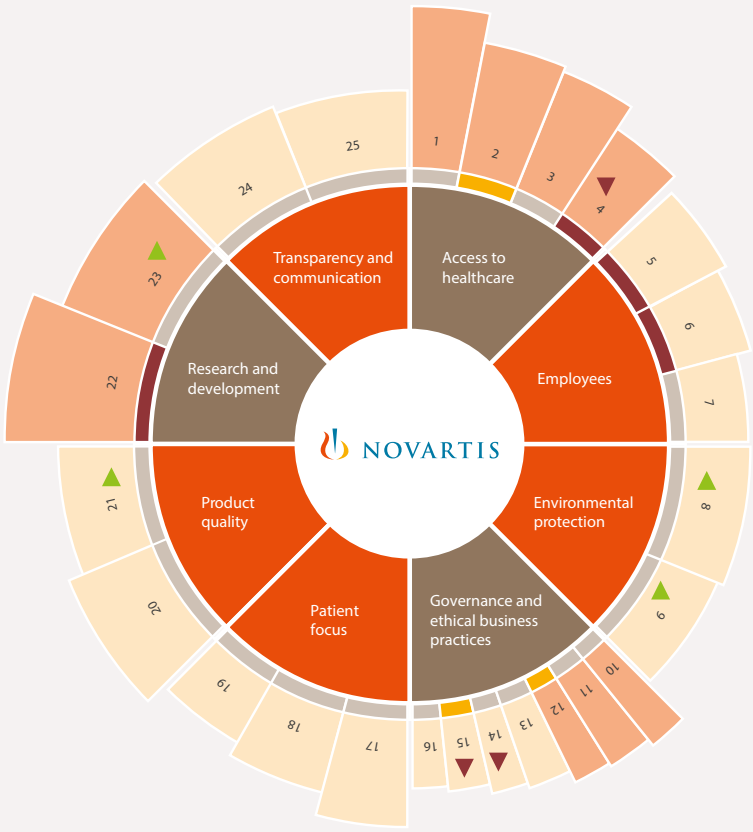
To help us achieve our goal of finding new ways to deliver breakthrough treatments to as many people as possible, our access efforts include an array of social business, zero-profit, philanthropic and patient assistance programs. To help us become a trusted leader in changing the practice of medicine, we are taking steps to ensure our standards align with society's increasingly high expectations for ethical behavior.

Corporate responsibility is embedded throughout our company. The commitment and involvement from senior management and the Governance, Nomination and Corporate Responsibilities Committee of the Novartis Board of Directors helped us make the strategic decisions necessary to drive our corporate responsibility programs. The engagement and dedication of our associates help bring all of these initiatives to life.

# NOVARTIS CORPORATE RESPONSIBILITY MATERIALITY

We use findings from our materiality analysis to guide our strategy, track issues of concern, inform and prioritize our corporate responsibility (CR) programs, and establish meaningful metrics against which to measure our performance. In 2015, we conducted a review of our materiality analysis with our external stakeholders, which confirmed the results of our 2013 exercise, encouraging us to further focus on access to healthcare, governance and ethical business practices, and research and development in 2016. We aim to conduct another full CR materiality analysis in the future.

## CR MATERIALITY RESULTS




**Key**
- Novartis CR key material areas
- Novartis CR material topics
- Novartis CR key material topics
- Other areas
- External expectations exceed internal by more than 10%
- Internal expectations exceed external by more than 10%
- Difference between expectations is less than 10%

- ▲ Topics that have gained importance in 2015 vs. 2013
- ▼ Topics that have lost importance in 2015 vs. 2013

**Access to healthcare**
1 Lower-income patients
2 Product pricing
3 Partnering
4 Intellectual property

**Employees**
5 Recruitment and retention
6 Diversity and inclusion
7 Health and safety

**Environmental protection**
8 Pollution, waste and effluents
9 Energy and climate change

**Governance and ethical business practices**
10 Integrity and compliance management
11 Responsible clinical trials
12 Bribery and corruption
13 Responsible marketing/advertising
14 Board structure and independence
15 Responsible lobbying and political contributions
16 Risk and crisis management

**Patient focus**
17 Health outcome contribution
18 Demographic changes in society
19 Security of product supply

**Product quality**
20 Quality of drugs
21 Counterfeit medicines

**Research and development (R&D)**
22 Innovation and R&D pipeline
23 R&D in neglected diseases

**Transparency and communication**
24 Stakeholder engagement and dialogue
25 Disclosure and labeling

**Topics seen as key in 2015 by external stakeholders not included in top 25 in 2013**
- Access to healthcare: noncommunicable diseases
- Environmental protection: pharmaceuticals in the environment
- Patient focus: rising costs of healthcare/insurance

**New topics added in 2015 based on research**
- Access to healthcare: noncommunicable diseases
- Governance and ethical business practices: corporate tax
- Community engagement: youth unemployment
- Transparency/better communication: non-financial disclosure

Dr. Chang As Xinh waits for patients at a community hospital in northeast Vietnam. The rise of chronic diseases creates an additional burden for community physicians like Dr. Xinh who are already working hard to tackle infectious diseases.

# TAKING ACTION ON WHAT IS IMPORTANT

*Our materiality analysis helped identify the topics of corporate responsibility (CR) deemed most significant to us and our stakeholders. In 2015, we continued to focus on these key areas. Next year we will continue our activities in these topics, while seeking additional feedback, comments and constructive input from our stakeholders.*

*Our key material areas: access to healthcare, research and development, and governance and ethical business practices*

## ACCESS TO HEALTHCARE

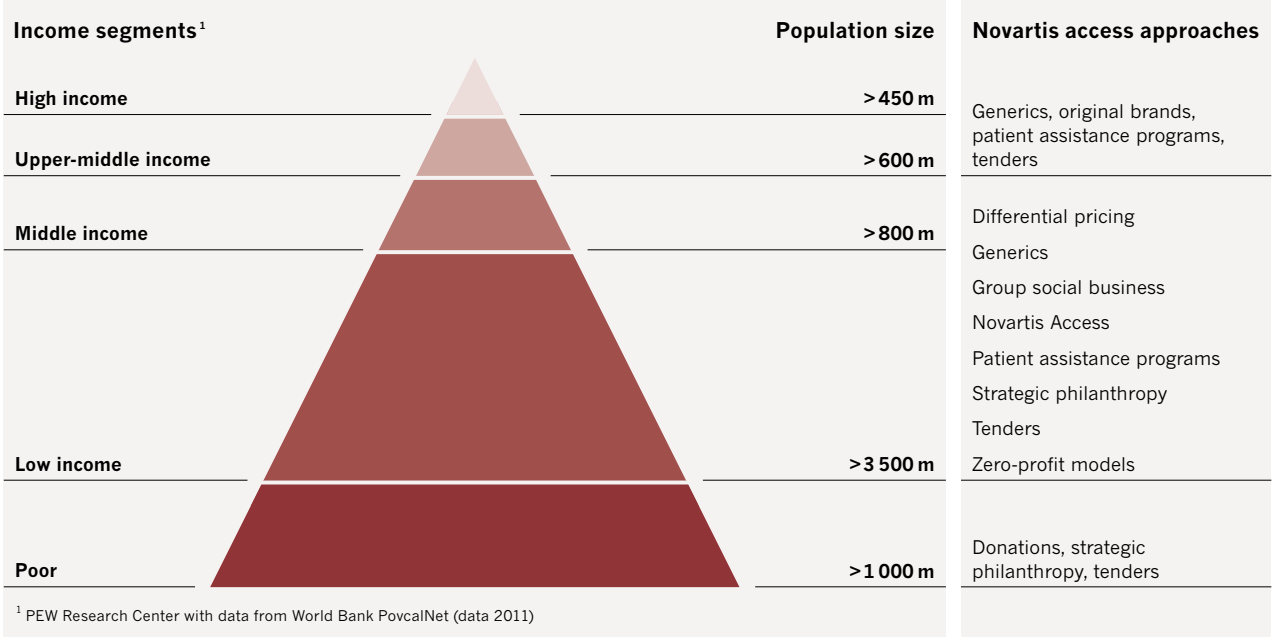
Developing new and innovative ways to reach the underserved is one of our top priorities. To expand access to healthcare, we pursue a variety of approaches – including shared value and zero-profit initiatives, as well as philanthropy. Responsible risk-taking and collaboration are cornerstones of our access strategy and contribute to our success.

In 2015, we launched **Novartis Access**, a first-of-its-kind program in our industry that aims to make treatments for noncommunicable diseases (NCDs) more accessible and affordable in low- and lower-middle-income countries. NCDs disproportionately impact low- and middle-income countries, where 28 million people die each year from these types of diseases (accounting for nearly 75% of NCD-related deaths around the world). Through Novartis Access, we're working to address this issue by providing a portfolio of 15 on- and off-patent medicines for NCDs to governments and public-sector healthcare providers at a price of USD 1 per treatment per month. We are seeking partners to strengthen local healthcare system capabilities in NCDs, as these partnerships will be essential to the success of the program.

The initial Novartis Access portfolio includes treatments for cardiovascular diseases, diabetes, respiratory illnesses and breast cancer that were selected from the Novartis Group portfolio based on three criteria: significant health need, medical relevance, and lack of local access programs. We have already signed agreements in Kenya and Ethiopia, and the first product orders have been received. Novartis Access is designed to be commercially sustainable over the long term – enabling ongoing support in target regions – and we have plans to roll the program out in about 30 countries.

Beyond Novartis Access, we secured World Health Organization (WHO) prequalification in July for a higher dosage strength of our **antimalarial medicine *Coartem***. With WHO prequalification, *Coartem* 80/480mg is the first and only high-strength malaria treatment available for public-sector procurement – and

## NOVARTIS ACCESS STRATEGY




[1] PEW Research Center with data from World Bank PovcalNet (data 2011)

it could help as many as 25 million patients in Africa. Patients must now take just six pills (versus the previous 24) to complete a full course of treatment. A lower pill burden could improve patient adherence to treatment and, ultimately, boost clinical effectiveness.

This milestone confirmed our status as a leading innovator in malaria treatment. The **Novartis Malaria Initiative** is one of the largest access-to-healthcare programs in the pharmaceutical industry. Through it, we have delivered more than 750 million antimalarial treatments – including more than 300 million treatments for children – without profit since 2001. Our long term goal is to help eliminate this deadly disease.

Last year the **Novartis Foundation** also expanded access for patients with hypertension (high blood pressure) and leprosy. The Novartis Foundation takes a strategic approach to philanthropy by collaborating with global and local partners on projects intended to evolve into scalable and sustainable healthcare solutions. In a district in Ghana, for example, the foundation worked with partners to implement and evaluate an innovative model for screening and managing hypertension. This model is designed to improve the control of hypertension by making services more accessible and empowering people to manage the condition on their own. Screening began in 2015.

On the **leprosy** front, the Novartis Foundation continued executing a strategy adopted in 2013 to achieve zero transmission. A key component is leprosy post-exposure prophylaxis (LPEP), which was introduced in India, Indonesia, Myanmar, Nepal, Tanzania and Sri Lanka last year. Through LPEP, people who have been exposed to recently diagnosed patients are examined and given treatment if appropriate. Those who are asymptomatic receive preventative therapy, which could decrease their risk of developing the disease by as much as 50–60%. Novartis also renewed its pledge with the WHO to extend its donation of multidrug therapy medicines to treat leprosy until 2020. Overall, the program is expected to reach about 1.3 million patients during the next five years.

To guide our CR work in Africa, in early 2015 we formed the **Novartis Africa Health Alliance** (NAHA), a committee representing our company's businesses and functions. NAHA evaluates and helps prioritize new and existing initiatives in Africa to ensure we are positioned for long term success. In 2015, Novartis also established a USD 1 million Health Education & Capabilities Fund, which helps finance internal projects focused on health education, disease awareness and capability building, primarily in Africa.

*Novartis Access is a portfolio of 15 on- and off-patent medicines for NCDs at a price of USD 1 per treatment per month*

Researchers at the Novartis facility in Morris Plains in the US check on the production process for human T-cells.

## RESEARCH AND DEVELOPMENT

In 2015, we continued investing in research and development (R&D) to discover and develop new treatments that address unmet medical needs. Our **R&D strategy** is to focus on therapeutic areas that represent our core strengths – including oncology, cardiovascular, neuroscience, eye care and biosimilars – and to explore other areas that we believe are ripe for innovation, such as immuno-oncology, and aging and regenerative medicine. We are also focused on developing new therapies to treat and prevent infectious diseases that disproportionately impact the developing world.

One challenge to public health – this one common to both developed and developing countries – is the **growing resistance of bacteria to antibiotics**. Without effective drugs, even the most basic infections could become life-threatening. The most serious threat is from multidrug-resistant gram-negative bacteria, which are showing resistance not just to older antibiotics derived from penicillin, but also to carbapenems – a potent antibiotic class that is typically used when everything else has failed. Gram-negative bacteria have two membranes at the cellular level, and most antibiotics must make it past both, a difficult challenge. The **Novartis infectious disease research team** is working to develop new antibiotics to treat these forms of bacteria.

We remain committed to finding new medicines to treat neglected, infectious diseases that can be devastating in developing countries. Our infectious disease team is exploring new treatments for viral infections, including respiratory viruses (such as influenza and respiratory syncytial virus, or RSV) and viruses that threaten patients with undeveloped or compromised immune systems (such as those with HIV/AIDS, and patients receiving cancer chemotherapy or immunosupressive therapy). These efforts complement our company's strong therapeutic programs in chronic respiratory diseases (e.g., asthma and chronic obstructive pulmonary disease), oncology and transplantation.

We also undertake **adaptive development** by, for example, modifying existing medicines to better meet the needs of underserved and vulnerable patient groups like children and the elderly, and those living in high-heat and tropical climates. These may include formulations that are age-appropriate, heat stable or in different dosage strengths to help increase treatment adherence.

The **Novartis Institute for Tropical Diseases** in Singapore is dedicated to finding new medicines to treat neglected, infectious diseases. These include dengue fever, human African trypanosomiasis and malaria, among others. Novartis has two treatments, KAE609 (cipargamin) and KAF156, in Phase II clinical development. Both are active against Plasmodium vivax and Plasmodium falciparum, the parasites responsible for most malaria-related deaths. In July, a higher dose of our artemisinin-based combination therapy (ACT *Coartem*) for the treatment of malaria received World Health Organization prequalification. With this higher dose, a malaria patient can take just six tablets – versus the previous 24 – to complete a full course of treatment.

*We discover and develop new treatments that address unmet medical needs, including new therapies to treat and prevent infectious diseases that disproportionately impact the developing world*

Sybilla Blumer, a home healthcare worker in Switzerland, helps manage medication for Walter Imboden following an operation on his toe.

## GOVERNANCE AND ETHICAL BUSINESS PRACTICES

In 2015, we continued taking concrete steps to reinforce our culture of integrity, even as we dealt with several ethical issues.

Society has increasingly high expectations for ethical behavior from global healthcare companies – expectations that very often go beyond what is legally required. We are taking steps to ensure our standards align with these expectations.

To further reinforce our culture of ethics, in 2015 we launched a series of comprehensive, multiyear initiatives in line with our six core values of innovation, quality, collaboration, performance, courage and integrity. We are working to adjust promotional practices with doctors and other healthcare professionals, and to be more transparent about our financial relationships with them. And we are reviewing traditional practices, such as sending healthcare professionals to international congresses and engaging them to speak at professional gatherings, to determine if they should be modified or stopped.

At the same time, we are pursuing new ways to interact with healthcare professionals. In 2015, we began developing tools to facilitate medical education for our customers. They include a mix of virtual and local meetings to bring the experience of international congresses to the local level, a platform to connect online communities in disease areas related to Novartis products, and new digital tools that supplement face-to-face meetings with our medical science liaisons. These tools will be rolled out to sales forces worldwide in 2016.

We are also adjusting incentives for our sales teams around the world. For instance, we have started to increase the weight of fixed pay in overall compensation and to reduce the variable component. Additionally, we are evaluating whether people's behavior aligns with Novartis Values and Behaviors as one element used to set variable pay.

In 2015, we also continued to manage several integrity issues with root causes that sometimes go back many years. In November, Novartis Pharmaceuticals Corporation (NPC) settled litigation in the Southern District of New York related to interactions with specialty pharmacies from 2004 to 2013. The settlement included payments totaling USD 390 million and an agreement to amend and extend for five years an existing corporate integrity agreement with the Office of the Inspector General of the US Department of Health and Human Services.

In Japan, we had setbacks in our efforts to address and improve ethics and compliance at Novartis Pharma K.K. (NPKK), our Japanese subsidiary. The company received a business suspension order, as well as a business improvement order and instruction from the Japanese health authorities in 2015 for failures to promptly report cases where patients experienced adverse effects while taking our medicines. NPKK has taken steps to correct the issue and prevent recurrence.

Although we may never be able to entirely prevent individual misconduct, the actions Novartis is now taking will further support efforts to avoid systemic issues.

In Kenya, a malaria surveillance team from the Walter Reed Project visits a home near the Kombewa clinic to check on children at risk for the disease. The team tests for malaria and administers medicine where appropriate.

## EMPLOYEES

2015 was a year of change for Novartis, with our **portfolio transformation** resulting in workforce transitions. A number of associates joined our company, while others left or assumed new roles. This process was carefully planned and successfully executed on schedule without interrupting business. In countries where associates could decide whether or not to transfer, between 89% and 98% moved to the new organizations.

Last year Novartis also implemented a **five-year talent and leadership strategy** to help ensure we hire the best people, and train and develop them in a way that benefits both our company and associates. To strengthen and standardize recruitment efforts, we created a global staffing organization – supported by centers in Ireland, India and the Czech Republic – that helps identify top-tier candidates and encourages managers to have a global perspective on recruitment needs. Additionally, we launched an Enterprise Leadership Development program to improve succession planning for key executive positions, and we began creating a global learning organization in partnership with top business schools to enhance training and development for our associates. Since 2008, we have provided training programs for associates in emerging markets, which include both in-person and online courses combined with expert presentations and mentoring. More than 4 500 associates participated in these programs in 2015.

We are continuing to make progress in **diversity and inclusion** (D&I), as well. We broadened the scope of responsibility for the Global Head of Diversity and Inclusion, and a global D&I strategy will be rolled out in 2016, aiming to drive business and scientific innovation through D&I. In 2015, the percentage of women in management at Novartis increased slightly to 41%, and the number of nationalities represented in our company is close to 150. Furthermore, for the second year in a row, DiversityInc magazine named NPC the best company in the US for diversity. No other organization has received this accolade for two consecutive years.

In 2015, Novartis also entered the fourth phase of **Be Healthy,** a Group-wide health and well-being initiative launched in 2011 that encourages associates to live healthier lives. Our long term objective is to drive impact and sustainability by embedding support for healthy living into our company's culture.

Our new environmental agenda inspired the theme of our 2015 Be Healthy Celebration Week, "Healthy People, Healthy Planet," which highlighted the link between protecting the environment and our own long term health. And, as part of Be Healthy, Novartis again participated in the Global Corporate Challenge®, an independent program through which teams of associates compete in a 100-day virtual race around the world. For the second straight year, Novartis secured the number two spot in the "World's Most Active" global rankings out of 1 200 organizations participating worldwide. We were also named most active organization in the healthcare and medical sector. Notably, after 100 days, 70% of participating associates were walking more than 10 000 steps per day – up from 20% at the start of the challenge.

*Last year we implemented a five-year talent and leadership strategy to help ensure we hire, train and develop the best people*

A woman fetches water by the shores of Lake Victoria, Africa's largest lake, in Kenya. The lake is a fertile breeding ground for mosquitoes, putting local people at great risk of contracting malaria.

## ENVIRONMENTAL PROTECTION

As a global leader in healthcare, we take our responsibility to protect the environment seriously – and we have already accomplished a lot. While Novartis Group sales have more than doubled in 15 years, our consumption of energy and water has increased at a much slower pace and greenhouse gas (GHG) emissions have been reduced. However, we know there is much more work to do, which is why we established and began pursuing a new environmental agenda last year. In June, the Executive Committee of Novartis (ECN) approved a **2030 company vision on environmental sustainability**, underpinned by ambitious targets spanning four areas: energy and climate, water and micropollutants, materials and waste, and environmental sustainability management. By 2020, we aim to reduce both our Scope 1 + 2 GHG emissions and non-recyclable operational waste by 30% compared to 2010. We are also committed to protecting water quality and decreasing water consumption, and reducing the carbon footprint of our global supply chain.

To help identify projects that will most cost-effectively reduce our GHG emissions, the ECN approved our first-ever **internal carbon price**, set at USD 100 per ton of carbon dioxide emitted. We intentionally set a price high enough to reflect the real impact of carbon emissions on society. For further information on our internal carbon price, see p.59.

*I am very pleased with the progress we made in 2015 in corporate responsibility. Through these efforts, Novartis is contributing to the United Nations' new Sustainable Development Goals (SDGs) in two major ways. We're helping people live longer and healthier lives by investing in R&D and innovative programs such as Novartis Access. We're also supporting the SDGs through our ongoing commitment to protect the environment. Novartis is starting 2016 with strong momentum.*

**Pierre Landolt**
Member of the Board of Directors, and
Chairman of the Governance, Nomination and Corporate Responsibilities Committee

# ABOUT THIS REPORT

For the third consecutive year, Novartis is publishing a Corporate Responsibility (CR) Performance Report. We have structured our report in accordance with the Global Reporting Initiative's (GRI) G4 guidelines, with disclosure at "comprehensive" level.

This report fulfills our commitment as a LEAD participant and signatory to the United Nations Global Compact (UNGC) to producing a UNGC Communication on Progress, a public disclosure outlining our progress in implementing the 10 principles of the UNGC and in supporting broader UN development goals.

Novartis has reported on CR since 2000 through our Annual Report and several online and printed materials.

We have made changes to the structure of this report based on feedback from readers of our CR Performance Report 2014, published in June 2015. Our new section on CR at Novartis provides further information about how Novartis approaches CR in terms of governance and strategy. We have consolidated the information related to our most material topics to add context to the information in this report.

We have again included a statement from Joerg Reinhardt, Chairman of the Board of Directors. The Governance, Nomination and Corporate Responsibilities Committee, which is the highest CR body in our company, has reviewed this report.

This 2015 report has also been issued earlier to align with the publication of our Annual Report, providing readers with a more integrated view of Novartis.

This report covers all regions and divisions from January 1, 2015 to December 31, 2015. It aims to meet the needs and expectations of CR professional audiences by offering easy access to data. It details progress against Novartis priorities, defined following our CR materiality analysis (for more information about our materiality review and how it maps to G4 aspects and indicators, see p.34–43.) This year we have disclosed further indicators to fulfill the GRI G4 "comprehensive" level of reporting. The GRI content index beginning on p.19 provides links to content within this report.

PricewaterhouseCoopers AG has provided independent limited assurance on the key CR figures in this report as well as on our materiality determination exercise. For more detail, see the Independent Assurance Report on p.90.

Learn more about our CR activities: www.novartis.com/corporate-responsibility
Review our CR reports: www.novartis.com/about-us/corporate-responsibility/reporting
Receive the Novartis CR e-newsletter via email

For feedback and suggestions:
Esther Bares, Senior Manager, Corporate Responsibility Reporting
Email: esther.bares@novartis.com

SD **General standard disclosures**

EC **Economic**

EN **Environment**

LA **Social: labor practices and decent work**

HR **Social: human rights**

SO **Social: society**

PR **Social: product responsibility**

**United Nations Global Compact**

*We report our CR performance following the GRI G4 guidelines and the UNGC principles. The GRI is split into general and specific standard disclosures. Specific standard disclosures cover the six areas shown above. The UNGC has 10 guiding principles. The above icons reflect these relevant sections throughout the report.*

**Ratings and recognitions**

access to medicine index

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

FTSE4Good

CDP DRIVING SUSTAINABLE ECONOMIES

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| **Environmental grievance mechanisms** | | | | |
| G4–EN34 | Number of grievances about environmental impacts filed, addressed and resolved through formal grievance mechanisms | **8** | | 66 |

# Social: labor practices and decent work

G4
LA

| | | UNGC PRINCIPLE | NOTES | PAGE |
|---|---|---|---|---|
| **Employment** | | | | |
| G4–LA1 | Total number and rates of new employee hires and employee turnover by age group, gender and region | **6** | | 67 |
| G4–LA2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation | **6** | | 68 |
| G4–LA3 | Return-to-work and retention rates after parental leave, by gender | **6** | | 68 |
| **Labor/management relations** | | | | |
| G4–LA4 | Minimum notice periods regarding operational changes, including whether these are specified in collective agreements | **3** | | 68 |
| **Occupational health and safety** | | | | |
| G4–LA5 | Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs | | Data reported by % sites rather than % total workforce – see full response for detail | 68 |
| G4–LA6 | Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities, by region and by gender | | Data not split by gender; data on non-occupational absenteeism, and on injury rate and occupational disease for contractors not available – see full response for detail | 69 |
| G4–LA7 | Workers with high incidence or high risk of diseases related to their occupation | | | 72 |
| G4–LA8 | Health and safety topics covered in formal agreements with trade unions | | | 73 |
| **Training and education** | | | | |
| G4–LA9 | Average hours of training per year per employee by gender and by employee category | **6** | | 74 |
| G4–LA10 | Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings | | | 74 |
| G4–LA11 | Percentage of employees receiving regular performance and career development reviews, by gender and by employee category | **6** | | 74 |
| **Diversity and equal opportunity** | | | | |
| G4–LA12 | Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity | **6** | | 75 |
| **Equal remuneration for women and men** | | | | |
| G4–LA13 | Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation | **6** | | 75 |
| **Supplier assessment for labor practices** | | | | |
| G4–LA14 | Percentage of new suppliers that were screened using labor practices criteria | **6** | Absolute number provided rather than % – see full response for detail | 30 |
| G4–LA15 | Significant actual and potential negative impacts for labor practices in the supply chain and actions taken | | | 30 |
| **Labor practices grievance mechanisms** | | | | |
| G4–LA16 | Number of grievances about labor practices filed, addressed and resolved through formal grievance mechanisms | **6** | Specific number for labor practices not available – see full response for detail | 75 |

# Social: human rights

G4
HR

| | | UNGC PRINCIPLE | NOTES | PAGE |
|---|---|---|---|---|
| **Investment** | | | | |
| G4–HR1 | Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening | **1, 2** | Inclusion of figures not possible – see full response for detail | 76 |
| G4–HR2 | Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained | **1** | | 76 |
| **Non-discrimination** | | | | |
| G4–HR3 | Total number of incidents of discrimination and corrective actions taken | **6** | Number of incidents not reported – see full response for detail | 76 |
| **Freedom of association and collective bargaining** | | | | |
| G4–HR4 | Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights | **3** | | 77 |
| **Child labor** | | | | |
| G4–HR5 | Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor | **5** | | 77 |
| **Forced or compulsory labor** | | | | |
| G4–HR6 | Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor | **4** | | 78 |
| **Security practices** | | | | |
| G4–HR7 | Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations | **1** | | 78 |
| **Indigenous rights** | | | | |
| G4–HR8 | Total number of incidents of violations involving rights of indigenous peoples and actions taken | **1** | | 78 |
| **Assessment** | | | | |
| G4–HR9 | Total number and percentage of operations that have been subject to human rights reviews or impact assessments | **1** | Inclusion of figures not possible – see full response for detail | 78 |
| **Supplier human rights assessment** | | | | |
| G4–HR10 | Percentage of new suppliers that were screened using human rights criteria | **2** | Absolute number provided rather than % – see full response for detail | 30 |
| G4–HR11 | Significant actual and potential negative human rights impacts in the supply chain and actions taken | **2** | | 30 |
| **Human rights grievance mechanisms** | | | | |
| G4–HR12 | Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms | **1** | Specific number for human rights not available – see full response for detail | 79 |

# Social: society

G4
SO

| | | UNGC PRINCIPLE | NOTES | PAGE |
|---|---|---|---|---|
| **Local communities** | | | | |
| G4–SO1 | Percentage of operations with implemented local community engagement, impact assessments and development programs | **1** | Percentage figure not reported – see full response for detail | 80 |
| G4–SO2 | Operations with significant actual or potential negative impacts on local communities | **1** | We are currently working to better measure and quantify our impacts on local communities and may disclose data in 2017 | |
| **Anti-corruption** | | | | |
| G4–SO3 | Total number and percentage of operations assessed for risks related to corruption and the significant risks identified | **10** | | 81 |
| G4–SO4 | Communication and training on anti-corruption policies and procedures | **10** | Figures for training of governance body members and business partners not reported | 81 |
| G4–SO5 | Confirmed incidents of corruption and actions taken | **10** | Nature of confirmed incidents of corruption, termination or non-renewal of contracts with business partners due to violations related to corruption not reported – see full response for detail | 81 |
| **Public policy** | | | | |
| G4–SO6 | Total value of political contributions by country and recipient/beneficiary | **10** | Data not reported by country and recipient – see full response for detail | 82 |
| **Anti-competitive behavior** | | | | |
| G4–SO7 | Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes | | | AR 2015 p.209 |
| **Compliance** | | | | |
| G4–SO8 | Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations | | | AR 2015 p.209 |
| **Supplier assessment for impacts on society** | | | | |
| G4–SO9 | Percentage of new suppliers that were screened using criteria for impacts on society | | Absolute number provided rather than % – see full response for detail | 30 |
| G4–SO10 | Significant actual and potential negative impacts on society in the supply chain and actions taken | | | 30 |
| **Grievance mechanisms for impacts on society** | | | | |
| G4–SO11 | Number of grievances about impacts on society filed, addressed and resolved through formal grievance mechanisms | | Specific number for impacts on society not available – see full response for detail | 83 |

# Social: product responsibility

G4
PR

| | | UNGC PRINCIPLE | NOTES | PAGE |
|---|---|---|---|---|
| **Customer health and safety** | | | | |
| G4–PR1 | Percentage of significant product and service categories for which health and safety impacts are assessed for improvement | | No overall % reported – see full response for detail | 84 |
| G4–PR2 | Total number of incidents of noncompliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes | | | 7 |
| **Product and service labeling** | | | | |
| G4–PR3 | Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements | | No overall % reported – see full response for detail | 85 |
| G4–PR4 | Total number of incidents of noncompliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes | | | 85 |
| G4–PR5 | Results of surveys measuring customer satisfaction | | | 85 |
| **Marketing communications** | | | | |
| G4–PR6 | Sale of banned or disputed products | | | 85 |
| G4–PR7 | Total number of incidents of noncompliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes | | Data not split by type of noncompliance – see full response for detail | 85 |
| **Customer privacy** | | | | |
| G4–PR8 | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data | | | 86 |
| **Compliance** | | | | |
| G4–PR9 | Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services | | | AR 2015 p.209 |

Modern medicine is changing medical practices in Vietnam, but many people still visit traditional healers and use herbal remedies such as these seen on sale in the old quarter of Hanoi.

# General standard disclosures

G4 SD 2

## KEY IMPACTS, RISKS AND OPPORTUNITIES

**Significant economic, environmental and social impacts of the organization, and associated challenges and opportunities**

We focus our corporate responsibility (CR) work in two areas that underscore our mission of discovering new ways to extend and improve people's lives:

- Expanding access to healthcare: We work to control and eliminate diseases such as malaria and leprosy, pioneer new business approaches to reach underserved patients, and find new treatments and adaptive solutions to improve health in developing countries. In recent years, these efforts have reached up to 100 million people annually.
- Doing business responsibly: This is a core part of Novartis. We care for our associates, strive to positively contribute to the communities where we live and work, and protect the environment. We conduct business ethically, maintaining a Code of Conduct and governance system to ensure our associates uphold our values.

Key topics of focus have been identified through our extensive CR materiality process in 2013 and confirmed during our 2015 CR materiality review. These topics can be found on p.11 of this report. On p.34–43 we explain our materiality process and how we have prioritized these topics. Our progress in addressing these key topics throughout 2015 is detailed on p.12–17 of this report, and our performance can be monitored through our key performance indicators on p.5–7 as well as our CR targets.

Business divisions and relevant functions develop annual and mid-term CR targets to support the Novartis CR strategy as defined by Novartis management. Target owners are responsible for reporting on progress at least once annually to the CR Board; the CR Board can propose corrective actions if needed. A balanced scorecard highlighting priority CR objectives is assembled quarterly and shared with the Executive Committee of Novartis (ECN). Key CR objectives are also included in the ECN balanced scorecard, with progress reported on a monthly basis.

**Risks and opportunities**

All organizations face a variety of risks at both strategic and operational levels. Some risks are beyond an organization's immediate control. Each risk has a certain likelihood of occurrence and potential impact, including impact on people, equipment or property, the environment, reputation or business.

Novartis aims to systematically identify and assess these risks. We manage risks proactively by implementing preventive and contingency measures to reduce the likelihood of an event occurring and the severity of its consequences.

The two most important tools for health, safety and environment (HSE) and business continuity risk management are risk portfolios and audits. In addition, a business continuity management process is an integral part of the Novartis risk management framework for business-related risks.

The Corporate Risk Management function is overseen by the Board's independent Risk Committee. The Compensation Committee works closely with the Risk Committee to ensure that the compensation system does not lead to excessive risk-taking by management (for details see the Compensation Report on p.108 of the Novartis Annual Report 2015). Organizational and process measures have been established to identify and mitigate risks at an early stage. Organizationally, the individual divisions are responsible for risk and risk mitigation, with specialized corporate functions – such as Group Finance; Group Quality Assurance; Corporate Health, Safety and Environment and Business Continuity Management; and Integrity & Compliance – providing support and controlling the effectiveness of risk management by the divisions in these respective areas.

Long-term risks and opportunities facing Novartis are detailed in our Novartis Annual Report 2015 on p.162.

**Governance**

CR is endorsed and ingrained at the highest level in the company.

The Governance, Nomination and Corporate Responsibilities Committee (GNCRC) of the Board of Directors of Novartis AG specifically oversees the company's strategy and governance on CR topics that may affect the company's business and reputation.

The ECN members include CR objectives in their balanced scorecard, which is used to determine their compensation. The Chief Executive Officer (CEO) has specific personal CR objectives.

A full-time Global Head of Corporate Responsibility, reporting to the CEO, integrates CR activities across the company, in collaboration with relevant functions and all divisions, as well as our research organization, the Novartis Institutes for BioMedical Research (NIBR). Related functions include Corporate Health, Safety and Environment, and Business Continuity Management; Integrity & Compliance; Legal; Public Affairs; Communications; Investor Relations; and the Novartis Foundation. The Global Head of Corporate Responsibility updates the GNCRC of the Board of Directors regularly.

The Novartis Corporate Responsibility Board coordinates activities across the company through representation from all relevant functions and divisions.

The Novartis Access to Medicine Committee governs the topic of access to Novartis medicines and treatments.

The HSE Steering Committee is responsible for providing overall guidance within its functional portfolio.

G4 SD 10

THE GLOBAL COMPACT 6

**NUMBER OF EMPLOYEES**

Novartis Group companies employed 122 966 people globally on December 31, 2015 (headcount continuing operations):

- 29 685 work in Asia Pacific
- 24 605 in North America
- 62 258 in Europe, Middle East and Africa
- 6 418 in Latin America

4% of all Novartis Group company associates work part-time (i.e., up to 0.9 full-time equivalent). At our headquarters in Basel, Switzerland, the part-time workforce was approximately 10% in December 2015. There are 117 257 permanent contracts and 5 709 temporary contracts.

G4 SD 11

THE GLOBAL COMPACT 3

**EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS**

According to the global Corporate Citizenship Survey 2015, 42% of non-management employees are represented by an internal employee representation body (i.e., Novartis internal work council), and 29% are also represented by an external employee representation body (i.e., labor union). 40% of Novartis Group company associates (excluding management) worldwide are covered by a collective bargaining agreement.

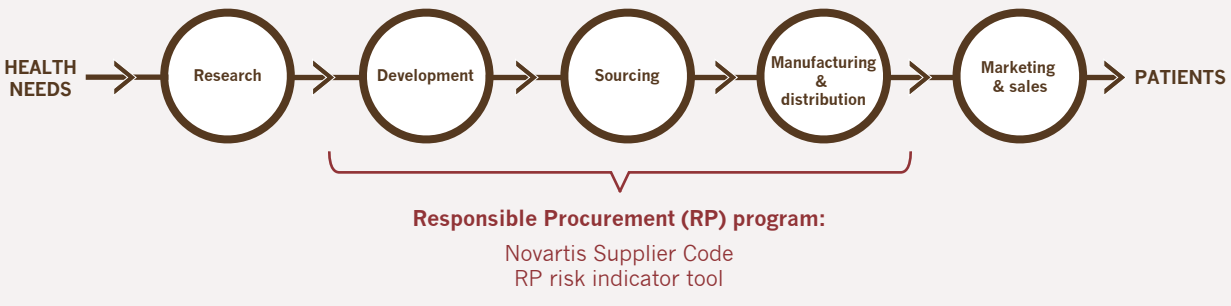
G4 SD 12

THE GLOBAL COMPACT 3,4,5,6,8,10

**ORGANIZATION'S SUPPLY CHAIN**

Procurement, accountable for an annual global spend of more than USD 22 billion, is a strategic partner to the business. Operating across 60 countries, Novartis has a network of approximately 1 200 procurement professionals and more than 100 000 suppliers.

**OUR VALUE CHAIN**



## SUPPLY CHAIN DATA

| | Spend | | | Supplier[3] | |
|---|---|---|---|---|---|
| Country | Total % | Direct spend[1] % | Indirect spend[2] % | Total | % |
| United States | 28.5 | 24.3 | 30.0 | 17 462 | 13.2 % |
| Switzerland | 13.7 | 6.8 | 16.2 | 7 842 | 5.9 % |
| Germany | 10.5 | 15.8 | 8.5 | 14 880 | 11.3 % |
| United Kingdom | 8.6 | 9.9 | 8.1 | 4 788 | 3.6 % |
| China | 3.4 | 4.8 | 2.9 | 7 002 | 5.3 % |
| Austria | 2.8 | 2.9 | 2.7 | 3 776 | 2.9 % |
| Italy | 2.7 | 3.7 | 2.4 | 3 278 | 2.5 % |
| France | 2.6 | 3.2 | 2.4 | 5 620 | 4.3 % |
| Spain | 2.5 | 3.6 | 2.1 | 3 246 | 2.5 % |
| India | 2.5 | 3.9 | 1.9 | 3 801 | 2.9 % |
| Japan | 2.4 | 2.2 | 2.5 | 7 039 | 5.3 % |
| Belgium | 1.8 | 3.4 | 1.2 | 2 236 | 1.7 % |
| Slovenia | 1.5 | 1.2 | 1.5 | 1 933 | 1.5 % |
| Canada | 1.4 | 1.2 | 1.5 | 2 719 | 2.1 % |
| Singapore | 1.3 | 0.2 | 1.7 | 2 021 | 1.5 % |
| Rest of the world | 14.0 | 12.8 | 14.4 | 44 488 | 33.7 % |
| **Grand total** | **100.0** | **100.0** | **100.0** | **132 131** | **100.0 %** |

[1] Purchases of goods and services directly incorporated into a product being manufactured. Examples: raw materials, subcontracted manufacturing services, packaging
[2] All supplies necessary to run an organization, such as utilities, IT hardware/software, furniture, capital expenditure, marketing supplies, etc.
[3] Suppliers with whom we have a direct contractual relationship pertaining to the delivery of goods and services

### Working with our suppliers

Novartis engages thousands of new suppliers each year, across a supply chain that extends into almost every country in the world. We support the Pharmaceutical Industry Principles for Responsible Supply Chain Management, and our standards are based on the United Nations Global Compact and other applicable international standards or accepted good practices such as those of the International Labor Organization.

### Novartis Supplier Code

The Novartis Supplier Code sets out our expectations of suppliers on ethical standards in fair labor practices, health and safety, environmental protection, animal welfare, anti-bribery and data privacy.

### Responsible Procurement Program

RP focuses on four key principles:

- **Risk-based:** Using risk assessments that take country and sector into account, we identify suppliers that pose elevated risks and accurately target our efforts to where they are most needed: on high-risk suppliers
- **Modular:** Covers labor rights, HSE, animal welfare, anti-bribery and fair competition, and data privacy
- **Integrated:** Fully integrated into our sourcing process as part of our day-to-day procurement operations, and draws on our global network of subject-matter experts in labor, HSE, animal welfare and anti-bribery
- **Collaborative:** Engages and supports suppliers to improve their social responsibility and ethical business practices

### Active monitoring of risk and responsibility

We focus our attention on risk and responsibility in the supply chain. Expectations are addressed in the early stages of the supplier selection process.

Our RP practice is designed to provide a clear view of where potential issues exist or standards may be compromised, with speed and accuracy. It quickly filters out the approximate 95% of suppliers that present little or no ethical risk, enabling us to concentrate our efforts on the small number of suppliers where a significant risk exists or where we can influence change. Most importantly, it gives us this insight before we buy – we call it "buying with our eyes open." Ongoing monitoring of these standards is also managed through the RP practice.

### 2015 RP findings

In 2015, 475 suppliers were identified as posing a potential risk, including environmental, labor and human rights. One supplier can pose multiple risks. Of these:

- 167 suppliers were identified as posing an elevated HSE risk. Active follow-up actions, including desktop review and/or audits, were taken with 69 suppliers. In 27 cases, HSE audits were conducted.

  Improvement plans were developed in collaboration with relevant suppliers, in cases of noncompliance identified in the following elements of our Supplier Code:
  - Worker protection
  - Risk and process safety
  - Emergency preparedness and response
  - Hazard information

- Environmental authorizations
- Waste and emissions
- Spills and releases

— 214 suppliers were identified as posing an elevated human rights or labor rights risk. Actions including desktop reviews and 12 labor rights audits were taken with 43 suppliers. Improvement plans were developed in collaboration with relevant suppliers in cases of noncompliance identified in the following elements of the Supplier Code:
- Freely chosen employment
- Worker protection
- Record keeping
- Fair treatment
- Wages, benefits and working hours
- Documentation

— Regarding screening for impacts on society, we include anti-bribery criteria. Data is reported and analyzed on a country-by-country basis. Our RP practice focuses on applying our expertise to help suppliers find lasting solutions to complex issues, ultimately improving standards and reducing their overall negative impacts on society.

**Novartis-backed Working Well project launches in China**
In April 2015, Novartis helped launch the Working Well project in China, a first-of-its-kind initiative to improve manufacturing quality and labor standards in that country. Working Well addresses specific issues uncovered through a review of labor rights in China – including problems with working hours, rest days and compensation, as well as poor systems for managing health, safety and the environment (HSE). Many issues can be attributed to inadequate management skills and a lack of knowledge about how labor standards, productivity and quality are connected.

Through this project, we are working to change how China-based suppliers approach labor and HSE practices. Our strategy is twofold: to build management capabilities at the site level, and to use data and performance metrics to make the case for improving management practices. To date, we have trained managers at nine factories, while developing action plans and facilitating monthly data collection and reporting. We're looking forward to making additional progress over the course of this 12- to 16-month project.

**The RP risk indicator tool**
The RP risk indicator tool uses the category risk, country risk and contract value in combination to indicate a potential risk around the five areas of elevated ethical risk in the supply chain: labor rights, HSE, animal welfare, anti-bribery and data privacy. Data privacy is not included in the table below because we currently do not have a global approach to managing data privacy. This is managed at the country level.

**The RP risk indicator tool**

| | Labor rights | HSE general | HSE specific | Animal welfare | Anti-bribery |
|---|---|---|---|---|---|
| **Policy or guidelines** | Novartis Supplier Code | Novartis Supplier Code | HSE guideline 1 / HSE guidance note 7.2 | Novartis animal welfare policy | Novartis Anti-Bribery Policy and Third-Party Guideline |
| **Applies to** | All third-party suppliers | All third-party suppliers | Contract manufacturers, waste contractors, chemical producers | Third-party suppliers handling animals | Third-party suppliers acting on behalf of Novartis |
| **Risk indication trigger** | Category risk<br>Country risk<br>Contract value | Category risk<br>Country risk<br>Contract value | Category only (independent of country or contract value) | Category only (independent of country or contract value) | Category only (independent of country or contract value) |
| **Assessment and due diligence** | Depending on the risk type, policies and/or guidelines and related standards set forth the due diligence process for suppliers using a variety of tools including desktop review, supplier questionnaires, assessment visits and audits. | | | | |
| **Collaboration/ engagement** | Focuses on implementing improvement plans (developed after audits or other assessments) and other targeted initiatives to help suppliers improve their standards and ethical business practices | | | | |
| **Case review** | If noncompliance is found through assessment and due diligence, the matter is escalated to a Case review. | | | | |

G4 SD 14

UNGC 7

### PRECAUTIONARY APPROACH

We take a precautionary approach to the innovation and development of new products and technologies. To this end, we follow a step-by-step approach, we engage in scientific peer review, and we consider the benefits and risks of innovation in a scientific and transparent manner.

Novartis takes its responsibility for environmental impacts seriously, and we will continue to do what we can to reduce or mitigate our environmental impacts:

- We apply a precautionary approach in all operations to minimize environmental impacts (emissions to air and water, waste to landfill, and efficient use of water and energy resources).
- We manage risks proactively by implementing appropriate preventive and contingency measures. This risk management process is designed to identify potential hazards and take action to reduce the risk of an event – the likelihood of occurrence and severity of consequences – to an acceptable minimum level. Risk portfolios are elaborated on the sites, consolidated at divisional and corporate levels, and reviewed by senior management.
- We identify and manage HSE risks by conducting site analyses and audits by corporate HSE & Business Continuity (BC), and the HSE and BC organizations of the divisions and business units.

For more information about reducing risk and ensuring continuity, see p.29 of this report.

G4 SD 15

UNGC 1,8

### ECONOMIC, ENVIRONMENTAL AND SOCIAL CHARTERS, PRINCIPLES, OR OTHER INITIATIVES

- Novartis signed the Women's Empowerment Principles launched by the UNGC and the UN Development Fund for Women (UNIFEM)
- As a signatory to the UNGC, Novartis supports the Universal Declaration of Human Rights, the ILO's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, the United Nations Convention Against Corruption, the OECD Guidelines for Multinational Enterprises, and the OECD Convention on Combating Bribery of Foreign Public Officials.
- Signatory to the International Chamber of Commerce's Business Charter for Sustainable Development
- Signatory to the ILO Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy
- Signatory to the CEO Letter on the UN Convention Against Corruption
- Support for the Pharmaceutical Industry Principles for Responsible Supply Chain Management set by the Pharmaceutical Supply Chain Initiative (PSCI)
- Voluntarily agreed to reduce GHG emissions in line with the Paris Agreement and subsequent international target commitments, such as those of the European Union (GHG emissions are reported according to the GHG Protocol)
- Signatory to the UNGC/UNEP/World Business Council for Sustainable Development (WBCSD) initiative "Caring for Climate: The Business Leadership Platform" additionally fulfilling the "Business Leadership Criteria on Carbon Pricing"
- Classify and dispose of waste according to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- Member of the Carbon Disclosure Project, Water Disclosure Project and Supply Chain Disclosure Project
- Signatory to the WBCSD's Manifesto for Energy Efficiency in Buildings
- Signatory to the Guiding Principles on Access to Healthcare (GPAH), which frame the pharmaceutical industry's approach to expanding access to quality healthcare globally
- Strategic partner of the World Economic Forum

G4 SD 16

1,8

## MEMBERSHIPS OF ASSOCIATIONS AND NATIONAL OR INTERNATIONAL ADVOCACY ORGANIZATIONS

Novartis Group companies are members of various chambers of commerce, sustainability industry associations, and pharmaceutical industry associations. We also participate in sector initiatives such as the PSCI to promote high ethical standards in the supply chain, and the Pharmaceutical Security Institute to combat counterfeit medicines. Novartis is a member of:

- The Business for Social Responsibility (BSR) Healthcare Working Group, and is a signatory to the BSR GPAH
- The Bill & Melinda Gates Foundation CEO Roundtable on Neglected Tropical Diseases, formed to accelerate progress toward eliminating or controlling 10 neglected tropical diseases by 2020
- The Clinton Global Initiative, which convenes global leaders to create solutions to the world's most pressing challenges
- The International Integrated Reporting Council
- The UNGC LEAD initiative, of which it is one of the 54 founding members
- The Private Sector Delegation Advisory Group and the Global Fund Private Sector Delegation
- The Private Sector Constituency to the Roll Back Malaria Partnership
- Various chambers of commerce and sustainability industry associations, including BSR; CSR Europe; SustainAbility; WBCSD; EH&S Inc. Corporate Environmental, Health & Safety Roundtable; ORC (Organization Resource Counselors) Safety & Health Forum; Conference Board (Chief EH&S Council, Business Continuity & Crisis Management Council, and Corporate Responsibility & Sustainability Council); European Biosafety Association; American Biosafety Association; Medichem and European Process Safety Center
- Pharmaceutical Industry Associations: National pharmaceutical industry associations in countries or regions where Novartis operates, notably:
  - Switzerland, where the national associations are Interpharma and Intergenerika
  - The United States, where the key national organizations are: PhRMA, BIO, GPhA, CHPA, and AH Institute
  - The European Union, where regional organizations are: AESGP, EFPIA, EuropaBio, EGA, AESGP, EPAA, EVM, EBE and Euromcontact
  - Global associations including the IFPMA and IFAH
- National associations in most markets where Novartis has a legal subsidiary

G4 SD 18

## PROCESS FOR DEFINING THE REPORT CONTENT AND THE ASPECT BOUNDARIES

The content of this report is based on the issues identified through the CR materiality analysis Novartis conducted in 2013. In 2014, we began implementing activities to follow up on the results of our materiality analysis, and in 2015 we conducted a review of our materiality analysis.

### Identification

We evaluated a vast range of internal and external data, including analyst reports, media articles and stakeholder feedback, and identified more than 100 issues relevant to Novartis stakeholders. We aggregated this list into 46 issues, which formed the basis of our 2013 CR materiality survey.

### Prioritization and validation

We surveyed 43 internal stakeholders via an online questionnaire, and then conducted one-on-one interviews to determine the issues they thought were most important and relevant to Novartis. The interviewees included senior executives from all Novartis divisions. Based on input from internal interviewees, we completed an in-depth stakeholder mapping exercise and identified 100 key external stakeholders, including representatives of patient organizations, non-governmental organizations (NGOs), health institutions, customers, academics and other groups considered important to the industry and our business.

This list of stakeholders was reviewed and amended by three external CR experts – John Elkington from Volans, Mark Little from BSR and Kyle Peterson from FSG – all of whom have in-depth knowledge about our industry. Of the 100 external stakeholders who were invited, more than 50 completed an online survey and were interviewed by phone.

The 2015 list of material topics will be presented and reviewed by the Novartis CR Board, as was the 2013 list.

The results of our 2013 materiality assessment were summarized in a comprehensive report made publicly available on our website.

### Review

We are using findings from the materiality analysis to guide our business strategy, track issues of concern, inform and prioritize our CR programs, and establish meaningful metrics against which to measure our performance. In 2015, we conducted a review of our materiality analysis. This was done following a two-pronged approach:

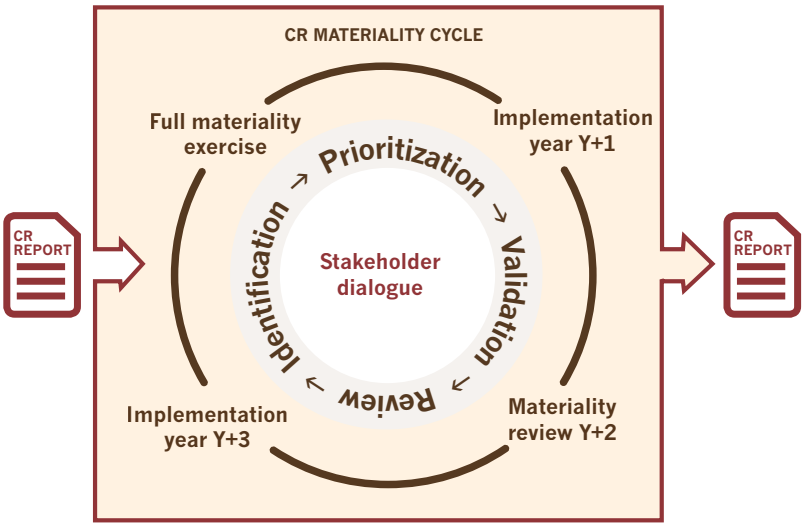
- We conducted an online survey, asking our external stakeholders to re-prioritize our material topics according to their views and perspectives, and to add any topics they felt were missing from the original list of 2013. More than 100 external stakeholders from all stakeholder categories answered the survey and shared their comments.

— We also conducted webinars on our two most material topics: access to healthcare, and governance and ethical business practices. These webinars enabled our internal specialists to inform stakeholders about the latest developments on these topics, gather their feedback, and answer their questions. Around 80 stakeholders took part in these webinars.

The results of the webinars and survey confirmed the results of the 2013 materiality analysis, encouraging us to further focus on the issues of access to healthcare, governance and ethical business practices, and research and development in 2016.

During 2017, we will strive to conduct a full materiality analysis.

For more information on key topics and concerns raised through stakeholder engagement, please refer to G4–27.




G4 SD 19

## MATERIAL ASPECTS IDENTIFIED IN THE PROCESS FOR DEFINING REPORT CONTENT

Our 2013 CR materiality exercise identified 25 issues, grouped into eight key clusters, consistently significant to the internal and external stakeholders we engaged in our CR materiality analysis. Of these eight clusters, we decided to focus on three priority clusters: access to healthcare, governance and ethical business practices, and research and development.

Our 2015 materiality review brought us to the same conclusions as the 2013 exercise. The rating of the top 25 issues remained similar to 2013, and three additional issues gained significant importance and were added to these 25 topics:

— Access to healthcare: noncommunicable diseases (NCDs)
— Environmental protection: pharmaceuticals in the environment
— Patient focus: rising costs of healthcare/insurance

The materiality review exercise also enabled us to gain further insight into new issues increasing in importance for our stakeholders that were not part of our 2013 exercise and that did not reach the top 25 threshhold, namely:

— Community engagement: structurally high youth unemployment
— Governance and ethical business practices: corporate tax
— Transparency/better communication: non-financial disclosure

## MATERIAL CLUSTERS AND GRI G4 ASPECTS

| Material areas | Key topics | Relevant G4 aspects |
|---|---|---|
| **Access to healthcare** | Lower-income patients<br>Product pricing<br>Partnering<br>Intellectual property | **ECONOMIC ASPECTS**<br>— Economic performance<br>— Market presence<br>— Procurement practices<br>— Indirect economic impacts<br>**SOCIAL ASPECTS**<br>**Society**<br>— Local communities |
| **Governance and ethical business practices** | Integrity and compliance management<br>Responsible clinical trials<br>Bribery and corruption<br>Responsible marketing/advertising<br>Board structure and independence<br>Responsible lobbying and political contributions<br>Risk and crisis management | **ECONOMIC ASPECTS**<br>— Economic performance<br>— Indirect economic impacts<br>— Market presence<br>— Procurement practices<br>**ENVIRONMENTAL ASPECTS**<br>— Compliance<br>— Supplier environmental assessment<br>— Environmental grievance mechanisms<br>**SOCIAL ASPECTS**<br>**Labor practices and decent work**<br>— Supplier assessment for labor practices<br>— Labor practices grievance mechanisms<br>**Human rights**<br>— Investment<br>— Non-discrimination<br>— Freedom of association and collective bargaining<br>— Child labor<br>— Forced or compulsory labor<br>— Indigenous rights<br>— Security practices<br>— Assessment<br>— Supplier human rights assessment<br>— Human rights grievance mechanisms<br>**Society**<br>— Anti-corruption<br>— Public policy<br>— Anti-competitive behavior<br>— Compliance<br>— Supplier assessment for impacts on society<br>— Grievance mechanisms for impacts on society<br>**Product responsibility**<br>— Customer health and safety<br>**Product and service labeling**<br>— Marketing communications<br>— Customer privacy<br>— Compliance |
| **Research and development** | Innovation and R&D pipeline<br>R&D in neglected diseases | **SOCIAL ASPECTS**<br>**Product responsibility**<br>— Customer health and safety<br>**Human rights**<br>— Indigenous rights |

| Material areas | Key topics | Relevant G4 aspects |
|---|---|---|
| **Employees** | Recruitment and retention of employees<br><br>Diversity and inclusion<br><br>Health and safety | **SOCIAL ASPECTS**<br>**Labor Practice and Decent Work**<br>— Employment<br>— Labor/management relations<br>— Occupational health and safety<br>— Training and education<br>— Diversity and equal opportunity<br>— Equal remuneration for women and men<br>— Suppliers assessment for labor practices<br>— Labor practices grievance mechanisms<br>**Human rights**<br>— Non-discrimination<br>**ECONOMIC ASPECTS**<br>— Market presence |
| **Environmental protection** | Pollution, wastes and effluents<br><br>Energy and climate change | **ENVIRONMENTAL ASPECTS**<br>— Materials<br>— Energy<br>— Emissions<br>— Effluents and waste<br>— Products and services<br>— Compliance<br>— Overall<br>— Supplier environmental assessment<br>— Environmental grievances mechanism |
| **Product quality** | Quality of drugs<br><br>Counterfeit medicines | **SOCIAL ASPECTS**<br>**Product responsibility**<br>— Customer health and safety<br>**Product and service labeling**<br>— Marketing communications<br>— Customer privacy<br>— Compliance |
| **Transparency and communication** | Stakeholder engagement and dialogue<br><br>Disclosure and labeling | **ECONOMIC ASPECTS**<br>**Economic performance**<br>— Procurement practices<br>**SOCIAL ASPECTS**<br>**Society**<br>— Local communities<br>**Product responsibility**<br>— Marketing communications<br>— Customer privacy<br>— Product and service labeling |
| **Patient focus** | Health outcome contribution<br><br>Demographic changes in society<br><br>Security of product supply | **ECONOMIC ASPECTS**<br>— Economic performance<br>— Procurement practices<br>**ENVIRONMENTAL ASPECTS**<br>— Supplier environmental assessment<br>**SOCIAL ASPECTS**<br>**Labor practices and decent work**<br>— Supplier assessment and labor practices<br>**Human rights**<br>— Supplier assessment on human rights<br>**Society**<br>— Local communities<br>— Supplier assessment for impacts on society<br>**Product responsibility**<br>— Customer health and safety |

G4 SD 20

G4 SD 21

## ASPECT BOUNDARIES WITHIN AND OUTSIDE THE ORGANIZATION

The Aspect Boundary, within the organization, applies across the organization (as defined by this report).

| Aspect | Indicators | Aspect Boundary outside the organization |
|---|---|---|
| **Economic performance** | G4 EC 1, G4 EC 2, G4 EC 3, G4 EC 4 | — Academia and scientific community<br>— Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— Local communities<br>— NGOs<br>— Patients and patient groups<br>— Pharmaceutical industry<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Market presence** | G4 EC 5, G4 EC 6 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— Local communities<br>— NGOs<br>— Patients and patient groups<br>— Pharmaceutical industry<br>— Regulators<br>— Shareholders<br>— Suppliers |
| **Indirect economic impacts** | G4 EC 7, G4 EC 8 | — Governments<br>— Health authorities<br>— NGOs/intergovernmental oranization (IGOs)<br>— Patients and patient groups<br>— Trade unions |
| **Procurement practices** | G4 EC 9 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— NGOs<br>— Patients and patient groups<br>— Pharmaceutical industry<br>— Shareholders<br>— Suppliers |
| **Materials** | G4 EN 1, G4 EN 2 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities<br>— NGOs<br>— Shareholders<br>— Suppliers |
| **Energy** | G4 EN 3, G4 EN 4, G4 EN 5, G4 EN 6, G4 EN 7 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities<br>— NGOs<br>— Shareholders<br>— Suppliers |
| **Water** | G4 EN 8, G4 EN 9, G4 EN 10 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities<br>— NGOs<br>— Shareholders<br>— Suppliers |
| **Emissions** | G4 EN 15, G4 EN 16, G4 EN 17, G4 EN 18, G4 EN 19, G4 EN 20, G4 EN 21 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities<br>— NGOs<br>— Shareholders<br>— Suppliers |

| Aspect | Indicators | Aspect Boundary outside the organization | |
|---|---|---|---|
| **Effluents and waste** | G4 EN 22, G4 EN 23, G4 EN 24, G4 EN 25, G4 EN 26 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities<br>— NGOs<br>— Shareholders<br>— Suppliers | |
| **Products and services** | G4 EN 27, G4 EN 28 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities | — NGOs<br>— Shareholders<br>— Suppliers |
| **Compliance** | G4 EN 29 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities | — NGOs<br>— Shareholders<br>— Suppliers |
| **Transport** | G4 EN 30 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities | — NGOs<br>— Shareholders<br>— Suppliers |
| **Overall** | G4 EN 31 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities | — NGOs<br>— Shareholders<br>— Suppliers |
| **Supplier environmental assessment** | G4 EN 32, G4 EN 33 | — Academia and scientific community<br>— Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Local communities<br>— NGOs<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Environmental grievance mechanisms** | G4 EN 34 | — Academia and scientific community<br>— Customers<br>— Health authorities<br>— Local communities | — NGOs<br>— Shareholders<br>— Suppliers |
| **Employment** | G4 LA 1, G4 LA 2, G4 LA 3 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs | — Regulators<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Labor/ management relations** | G4 LA 4 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs | — Regulators<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Occupational health and safety** | G4 LA 5, G4 LA 6, G4 LA 7, G4 LA 8 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs<br>— Regulators<br>— Shareholders<br>— Suppliers | — Trade unions |
| **Training and education** | G4 LA 9, G4 LA 10, G4 LA 11 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs<br>— Regulators<br>— Shareholders<br>— Suppliers | — Trade unions |
| **Diversity and equal opportunity** | G4 LA 12 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs | — Regulators<br>— Shareholders<br>— Suppliers<br>— Trade unions |

| Aspect | Indicators | Aspect Boundary outside the organization | |
|---|---|---|---|
| **Equal remuneration for women and men** | G4 LA 13 | — Customers<br>— Financial markets<br>— Local communities<br>— NGOs | — Regulators<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Supplier assessment and labor practices** | G4 LA 14, G4 LA 15 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— NGOs | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Labor practices grievance mechanisms** | G4 LA 16 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— NGOs | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Investment** | G4 HR 1, G4 HR 2 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Non-discrimination** | G4 HR 3 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Freedom of association and collective bargaining** | G4 HR 4 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Child labor** | G4 HR 5 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Forced or compulsory labor** | G4 HR 6 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Security practices** | G4 HR 7 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Indigenous rights** | G4 HR 8 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Impact assessment** | G4 HR 9 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Supplier human rights assessment** | G4 HR 10, G4 HR 11 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Human rights grievance mechanisms** | G4 HR 12 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |

| Aspect | Indicators | Aspect Boundary outside the organization | |
|---|---|---|---|
| **Local communities** | G4 SO 1, G4 SO 2 | — Customers<br>— Financial markets<br>— Governments<br>— Health authorities<br>— Healthcare professionals<br>— Key opinion leaders | — Local communities<br>— NGOs/IGOs<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers<br>— Trade unions |
| **Anti-corruption** | G4 SO 3, G4 SO 4, G4 SO 5 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers | |
| **Public policy** | G4 SO 6 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Anti-competitive behavior** | G4 SO 7 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Compliance** | G4 SO 8 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Supplier assessment for impacts on society** | G4 SO 9, G4 SO 10 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — NGOs<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Grievance mechanisms for impacts on society** | G4 SO 11 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Customer health and safety** | G4 PR 1, G4 PR 2 | — Customers<br>— Financial markets<br>— Governments<br>— Health authorities<br>— Healthcare professionals | — NGOs/IGOs<br>— Patients and patient groups<br>— Pharmaceutical industry<br>— Shareholders<br>— Suppliers |
| **Product and service labeling** | G4 PR 3, G4 PR 4, G4 PR 5 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers | |
| **Marketing communications** | G4 PR 6, G4 PR 7 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Media<br>— Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Customer privacy** | G4 PR 8 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |
| **Compliance** | G4 PR 9 | — Customers<br>— Financial markets<br>— Health authorities<br>— Healthcare professionals | — Patients and patient groups<br>— Shareholders<br>— Suppliers |

G4 SD 22

### RESTATEMENTS OF INFORMATION

2013 and 2014 data have been restated to cover the Novartis continuing operations, following the company transformation that occurred in 2014 and 2015.

HSE data is based on nine-months actual data (January to October 2015) plus three-months estimates. This data will be restated with actual figures on our website during the first half of 2016.

G4 SD 23

### SIGNIFICANT CHANGES FROM PREVIOUS REPORTING PERIODS IN THE SCOPE AND ASPECT BOUNDARIES

In 2015, we conducted a review of our materiality matrix that led to no significant changes with regard to scope or Aspect Boundaries for this report.

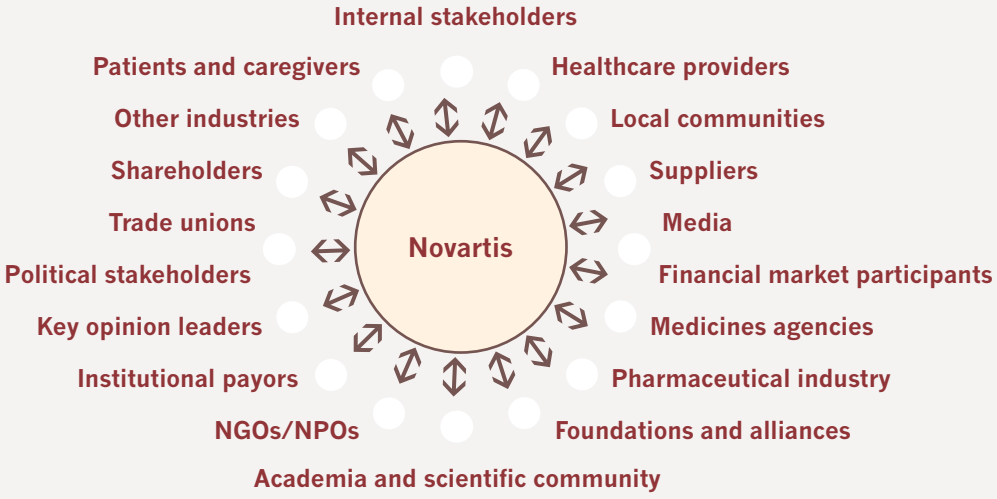
G4 SD 24

### STAKEHOLDER GROUPS ENGAGED BY THE ORGANIZATION

Our stakeholders include patients and caregivers, associates, healthcare providers, governmental and nongovernmental organizations, shareholders and other financial market participants, local communities, and partners from the pharmaceutical industry and other industries. We engage with these diverse groups to understand their needs and expectations, and to improve access to healthcare.

We continuously strive to improve how we engage with our stakeholders. Conducting the materiality review survey and our stakeholder webinars in 2015 was part of this process. The stakeholders with whom we engaged through this process cover everyone categorized in our stakeholder map and all geographical regions in which we operate.

**STAKEHOLDERS WITH WHOM WE ENGAGE**




G4 SD 25

### BASIS FOR IDENTIFICATION AND SELECTION OF STAKEHOLDERS WITH WHOM TO ENGAGE

Novartis interacts with an increasingly complex map of stakeholders with diverse – sometimes conflicting – expectations. We identify our stakeholders based on the impact and influence level they exert over our company and vice versa. We engage with diverse groups to understand their needs and expectations, and to improve access to healthcare. To deepen these insights, in 2013 Novartis completed an extensive CR materiality analysis to gauge the views of key internal and external stakeholders. The stakeholders identified through this process served as the basis for our stakeholder engagement and our 2015 materiality update exercise. We refine and update our stakeholder list through our ongoing day-to-day CR work.

G4 SD 26

## APPROACH TO STAKEHOLDER ENGAGEMENT

We engage with our stakeholders in a variety of ways, including through focus groups and collaborations with patient advocacy organizations to better understand patient needs, participation in scientific congresses to interact with the scientific community, public policy work to meet with authorities and regulators, global associate surveys to gauge associates' perspectives on the company, and roundtables to exchange experiences and expectations with our suppliers. These are just some examples of how we interact with our diverse range of stakeholders.

Stakeholder engagement at Novartis helps us to:

- Participate actively in civil society
- Learn and gain relevant knowledge regarding our business and expectations of our stakeholders
- Correct misperceptions and voice our arguments in the social debate
- Make strategic adjustments in corporate practice to optimize our business success
- Raise trust and reach common understanding when differences arise

On top of these ways to engage with our stakeholders, in 2015 our approach also included two stakeholder webinars, two stakeholder events, and an online survey to seek stakeholdersfeedback on our CR material topics. We also sought stakeholder feedback on our CR Performance Report 2014 through an online survey, which helped guide the preparation of this report. At our stakeholder events held in New York and Basel, we interacted with around 150 stakeholders.

We also engage throughout the year with investors in face-to-face meetings, email exchanges, and phone conversations about our environment, social and governance performance, and respond to additional written information requests. In 2015, more than 50 investors took part in our investor call focusing on ethical business practice.

G4 SD 27

## KEY TOPICS AND CONCERNS RAISED THROUGH STAKEHOLDER ENGAGEMENT

2015 developments on the key topics raised by stakeholders during our CR materiality analysis are addressed on p.12–17 of this report.

As part of our materiality review exercise, our stakeholders raised questions and concerns during our webinars or our stakeholder events. These pertained to our top seven material clusters, with a particular focus on access to healthcare and governance and ethical business practices, two topics covered by our stakeholder webinars.

In the area of access to healthcare, questions of partnering, low-income patients, and product pricing were of particular concern to our stakeholders. In the area of governance and ethical business practices, integrity and compliance management was of key concern.

G4 SD 56

1,2,3,4,5, 6,8,10

## ORGANIZATION'S VALUES, PRINCIPLES, STANDARDS AND NORMS OF BEHAVIOR SUCH AS CODES OF CONDUCT AND CODES OF ETHICS

Our vision, mission and strategy are detailed on p.10 of this report. Strong values define our culture and help us execute the Novartis strategy in line with our mission and vision. Our values are innovation, quality, collaboration, performance, courage and integrity. They describe the professional behavior we expect from our employees.

### Novartis Code of Conduct

Novartis adopted its first global Code of Conduct in 1999. An amendment was later added, reflecting the Group's commitment to the UNGC. Our Code of Conduct was revised in 2001, and most recently in 2011.

Our Code of Conduct is based on five core principles (for details of these principles, see the Novartis Code of Conduct):

- **Patients:** Patient benefit and safety is at the heart of everything we do.
- **Associates:** We treat our associates fairly and respectfully.
- **Shareholders:** We are committed to outstanding and sustainable performance with integrity.
- **Healthcare partners:** We strive to be a trusted healthcare partner.
- **Society:** We aspire to be a good corporate citizen.

Every Novartis associate is required to take part in yearly Code of Conduct trainings, including certification. In 2015, 110 638 associates were trained and certified on the Code of Conduct. Compliance with the Code of Conduct is included in the terms of employment of all Novartis associates and is closely monitored. Novartis further regulates ethical business practices through its internal policies, which are fully aligned with the overarching Code of Conduct.

These policies set global standards for the most common business practices at Novartis. Implementation and enforcement of these policies are supported by regular training in local languages (including e-learning), monitoring of existing controls, and internal audits. The policies, together covering all businesses comprising Novartis in 2015, are as follows:

- Novartis Global Anti-Bribery Policy

— Pharma: Novartis Pharma Principles and Practices for Professionals (NP4)
— Alcon: Alcon Policy on Promotion and Interaction with Healthcare Professionals (AP3)
— Sandoz: Sandoz Professional Practices Policy (SP3)
— Novartis Institutes for BioMedical Research (NIBR): Policy for Interactions with Patients, Physicians, and Institutions for NIBR (PIPPIN)

A worldwide network of compliance officers advise on compliance matters and handle any issues that arise locally. The Novartis Chief Ethics, Compliance and Policy Officer presents an update on the compliance program semi-annually to the Audit and Compliance Committee of the Novartis Board of Directors. The Chief Ethics, Compliance and Policy Officer reports to the Chief Executive Officer. He has overall responsibility for the Code of Conduct, the anti-bribery program and ethical business practices.

For more information about our ethics, governance and compliance, see our website.

G4
DMA

## DISCLOSURE ON MANAGEMENT APPROACH

### Access to healthcare

***Why it is important***

With 2 billion underserved patients across the world, there is a clear expectation that we should play an active, long term role in improving access to healthcare. Access to healthcare was identified as important by all the audiences surveyed for our materiality analysis, as it could be a key driver in future growth markets and will help build business in the long term.

***How we approach it***

As our most important CR issue, and one of our key focus areas, access to healthcare is governed by a dedicated Access to Medicine Committee. The charter of the Access to Medicine Committee is to establish guiding principles, and continually assess opportunities to expand access to medicine and treatments to more patients, especially in underserved communities.

Specific responsibilities of the Access to Medicine Committee include:
— Develop and implement company-wide policies and positions on access to medicines and treatments, tiered pricing, criteria for establishment of patient assistance programs, etc.
— Support new and existing access-to-medicine initiatives in the Novartis divisions in line with the CR strategy
— Establish broad commitments and targets related to access to medicines and treatments
— Share best practices, identify synergies, and review newly proposed Novartis access initiatives in light of external trends

Members of the Access to Medicine Committee include the Group CEO (Chair); the Global Head of Corporate Responsibility (Co-Chair as delegated by the CEO); and representatives from all business divisions and relevant functions. These representatives include the Sandoz Head of Western Europe, Middle East and Africa; the Pharmaceuticals Head of Asia, Middle East and Africa (Co-Chair as delegated by the CEO); the Oncology Head of Emerging Growth Markets; the Alcon Head of Latin America and Caribbean; the Pharmaceuticals Head of Market Access; the NIBR Head of Infectious Diseases; the Head of Group Social Business and the Secretary of the Access to Medicine Committee; the Head of the Novartis Foundation.

The Access to Medicine Committee meets three times per year. Our position on access to healthcare can be found here.

***How we perform***

Data on access to healthcare can be found in our access-to-healthcare table on p.6 of this report. Our targets and commitments can be found on our website.

Our key achievements in 2015 on access to healthcare can be found on p.12 of this report.

### Research and development (R&D)

***Why it is important***

R&D and a strong pipeline of potential medicines are critical for future business and long term success. They support our growth in emerging markets and can help us respond to unmet medical needs of patients in the developing world. Innovation more broadly is also a key enabler of access to healthcare.

***How we approach it***

We believe innovation that produces breakthrough medicines, devices and solutions will be critical in the healthcare industry in the coming years as demographic trends increase pressure on health systems to produce the best results at the lowest overall cost.

Our R&D strategy sets clear priorities. We concentrate on therapeutic areas where there is patient need and where scientific advances present new opportunities, including oncology, cardiovascular, eye care, biosimilars and neuroscience.

We are also exploring new scientific frontiers in areas with great potential for innovation, including immuno-oncology, aging and regenerative medicine, and infectious diseases.

**Drug discovery**
NIBR is the innovation engine of Novartis. More than 6 000 NIBR scientists and physicians worldwide work to discover potentially groundbreaking therapies, using molecular signaling pathways – the communication highways inside cells – as a guide for drug discovery. When new molecular entities have been qualified for testing in humans, small-scale proof-of-concept studies are conducted to get an early read on a drug's safety and effectiveness.

**Drug development**
After a successful proof-of-concept study, new medicines move into clinical development. Development processes at Novartis vary by division because of the different types of products involved. In the Pharmaceuticals Division, in Ophthalmic Pharmaceuticals at Alcon and at Sandoz for biosimilars, Novartis scientists build development plans with practicing physicians and health authorities.

Clinical trials can involve large numbers of patients and can last from two to five years, depending on the indication and patient population. For other products, such as medical devices or generic drugs, the process can be much shorter. At Alcon, researchers develop new devices and surgical instruments with eye surgeons and research institutes. Development at Sandoz for generics typically involves small clinical studies to show the generic version is equivalent to the original branded medicine.

Even when a proof-of-concept study yields a positive result, rigorous prioritization means a therapy may not be developed at Novartis. In such cases, we may license the compound to another company

More information on this topic can be found on p.44–59 of the Novartis Annual Report 2015, and on our website here and here.

Our policies and position papers in this area are listed on our website here and here.

***How we perform***
R&D data can be found in our innovation table on p.5 of this report. Our targets and commitments can be found on our website. Our key R&D achievements in 2015 can be found on p.14 of this report.

**Governance and ethical business practices**
***Why they are important***
Governance and ethical business practices is seen as a material CR topic from a financial perspective because poor ethical practices can lead to fines, public scrutiny and distrust, ultimately affecting sales and profits. Ethical issues can overshadow good performance, destroy reputation, and undermine the morale and engagement of employees. All these elements can compound the financial impact of bad performance.

***How we approach it***
Our aim is to prevent issues from occurring, drive personal accountability for behaviors, and generate learnings that can be applied across the organization.

We recently created a new position of Chief Ethics, Compliance and Policy Officer, reporting to the CEO – elevating the Compliance function to the highest levels in the company. Eric Cornut, formerly Chief Commercial Officer, Novartis Pharmaceuticals, was named to this position. His experience in our commercial organization – as well as prior positions at regional and country levels – ensure that he can help teams continue to embed a culture of high performance with integrity.

We do not tolerate unethical behavior by our associates anywhere, and we will take all necessary steps to ensure compliance with our Code of Conduct and all applicable laws. At the same time, we know there are potential pockets of bad behavior in a global business with about 123 000 associates, and we work to take swift action when this occurs.

We have further strengthened our compliance system by adding country and global compliance risk assessments for marketing and sales. We work to identify and mitigate risk exposure proactively so it can be reviewed and discussed at a management level.

Our goal is to maintain consistent standards of business practices across Novartis, and ultimately to provide the best possible care for patients globally.

More information on this topic can be found here.

Our policies and positions in the area of ethics are listed on our website here and here.

***How we perform***
Data on governance and ethical business practices can be found in our ethics table on p.7 of this report. Our targets and commitments can be found on our website. Our key achievements in 2015 related to governance and ethical business practices can be found on p.15 of this report.

Husband and wife ophthalmic surgeons Janak and Preeti Shah examine a patient awaiting an eye operation at Siliguri in Darjeeling, India. They volunteer their services via SEE International, a non-governmental organization with a focus on curing blindness, and have worked all over India, as well as at remote locations in Peru, China and Brazil.

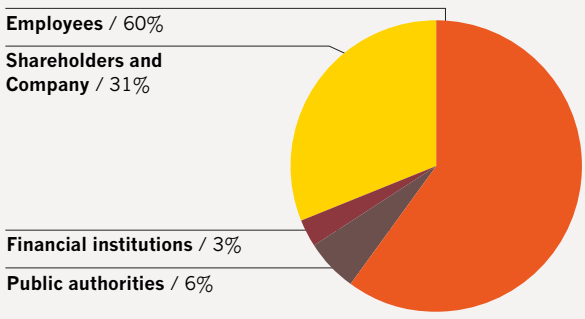
# Economic

G4 EC 1

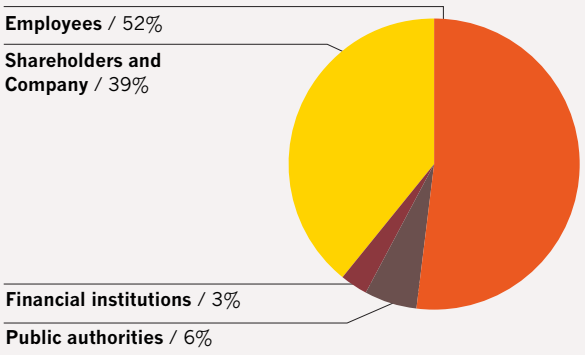
## DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED[1]

| **Origin of value added** | 2015 USD millions | 2015 % of net sales | 2014 USD millions | 2014 % of net sales |
|---|---|---|---|---|
| **Net sales** | **49 414** | **100.0%** | **52 180** | **100.0%** |
| Other revenues, change in inventory and own manufactured items | 1 429 | 2.9% | 1 722 | 3.3% |
| | **50 843** | **102.9%** | **53 902** | **103.3%** |
| Material costs and other operating expenses | | | | |
| Material costs | –5 245 | –10.6% | –7 376 | –14.1% |
| Other operating expenses | –17 363 | –35.1% | –15 900 | –30.5% |
| **Gross value added** | **28 235** | **57.1%** | **30 626** | **58.7%** |
| Depreciation, amortization and impairments | –5 575 | –11.3% | –4 751 | –9.1% |
| Financial income net | –454 | –0.9% | –31 | –0.1% |
| Income from associated companies | 266 | 0.5% | 1 918 | 3.7% |
| **Net value added** | **22 472** | **45.5%** | **27 762** | **53.2%** |

### DISTRIBUTION OF NET VALUE ADDED 2015[1]




### DISTRIBUTION OF NET VALUE ADDED 2014




[1] Continuing operations

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## FINANCIAL IMPLICATIONS AND OTHER RISKS AND OPPORTUNITIES FOR THE ORGANIZATION'S ACTIVITIES DUE TO CLIMATE CHANGE

Novartis responds to a range of physical, regulatory, and other risks and opportunities driven by climate change. For complete detail of our work to address climate change risks and opportunities, see CC5 and CC6 of the Carbon Disclosure Project (CDP) Investor Information Request Response. An overview is provided below.

### Physical risks

As a company with products available in more than 180 countries, we understand that potential physical risks as a result of climate change are not limited to a particular region or country. Our operations may become directly affected by physical risks related to climate change in the same way as any other business that operates worldwide. While extreme weather events, changes in weather patterns, and rising temperatures and/or sea levels are not expected to strongly influence our operational plans and decisions within the next 5–10 years, we are working to identify, quantify and manage these potential risks. Reinforcement of site infrastructure to account for changes in precipitation extremes and droughts could amount to an estimated cost of USD 2–5 million per site.

Suppliers of chemicals and intermediates, energy and packaging materials could be affected by the physical risks of climate change. Severe events due to climate change could potentially affect supply continuity for such materials and services. We have programs in place to address risks to supply interruptions. Prices for agricultural commodities may increase by 20–30% within the next 10–15 years as a result of climate change.

We are aware that rising sea levels could result in protective measures being required for industrial areas near the coastline and in low-land areas where we operate (e.g., in Shanghai, Dhaka or Singapore). Flooding of manufacturing operations could lead to higher capital and operational costs, and at-risk operations with smaller asset values or in poorer areas may need to be relocated.

The availability of fresh water is another area where some of the Novartis operations (primarily the manufacture of anti-infective pharmaceuticals by fermentation) could be affected in the long term. The fresh water needed for cooling is normally supplied directly from rivers or from groundwater layers at river banks. All of our anti-infective sites are located in areas where the availability of fresh water is currently abundant or sufficient, and is expected to be for the next 15–20 years. However, energy and water costs in water-scarce areas could increase by 20–30% due to increased water stress. For the top 10 water-scarce sites, total electricity costs in 2015 were USD 32 million and total water costs were USD 7 million. An increase as estimated above would result in an additional USD 8–12 million per year in costs.

At a corporate level, Novartis has identified short-term and long term risks related to water scarcity based on WBCSD Global Water Tool. Locations with higher potential risks have been asked to conduct assessments to manage and minimize their dependence on water.

Potential reductions in biodiversity caused by climate change may have long term impacts on our business. Temperature increases of 1.5–2.5°C above pre-industrial levels (expected minimum increases to occur by 2050 due to global warming) could lead to the extinction of 20–30% of known plant and animal species (IPCC 2007). With more than 60% of all new anti-cancer and anti-infective agents in the period 1984 to 1995 coming from natural products or their derivatives, Novartis could suffer from a reduction in biodiversity more in the next 30–50 years. Current Novartis products based on natural compounds together bring in more than USD 2 billion in net sales.

### Regulatory risks and opportunities

Regulation driven by climate change can present risks and opportunities for our business. For example, cap-and-trade schemes and international agreements could cause an increase in operational costs within the next 5–10 years, with a strong likelihood that they will directly impact Novartis.

We have invested between USD 20–35 million per year on our energy and climate management programs within the last seven years to ensure that we minimize the associated risks and position ourselves to benefit from potential opportunities. Energy projects within the last seven years had an average payback of less than three years. Management costs for the energy management programs were exceeded by the savings achieved. Since the introduction of our energy program in 2008, we have reduced annual energy costs by USD 70 million through projects, compared to a business-as-usual scenario.

With respect to regulatory schemes (such as the Kyoto Protocol and the COP21 agreement), Novartis has taken a proactive approach due to the growing importance of these schemes, even though climate change currently has limited direct impact on our industry.

In 2015, Novartis leadership endorsed a carbon price of USD 100 per ton of carbon dioxide equivalents ($CO_2e$), in line with the cost of climate change to society as calculated by the World Bank. Building a carbon price into investment decisions is important, as it helps identify projects that will most cost-effectively reduce GHG emissions. Novartis has also signed the Business Leadership Criteria on Carbon Pricing of the Caring for Climate Initiative of the UNGC, and joined the group of companies committing to Science Based Targets on climate change.

Climate change will also affect future consumer demand for pharmaceuticals by changing the spatial distribution and frequency of diseases. The IPCC (2007) and the World Health Organization (2007) both state that the effects of climate change on human health are likely to include an increased frequency of heart disorders due to higher levels of ground-level ozone. Rates of infectious diseases such as malaria and dengue fever are also expected to increase due to changing climatic patterns. Predicted changes to global climate patterns (temperatures, precipitation patterns, etc.) are expected to have multiple and increasing impacts on public health within the next 20–30 years, including the spread of vector-borne diseases.

For more details on our corporate energy and climate strategy, see G4–EN15: direct GHG emissions (Scope 1).

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## FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT

No government is registered with more than 2% of our share capital as of December 31, 2015.

### Investment grants, research and development grants, and other relevant types of grants

Within the Novartis Group, some entities receive grants from various governments and private organizations linked to specific activities. As an example, within the Novartis Institutes for BioMedical Research (NIBR), certain entities – mainly the Friedrich Miescher Institute (FMI), the Genomics Institute of the Novartis Research Foundation (GNF) and the Novartis Institute for Tropical Diseases (NITD) –receive research grants from private organizations such as the Wellcome Trust and governments (US, EC, Switzerland). In the US, the Novartis Institutes for BioMedical Research, Inc. (NIBRI) also receive a grant from the US government. In total, these grants are not material to Novartis (2015 amount received: USD 29 million).

### Financial assistance from Export Credit Agencies (ECAs)

Novartis uses Export Credit Agencies when insurance policies exist to cover or transfer political and commercial risk and if Novartis considers coverage necessary. Insurance premiums are paid and claims raised, if and when losses occur on covered transactions and recovery is considered impossible. However, these insurance policies and any related recovery are not material to the Group.

### Tax relief and tax credits

Novartis publishes an overall analysis of the tax rate. Tax authorities offer different types of tax credits. For Novartis, the tax benefits result from R&D credits which are typically offered to the pharmaceutical industry as an incentive to intensify R&D activities in the respective jurisdiction. In 2015, the overall effect of such credits and allowances on the expected tax rate amounts to a 2.7 percentage points benefit (approximately USD 220 million).

### Analysis of tax rate

The main elements contributing to the difference between the Group's overall expected tax rate (which can change each year since it is calculated as the weighted average tax rate based on pre-tax income of each subsidiary) and the effective tax rate are:

| | 2015 (%) | 2014 (%) |
|---|---|---|
| Expected tax rate | 12.4 | 11.7 |
| Effect of disallowed expenditures | 3.5 | 2.9 |
| Effect of utilization of tax losses brought forward from prior periods | –0.2 | –0.3 |
| Effect of income taxed at reduced rates | –0.3 | –0.6 |
| Effect of tax credits and allowances | –2.7 | –1.8 |
| Effect of tax rate change on opening balance | –0.5 | |
| Effect of tax benefits expiring in 2017 | –0.4 | –0.8 |
| Effect of non-deductible losses in Venezuela | 1.2 | |
| Effect of write-down and reversal to write-down of investments in subsidiaries | –0.9 | 0.9 |
| Prior year and other items | 1.5 | 0.6 |
| **Effective tax rate for continuing operations** | **13.6** | **12.6** |
| Effective tax rate for discontinued operations | 13.7 | –27.4 |
| **Effective tax rate** | **13.7** | **13.8** |

The utilization of tax-loss carry-forwards lowered the tax charge by USD 15 million in 2015 and by USD 34 million in 2014, respectively. For further details see p.192 of the Novartis Annual Report 2015.

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## RATIOS OF STANDARD ENTRY-LEVEL WAGE BY GENDER COMPARED TO LOCAL MINIMUM WAGE AT SIGNIFICANT LOCATIONS OF OPERATION

Each year, Novartis voluntarily sets a minimum living wage around the world, so that associates and their families can cover the costs of their basic living needs. These living wages are usually above the local minimum wage. In 2015, the living wage survey covered 79 countries with 50 or more associates. There were six associates (three in Colombia and three in Ukraine) below agreed living wages reported from those countries. Our local HR adjusted their wages accordingly.

At major operations [1] where local minimum wage requirements (which tend to focus on poverty levels for individuals) exist, the Novartis living wage can be higher than the legal minimum standard.

We track living wage data at country level but not by gender. Country managers are tasked with ensuring that all associates, regardless of gender, are paid at least the confirmed living wage. They report back on any incidents of noncompliance to the Global Human Resources function.

[1] Our major operations (based on number of associates) are located in Switzerland, Germany, the United States and China.

G4 EC 6

## PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY AT SIGNIFICANT LOCATIONS OF OPERATION

The percentage of local managers (i.e., managers holding the nationality of the country in which they work) is as follows at significant locations of operation: Switzerland 20%, Germany 24%, and China 92%. We do not collect data on nationality for our US operations.

**NIBR program provides a gateway to graduate schools for up-and-coming scientists**

The Novartis Institutes for BioMedical Research (NIBR) is helping aspiring scientists from underserved communities make their way to top graduate schools – thanks to its Gap Year Scholars Postbaccalaureate Program. This two-year training program at NIBR provides research opportunities for recent college graduates in the US, including first-generation college students, socioeconomically disadvantaged individuals, under-represented minorities, and people with learning differences. Guided by scientific mentors (who say they also benefit from this program), Gap Year scholars conduct and present research, complete coursework at prestigious universities, and build their leadership and communications skills. After two years, many are accepted into leading biomedical Ph.D. and M.D./Ph.D. programs.

The Gap Year Scholars Postbaccalaureate Program, now in its fourth year, grew out of a similar initiative launched by NIBR and the Massachusetts Institute of Technology (MIT) in the US in 2010. Since then, many talented scholars have thrived – including Kaisha Benjamin, who entered the program in 2013 and presented her research on stem cells at the New England Science Symposium and the Biomedical Engineering Society Annual Meeting. She is now pursuing a Ph.D. in bioengineering at Stanford University in the US. Tamuka Chidyausiku, who also joined the Gap Year program in 2013, went on to present at the Annual Quantitative Biology Conference, the Annual Biomedical Research Conference for Minority Students, and the New England Science Symposium. He is currently studying biological physics, structure and design at the University of Washington, Seattle in the US. And Alexandra Navarro, another Gap Year scholar, was accepted into 10 highly competitive advanced degree programs. She entered MIT's biology Ph.D. program in fall 2015.

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## SIGNIFICANT INDIRECT ECONOMIC IMPACTS, INCLUDING THE EXTENT OF IMPACTS

In our industry, main indirect impacts are linked with increasing access to healthcare.

- Diseases cause governments to spend more on healthcare and also have wider economic and social costs. Our medicines and medical devices help to reduce these costs, but quantifying these indirect savings is difficult. However, innovative medicines and treatments can reduce healthcare costs because fewer surgical procedures are required, hospital stays are shorter, and the associated costs of nursing care are also reduced.
- Since 2010, 23.6 million people in rural India, Kenya, Vietnam and Indonesia have attended 591 736 health awareness meetings arranged by our social ventures. More than 1.4 million people were also diagnosed and treated in health camps.
- Through 552 medical missions, Alcon provided eye health education, trained physicians, and brought treatments to places without access to care in 2015.
- We are contributing to building scientific and clinical capabilities in emerging countries through the Novartis Next-Generation Scientist (NGS) and Visiting Scholar (VS) programs. Each year, 20 NGS interns and as many as 10 VS from across the developing world are selected to carry out research projects using state-of-the-art techniques and equipment that can also be implemented within their local infrastructure. Since 2010, 135 young scientists and clinicians from 21 countries across Africa, Asia and Latin America participated in these programs. The programs have contributed to peer-reviewed publications, presentations at international conferences, the advancement of local healthcare infrastructure, and the creation of an international network of scientific and clinical leaders in emerging countries.
- We also promote development through our carbon sink projects, as they help foster sustainable economic growth for local populations in developing economies. Novartis currently operates four forestry projects in Argentina, China, Colombia and Mali. While improving our company's environmental performance, our projects also provide employment and income to local residents.

**Converting promising local ideas into valuable innovations**

Novartis is a founding member of the Steering Committee of the WIPO-World Economic Forum Inventor Assistance Program (IAP), the only global program of its kind aimed at improving access to the patent system by matching financially under-resourced inventors and small businesses in developing countries with qualified patent attorneys to help them secure patent protection for their inventions on a pro-bono basis. Designed to help developing country inventors navigate and use the patent system – a critical step in the process of converting promising local ideas into economically and socially valuable innovations – the IAP is built on the fundamental understanding that creativity and great ideas come from people in all parts of the world, and that the patent system should therefore be accessible to all, without regard to one's socioeconomic status, geography or financial means. With this in mind, Novartis helped conceive and design the IAP through its work with the World Economic Forum's Global Agenda Council on the Intellectual Property System, and then played a central role in developing the program framework and securing WIPO as the program administrator. We have since served as a program advisor, providing IP and legal expertise, connecting the program to our network of preferred law firms to serve as pro-bono legal counsel, and providing implementation support and development guidance. Novartis also helped launch two pilot programs in 2015, one in Colombia and one in Morocco, and will help launch a third pilot in the Philippines in 2016.

**Access to healthcare**

Novartis products reached more than 900 million patients in 2015, and of these patients, about 66 million were reached through Access to Healthcare programs.

**Indirect impacts in Switzerland**

In Switzerland where we are headquartered, Novartis offers jobs not only directly, but also indirectly as a buyer of goods and services from suppliers, including many small- and medium-sized enterprises. In 2015, the company placed orders worth about CHF 2.8 billion with companies in the 26 Swiss cantons. Novartis indirectly secured 44 000 jobs in Switzerland through the procurement of products and services. A total of around 57 000 jobs are dependent on Novartis in Switzerland.

Major areas of procurement include laboratory equipment, information technology products and services, raw materials, building costs, fixtures and fittings, and chemical products.

For further information about the local activities of Novartis in Switzerland, see the Novartis in Switzerland Passport.

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## PROPORTION OF SPENDING ON LOCAL SUPPLIERS AT SIGNIFICANT LOCATIONS OF OPERATION

The Novartis Global Policy of Procurement of Goods and Services from Third-Party Suppliers describes expectations when committing company resources to third-party suppliers. It defines a competitive environment as one in which our suppliers and/or potential suppliers can compete independently, fairly and transparently for the goods or services we wish to acquire on the basis of price, quality, service and other criteria.

The policy also provides the basis for division, region, country and site procurement guidelines and standard operating procedures. Divisions develop their guidelines in line with the global policy. The process and criteria for competitive bidding and supplier selection are aligned with Group and divisional guidelines but managed locally.

In our significant locations of operations (based on sales), over 70% of spend is spent on local suppliers.

Bianca Wuersch climbs into a four-seat gondola and sets a bag of medical supplies on the seat beside her as the cable car jerks to life, swaying up a steep mountain-side toward a remote Alpine community. Gondola rides and hard-to-reach homes are all part of a typical day's work for Ms. Wuersch, an energetic 34-year-old nurse who provides home health-care to elderly clients in a rural part of central Switzerland.

# Environment[1]

G4 EN 1

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## MATERIALS USED BY WEIGHT OR VOLUME

As a large global organization, we are expected to manage, minimize and report on our environmental impacts, and increase the efficient use of raw materials and natural resources. Novartis monitors and reports total production as the total weight of all products delivered from all Novartis Group companies' manufacturing facilities. Total production covers all types of products, including chemical and fermentation products, active pharmaceutical ingredients and finished dosage forms, as well as eye care drugs, surgical equipment and vision care products.

Total production for 2015 was 184 kt (2014: 186 kt). The contributions of the divisions to this total are: Sandoz (80 kt), Alcon (78 kt) and Pharmaceuticals (26 kt).

Novartis additionally collects measured data on the quantity of raw material use and packaging material use on a quarterly basis.

**PRODUCTION TOTAL**
(in kt)

| 2011 | 2012 | 2013 | 2014 | **2015** |
|---|---|---|---|---|
| 182 | 194 | 188 | 186 | **184** |

G4 EN 2

## PERCENTAGE OF MATERIALS USED THAT ARE RECYCLED INPUT MATERIALS

We do our best to use recycled materials wherever possible. We favor raw materials with a reduced environmental footprint (i.e., materials that are less hazardous or that lead to less environmental impact during production) and prefer materials from renewable sources, if technically feasible and economically viable. The majority of the solvents we use are recycled, to a large extent within our operations and partly by contractors for third-party users. Solvents that are not recycled are either used as alternative fuels or are incinerated at waste facilities that recover the energy generated from combustion. The waste solvents used at our sites constitute recycled input materials. At the five chemical operations plants of the Novartis Pharmaceuticals Division, 55.4% of the solvents used are from recycled input materials.

[1] All data in this section reflect continuing operations.

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## ENERGY CONSUMPTION WITHIN THE ORGANIZATION

Novartis has a longstanding, comprehensive energy program with two objectives:

- Improve energy efficiency for all industrial and commercial operations
- Use renewable energy sources where available and feasible

Energy consumption is reported quarterly at all Novartis sites. The data is separated into energy generated from fossil sources (natural gas, light oil, heavy oil and fossil waste), biomass fuels and renewable sources (photovoltaic, thermal solar, hydroelectric, etc.). Conversion and transformation factors for fuels are based on standards used by the International Energy Agency (IEA).

In 2015, total energy use increased by 0.5% to 17.08 million gigajoule (GJ), compared to 17.00 million GJ in 2014.

### Low carbon-intensive and renewable sources

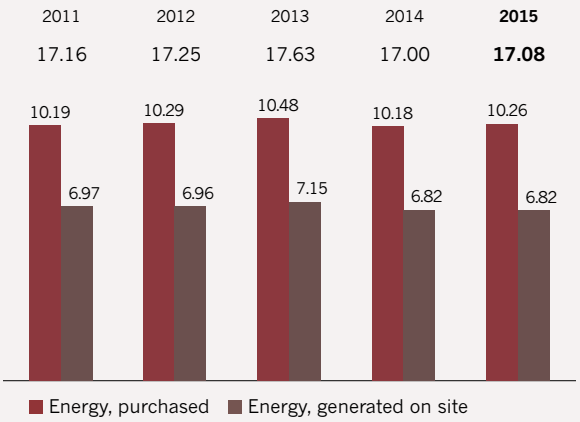
A high proportion of our energy use comes from less carbon-intensive and renewable energy sources. In 2015, 92.7% of our on-site energy came from the combustion of natural gas and 2.2% came from renewable fuel sources, which is a slight increase compared to 2.0% in 2014. On-site renewable sources are primarily wood chips, sugar cane residues (bagasse), and biogas from mycelium waste.

Additional photovoltaic (PV) arrays of 100 kW peak capacity were added in Fort Worth, Texas in 2015. Total solar PV capacity of Novartis in 2015 amounts to approximately 1 MW.

### Purchased energy

Novartis monitors the purchase and use of all types of energy sources and fuels. The use of purchased energy, including electricity, steam and hot water, is calculated from the net value of all energy acquired from external sources. Conversion and transformation factors for purchased energy are based on standards used by the IEA.

**ENERGY USE**
(in million GJ)




Our total purchased energy increased by 0.8% from 10.18 million GJ in 2014 to 10.26 million GJ in 2015. Sandoz (7.60 million GJ) was the largest energy user in the Novartis Group in 2015, followed by Pharmaceuticals (5.17 million GJ) and Alcon (3.18 million GJ).

Purchased electricity currently accounts for around 79% of the total amount of purchased energy.

Purchased steam accounts for 16% of the total amount of purchased energy, with other energy (such as hot water) making up the remainder.

Total energy costs for the Novartis Group were USD 334.3 million in 2015 (compared to USD 333 million in 2014), of which USD 234 million was spent on electricity.

G4 EN 4

## ENERGY CONSUMPTION OUTSIDE OF THE ORGANIZATION

We do not collect information on energy consumption for areas outside the organization (upstream and downstream). For the materials supply chain, we assess the carbon footprint and report this as Scope 3 GHG emissions. We believe that climate (GHG) impact is the most relevant aspect related to energy consumption and is therefore more important to report compared to energy figures.

G4 EN 5

## ENERGY INTENSITY

Energy intensity is considered a valid indicator to support site energy managers and primarily local management in evaluating progress being made against targets and considering further measures toward higher energy efficiency. We measure energy consumption in relation to sales, production quantity, number of associates, and indoor area conditioned for specified type of operation. These parameters may vary widely depending of the type and portfolio of products being manufactured in a certain operation, the type of application of a particular building, and the climate zone where the operating unit is located.

The overall energy intensity per number of associates for the Novartis Group decreased by 12.4% in the period 2010 to 2015, from 165 to 145 GJ per full-time employee. The energy intensity per indoor area for the Novartis Group decreased 5.6% in the same period, from 3 930 to 3 710 megajoule per square meter.

**New "green" packaging center in Slovenia**

In 2015, Sandoz opened a new packaging center at its Lendava site in Slovenia. The new plant is outstanding in terms of its energy efficiency and environmental performance.

The new Lendava packaging center was designed with process improvements for higher energy efficiency and it uses innovative building control technology. The air-conditioning systems in the entire new premises use locally-available water for cooling and the heat from waste air for heating. Additional heat is recovered from steam condensate, and all energy-using devices are equipped with frequency regulators that adjust energy consumption according to current needs. Stand-by systems with the option of low energy consumption are also integrated, and all energy and air-conditioning systems are controlled by a central control system providing additional energy savings.

G4 EN 6

UN Global Compact 7,8,9

## REDUCTION OF ENERGY CONSUMPTION

The availability of resources, predominantly energy and fresh water, is becoming more constrained and prices are expected to increase in the longer term. Novartis makes every effort to protect the environment, limit the intake of natural resources, and use them more efficiently.

### Energy management program

In an effort to further increase energy efficiency, ultimately reducing GHG emissions, Novartis has a comprehensive energy management program in place at all levels of the organization. Energy managers use a systematic process to ensure energy considerations are given appropriate attention in all investment projects. All of our major sites have been audited to assess energy systems and identify potential for improvement, for example through energy-saving measures and the use of renewable energy.

We apply energy management tools and dedicated training programs systematically, together with continuous monitoring of targets and performance. Novartis has a long term view on capital investments associated with energy conservation, allowing payback periods up to the lifetime of the asset for projects that save energy.

New projects are a major focus for energy savings, as it is more effective to build in efficiency from the beginning than to redesign an existing system.

Many of our energy efficiency projects demonstrate short payback periods: Novartis has invested within the last years on average about USD 25 million in energy projects with a payback of between two and three years. Energy savings achieved within the last six years sum up to 17.9% of the company's 2008 baseline energy consumption.

### Energy efficiency targets and outlook

Since 2003, the Novartis Group has successfully introduced energy efficiency targets in all divisions. A target of 15% improvement in energy efficiency was set for 2011–2015 based on 2010 levels. In 2015, energy efficiency per sales (in constant currencies) improved by 23% compared to 2010; this is 8% ahead of the target of 15% for 2011–2015.

For details on energy types and calculation methods, see G4–EN3: energy consumption within the organization.

In 2008, Novartis started to report energy savings achieved through energy projects, and use this data to set energy performance targets for sites and divisions. Each division is expected to implement energy projects to reduce its 2008 energy consumption in accordance with specific targets agreed upon with each division. In 2015, total annual energy savings achieved through energy projects amounted to USD 70 million of energy costs and 2.89 million GJ of energy. This accounts for 17.9% of the 2008 energy consumption, or 22.4% of 2008 energy costs across all sites and divisions, exceeding the targets in all divisions.

For more information about our approach to energy efficiency, see the energy and climate page of the Novartis website.

We believe these significant achievements result from our ongoing energy management programs. We continue our efforts to further improve our energy performance and support our GHG emissions reduction targets. We expect the trend in improved energy efficiency to continue in future years as a result of our energy efficiency programs spreading throughout the organization. Novartis will continue monitoring energy project savings as a major element within its new GHG reduction targets for 2020 and 2030.

**Tapping into geothermal energy at the Novartis campus**
Novartis is investing in thermal energy storage to minimize fuel costs and reduce the carbon footprint of new buildings at its global headquarters in Basel, Switzerland.

The concept of geothermal heating, or drawing naturally-occurring heat from below ground to heat the home, is already well established in Switzerland, where energy efficiency is a legal requirement and many new houses are built with heat pumps.

The Novartis project takes this a step further. It uses a single closed system to provide all the heating and cooling needed for the new buildings, with heat being retained in dense limestone some 220 meters (700 feet) underground.

The Novartis system relies on a heat pump and a network of more than 30 pipes that are inserted into holes drilled into the ground beneath the buildings and then encased in concrete.

***How heat exchange works***
During the summer, warm air from outside the building is drawn into a heat exchanger through which cool underground water also passes. This cools the air and heats the water, which is then pumped down the pipes where it gradually increases the temperature of the surrounding bedrock. With outdoor temperatures easily exceeding 30 degrees Celsius (86 degrees Fahrenheit) in summer, the system can keep inside temperatures below 26 degrees (78 degrees Fahrenheit).

Throughout the summer, the temperature of the rock rises by less than 15 degrees Celsius, but this additional heat is more than enough to keep the building warm during the winter. Thermal energy stored during the summer is transferred from the rock, producing warm water that can be used to maintain the building at 22 degrees (72 degrees Fahrenheit).

***Enjoying thermal energy storage***
The first building with thermal energy storage opened in 2014 and provides offices for close to 200 associates. The use of thermal storage, coupled with a highly efficient design, is expected to halve the amount of energy the building consumes each year – a reduction equivalent to the annual energy consumption of 22 average homes. It will also save an estimated USD 35 000 a year in running costs.

A second and third building – a laboratory used by 225 associates and a high-rise office block for 550 staff – opened in 2015, using the same geothermal heat storage technology.

G4 EN 7

THE GLOBAL COMPACT 7,8,9

## REDUCTIONS IN ENERGY REQUIREMENTS OF PRODUCTS AND SERVICES

Pharmaceuticals and medical products in general do not require energy during use, and therefore we do not consider this indicator relevant for our business. Medical devices that today may include electronic features for a more effective use and for the support of patients are being developed following design rules including environmental aspects of energy efficiency and durability.

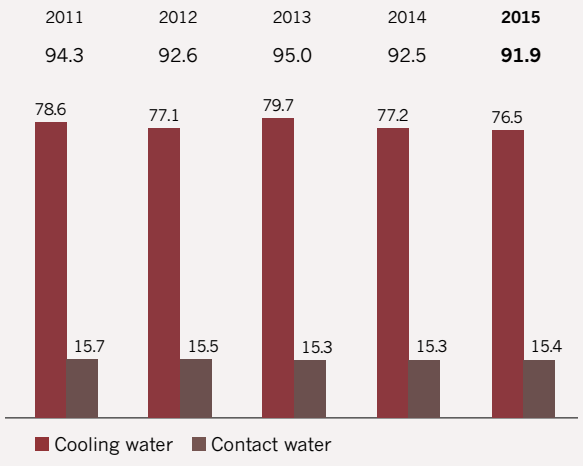
G4 EN 8

THE GLOBAL COMPACT 7,8

## TOTAL WATER WITHDRAWAL BY SOURCE

Conserving water at our facilities is a priority, especially in geographical areas where water is scarce, and particularly at our manufacturing facilities where our water use is highest. Novartis monitors water streams into its sites by source and out of its sites by discharge stream, as well as various types of water use at the sites on a quarterly basis. Water volumes are measured at all manufacturing sites and the majority of large administration sites. Water data is estimated at small administration sites based on associate numbers and average assumed consumption per person and per day. Such water balance methodology enables effective water resource and cost management, and helps achieve complete and accurate information on water use.

**WATER USE**
(in million $m^3$)



Our total water use decreased from 92.9 million cubic meter ($m^3$) in 2014, to 91.8 million $m^3$ in 2015. We purchased 25.9 million $m^3$ (28%) from water suppliers, and 65.9 million $m^3$ (72%) was abstracted from groundwater wells or from surface water bodies (directly from the environment). The water directly abstracted from the environment is used mainly for cooling purposes before being returned to the source.

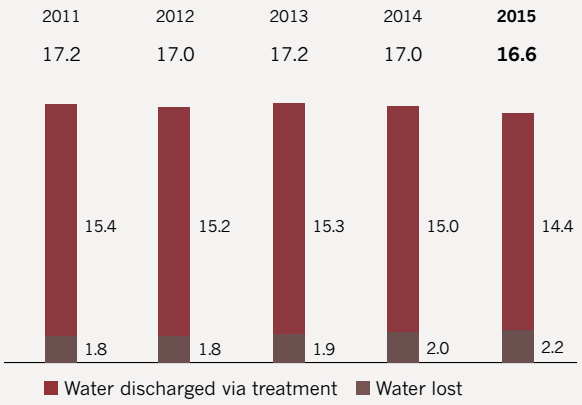
This water is primarily used for the cooling of fermentation and other biochemical processes, for the cooling of computer servers of data centers, and for comfort cooling of offices. Such free cooling with water enable us to largely reduce the environmental impact related to energy consumption compared to using mechanical chillers.

The use of contact water (water that comes into contact with process ingredients) increased slightly in 2015 to 15.4 million $m^3$, compared to 15.3 million $m^3$ in 2014. Our operational water footprint decreased to 16.6 million $m^3$ in 2015, compared to 17.0 million $m^3$ in 2014. Our operational water footprint includes our grey water footprint (water output that goes through wastewater treatment, 14.4 million $m^3$) and our blue water footprint (water that is lost mainly through evaporation from cooling towers, 2.2 million $m^3$).

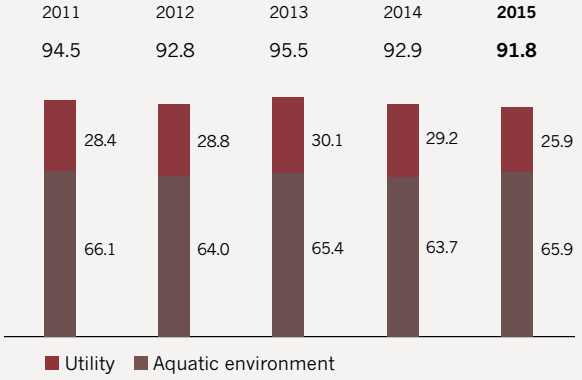
We have reported water use via the Carbon Disclosure Project (CDP) water program since 2010. Novartis achieved score level B for the CDP water scoring in 2015, which is above the sector average for healthcare and above the average for the Global 500.

See our 2015 CDP Water Information Request submission here.

**WATER FOOTPRINT**
(in million $m^3$)




**WATER INPUT BY SOURCE**
(in million $m^3$)




G4 EN 9

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## WATER SOURCES SIGNIFICANTLY AFFECTED BY WITHDRAWAL OF WATER

There are no water sources significantly affected by withdrawal of water from our operations; 28% of total water used is supplied by local public water utilities. The remaining 72% of total water used is drawn from groundwater wells or surface water bodies and used for cooling before being returned to the source with a minor increase in temperature.

### Water scarcity

Novartis assesses the location of sites according to areas of potential water scarcity by 2025 using the World Business Council for Sustainable Development's Global Water Tool. We have intensified water-saving initiatives at sites located in these water-scarce areas, as well as other locations.

Strategies on water abstraction and the use of water for cooling vary widely from site to site, depending on the availability of water. We have made concerted efforts to reduce our water footprint, including water lost and water that requires treatment at locations where fresh water is scarce. Sites located in areas where water is scarce are identified, and their specific risks are considered as part of our risk assessment procedures based on risk portfolio. Sites with a high level of water scarcity and high water footprint are included in a corporate water saving program.

### Water footprint reduction achievement and outlook

In 2013, a water saving program was initiated at the top 10 sites with respect to water footprint and water scarcity. Eight additional sites were included in the program during 2014. These sites, located in South and Southeast Asia, the United States and Europe, conducted water audits, determined water flows, identified water saving opportunities, set local water saving targets, and implemented relevant water saving projects in 2014 and 2015. The top 10 Novartis sites in water-scarce regions achieved than 20% savings of their total water footprint since 2010.

G4 EN 10

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## PERCENTAGE AND TOTAL VOLUME OF WATER RECYCLED AND REUSED

The availability of resources, predominantly energy and fresh water, is becoming more constrained and prices are expected to continue to increase. Novartis makes every effort to protect the environment, limit the intake of natural resources, and use them more efficiently.

In 2015, Novartis recycled 22.5 million $m^3$ of water, which is 24.5% of our total water use, including contact water and non-contact cooling water (up from 23% in 2014).

For more detail on overall volumes and calculation methods, see G4–EN8: total water withdrawal by source.

G4 EN 15

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## DIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 1)

Novartis has reported its GHG emissions in accordance with the World Resources Institute's and WBCSD's Greenhouse Gas Protocol for all sites under its operational control since 2005, and has reported emissions via the Carbon Disclosure Project (CDP) since 2003. The reporting structure includes Scope 1 $CO_2$ emissions from stationary combustion installations and from production processes, as well as Scope 1 $CO_2$ emissions from company-owned or leased vehicles. GHG emissions are reported on a quarterly basis and calculated in metric tons of $CO_2$ equivalent using emission factors provided by energy suppliers or factors from the IEA. Novartis uses the global warming potential factors from the 2007 IPCC Report for GHGs other than $CO_2$.

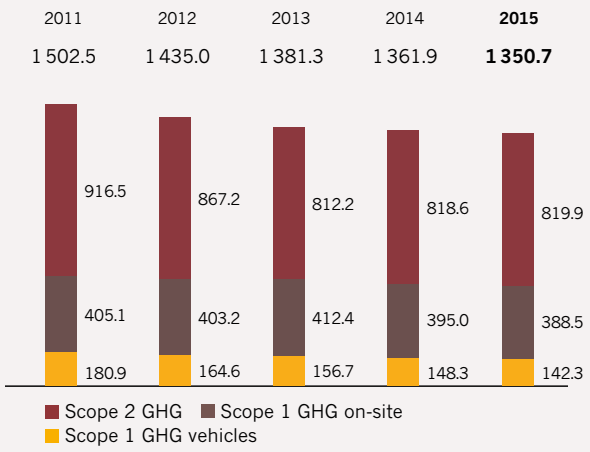
For more detail on our overall GHG emissions target, performance and reduction measures, including carbon offsets, see G4–EN19: reduction of GHG emissions.

The total amount of on-site Scope 1 GHGs, mainly $CO_2$, emitted from the combustion of fossil fuels at Novartis sites in 2015, was 388.5 kt, a 1.7% decrease compared to 2014 (395 kt). Emissions of hydrofluorocarbons from refrigeration systems totaled 8.0 kt. GHG emissions from production processes amounted to approximately 3.2 kt.

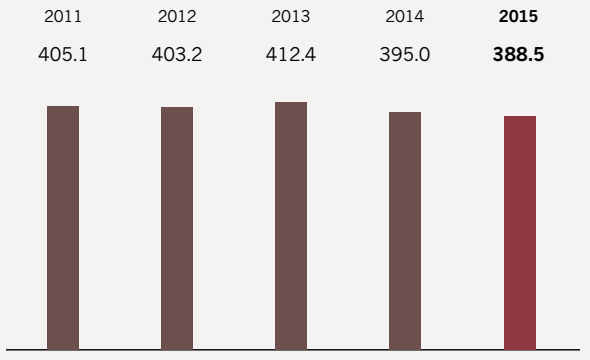
Scope 1 GHG emissions from the use of company-owned or leased vehicles are monitored and reported separately. In 2015, these totaled 142.3 kt, compared to 148.3 kt in 2014, a 4.0% decrease. When including Alcon data in the 2010 baseline for our current 2015 target on GHG emissions, Scope 1 GHG emissions from vehicles decreased 30.7%. This decrease is mainly due to the use of more efficient fleet vehicles and also as a result of conservative and safe driving habits. With this decrease, we achieved our target for Scope 1 GHG from vehicles, consisting in a 30% reduction on 2010 emissions by 2015.

GHG emissions of non-Kyoto gases such as hydrochlorofluorocarbons (HCFCs), which are not included in Scope 1 GHG emissions, totaled approximately 4.9 kt. The primary sources of these emissions are losses from refrigeration equipment. Novartis does not collect data on biogenic $CO_2$ emissions, as the potential quantities are not considered relevant.

**GHG EMISSIONS**
(in kt)




**GHG EMISSIONS, SCOPE 1, COMBUSTION AND PROCESS**
(in kt $CO_2e$)



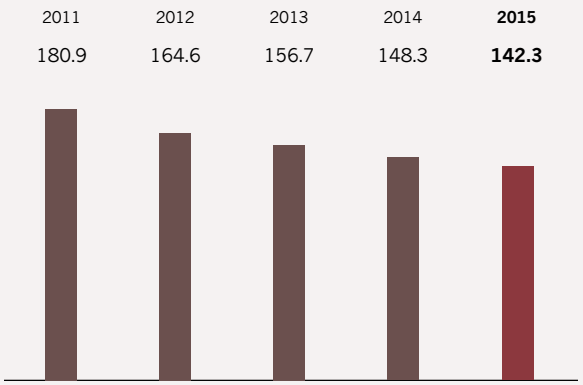
**External schemes**

Novartis operates six sites in the European Union that are included in the European Emissions Trading Scheme. More sites in other regions or countries may become part of similar trading schemes in future years. With respect to regulatory schemes and commitments, such as the recent COP21 agreement, we have taken a proactive approach toward the implementation of such schemes on GHG emissions at Novartis.

We have reported comprehensive energy and GHG data via the Carbon Disclosure Project (CDP) climate program since 2003. Novartis achieved a disclosure score of 98 points and a performance score level B for the CDP climate scoring in 2015.

See our 2015 CDP Climate Change Information Request submission here.

**GHG EMISSIONS, SCOPE 1, FROM VEHICLES**
(in kt $CO_2e$)




G4 EN 16

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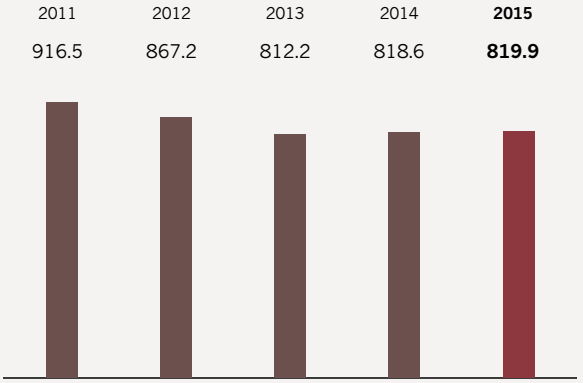
## ENERGY INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2)

Novartis has reported its GHG emissions in accordance with the World Resources Institute's and WBCSD's Greenhouse Gas Protocol for all sites under its operational control since 2005. The reporting structure includes Scope 2 GHG emissions from purchased energy sources such as electricity, steam and other purchased energy sources. Scope 2 GHG emissions are calculated using emission factors provided by energy suppliers or factors from the IEA and are reported on a quarterly basis in metric tons of $CO_2$ equivalent.

Scope 2 GHG emissions in 2015 – mainly from electricity generation – totaled 819.9 kt, which represents a slight increase of about 0.2% from 818.6 kt in 2014, and a reduction of 10.5% since 2011.

For more detail on our GHG emissions target and reduction measures, see G4–EN19: reduction of GHG emissions.

**GHG EMISSIONS, SCOPE 2**
(in kt $CO_2e$)




G4 EN 17

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## OTHER INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 3)

Scope 3 GHG emissions from our global business flights in 2015 totaled 231 kt, compared to 186.2 kt the year before. This number is based on detailed information from our worldwide travel agent who calculates the data in metric tons of $CO_2$ equivalents using the UK Department for Environment Food and Rural Affairs emission factors. GHG emissions from the five company-owned or leased aircraft, totaling 6 kt, have been included in the Scope 1 company vehicle fleet reporting.

Scope 3 GHG emissions from waste disposal are calculated every year on the basis of waste disposal quantities and GHG emission factors from the Ecoinvent database. In 2015, Scope 3 GHG emissions from the disposal of waste were calculated to be 53 kt of $CO_2$ equivalent, compared to 58 kt of $CO_2$ equivalent in 2014.

The use of Novartis products does not generally result in GHG emissions, with the exception of an inhaler product that uses HFC R134a as a propellant. The Scope 3 emissions from the use of this product in 2015 amounted to 124 kt of $CO_2$ equivalent, which is higher than the 99 kt of $CO_2$ equivalent reported in 2014.

Biogenic $CO_2$ emissions are not considered relevant and are not included in the Scope 3 figures calculated above.

G4 EN 18

## GREENHOUSE GAS (GHG) EMISSIONS INTENSITY

Total Scope 1 and 2 GHG emissions per sales were 27.3 t $CO_2$ equivalent per million USD in 2015 compared to 26.1 t $CO_2$ equivalent per million USD in 2014. Total Scope 1 and 2 GHG emissions per associate were 11.4 t $CO_2$ equivalent per person in 2015, remaining stable versus 2014.

G4 EN 19

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## REDUCTION OF GREENHOUSE GAS (GHG) EMISSIONS

As in previous years, the Novartis Group achieved an absolute reduction in total Scope 1 and Scope 2 GHG emissions in 2015, decreasing by 0.8% from 1 361.9 kt of $CO_2$ equivalent in 2014 to 1 350.7 kt of $CO_2$ equivalent in 2015, not considering sequestration from our carbon-sink forestry projects. Total Scope 1 GHG emissions decreased by 2.3% between 2014 and 2015, while Scope 2 GHG emissions slightly increased by 0.2% within the same period.

For more detail on specific GHGs and calculation methods, see G4–EN15: direct GHG emissions (Scope 1).

In 2010, we set targets on total GHG emissions for 2015 and 2020: a 17% and 20% reduction, respectively, compared to 2008, including sequestration from our carbon-sink forestry projects. These were in line with targets set by leading countries for the same target years. Compared to a 2008 baseline, corrected for continuing operations, total GHG emissions for the Novartis Group decreased by 20.5% already in 2015. This was achieved through our comprehensive energy-saving program, as well as increased use and purchase of renewable energy.

We set a separate 30% reduction target on vehicle GHG emissions for 2015 compared to 2010 emissions. A reduction of 30.7% compared to the 2010 baseline was achieved as a result of more fuel-efficient vehicles, the introduction of hybrid gasoline-electric cars, increased use of diesel engines fitted with particulate filters, and other emission-reduction measures such as the use of liquid natural gas or biofuels.

We continue to strengthen our efforts and investments in more energy-efficient vehicle technology and the use of renewable sources to further reduce total GHG emissions in the coming years.

In June 2015, the Executive Committee of Novartis endorsed **a new strategy on environmental sustainability** focusing on four priority areas:

- energy and climate
- water and micro pollutants
- material and waste
- supply chain

In terms of GHG emissions, we committed to two major milestones on our long term pathway to carbon neutrality. We established targets on Scope 1 and Scope 2 GHG emissions for 2020 and 2030, representing an absolute reduction of 30% by 2020 and of 50% by 2030, compared to a 2010 baseline.

Starting in 2016, we will select major GHG reduction projects and measures based on the cost savings they generate, as determined by our internal carbon price of USD 100/t$CO_2$e. A cross-divisional team consisting of energy experts from divisions of Novartis Business Services – Real Estate and Facility Services will prioritize major projects and actions necessary to achieve our 2020 GHG reduction target. Projects will be submitted to top management for approval.

### Internal carbon price

Together with **the new Environmental Sustainability vision 2030 and targets 2020**, Novartis leadership has endorsed a carbon price of USD 100 per ton (t) of carbon dioxide equivalents, in line with the cost of climate change to society as calculated by the World Bank. Building a carbon price into investment decisions is important as it helps identify projects that will most cost-effectively reduce GHG emissions.

Leading business organizations have demonstrated that applying a price on carbon is the most effective way to reduce GHG emissions and foster mitigation measures. Some countries have implemented market mechanisms to reduce GHG emissions or have introduced taxes on carbon emissions. Yet, to a large extent, these prices do not fully reflect the actual costs of GHG emissions and the related consequences of climate change to society.

Companies that voluntarily apply an internal carbon price can influence their decision-making toward lowering their emissions and thus demonstrate they are proactively addressing risks posed by climate change. Further, companies that have set an internal carbon price can better anticipate market mechanisms and new taxes to curb emissions.

**Forestry carbon sinks**

While our main focus is to lower GHG emissions through internal operational improvement programs, the Novartis Group is also taking advantage of carbon sinks that are generated by owned forestry projects. These forestry projects are implemented in accordance with certification schemes such as the United Nations Clean Development Mechanism (UN-CDM) and voluntary-offset schemes. These schemes are designed to quantify the amount of carbon dioxide removed from the atmosphere through sequestration into the forest's biomass. They can be taken into account to offsetting part of the GHG emissions generated from the use of fossil energy in our operations.

Novartis has established four forest carbon-sink projects. They are located in Argentina, Mali, China and Colombia.

Around 3 million trees were planted in Argentina on Novartis-owned land between 2007 and 2010. This forestry project was certified by the Forest Stewardship Council and registered by the United Nations Framework Convention on Climate Change (UN-FCCC) as a CDM project in February 2011. The carbon credits, issued by UN-FCCC on December 9, 2013 for the period from May 2007 to October 2012, were accounted by Novartis as offsets for part of its own GHG emissions and formally retired from the UN-FCCC credit accounts. Total carbon sinks achieved by end of 2015 through this afforestation amount to 304 kt $CO_2$ equivalent.

Novartis sponsors a smallholders' jatropha plantation and biofuel project in Mali, which is the first agro-forestry project registered under the voluntary Verified Carbon Standard in Africa.

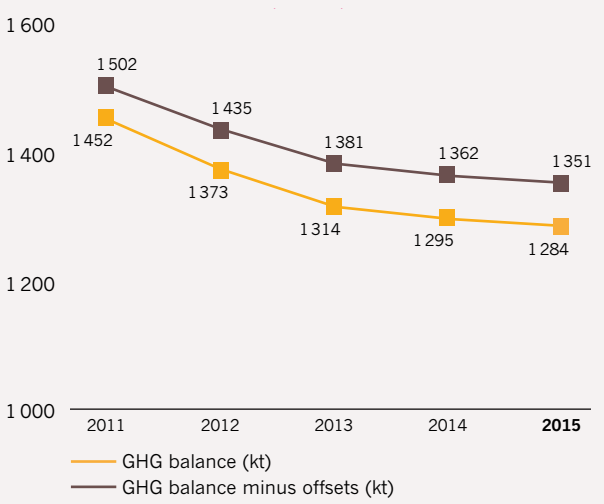
The harvest from these plantations is pressed into jatropha oil used for soap manufacturing, engine fuel and electricity generation. Since 2007, jatropha bushes have been planted by more than 5 000 local farmers. Carbon sinks achieved through the Mali jatropha agro-forestry project amount to 6 kt of $CO_2$ equivalent.

In China, we are supporting the afforestation of 4 100 hectares of land in the southwest of Sichuan with 9 million trees. The project began in 2011, and by the end of 2015, more than 3 500 hectares were planted with the help of local communities. The project will also generate benefits for the local communities and for environmental protection and biodiversity.

In 2013 and 2014, we purchased 3 596 hectares of farmland in Colombia for afforestation, and we planted the first 763 hectares with commercial and native tree species in 2014 and 2015. The plantation area will further increase in 2016 and the project is nearly ready for registration as a UN-FCCC CDM project.

**GHG EMISSION BALANCE**

(in kt)




Carbon sinks achieved in 2015 from our forestry projects in Argentina and Mali amount to 67 kt $CO_2$ equivalent, or 4.1% of our 2008 baseline GHG emissions. As of 2015, we have reduced total GHG emissions, taking into account sequestration from our forestry carbon-sink projects, by 20.5% compared to the end 2008.

We believe these carefully designed forestry projects also foster local development and long term economic growth for local populations in developing economies. They are net-positive for the natural environment and can foster biodiversity, while supporting Novartis in meeting its Group GHG reduction target.

G4 EN 20

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## EMISSIONS OF OZONE-DEPLETING SUBSTANCES

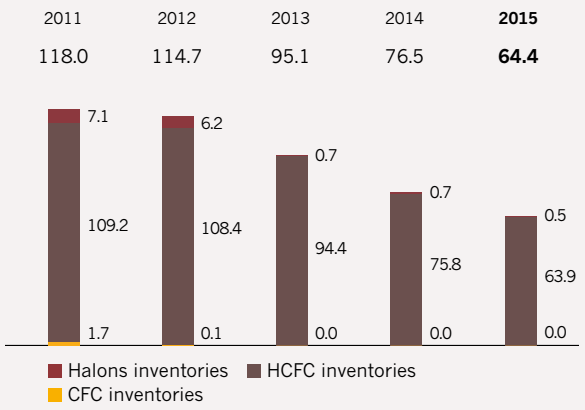
In 2015, Novartis sites globally reported a total inventory of 64.4 t of ozone-depleting substances (ODS), which amounts to 7.2 t of CFC-R11 equivalent – compared to 76.5 t in 2014 (9.6 t of CFC-R11 equivalent). The 2015 figure includes 63.9 t of HCFC refrigerants and 520 kg of halons. CFC refrigerants have now been completely phased out of all Novartis facilities. Additionally, HCFC inventories are continually replaced with chlorine-free HFCs or with natural refrigerants. In 2015, HFCs, which have an ODS factor of zero, amounted to 126 t for Novartis. Novartis does not produce ODS through its processes or products.

Emissions caused by ODS losses in 2015, reported in metric tons of CFC-R11 equivalents, were 140 kg, compared to 190 kg in 2014. ODS are not included in any Novartis product. Novartis intends to minimize the use of synthetic refrigerant materials, and natural refrigerant materials are the preferred alternative in new equipment. HCFCs and halons in existing equipment are being replaced when refilling becomes necessary.

Data is calculated into CFC-R11 equivalents using the factors from the 2007 IPCC Report.

### ODS INVENTORIES

(in t)

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## $NO_x$, $SO_x$ AND OTHER SIGNIFICANT AIR EMISSIONS

As a further disclosure of relevant emissions into the air, Novartis reports halogenated and non-halogenated volatile organic compounds (VOCs), sulfur dioxide ($SO_2$) and nitrogen oxide (NOx) inorganic pollutants and particulates. VOCs mainly originate from the use of halogenated and non-halogenated solvents in various production processes, and are either measured or calculated using mass-balance equations. Inorganic pollutants and particulates arise primarily from the combustion of fuels for steam generation and heating, and are either measured or calculated using standard emission factors from the IEA. Other possible air emissions are not considered relevant.

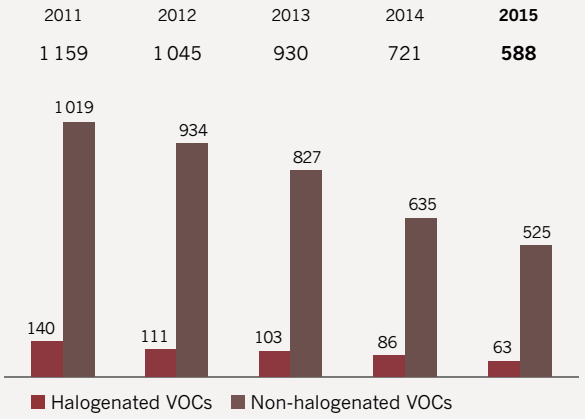
### VOCs

In 2015, our emissions of halogenated VOCs decreased to 63 t, from 86 t in 2014. Similarly, non-halogenated VOC emissions were reduced from 635 t in 2014 to 525 t in 2015. Emissions of halogenated VOCs originated predominantly from Sandoz (99.6%). VOCs are the precursors of photochemical (tropospheric) ozone creation that leads to smog and related detrimental effects on health and the environment. Halogenated VOCs are greenhouse gases and contribute to GHG emissions.

The Novartis Group emphasizes reductions in VOC emissions in operations worldwide, and has set a target to reduce non-halogenated VOC emissions by 40% and halogenated VOC emissions by 48% below 2008 values by 2016. Emissions are strongly influenced by products that require solvent-based production processes and by the significant lead time to change production processes.

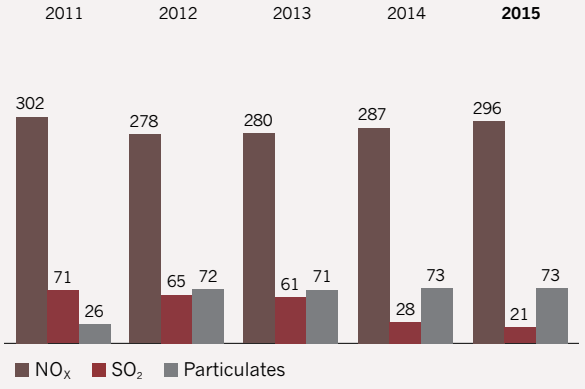
### VOC EMISSIONS

(in t)




### INORGANIC AIR POLLUTANTS

(in t)



Emissions of VOCs overall decreased significantly again in 2015, and both 2016 targets have already been exceeded, primarily due to the installation of effective abatement measures at various Sandoz sites.

**Inorganic air pollutants and particulates**

In 2015, inorganic air pollutant emissions for the Novartis Group totaled 21 t for $SO_2$ and 296 t for NOx, compared to 28 t and 287 t, respectively, in 2014. Particulate emissions amounted to 73.3 t in 2015, compared to 73.4 t in 2014.

Strong reductions in $SO_2$ occurred from 2014 to 2015 as a result of several sites in India replacing fuel oil with natural gas.

NOx emission levels from company-owned or leased vehicles are not included in these figures. The distribution of NOx and particulates emissions is similar to that for the consumption of fuels for on-site-generated energy.

Inorganic air pollutants have long been a focus of environmental improvement at Novartis. Given the measures we have implemented to increase energy efficiency, and replace fuel oil and use best-in-class controlled furnace technology, we expect inorganic air pollutants, including $SO_2$, to further decrease in the coming years.

G4 EN 22

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## TOTAL WATER DISCHARGE BY QUALITY AND DESTINATION

Novartis monitors water streams into its sites by source and out of its sites by discharge stream, as well as various types of water use on a quarterly basis. Water discharge is reported in volumes released to the environment, sent for treatment, entering products, evaporated or used for other purposes. Discharge volumes to treatment closely match input and contact water usage volumes, and amounted to 14.5 million $m^3$ in 2015.

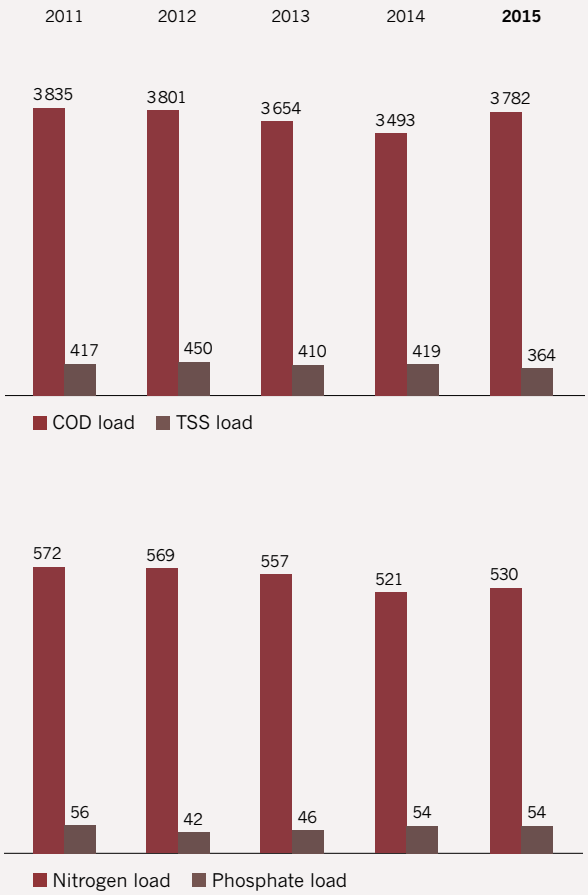
More than 98% of all non-contact water used for cooling is released back into the environment, which accounts for 82% of all water outputs. The rest of the cooling water, together with the contact water used in processes, is sent to water treatment plants, accounting for 16% of our water outputs (as treatment generally occurs in off-site wastewater treatment plants, treatment methods will vary). The remaining water evaporates or is used in products or for other purposes, such as irrigation.

With regards to the quality of water discharged, Novartis reports total effluent load using the standard chemical oxygen demand (COD) and total suspended solids (TSS) parameters. The amounts reported are the loads that finally reach groundwater or surface water bodies. In cases where discharged wastewater is treated off-site, for example in public wastewater treatment plants, the specific removal efficiency of such treatment is considered in the amounts reported.

The COD load on the aquatic environment from Novartis Group operations increased in 2015 after several years of decrease, from 3 493 t in 2014 to 3 782 t. TSS decreased from 419 t in 2014 to 364 t in 2015. Total nitrogen load slightly increased from 521 t in 2014 to 530 t in 2015, and phosphate load remained stable around 54 t in 2014 and 2015.

Novartis has not set a Group target on emissions into water for these parameters. Effluent water is always treated in state-of-the-art facilities, and therefore remaining effluent loads do not have a major impact on the environmental quality of water bodies near our sites. However, we closely monitor specific parameters such as the release of drug substances into water, and take the appropriate mitigation and risk minimization measures when necessary.

**EMISSIONS INTO WATER**
(in t)



One major water-related concern is preventing pharmaceuticals from entering the aquatic environment. The majority of pharmaceuticals in the environment are a result of excretions from treated patients and improper disposal of unused or expired medicine. However, relatively small quantities can come from drug manufacturing effluents and R&D facilities.

We regularly monitor the levels of active pharmaceutical ingredients in Novartis effluents and in the aquatic environment as a result of Novartis activities. These levels are below those approved as safe by medical regulatory agencies and therefore do not present a health risk. The total quantity of drug substance released has been reduced to below 0.2%.

In June 2015, the Executive Committee of Novartis endorsed **a new strategy on environmental sustainability** focusing on four priority areas:

— Energy and climate
— Water and micro pollutants
— Material and waste
— Supply chain

With respect to water and micro pollutants, our vision is to generate no adverse effects on water quality and water depletion from our sites and products. Our target for 2020 is to keep our drug substance effluents from our manufaturing sites tenfold below the predicted “no effect” concentration.

**Active carbon treatment of water effluents**

Several sites have implemented dedicated treatment methodologies to keep the load of active pharmaceutical ingredients (APIs) in waste water to a minimum. For instance, the Pharmaceuticals Division’s manufacturing facility in Stein, Switzerland has installed a pre-treatment facility to reduce the load of APIs in water effluents since 2009. This pre-treatment includes a neutralization tank, an aerobic bioreactor, and membrane filtration followed by an active carbon filtration.

Besides the general parameters (e.g., chemical oxygen demand and total suspended solids), Stein regularly measures the concentration of selected APIs to determine the remaining load of the APIs in the environment. Results show that pre-treatment reduces API load in effluents by more than 90%.

G4 EN 23

THE GLOBAL COMPACT 7,8

## TOTAL WEIGHT OF WASTE BY TYPE AND DISPOSAL METHOD

Novartis follows a clear waste management strategy. The aim is to prevent, reduce, recycle or use waste as an energy source, before safe disposal. Waste prevention and reduction are always preferred over treatment, incineration or disposal. This ensures the overall environmental impact related to waste remains minimal, while energy use from waste is maximized. Opportunities for recycling and energy recovery from both hazardous and non-hazardous wastes are always considered. Waste is managed at local sites in accordance with local legislation and Group polices. All Novartis sites report waste data on a quarterly basis. Novartis classifies waste by type and according to the disposal routes: recycling, treatment, incineration with and without energy recovery, and landfill.

We have a strict policy of not sending any hazardous waste to landfills regardless of local regulations that may still permit this. Waste contractors are audited on a regular basis to ensure adherence to our standards.

Operational waste – both hazardous and non-hazardous – is an important area of environmental management for our manufacturing facilities, as well as for research and administrative sites. Group objectives include the proper management of hazardous waste and risks related to disposal, in particular disposal into landfills.

In 2015, the total amount of hazardous waste for the Novartis Group decreased to 176 kt, from 195 kt in 2014; non-hazardous waste totaled 83 kt in 2015, compared to 86 kt in 2014.

**TOTAL OPERATIONAL WASTE**
(in kt)

**Hazardous waste**

The total amount of hazardous waste not recycled in 2015 for the Novartis Group was 56.3 kt, compared to 60.2 kt in 2014. An additional 120 kt of hazardous waste, mainly solvents, was subject to recycling. The recycling rate for hazardous waste remained at 68%. Novartis has completely eliminated disposal of hazardous waste with organic content to landfills.

Novartis puts a high priority on reducing the amount of hazardous waste generated and on increasing recycling rates. We set a target to reduce the intensity of hazardous waste not recycled per ton of production by 10% by 2015 compared to 2010. This target was overachieved in 2015, with a 21.6% improvement on hazardous waste not recycled per ton of production compared to the baseline.

**Non-hazardous waste**

Non-hazardous waste reported includes mixed or household waste, packaging waste, compostable waste and inert waste. Total amounts of non-hazardous waste not recycled for the Novartis Group in 2015 were 20.5 kt compared, to 21.2 kt in 2014. An additional 62.2 kt of non-hazardous waste was collected for recycling. The recycling rate for non-hazardous waste was up from 65% in 2014 to 75% in 2015.

Keeping non-hazardous waste to a minimum and maximizing its recycling rate is a constant challenge. Novartis makes ongoing efforts in all areas to minimize non-hazardous waste that cannot be recycled at its operations globally. We are installing waste-segregation programs at many sites that enable better use of recycling routes for materials such as paper, cardboard, glass and plastics – for example from packaging, offices and production processes.

We set a target to reduce the per-associate intensity of non-hazardous waste not recycled by 15% by 2015, based on 2010 values. In 2015, the non-hazardous waste intensity was reduced by 22.7% compared to 2010, which is substantially better than envisioned by our target path.

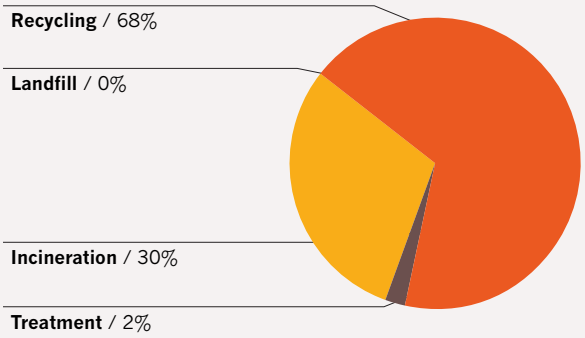
**Waste target outlook**

In June 2015, the Executive Committee of Novartis endorsed **a new strategy on environmental sustainability** focusing on four priority areas:

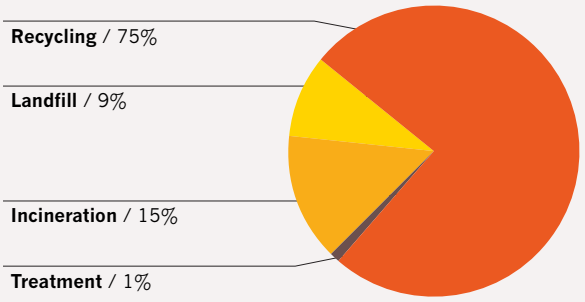
- Energy and climate
- Water and micro pollutants
- Material and waste
- Supply chain

With respect to materials and waste, our vision is to establish closed material loops for our major materials and to avoid adverse effects from waste disposal. Our target for 2020 is to reduce total non-recycled operational waste relative to production quantities by 30% compared to 2010.

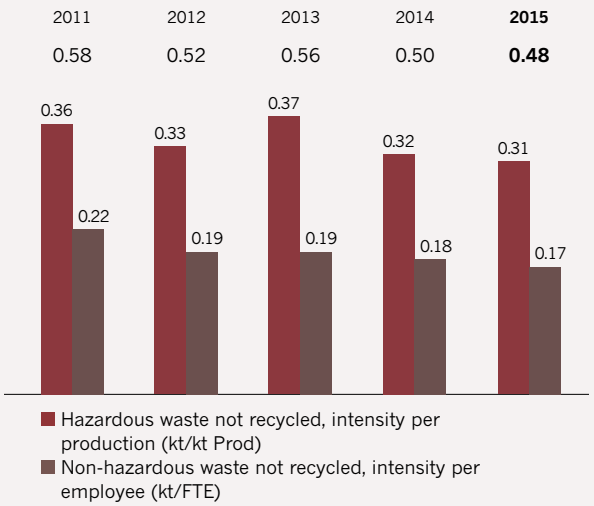
**DISPOSAL OF HAZARDOUS WASTE IN 2015**




**DISPOSAL OF NON-HAZARDOUS WASTE IN 2015**




**WASTE NOT RECYCLED, INTENSITIES**



**Sustainable packaging**

Novartis maintains a Group-wide initiative on sustainable packaging, and seeks to design packaging that both minimizes environmental impacts and meets all regulatory, quality, functional and design requirements.

We have developed and issued a sustainable packaging guide for packaging design teams. We also engage with clients and packaging material suppliers to determine needs and identify more sustainable packaging solutions.

Best-practice packaging case examples are collected and shared among packaging designers across the company. Improvements are quantified based on a set of packaging indicators.

**Recommendation of Novartis for the disposal of unused medicines**

Society's awareness and concern regarding environmental issues continues to grow, as does the technical ability to detect substances of synthetic or natural origin in our surroundings. Novartis shares society's desire to protect the environment and is taking necessary steps to minimize the environmental impact of its activities and products over their life cycle. One step concerns the appropriate and environmentally-benign disposal of unused medicines.

Novartis recommends that patients and consumers of pharmaceutical and medicinal products dispose of any unused or expired medicinal product or waste material in accordance with local requirements and disposal instructions on the patient information materials provided with the product.

G4 EN 24

8,9

## TOTAL NUMBER AND VOLUME OF SIGNIFICANT SPILLS

No significant spills were reported in 2015. This was also the case in 2014.

G4 EN 26

G4 EN 27

7,8,9

## EXTENT OF IMPACT MITIGATION OF ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES

Novartis is committed to minimizing the environmental impact of its products over their entire life cycle. As scientific knowledge and stakeholder expectations evolve in this field, we regularly benchmark our activities and actively support researchers, regulators and other groups in developing more efficient environmental practices.

Novartis maintains a Group-wide Sustainable Packaging Initiative designed to minimize environmental impacts and meet all regulatory, quality, functional and design requirements. We also engage with customers and packaging material suppliers to determine needs and identify more sustainable packaging solutions.

Savings from 20 dedicated projects amounted to USD 2.7 million material costs saved; 572 tons of materials reduced (cardboard, plastic, metals); and more than 130t $CO_2$e of GHG emissions avoided. Additional reductions were achieved in storage space, lead time, waste and complexity.

For more about our efforts to reduce the environmental impact of our products and services in relation to sustainable packaging, see G4–EN23: total weight of waste by type and disposal method.

For more information about our efforts to reduce our footprint, see the reducing our product footprint page of the Novartis website.

For more information about our strategy to minimize the impact of pharmaceuticals in the environment, including the release of drug substances into water, read about our position on the Novartis website.

**Reducing our material footprint and avoiding waste through "green chemistry"**

In the pharmaceutical industry, integrating environmental aspects upfront in the design and manufacture of products and processes is called "green chemistry." Green chemistry practices conducted by our process development experts in the Chemical and Analytical Development (CHAD) group are most useful in helping to reduce our material footprint and avoid waste in the first place. All new processes are now systematically assessed on the type and quantity of solvents and substances used, and whether organic solvents can be avoided in certain steps altogether.

The CHAD group has also developed and launched the Green Chemistry Process Scorecard, a process eco-label that serves to quantify the environmental impacts related to each process step in the synthesis of active pharmaceutical ingredients. This innovative process eco-label allows to compare process options and quantify improvements achieved through changes in the synthesis paths. The label is based on a range of environmental criteria, including use of water and materials, substances of concern, generation of waste, and carbon footprint.

G4 EN 29

THE GLOBAL COMPACT 7,8,

## MONETARY VALUE OF SIGNIFICANT FINES AND TOTAL NUMBER OF NON-MONETARY SANCTIONS FOR NONCOMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Novartis Group companies around the world paid a total of USD 139 671 in fines for minor health, safety and environment (HSE) violations in 2015. Two additional non-monetary penalties were reported in 2015.

**Management systems**

We operate using robust environmental management systems to drive good practice and compliance across our sites. A total of 44 Novartis Group company facilities have ISO 14001 or Eco-Management and Audit Scheme (EMAS) certification for their environmental management systems: Sandoz (16), Alcon (15) and Pharmaceuticals (13).

In addition, 28 sites have OHSAS 18001 (British standard for occupational health and safety management systems) certification: Sandoz (14), Pharmaceuticals (11) and Alcon (3).

ISO/EMAS certifications cover 98% of Alcon, 88% of Pharmaceuticals and 73% of Sandoz production. OHSAS certifications cover 66% of Pharmaceuticals, 63% of Sandoz and 2% of Alcon production (in terms of production amounts from certified sites).

**Risk management**

We take a precautionary approach to minimizing environmental impacts across all our operations.

This includes managing risks proactively through appropriate preventative and contingency measures. For more detail, see G4–14: precautionary approach.

We undertake site analyses and audits to assess site-specific risks, and we deliver HSE training to staff in order to embed good HSE practice. Divisional and Corporate risk portfolios are prepared on an annual basis, and corresponding risk-minimization actions are devised and implemented. In 2015, three themed audits, four Corporate and 14 divisional HSE audits of Novartis facilities were undertaken.

G4 EN 30

THE GLOBAL COMPACT 8,9

## SIGNIFICANT ENVIRONMENTAL IMPACTS OF TRANSPORTING PRODUCTS AND OTHER GOODS AND MATERIALS FOR THE ORGANIZATION'S OPERATIONS, AND TRANSPORTING MEMBERS OF THE WORKFORCE

The largest direct transportation impact identified at Novartis is the GHG emissions associated with the use of passenger cars for sales representatives. $CO_2$ emissions of owned and leased vehicles are measured and reported on a yearly basis in $CO_2$ equivalents based on the GHG Protocol methodology and factors from the 2007 IPCC Report.

In 2015, Scope 1 GHG emissions from the use of company-owned or leased vehicles totaled 142.3 kt, a 4.0% decrease compared to 148.3 kt in 2014. When including Alcon data in the 2010 baseline for our current 2015 emissions target, Scope 1 GHG emissions from vehicles have decreased by 30.7%. This decrease is due to the introduction of hybrid gasoline-electric cars, increased use of diesel engines fitted with particulate filters, and other emission-reduction measures such as the use of liquid natural gas or biofuels.

Scope 3 GHG emissions from our global business flights in 2015 totaled an estimated 231 kt, compared to 186.2 kt the year before. This number is based on detailed information from our worldwide travel agent who calculates the data in metric tons of $CO_2$ equivalent using the UK Department for Environment Food and Rural Affairs emission factors. GHG emissions from the five company-owned or leased aircrafts, totaling 6 kt, were included in the Scope 1 company vehicle fleet reporting.

G4 EN 31

THE GLOBAL COMPACT 7,8,9

## TOTAL ENVIRONMENTAL PROTECTION EXPENDITURES AND INVESTMENTS BY TYPE

We believe environmental stewardship makes good business sense. We adopt a preventive approach, striving to make efficient use of natural resources and to minimize the environmental impact of our activities and products.
Our structured approach to minimizing our environmental impact has helped us make considerable progress: while Group sales have more than doubled in 15 years, emissions have been reduced, and consumption of energy and water has increased at a much slower pace.

Novartis does not collect separate expenditures for all areas of environmental protection, as many measures are integrated and therefore expenditures cannot feasibly and reliably be extracted as separate figures.

**ENVIRONMENTAL PROTECTION EXPENDITURES**

| Type of expenditure | Amount (USD millions) |
|---|---|
| Total cost of waste disposal | 51.0 |
| Total cost for energy | 334.3 |
| Investment in energy-saving projects | 21.4 |
| Total costs for water supply and treatment | 46.8 |

G4 EN 34

THE GLOBAL COMPACT 8

## NUMBER OF GRIEVANCES ABOUT ENVIRONMENTAL IMPACTS FILED, ADDRESSED, AND RESOLVED THROUGH FORMAL GRIEVANCE MECHANISMS

Novartis is not aware of any grievances about environmental impacts filed, addressed and resolved through formal grievance mechanisms in 2015.

In a poor district of the Bangladeshi capital Dhaka, a small army of yellow-robed health workers is engaged in a constant battle against the world's biggest killer of young children. Pneumonia causes around 2 million child deaths per year globally – more than AIDS, malaria and measles combined – and the burden is especially heavy in a country like Bangladesh, where a third of the population is aged 14 or below.

# Labor practices and decent work

G4 LA 1

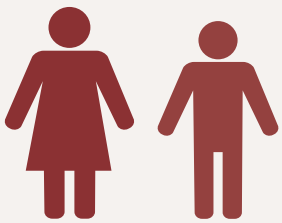
THE GLOBAL COMPACT 6

### TOTAL NUMBER AND RATES OF NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER BY AGE GROUP, GENDER AND REGION

On December 31, 2015, new hires totaled 20 346 associates: 9 577 men and 10 730 women (plus 39 associates with no disclosed gender). The overall turnover rate in December 2015 was 13.5% and voluntary turnover was 7.3% (permanent employees only). The highest voluntary turnover rate (16.7%) is among the 21–25 year age group within the Y Generation, and the lowest voluntary turnover rate (3.3%) is among the 51–55 year age group within the Baby Boomers Generation.

## VOLUNTARY TURNOVER IN 2015

### BY GENDER



| Female | Male |
|---|---|
| 7.6% | 7.1% |

### BY REGION

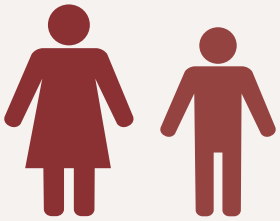
| North America | Latin America | Europe, Middle East and Africa | Asia Pacific |
|---|---|---|---|
| 8.2% | 5.4% | 5.4% | 11.2% |

### IN GENERATION GROUPS[2]


| Traditionalists | Baby Boomers | Generation X | Generation Y |
|---|---|---|---|
| 13.0% | 4.0% | 6.0% | 10.7% |

## NEW HIRES[1] IN 2015

### BY GENDER



| Female | Male |
|---|---|
| 10 730 | 9 577 |

### BY REGION

| North America | Latin America | Europe, Middle East and Africa | Asia Pacific |
|---|---|---|---|
| 4 206 | 1 340 | 8 631 | 6 169 |

### BY GENERATION GROUP[2]


| Traditionalists | Baby Boomers | Generation X | Generation Y |
|---|---|---|---|
| 15 | 1 475 | 5 951 | 12 899 |

[1] Variations in figures are due to non-assigned details in the system.
[2] Generation groups are defined as follows: born 1928–1944, born 1945–1964, born 1965–1979, born 1980–2000

G4 LA 2

THE GLOBAL COMPACT 6

## BENEFITS PROVIDED TO FULL-TIME EMPLOYEES THAT ARE NOT PROVIDED TO TEMPORARY OR PART-TIME EMPLOYEES, BY SIGNIFICANT LOCATIONS OF OPERATION

At significant locations of operation,[1] full-time Group company associates are eligible for or covered by health, retirement, disability and maternity benefits. In most significant locations of operation, Novartis Group company associates are also eligible for flex time, telecommuting, child care, bereavement leave, sabbatical programs, and employee assistance programs. At some significant locations of operation, health management services, parental leave and paternity leave are also provided.

Depending on specific legal requirements, additional benefits such as pension and medical insurance are also available to associates.

In Brazil, Russia, India and China (BRIC), full-time Group company associates are also eligible for or covered by health, retirement, disability and maternity benefits. At some BRIC operations, flex time, parental leave, paternity leave and marriage leave are also provided.

[1] Our major operations (based on number of associates) are located in Switzerland, Germany, the United States and China.

G4 LA 3

## RETURN-TO-WORK AND RETENTION RATES AFTER PARENTAL LEAVE, BY GENDER

According to the global Corporate Citizenship Survey 2015, 51% of associates return to work after parental leave. We also ask HR teams in our countries of operation to state if they offer parental leave/benefits as required by law in their relevant country, or if they offer anything beyond the legal minimum. According to the Corporate Citizenship Survey 2015, 52% of Novartis Group company associates are offered parental leave, fulfilling more than the minimum legal obligations.
Additionaly:

- 85% of Novartis Group company associates have access to flexible working arrangements.
- 72% of Novartis Group company associates have access to reduction of working time (part time).
- 81% of Novartis Group company associates have access to workplace flexibility (home office).
- 63% of Novartis Group company associates have access to dependent care support, a child care center/support (e.g., a site child care center, referrals to agencies, backup child care support, etc.), or nursing care (e.g., lactation support).
- 83% of Novartis Group company associates have access to care management (e.g., employee assistance program, free-of-charge medical care).

G4 LA 4

THE GLOBAL COMPACT 3

## MINIMUM NOTICE PERIODS REGARDING OPERATIONAL CHANGES, INCLUDING WHETHER THESE ARE SPECIFIED IN COLLECTIVE AGREEMENTS

We engage in constructive dialogue with employees and employees' representatives.

In general, minimum notice periods regarding operational changes are defined by law, by collective bargaining agreements or by individual labor contracts in all countries. Where relevant, local legislation and collective bargaining agreement specifications on notice periods vary, ranging from 30 to 180 days and more. Where there is no binding minimum notice period, Novartis Group company associates and their representatives are informed at the earliest possible time (usually between 30 and 180 days).

In addition to regulations in collective bargaining agreements, social plans and balance of interests negotiated with employee representatives may allow longer pre-notice and notice periods. They also may provide severance pay, redeployment to other Novartis companies, outplacement services or transition assistance in compliance with the regulatory or collective bargaining agreement requirements.

In many cases we provide more than the required minimum.

G4 LA 5

## PERCENTAGE OF TOTAL WORKFORCE REPRESENTED IN FORMAL JOINT MANAGEMENT/WORKER HEALTH AND SAFETY COMMITTEES THAT HELP MONITOR AND ADVISE ON OCCUPATIONAL HEALTH AND SAFETY PROGRAMS

Since 2015, we have been collecting information on the number of sites that have implemented a formal joint management/worker health and safety committee that meets on a regular basis to monitor and advise on the site occupational health and safety program and performance. In 2015, 82% of sites with more than 100 Novartis Group company associates have health and safety committees. Relevant sites including manufacturing, research and development have 98% coverage. Office sites infrequently have health, safety and environment committees, and tend to appoint safety coordinators instead. Overall, 84% of Novartis Group company associates are represented in such committees.

G4 LA 6

## TYPE OF INJURY AND RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES, BY REGION AND BY GENDER

Employee health and safety is an integral part of an employer's responsibility. Novartis Group companies are committed to providing associates with safe workplaces.

Novartis continuously seeks innovative, sustainable strategies and systems to strengthen our commitment to HSE and business continuity. Rigorous technical standards, reinforced by engineering solutions ensure that workplaces are safe for Novartis Group company associates. Novartis proactively fosters and encourages a strong culture of safe behavior and on-site health promotion. Our Occupational Medicine department delivers programs to maintain health, reduce absenteeism, and enhance ability to return to work after injury or illness.

**Lost time injury and illness rate (LTIR)**

Novartis reports work-related injuries and illnesses among Group company associates. Our LTIR is a key performance indicator, enabling direct comparison between the performance of our units and on a country-by-country basis. Since 2014, the LTIR has also included third-party personnel.

In 2015, the overall LTIR for Novartis associates and third-party personnel was further reduced to 0.11 per 200 000 hours, from 0.12 in the previous year; this represents an 8.3% reduction. Continuing management commitment and the rigorous application of safety systems and procedures, combined with ongoing training for Group company associates, have driven our progress in the overall injury and illness reduction. Local management teams undertake a number of measures to promote safety awareness. These are reviewed by divisional HSE teams, and include four key proactive measures:

- Walkthrough inspections by senior managers on site with a focus on serious injury and fatality (SIF) exposures and their safety controls
- HSE training as ratio of total hours worked yearly, depending on the work area (targeted at 0.1–0.5%)
- On-time completion of observations from audits, inspections, walkthroughs and incident investigations
- Near-miss reporting (targeted at least 5–10 times the number of actual incidents)

A significant number of units have introduced safety culture initiatives – behavior-based safety programs – to complement existing measures for ongoing safety management at sites.

At Novartis, we are placing increasing emphasis on the analysis and reduction of cases with SIF potential. A SIF case is defined as a work-related incident that results in a serious injury or even death to the person(s) involved.

The SIF prevention program was developed in 2014, and rolled out to sites across Novartis in 2015. Reporting on SIF cases and on cases with SIF potential is part of the SIF prevention program. In 2014 we recorded 11 SIF cases, which were reduced to two SIF cases in 2015. In addition, since for several years we have introduced tailored safety initiatives where relevant, such as example driver safety for fleet and sales organizations, and laboratory safety for research and development.

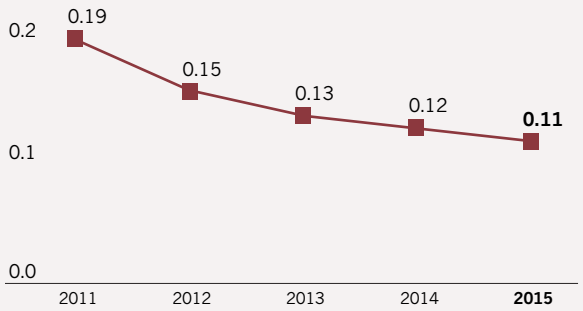
Significant incidents without lost time, including incidents with SIF potential, incidents with lost time, and relevant near-misses are investigated. The level and extent of the investigation reflect the seriousness or potential impact of the event. Suitable processes and criteria – such as risk/potential consequences and learning potential – are put in place to ensure that investigations are carried out adequately. A systematic method (for example, TapRooT®) is applied to guarantee a thorough investigation.

In-depth risk analysis – in accordance with the Zurich Hazard Analysis methodology – is fundamental to Novartis operations. It contributes substantially to process safety, including the prevention of fires, explosions, releases and spills. We provide regular training courses globally in hazard analysis, process safety management, and systematic incident investigations. In 2015, about 20 new safety associates were trained in process safety. Tailor-made laboratory process safety training courses were delivered to associates working in the chemical and pharmaceutical development areas. In addition, extensive on-the-job HSE training is carried out at all sites.

### LOST TIME INJURY AND ILLNESS RATE TARGETS AND PERFORMANCE 2015 (INCLUDING THIRD-PARTY PERSONNEL)

| | Target 2015 | Achievement 2015 | Achievement 2014 |
|---|---|---|---|
| Novartis Group | ≤ 0.14 | 0.11 | 0.12 |
| Pharmaceuticals | ≤ 0.14 | 0.09 | 0.12 |
| Sandoz | ≤ 0.14 | 0.13 | 0.12 |
| Alcon | ≤ 0.14 | 0.13 | 0.13 |
| Novartis Research | ≤ 0.14 | 0.07 | 0.02 |

### LOST TIME INJURY AND ILLNESS RATE




*HSE data reflects continuing operations*

**Fatalities**
Unfortunately, we recorded one fatality in a car incident in 2015 in Croatia. Since 2005, there have been 10 fatalities of Novartis Group company associates related to traffic incidents while traveling on public roads for business.

To address this undesirable situation with fatality cases almost every year, the above-mentioned comprehensive SIF prevention program to evaluate and prevent situations with a serious injury and fatality potential has now been rolled out at manufacturing and research facilities across Novartis.

Furthermore, we recognize the importance of safety at work, including where our associates travel by road as part of their job. Driver safety campaigns have been implemented at Novartis locations throughout the world and include guidance on how to reduce the number of traffic-related accidents, as well as an increased level of driver safety training.

**Total recordable case rate (TRCR)**
Many injury and illness cases without lost time have the potential to lead to lost time. Identifying and managing the circumstances in which these incidents occur ultimately reduces the overall risk of having a serious incident, lost time injuries and illnesses, and even fatalities. A recordable case includes:
- Work-related injury with or without lost time
- Work-related illness with or without lost time
- Work-related loss of consciousness
- Work-related fatality

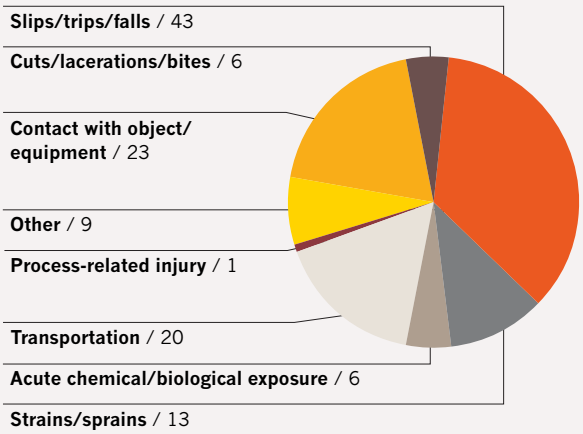
The TRCR equals the division of all recordable cases by the hours worked, multiplied by 200 000 for standardization. Since 2014, the TRCR has included third-party personnel in addition to Novartis associates. In 2015, the Novartis Group TRCR was 0.40, down from 0.43 in 2014.

**Occupational injury and illness**
During 2015, a total of 420 Group company associates suffered work-related injuries. Of these, 121 (2014: 152) led to days off work (integrated into the LTIR).

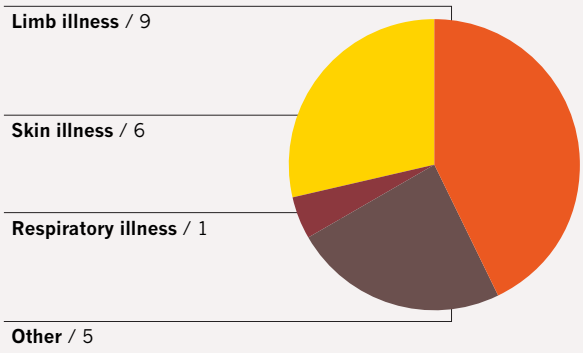
The distribution of injuries by immediate cause indicates that the most prominent safety issues are related to non-operational activities, such as slips, trips and falls at offices and sites, and transport accidents within the sales force. Together, these causes account for 52% of occupational injuries with lost time.

Novartis sites reported a total of 21 occupational illnesses in 2015, compared to 27 in 2014. Of these, one – compared to three in 2014 – led to days off work. This figure is integrated into the LTIR, and represents 1% of the total lost time cases. There were no recorded chronic poisonings; we have an existing preventative health protection strategy with regards to the handling of potentially hazardous substances. The most prominent work-related health issue remains musculoskeletal disease, which accounted for 45% of illness cases in 2015, compared to 74% in 2014. In addition, one case of occupational mental illness leading to lost work time was recorded in 2015.

**INJURY WITH LOST TIME 2015**
Total: 121 associates




**ILLNESS WITH AND WITHOUT LOST TIME 2015**
Illness total: 21 associates




The lost time occupational illness rate was 0.001 per 200 000 working hours in 2015, compared to 0.002 in 2014. The total recordable occupational illness rate was 0.018 per 200 000 working hours in 2015, compared to 0.022 in 2014.

**Overall health and safety data by region**
The following tables present selected key health and safety performance figures by region. Due to privacy and equal opportunity considerations, Novartis does not break down health and safety data by gender. Novartis does not track non-occupational absenteeism data on a global level. We are in the process of rolling out reporting and management of non-work-related absences in the new HR systems. Country-specific reports and actions will be developed in 2016 for implementation in 2017.

**Occupational injury and illness to third-party personnel**
Beyond Novartis Group company associates, we recognize our responsibility to promote the health and safety of third-party personnel (TPP).

TPP are those individuals employed by a third party that invoices Novartis for hours completed. They work regularly on Novartis premises and receive day-to-day work assignments

from Novartis Group company associates. Some companies refer to these individuals, including sub-contracted workers, as contractors (see "occupational injury and illness to contractors" for our definition of contractors).

In 2015, Novartis employed more than 11 800 TPP. There were 62 occupational injuries and illnesses among this group. Of these, 20 resulted in lost time. There were no fatalities among TPP in 2015. Since 2011, we have been recording the hours worked by TPP so that we can calculate and compare the LTIR and TRCR with Novartis associates. As with our own Group company associates, any incident is rigorously investigated to reduce the total number of work-related incidents.

Due to privacy and equal opportunity considerations, Novartis does not break down health and safety data by gender.

Due to the increasing number of TPP working for Novartis, LTIR and TRCR targets since 2014 include this population (see LTIR and TRCR sections above). The TPP LTIR for 2015 was 0.17 (stable compared to 0.17 in 2014), and the TPP TRCR for 2015 was 0.52 (compared to 0.50 in 2014).

Novartis does not differentiate between occupational injuries or illnesses for TPP. As a consequence, it is not possible to calculate a lost time occupational illness rate for TPP.

**Occupational injury and illness to contractors**

Beyond Novartis Group company associates and TPP, we recognize our responsibility to promote the health and safety of contractors. Contractors are those individuals employed by companies undertaking work for Novartis within the terms of a contract or service agreement. In contrast with TPP, contractors receive day-to-day work assignments from their companies' management and are hired to complete a job on their own. Novartis only reports health and safety data from contractors who regularly work at a Novartis site, such as cleaning, catering, security, engineering and maintenance personnel. These contractors, known as "fixed" or "nested" contractors, work a minimum of one month per year for Novartis.

**THIRD-PARTY PERSONNEL INJURIES**

| Year | Number of TPP | Number of injury cases w/wo lost time |
|---|---|---|
| 2011 | 9 400 | 80 |
| 2012 | 10 000 | 132 |
| 2013 | 10 700 | 61 |
| 2014 | 11 400 | 60 |
| 2015 | 11 800 | 60 |

**NOVARTIS GROUP COMPANY ASSOCIATES HEALTH AND SAFETY, BY REGION**

| Region | Total injury and illness cases | Fatalities | Total cases with lost time | Total lost time days | Total working hours | TRCR | LTIR |
|---|---|---|---|---|---|---|---|
| Europe | 224 | 1 | 80 | 894 | 92 470 308 | 0.48 | 0.17 |
| North America | 158 | 0 | 17 | 207 | 48 331 110 | 0.65 | 0.07 |
| Latin America | 5 | 0 | 3 | 34 | 11 884 927 | 0.08 | 0.05 |
| Asia | 33 | 0 | 13 | 97 | 64 358 118 | 0.10 | 0.04 |
| Middle East and Africa | 5 | 0 | 2 | 33 | 5 103 101 | 0.20 | 0.08 |
| Oceania | 16 | 0 | 7 | 124 | 1 487 741 | 2.15 | 0.94 |
| **Total** | **441** | **1** | **122** | **1 389** | **223 635 305** | **0.39** | **0.11** |

**NOVARTIS GROUP THIRD-PARTY PERSONNEL HEALTH AND SAFETY, BY REGION**

| Region | Total injury and illness cases | Fatalities | Total cases with lost time | Total working hours | TRCR | LTIR |
|---|---|---|---|---|---|---|
| Europe | 27 | 0 | 15 | 8 264 863 | 0.65 | 0.36 |
| North America | 32 | 0 | 4 | 7 637 084 | 0.84 | 0.10 |
| Latin America | 1 | 0 | 1 | 1 143 646 | 0.17 | 0.17 |
| Asia | 2 | 0 | 0 | 6 029 823 | 0.07 | 0.00 |
| Middle East and Africa | 0 | 0 | 0 | 569 393 | 0.00 | 0.00 |
| Oceania | 0 | 0 | 0 | 249 599 | 0.00 | 0.00 |
| **Total** | **62** | **0** | **20** | **23 894 408** | **0.52** | **0.17** |

As of 2011, Novartis reports the LTIR for contractors, but not the TRCR for this group. Because we cannot precisely determine the number of cases without lost time for this group on a global level, the rate would be inaccurate and unreliable.

Novartis employed approximately 21 800 contractors during 2015. There were 34 occupational injuries and illnesses with lost time among this group in 2015.

The contractor LTIR for 2015 was 0.29 (compared to 0.48 in 2014). Novartis does not differentiate between occupational injuries or illnesses for contractors. As a consequence, it is not possible to calculate a lost time occupational illness rate for this group.

Due to privacy and equal opportunity considerations, Novartis does not break down health and safety data by gender.

For more information about our approach to creating a safe workplace, see the dedicated to safety section of the Novartis website.

**NOVARTIS GROUP COMPANY CONTRACTORS HEALTH AND SAFETY, BY REGION**

| Region | Fatalities | Total cases with lost time | Total working hours | LTIR |
|---|---|---|---|---|
| Europe | 0 | 26 | 11 689 092 | 0.44 |
| North America | 0 | 5 | 5 378 574 | 0.19 |
| Latin America | 0 | 2 | 1 942 958 | 0.21 |
| Asia | 0 | 1 | 4 112 112 | 0.05 |
| Middle East and Africa | 0 | 0 | 234 946 | 0.00 |
| Oceania | 0 | 0 | 12 727 | 0.00 |
| **Total** | **0** | **34** | **23 370 409** | **0.29** |

G4 LA 7

## WORKERS WITH HIGH INCIDENCE OR HIGH RISK OF DISEASES RELATED TO THEIR OCCUPATION

Novartis associates at many sites handle highly hazardous materials or infectious materials. Owing to the high level of risk management, there are no occupational illnesses recorded in this group. However, Novartis sites reported a total of 21 occupational illnesses in 2015. For a more detailed explanation of the occupational illnesses, see G4–LA6: type of injury and rates of injury, occupational diseases, lost days and absenteeism.

### Biosafety

Handling biological materials is an integral and essential part of research, development and manufacturing programs at Novartis. Biological materials can include human or animal pathogens, genetically-modifed viruses, and experimental or transgenic animals.

We take great care to ensure we prevent misuse of material. Our biosafety program sets out standards, tools and practices for associates to manage potential risks when handling biological materials. Risk management and safety measures are stipulated in our guidelines on biosafety and in our detailed guidance notes. These standards are binding and based on best practice. We regularly assess compliance through audits at sites conducting biological activities.

### Be Healthy workplace health promotion

Launched in 2011, Be Healthy is our first company-wide health and well-being initiative and builds on a tradition of providing health and well-being programs for Novartis Group company associates.

We place particular focus on prevention because statistics from the World Economic Forum show that workplace health and well-being programs addressing lifestyle changes can help prevent up to 40% of noncommunicable diseases (NCDs) such as cardiovascular diseases, cancer and lung disorders.

Be Healthy aims to help associates around the world embrace healthy lifestyles by providing opportunities for them to take control of their personal health and help prevent future health issues. The initiative has four main pillars:

- Move: increase physical activity and decrease sedentary behavior
- Choose: eat healthy foods and appropriately to keep in top shape at work and at home
- Know your numbers; help associates know their key health numbers so that they can take control of their health
- Manage; provide support for associates with disabilities or illnesses to maintain or regain their ability to perform at home and at work

As part of Be Healthy, our health promotion focus at Novartis includes healthy living and screening activities, and support to associates within our affiliates who suffer from chronic illnesses. Novartis believes it is important to ensure active care management, which includes looking beyond lost time cases, evaluating minor injuries and unsafe acts, and providing support to associates so they can return to work and perform in an environment that enables them to contribute optimally after an absence due to an illness or injury.

In addition, as part of Be Healthy, Novartis Group company locations are asked to provide their associates access to an Employee Assistance Program (EAP) offering psychological, social, legal and financial support services. In many locations – through the EAP or other services – we offer independent counseling services and help lines to help associates cope with stress, depression and anxiety.

Novartis Group company associates also participate in a Be Healthy celebration week every September. This is a week- long celebration of health and well-being that includes free exercise classes and health screenings.

This year's celebration week was held September 28 through October 2, 2015. Our new environmental agenda inspired the theme of the week: "Healthy People, Healthy Planet." During this worldwide event, our workforce took part in activities that highlighted the link between human health and our environment such as support for active commuting via biking or walking, and the benefits of choosing locally-grown foods.

In addition, as part of Be Healthy, Novartis again participated in the Global Corporate Challenge® (GCC) – an independent program through which teams of associates compete in a 100-day virtual race around the world. For the second year in a row, Novartis secured the number two spot in the "World's Most Active" global rankings out of 1 200 organizations participating worldwide. We were also named most active organization in the healthcare and medical sector. Notably, after 100 days, 70% of participating associates were walking more than 10 000 steps per day – up from 20% at the start of the challenge.

Be Healthy reaches 95% of Group company associates worldwide in more than 50 countries.

G4 LA 8

## HEALTH AND SAFETY TOPICS COVERED IN FORMAL AGREEMENTS WITH TRADE UNIONS

HSE is a fundamental component of our long term business strategy. We consider HSE implications in every aspect of our worldwide healthcare activities, with the intent to protect associates, neighbors, patients, business assets, natural resources and the environment. This commitment is part of everything we do, from the moment a scientist begins research, through production and distribution, until our customers and patients use and dispose of the final product.

We provide our Group company associates with safe working conditions, and strive to protect them from potential health hazards and injuries.

All Novartis Group company associates are expected to adhere to the health and safety requirements outlined in the Novartis Global HSE Policy and the Novartis Code of Conduct. We do not cover health and safety topics in formal agreements with trade unions or Novartis Employee Representative Councils (NERCs), but we consult local trade unions and NERCs to understand the approach to implementing these requirements on a country-by-country basis. For instance, at sites in Basel and the Rhine Valley, Novartis holds consultation processes and sets up commissions with NERCs on various HSE topics.

We are committed to providing our associates with safe workplaces, fair working conditions, and the assurance of mutual respect. We also strive to provide programs that help them to maintain or improve their health, such as Be Healthy. See G4–LA7: workers with high incidence or high risk of diseases related to their occupation.

The Global HR Guideline on the Promotion of Health outlines our commitment to influencing positive behaviors and providing opportunities for improving personal health, both in and outside the workplace. It describes how programs promoting health in the workplace and beyond should be set up, executed and monitored.

**Novartis takes on the Global Corporate Challenge – and takes the challenge to patients**

Last year Novartis re-entered the Global Corporate Challenge® (GCC), a 100-day competition for companies that promotes healthy living. Teams of associates raced in a virtual journey around the world, and for the second year in a row, we were named the most active organization in the healthcare and medical sector (and placed second overall). Our pre- versus post-race statistics were truly impressive. Of our 16 000 participating associates, 76% said they are now aware, very aware or highly aware of their physical activity levels (up from 48% before the GCC), and 63% said the GCC boosted their energy levels. They also improved their resilience, with 68% sleeping at least seven hours per night after the GCC versus 55% before the start of the challenge.

Novartis associates in more than 65 countries competed last year, but the team in the Czech Republic really "stepped up" to the challenge. They contacted 15 multiple sclerosis centers of excellence (MSCOE) and helped facilitate the involvement of MS patients, who created their own teams with COE healthcare professionals serving as captains. By engaging COEs, these associates helped encourage patients to adopt healthy, active lifestyles, and supported our goal of extending and improving people's lives.

G4 LA 9

THE GLOBAL COMPACT 6

### AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE BY GENDER, AND BY EMPLOYEE CATEGORY

In 2015, each user of our newly launched eLearning library spent on average 2.5 hours on learning activities in the area of personal effectiveness and leadership. Starting from a basis of 27 hours in 2014, associates increased their average time spent on learning to 27.3 hours in 2015 (this excludes sales and in-country programs, which we will be able to track with the unified talent and learning platform that is being rolled out across Novartis and will be available globally in 2019). Part of the increase is due to the fact that the library is accessible 24/7 to all Novartis associates across the globe, enabling self-paced learning and increasing the access and convenience of learning at Novartis.

Additionally, a new blended-learning portfolio focused on personal effectiveness skills was recently launched and will be made available globally to all Novartis associates in 2016. A global campaign is underway, closely linked to individual year-end performance reviews, and development needs are being discussed and action plans are being agreed upon.

**Annual awards program celebrates excellence in human resources**

Our 2015 Global HR Awards showcased significant progress made last year within our human resources (HR) function. The awards program recognized associates' key achievements in 11 categories: our four strategic HR pillars (organizational design and change, talent and leadership, culture and energy, and HR operational excellence and compliance); our six Values and Behaviors (innovation, quality, collaboration, performance, courage and integrity); and diversity and inclusion. Overall, 20 projects spearheaded by more than 200 associates received awards.

Last year's award-winning projects included BEAM (Building Expertise in Asia MTO), which developed talent across Alcon's Manufacturing and Technical Operations (MTO) organization in Asia. To improve associates' technical skills and prepare them for leadership roles, a committee of regional HR and MTO Asia site heads established a multiyear training program in late 2013 spanning various sites and countries. This program – focused on production; engineering; quality; and manufacturing, science and technology – was implemented in 2014 and well-received by participating associates. A new class of BEAM "students" will begin training in Q1 2016, further strengthening MTO Asia's talent pipeline and supporting its future growth.

G4 LA 10

### PROGRAMS FOR SKILLS MANAGEMENT AND LIFELONG LEARNING THAT SUPPORT THE CONTINUED EMPLOYABILITY OF EMPLOYEES AND ASSIST THEM IN MANAGING CAREER ENDINGS

While continuing with the established learning offerings (more than 2 500 learning programs in 2015), an e-learning penetration approach was rolled out globally to ensure all Novartis associates have access to relevant, self-paced learning at no individual cost, at any time, from anywhere on any topic. 17 000 associates made use of this new offering to keep up with the evolving demands of the internal and external job market.

Scalable programs were developed for associates and redesigned for first-line managers to satisfy demand. Despite a "soft launch," the number of participants in some of these programs doubled, and we expect to see even more participants in 2016 when several of these programs are officially launched globally.

A job center was also established to support associates in times of restructuring. Special learning programs for such situations were designed, while the learning programs in the portfolio and resources continue to be available to satisfy associates throughout their career at Novartis and beyond.

G4 LA 11

THE GLOBAL COMPACT 6

### PERCENTAGE OF EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS, BY GENDER AND BY EMPLOYEE CATEGORY

The Novartis performance management process is conducted for all permanent Novartis Group company associates and consists of objective-setting and development planning, and at least one review during the year and a formal year-end review. During the objective-setting and development planning discussion, managers and their direct reports agree on annual objectives and a development plan that includes short-term developmental activities to support the achievement of performance objectives, as well as a longer-term development plan to support the achievement of career aspirations.

In 2014, 93% of associates worldwide completed the process and received a year-end performance rating. We expect a similar completion rate for 2015. Due to the timing of our performance management cycle, data will only be available after finalization of this report. The process does not cover all associates because some employee groups subject to works council agreements do not participate in the performance management process. In 2014, the availability of performance ratings by gender was equal to the overall gender distribution in the workforce.

The purpose of our performance management process is to harness the efforts of every associate toward serving and cre-

ating value for patients, customers and stakeholders. The process drives a culture of continuous improvement through ongoing feedback and coaching. It supports individuals to meet their development aspirations and strengthens organizational capability. It is an ongoing process for managing and improving individual, team and overall business performance while fostering ethical behavior.

At Novartis, performance is measured based on two dimensions: achievement of individual objectives and demonstration of Novartis Values & Behaviors, reflecting our philosophy that what we achieve is as important as how we achieve it. We have introduced a revised set of Values & Behaviors, making the performance management process simpler and clearer. Our Values & Behaviors help guide the choices our associates make and the actions they take to help discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life.

**What we value**

- **Innovation** by experimenting and delivering solutions
- **Quality** by taking pride in doing ordinary things extraordinarily well
- **Collaboration** by championing high-performing teams with diversity and inclusion
- **Performance** by prioritizing and making things happen with urgency
- **Courage** by speaking up and giving and receiving feedback
- **Integrity** by advocating and applying high ethical standards every day

G4 LA 12

THE GLOBAL COMPACT 6

## COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER, AGE GROUP, MINORITY GROUP MEMBERSHIP, AND OTHER INDICATORS OF DIVERSITY

At least 144 different nationalities are represented at Novartis.

### BREAKDOWN BY GENDER IN 2015

| Employee category | Female | Male |
|---|---|---|
| Overall | 48% | 52% |
| Management | 41% | 59% |
| Novartis top leaders[1] | 23% | 77% |

[1] Comprises more than 350 of the most senior managers at Novartis, including the Executive Committee of Novartis

### BREAKDOWN BY GENERATION GROUP[2] IN 2015

| Employee category | Generation Y | Generation X | Baby Boomers |
|---|---|---|---|
| Overall | 39% | 45% | 16% |
| Management | 10% | 65% | 25% |
| Novartis top leaders[1] | – | 51% | 49% |

[1] Comprises more than 350 of the most senior managers at Novartis, including the Executive Committee of Novartis
[2] Generations are defined as follows: Baby Boomers: born 1945–1964; Generation X: born 1965–1979; Generation Y: born 1980–2000

G4 LA 13

THE GLOBAL COMPACT 6

## RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN BY EMPLOYEE CATEGORY, BY SIGNIFICANT LOCATIONS OF OPERATION

Novartis Group company associates are located in numerous countries with different legal and socio-economic environments. It is our policy to offer our associates fair and competitive wages based on level of responsibility, performance and ethical conduct. We appreciate the diversity and individuality of our associates and do not discriminate based on personal characteristics such as gender. Novartis is continuously working with internationally-recognized experts on the processes and tools to ensure consistent and competitive terms of employment.

G4 LA 16

THE GLOBAL COMPACT 6

## NUMBER OF GRIEVANCES ABOUT LABOR PRACTICES FILED, ADDRESSED AND RESOLVED THROUGH FORMAL GRIEVANCE MECHANISMS

Novartis Group companies employ about 123 000 associates around the world. While we do not have a misconduct category called labor practices, our misconduct category "employee relations" includes issues pertaining to labor practices such as discrimination, harassment, inappropriate behavior, performance management violations, retaliation, unfair dismissals, etc. In 2015, 1 368[1] allegations of misconduct related to employee relations were reported, the majority of which were minor.

All 1 368 allegations related to employee relations were addressed and resolved locally or investigated via the independent Business Practices Office (BPO) process.

- 1 057 allegations that were not related to misconduct were delegated to local management for review and action outside of the BPO investigative process.
- Investigations for 311 allegations were initiated by the BPO in 2015.
- Of these 311 investigated allegations, investigations of 235 allegations were completed by December 31, 2015; the rest are pending. 54% of those investigated allegations were substantiated, resulting in 71 dismissals or resignations and 57 written warnings.

[1] All the numbers exclude the divested divisions.

In a mountainous region of central Switzerland, Spitex nurse Margrit Locher accompanies Maria Matter in her garden, where she has grown Queen Elizabeth roses for 20 years.

# Human rights

G4 HR 1

THE GLOBAL COMPACT 1,2

### TOTAL NUMBER AND PERCENTAGE OF SIGNIFICANT INVESTMENT AGREEMENTS AND CONTRACTS THAT INCLUDE HUMAN RIGHTS CLAUSES OR THAT UNDERWENT HUMAN RIGHTS SCREENING

In case of acquisitions that constitute our most significant investments, all new employees have to acknowledge the Novartis Code of Conduct and all Group policies. The general obligation of each and every Novartis employee to adhere to human rights is defined in our Code of Conduct. Specific human rights issues are governed and managed by issue- and function-specific standards at Novartis (e.g., Novartis Supplier Code).

We respect and support the protection of human rights, as enshrined in the UN's Universal Declaration of Human Rights. We are also committed to upholding the core labor standards set out by the International Labor Organization. Since 2001, Novartis has been a signatory to the UN Global Compact, endorsing the 10 universal principles covering human rights, labor, the environment and anti-corruption. We also support the UN Guiding Principles on Business and Human Rights, and ensure appropriate implementation at Novartis.

G4 HR 2

THE GLOBAL COMPACT 1,2

### TOTAL HOURS OF EMPLOYEE TRAINING ON HUMAN RIGHTS POLICIES OR PROCEDURES CONCERNING ASPECTS OF HUMAN RIGHTS THAT ARE RELEVANT TO OPERATIONS, INCLUDING THE PERCENTAGE OF EMPLOYEES TRAINED

We seek to promote and protect the rights defined in the UN's Universal Declaration of Human Rights within our sphere of influence.

In 2013, we rolled out a new hire e-training module (updated in 2015) based on the Novartis Code of Conduct, which includes a reference to human rights. By December 31, 2015, 37 789 associates had been invited to undertake this training and 35 769 (95% of the new hires invited) had completed it. The course is approximately one hour long, which amounts to more than 36 000 hours of employee training. The e-training targets associates with an email address. All remaining associates are required to be trained face-to-face or through shared kiosks.

G4 HR 3

THE GLOBAL COMPACT 6

### TOTAL NUMBER OF INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN

Novartis reports on all cases of misconduct; for more information, see G4–LA16: number of grievances about labor practices, G4–HR12: number of grievances about human rights impacts, and G4–SO11: number of grievances about impacts on society. Complaints are investigated by the BPO, and substantiated cases are referred to senior management for appropriate disciplinary action. Novartis Group company associates encourage associates to address discrimination, harassment and retaliation appropriately. We have established a process to coordinate information and actions with Human Resources partners and managers.

The Human Resources function provides guidance to managers in taking supportive and/or corrective measures in cases where misconduct and inappropriate treatment are established. Global HR Guidelines regarding discrimination, harassment and retaliation as well as disciplinary actions and dismissals have been rolled out globally and implemented as country HR standards in countries of operation according to local legal requirements and legislation.

We do not specifically disclose the number of incidents related to discrimination, as this information is business confidential.

G4 HR 4

G4 3

## OPERATIONS AND SUPPLIERS IDENTIFIED IN WHICH THE RIGHT TO EXERCISE FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING MAY BE VIOLATED OR AT SIGNIFICANT RISK, AND MEASURES TAKEN TO SUPPORT THESE RIGHTS

None of our operations are identified as being at significant risk of violating the right to exercise freedom of association and collective bargaining.

As stated in our Code of Conduct, we support freedom of association and collective bargaining. These principles are included in the basic employment terms and contracts of Novartis associates.

The Novartis Global HR Principles Guideline outlines the standard applicable for all divisions across all countries: that Novartis fully respects the right of associates to choose to join a trade union or an employee association. In addition, a Global HR Guideline regarding the involvement of employee representative bodies (ERBs) confirms our commitment to have constructive dialogue with workforce representatives and to involve works councils or trade unions according to local laws and regulations.

Through the Corporate Citizenship Survey 2015, we gained insights from country operations that enable us to monitor the freedom of association in the organization, such as associates' opportunities to access internal or external employee representation and/or if associates are covered by a collective bargaining agreement, as allowed by local laws.

Novartis supports the right to exercise freedom of association. For example, in China associates are informed of their right to associate with trade unions or employee representatives, and across all divisions, associates are members of an internal works council or external union/employee representative body. In the course of reorganization projects (e.g., divestment of Animal Health, Vaccines, etc.), the involvement of local employee representatives globally has been carefully considered, managed and monitored according to local legal requirements.

In addition to our commitment to human rights and to the right to freedom of association, we comply with regional and local legislation relating to employee consultation.

In accordance with applicable European Commission directives regarding the implementation of European Works councils, the Novartis Euroforum (NEF) has been implemented and representatives have been nominated and elected in their countries. The terms of reference of the NEF outline its rights and duties, and confirm its constitution and consultation processes. Meetings with management take place regularly to provide information about transnational initiatives.

Due to legal requirements or other obligations, ERBs such as the NEF must be involved in certain Novartis activities in the EU countries and Switzerland. The respective agreement (NEF agreement) – a legally binding document – and Global HR Guideline about the involvement of ERBs define NEF's involvement in activities that could impact employees in more than one EU country. Activities that are strictly limited to one country follow local laws and legislation on communication and consultation with local ERBs.

Novartis expects its suppliers to aspire to the standards defined in its Supplier Code. Whenever a supplier is identified with a potential labor right risk, the topic is discussed during an audit. If an issue surfaces, we address it by engaging with the supplier.

For more detail on our approach to managing human rights and why we think it is important, see our position on human rights.

G4 HR 5

G4 5

## OPERATIONS AND SUPPLIERS IDENTIFIED AS HAVING SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOR, AND MEASURES TAKEN TO CONTRIBUTE TO THE EFFECTIVE ABOLITION OF CHILD LABOR

The Novartis Code of Conduct, which specifies our position on forced or compulsory labor, is included in the basic employment terms or contracts of associates. Novartis protects associates from unfair or unethical working conditions, including child labor. We annually monitor the global workforce for any associates below the age of 15, and take corrective actions when necessary. In 2015, monitoring showed no incidents of child labor at Novartis operations.

Our understanding is that the risk of child labor in our supply chain is low, and we have not identified any suppliers with whom we have a direct relationship as having a significant risk of incidents of child labor. This is because the majority of our key suppliers are involved in chemical and/or pharmaceutical production – high-tech sectors that rely on skilled labor and in which workers are usually older.

Based on external consultation and learnings from other industries, we have identified the manufacturing of promotional items – typically low-value marketing items – as a potential risk area for child labor because the workers are less skilled.

We recently launched a new promotional items framework and we mandate a satisfactory ethical audit report as a prerequisite for entering into a relationship with us. Where no such report exists, we allow a three-month grace period during

which an audit is conducted. Because we often do not have a direct relationship with manufacturers of promotional items, we are devolving responsibility for ethical risk management to the agent who holds the contract with Novartis to ensure adherence to the Group's ethical standards even at the sub-supplier level.

Following last year's successful pilot, we will roll out the promotional items framework across Novartis starting in January 2016 and embed it into the supplier selection process.

G4 HR 6

4

### OPERATIONS AND SUPPLIERS IDENTIFIED AS HAVING SIGNIFICANT RISK FOR INCIDENTS OF FORCED OR COMPULSORY LABOR, AND MEASURES TO CONTRIBUTE TO THE ELIMINATION OF ALL FORMS OF FORCED OR COMPULSORY LABOR

None of our operations are identified as having a significant risk for incidents of forced or compulsory labor.

The Novartis Code of Conduct, which specifies our position with regards to forced or compulsory labor, is included in the basic employment terms or contracts of associates. Novartis protects associates from unfair and unethical working conditions, including bonded, forced and child labor, and any unsafe working conditions.

Our Human Resources Principles Guideline outlines how the Novartis HR function supports the company's strategic goals, including a commitment to fair and respectful treatment of associates, and their development through HR processes, services and tools.

Novartis expects its suppliers to aspire to the standards defined in its Supplier Code. Whenever a supplier is identified with a potential labor right risk, the topic is discussed during an audit. If an issue surfaces, we address it by engaging with the supplier.

For more detail on our approach to managing human rights and why we think it is important, see our human rights position.

G4 HR 7

1,2

### PERCENTAGE OF SECURITY PERSONNEL TRAINED IN THE ORGANIZATION'S HUMAN RIGHTS POLICIES OR PROCEDURES THAT ARE RELEVANT TO OPERATIONS

According to our Code of Conduct, we strive to ensure that activities do not negatively impact fundamental human rights. 100% of Novartis investigators, operating under Novartis Business Services, are trained on the Code of Conduct. Site security personnel contracted through external service providers are currently not trained on the Code of Conduct.

For more detail on our approach to managing human rights and why we think it is important, see our human rights position.

G4 HR 8

1

### TOTAL NUMBER OF INCIDENTS OF VIOLATIONS INVOLVING RIGHTS OF INDIGENOUS PEOPLES AND ACTIONS TAKEN

Novartis uses natural sources for obtaining potential drugs or lead substances only in accordance with the UN Convention on Biological Diversity (CBD), the provision of the Nagoya protocol, and local regulations. Novartis accepts the CBD provision whereby countries maintain sovereignty over their genetic resources and may limit access to them, and supports sharing the benefits derived from future products in accordance with the principles of the CBD, while ensuring compliance with intellectual property law. To drive CBD implementation and promote sustainable society development in less developed countries, we transfer know-how and the latest technologies to local partners to help them build capacity, and we work closely with local authorities.

Read our position on biodiversity/bioprospecting.

G4 HR 9

1

### TOTAL NUMBER AND PERCENTAGE OF OPERATIONS THAT HAVE BEEN SUBJECT TO HUMAN RIGHTS REVIEWS OR IMPACT ASSESSMENTS

Human rights pertain to all aspects of our business, from research and development and clinical trials to marketing and the pricing of medicines. In addition to labor norms, which hold the same relevance for all companies, there are rights of particular significance to the healthcare sector, such as the right to health.

In addition to the Novartis Code of Conduct, we have developed guidelines on fair working conditions, human rights, business conduct and on third-party management that apply to all areas of our business.

We follow an integrated approach to managing human rights and have functional processes (including reviews) in place that aim to avoid human rights-related violations, such as:

— Responsible procurement: The Novartis Supplier Code defines the principles Novartis expects its suppliers to aspire to, including those related to labor rights. The code is based on the UN Global Compact and other international standards or accepted good practices.

— Clinical trials in developing countries: Practices in the developing world are frequently scrutinized to ensure they are not used to "escape" regulations or ethical standards in Europe or the US. Novartis acknowledges that the situation of clinical study participants in developing nations is more complex than of that in the developed world. Novartis strives for the highest possible protection of all study participants and is globally committed to a single set of core principles that governs all studies sponsored by Novartis. For more details, see our position on clinical trials in developing countries.

— Human resources: The Human Resource Principles Guideline outlines how the Novartis HR function supports the company's strategic goals, including a commitment to fair and respectful treatment of associates, and their development through HR processes, services and tools.

— Remediation: Our BPO provides a formal system for dealing with complaints of actual or suspected cases of misconduct, including those related to human rights. All complaints are investigated, and substantiated cases are escalated to management for appropriate action.

G4 HR 12

1

## NUMBER OF GRIEVANCES ABOUT HUMAN RIGHTS IMPACTS FILED, ADDRESSED, AND RESOLVED THROUGH FORMAL GRIEVANCE MECHANISMS

Novartis Group companies employ about 123 000 associates around the world. While we do not have a misconduct category called human rights, our misconduct category "employee relations" includes issues pertaining to human rights such as discrimination, harassment and inappropriate behavior, whereas our misconduct category "information protection" covers the protection of personal data. In addition, there is a category under "other" where any other non-covered issue would appear. In 2015, 608[1] allegations of misconduct related to human rights issues were reported. The BPO initiated investigations for 265 allegations in 2015. Of these 265 investigated allegations, the investigations of 205 allegations were completed by December 31, 2015; the rest are still pending. 58% of these investigated cases were substantiated, resulting in 50 dismissals or resignations and 42 written warnings.

For more detail on our approach to managing human rights and why we think it is important, see our human rights position.

[1] All numbers exclude the divested divisions.

**New framework for responsible buying of promotional items receives Novartis stamp of approval**

Novartis designed and successfully tested a new framework for sourcing promotional items (PIs) to reinforce our commitment to buy responsibly – which ultimately protects our patients, our people, our business and our reputation. This framework ensures that our PIs are produced only at factories that meet the standards in our Supplier Code, and that we improve our ability to manage risks beyond suppliers with whom we have a direct relationship. It devolves responsibility to our contracted suppliers to arrange and pay for audits to be conducted at selected factories, and to remediate any critical or major issues identified.

A young patient with malaria waits for treatment at the US Army Medical Research Unit in the Kombewa clinic in Kenya – known locally as the Walter Reed Project.

# Society

G4 SO 1

THE GLOBAL COMPACT 1

## PERCENTAGE OF OPERATIONS WITH IMPLEMENTED LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS AND DEVELOPMENT PROGRAMS

We are an integral part of the communities that host our operations, and we strive to contribute to their stability and prosperity. We engage with local communities where we have operations, and evaluate and assess relevant environmental impacts.

For instance, we have established four carbon-sink forestry projects in Argentina, Mali, China and Colombia. While supporting Novartis in meeting our emission-reduction target and improving our environmental performance, these forestry projects provide long term benefits to the environment and local communities. These benefits range from conserving or enhancing biodiversity to building capacity, and generating employment and local revenues. Ultimately, these projects help foster long term economic growth for local economies.

In Ethiopia, Sandoz collaborated with local authorities in East African countries to set up the first regional bioequivalence center, providing capital and technical support. The center ascertains the bioequivalence of generic drug products against those of the brand/innovator products as per the specifications of the World Health Organization. It provides laboratory and clinical research skills training to local communities, and helps strengthen health policy controls in the long term.

In 2015, Novartis launched Novartis Access, a portfolio of 15 medicines to treat the four main chronic diseases in low- and lower-middle-income countries: cardiovascular diseases, respiratory illnesses, cancer and diabetes. The portfolio is offered as a basket at the price of USD 1 per treatment per month. Novartis Access launched in Kenya in October 2015, and will soon launch in Ethiopia and Vietnam. We aim to partner with governments and NGOs to distribute these medicines on the ground and to raise awareness and strengthen healthcare system capabilities in key NCDs, including training on diagnosis and treatment. We believe the program can have a lasting impact for patients.

Novartis Bangladesh initiated the ASTHA (Achieving Sustainability Towards Healthcare Access) project in 2015, working with Swisscontact on implementation. ASTHA (meaning “reliance” or “trust” in Bengali) offers health education on disease prevention and treatment, and increases access to quality healthcare by training and working with community paramedics (CPs) in three disaster-prone areas of Bangladesh.

The project has three pillars:

- Referral system: CPs refer patients to qualified doctors to ensure treatment quality.
- Continuous education: Roundtable discussions and scientific seminars are held on the latest developments in therapeutic areas.
- Health camps: CPs and referral doctors provide primary healthcare services free of charge to underserved communities in health camps.

In 2015, 23 scientific seminars and 13 health camps were organized, serving 3 278 patients. An additional 58 information sessions were held, bringing health education to 28 945 people.

G4 SO 3

10

## TOTAL NUMBER AND PERCENTAGE OF OPERATIONS ASSESSED FOR RISKS RELATED TO CORRUPTION AND THE SIGNIFICANT RISKS IDENTIFIED

Our Code of Conduct clearly states our position on bribery and corruption. We do not tolerate any form of bribery or corruption. We do not bribe any public official or private person, and we do not accept any bribes. All operational reporting units (100%, approximately 350 units) undergo a financial risk assessment and have implemented the Novartis Financial Controls Manual requirements to ensure compliance with internal and relevant external financial standards and regulations. There are a number of significant risk areas and controls either directly or indirectly related to corruption, including proper segregation of duties, competitive bidding and supplier selection process, assurance on external service providers, Code of Conduct, marketing and promotional activities, anti-bribery, and relationships with third parties.

In 2014, Novartis introduced a mandatory formalized compliance risk assessment, covering professional practices and anti-bribery, for units across all divisions. The purpose of this is to help units identify, evaluate and mitigate key risks in the areas of professional practices and anti-bribery in a proactive manner and as an integral part of business decision-making. Units are required to report the outcome of this exercise to their regional or divisional functions annually.

In 2015, a self-assessment tool was launched to the general management population to increase awareness and accountability for anti-bribery and anti-corruption, and to enable them to assess and (when necessary) improve their local anti-bribery programs.

G4 SO 4

10

## COMMUNICATION AND TRAINING ON ANTI-CORRUPTION POLICIES AND PROCEDURES

In September 2015, we rolled out a new anti-bribery course to all functions in scope. As of December 31, 2015, 91 169 associates were invited to complete the course and 87 479 had completed it (96% course completion). This surpasses the March 2016 course target of 95%.

In 2015, 112 320 associates were invited to complete the Code of Conduct course[1] and 110 638 had completed it by December 31, 2015, including members of the Executive Committee of Novartis. This represents 99% of the invited population. 37 789 new associates were invited to complete the new hire e-training module (which includes a section on anti-bribery and corruption), and 35 769 (95%) had completed it by December, 31, 2015.

Face-to-face training was also carried out at a local level to specific risk groups; this was not reported centrally. Novartis does not currently report data on the number and percentage of governance body members and business partners receiving training on anti-corruption policies and procedures. Anti-bribery is also part of the Novartis Supplier Code.

[1] Containing anti-bribery topics

G4 SO 5

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## CONFIRMED INCIDENTS OF CORRUPTION AND ACTIONS TAKEN

We ensure that our standards of ethical business conduct are put into practice through an integrated approach to decision-making, a robust system for handling complaints, and ongoing monitoring and reporting procedures.

We support an open culture in which Novartis Group company associates can speak up and raise concerns. In 2005, we established the BPO to provide a formalized system for dealing with complaints and offering employees and external stakeholders a channel to report actual or suspected cases of misconduct, anonymously or not. Upon receipt of these messages, the BPO endeavors to respond within three working days. The BPO generally aims to turn around each case within six weeks.

We have also introduced integrity telephone lines in 115 countries, through which employees have the option of reporting allegations in 41 languages.

As part of our commitment to a “speaking up” culture, we respect confidentiality and actively monitor potential retaliation. The BPO assesses all complaints in terms of severity of the case. When misconduct is suspected, the case is assigned to an investigator, who establishes the facts and sends the findings back to the BPO. The BPO then reviews the entire case once again before a final report is sent to the relevant Business Head for review and action.

The business unit, usually involving Compliance, Legal and HR, then reviews the findings and recommends, if appropriate, remedial measures and/or disciplinary actions, including dismissal. However, before any action is taken, the BPO calibrates the recommendations for consistency of misconduct handling across the organization. In this way, fairness and transparency are guaranteed. The BPO also communicates the root causes and lessons learned to the business and key stakeholders in the organization, in order to prevent similar issues from arising elsewhere in the future.

We believe the above program is key to deterring and preventing misconduct, and provides associates with the confidence that action is taken when cases are found to be substantiated.

The BPO investigated 1 299 cases with a total of 1 633 allegations[1,2] in 2015, with 755 allegations substantiated by year-end. Of these investigated allegations, 39% pertained to fraud, 23% to professional practices and 6% to conflict of interest. "Corruption" cases can be found across these three categories.

Novartis does not currently report data on the nature of confirmed incidents of corruption, or on the termination or non-renewal of contracts with business partners due to violations related to corruption. We will evaluate the feasibility of reporting this data in the future.

Please refer to the ethics, governance and compliance section of the Novartis website for further details.

[1] One case can fall under several categories, so the total is greater than 100% and category figures total more than the stated number of cases. Investigation reports are received on an ongoing basis, which potentially leads to a reassessment of the allegation category and related figures.
[2] Reporting has changed from assessing cases to assessing allegations. Because one case can have more than one allegation, the assessment per allegation is higher than the previously reported assessment per case. Furthermore, numbers are based on the date a misconduct case is reported, whereas previously they were based on the date a misconduct case was assigned for investigation. 2014 data have been restated following the new methodology.

G4 SO 6

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## TOTAL VALUE OF POLITICAL CONTRIBUTIONS BY COUNTRY AND RECIPIENT/BENEFICIARY

Novartis makes political contributions to support political dialogue on public policy issues of relevance to Novartis, such as outcomes-based healthcare systems, healthcare innovation or access to medicines.

Political contributions made by Novartis are not intended to give rise to any obligations from the party receiving it. Moreover, rules and procedures are in place to make sure that political contributions are never made with the expectation of a direct or immediate return for Novartis, and that they are fully compliant with applicable laws, regulations and industry codes.

Novartis only makes political contributions in countries where such contributions by corporations are legal and generally considered appropriate. In Switzerland, Novartis supports political parties that have a political agenda and hold positions that support the strategic interests of Novartis, its shareholders and other stakeholders.

In 2015, Novartis made financial political contributions totaling approximately USD 1.13 million, thereof approximately USD 680 000 in Switzerland, USD 235 000 in the US (to non-federal candidates), USD 150 000 in Japan, USD 45 000 in Australia, USD 11 000 in Canada, and USD 8 000 in the UK.

In addition, in the US, a Political Action Committee (PAC) established by Novartis used funds received from Novartis employees (but not from the company) to make political contributions to US federal and state candidates totaling USD 283 000.
An up-to-date overview of the PAC disbursements/beneficiaries can be found at: www.fec.gov.

No in-kind contributions were identified, except that Novartis sometimes provided modest food and beverages when hosting political delegates at Novartis premises. Novartis currently does not report political contributions by specific recipients, except in the US where reporting is required by law.

Furthermore, Novartis Group companies contributed USD 42.9 million to various major international, regional and country trade associations in 2015.[1] The trade associations funding is reported separately since it does not correspond to political contributions.

For more information on responsible lobbying, see the public policy and advocacy section of the Novartis website. For a detailed list of our public affairs 2015 targets and results, see the targets and results page of the Novartis website.

[1] Compared to the 2014 figure of USD 26 million, the 2015 figure is higher since it newly includes funding provided to trade associations in major countries.
Please note that the USD 26 million for 2014 is a restated figure reflecting continuing operations, i.e. contributions by Novartis Corporate, Pharmaceuticals, Alcon and Sandoz only (excluding contributions by the divested divisions). The figure reported originally for 2014 was USD 27 million.
The restated figure for 2013 is USD 22.3 million (vs. USD 23.5 million reported originally).

G4
SO
11

## NUMBER OF GRIEVANCES ABOUT IMPACTS ON SOCIETY FILED, ADDRESSED AND RESOLVED THROUGH FORMAL GRIEVANCE MECHANISMS

In 2015, 3 325 complaints of alleged misconduct with a total of 3 761 allegations[1] were made. These fall under eight categories:

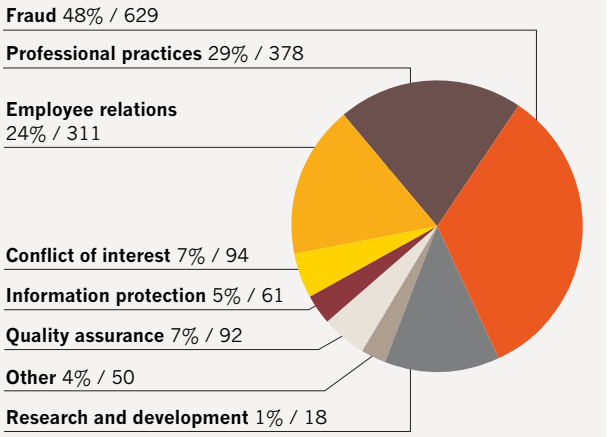
- Employee relations
- Fraud
- Professional practices/bribery
- Conflict of interest
- Information protection
- Quality assurance
- Research and development
- Other

All 3 325 complaints (3 761 allegations)[2] were investigated or addressed and resolved.

- 2 026 complaints (2 128 allegations) that were not related to misconduct were delegated to local management for review and action outside of the BPO investigative process.
- 1 299 investigations were initiated by the BPO, the investigations of 1 202 allegations were completed by December 31, 2015, and the rest are still pending. Of these investigated allegations, 63% were substantiated across all misconduct categories. These led to 343 dismissals or resignations and 198 written warnings.

### CASES INVESTIGATED THROUGH BPO PROCESS

(%, by type of violations)




[1] One case can fall under several categories, so the total is greater than 100% and category figures total more than the stated number of cases. Investigation reports are received on an ongoing basis, which potentially leads to a reassessment of the allegation category and related figures.

[2] Reporting has changed from assessing cases to assessing allegations. Because one case can have more than one allegation, the assessment per allegation is higher than the previously reported assessment per case. Furthermore, numbers are based on the date a misconduct case is reported, whereas previously they were based on the date a misconduct case was assigned for investigation. 2014 data have been restated following the new methodology.

The medical team, including deputy project coordinator Dr. Kamrun Nahar (left), examines X-rays at the Kamalpur clinic.

# Product responsibility

G4 PR 1

**PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES FOR WHICH HEALTH AND SAFETY IMPACTS ARE ASSESSED FOR IMPROVEMENT**

As a core part of its business, Novartis Pharmaceuticals has put processes in place for the continuous and systematic review of the benefit-risk profile of all products in its portfolio, including those that are on the market as well as those that are still in development. These processes are designed to ensure the best possible safety and therapeutic benefit for patients.

Two key sources of safety data are premarketing clinical trial data and post-marketing pharmacovigilance activities. Clinical trials are well-controlled studies seeking to answer questions about the safety and therapeutic benefit of a drug in a specific patient population. Together with preclinical safety data, the adverse events collected in these studies provide critical information for characterizing the safety profile of a drug. These safety data are closely scrutinized both internally and by regulators when assessing whether the benefits of a drug are expected to outweigh the potential risks, which is a prerequisite for gaining marketing approval. Post-marketing pharmacovigilance activities play an important role in our ability to gain a deeper understanding of the safety profile of a specific product once that product is approved for marketing and becomes available to a wider number of patients. With increasing frequency, we conduct specific studies after regulatory approval to address safety questions that could not be conclusively answered in pre-approval trials, and diligently collect the adverse events from these studies. In addition, in each country, qualified Novartis personnel are responsible for reporting and tracking adverse events for all of our products, investigating their causes, and communicating that information to the appropriate internal and external recipients in a timely manner.

The routine, continuous monitoring of the benefit-risk profile of each compound in the Novartis Pharmaceuticals portfolio based on all the safety data collected is the primary responsibility of cross-functional safety management teams (SMT) under the leadership of a dedicated safety physician. This process is supported by an internal data mining tool that screens all data in our safety database. We require the safety data of each marketed product to be reviewed at least annually by the Signal Detection Board (SigDet) which is a functional board chaired by the Chief Safety Officer (CSO). Any changes in the safety profile must be reviewed and confirmed by this board on an ad-hoc basis or during a regularly-scheduled review. Confirmed changes in the safety profile of any marketed product are then incorporated in the product label, which is reviewed and approved by the cross-functional Global Labeling Committee (GLC).

The Novartis safety risk management process begins early in the development of new products. The SMTs develop safety monitoring and risk management plans for each product when it enters development. These plans are regularly updated as new safety information for a product becomes available. They are reviewed and approved by the Medical Safety Review Board (MSRB), which is chaired by the CSO and consists of senior-level experts in drug safety, safety operations, clinical research, biostatistics, epidemiology, legal affairs and preclinical. This board ensures that all relevant safety risks have been identified, that they are being appropriately managed, and that risk minimization measures are in place whenever possible to ensure the best possible patient safety for as long as the product remains on the market.

Significant safety and product-related risk issues identified by the SigDet, MSRB or GLC can be escalated to the Portfolio Stewardship Board (PSB). In Novartis Pharmaceuticals, the PSB ensures the continuous, systematic, proactive and timely identification of product-related safety risks, including risks to the company's reputation or legal position. It also drives the performance of benefit-risk assessments, the development of appropriate risk mitigation measures, and the monitoring of their implementation. The PSB is a standing, cross-functional senior executive board that is chaired by the Chief Medical Officer and reports to senior management in the Pharmaceuticals Division. Its recommendations are made independently of project teams and business franchises with the intent to put patient safety first.

G4 PR 3

### TYPE OF PRODUCT AND SERVICE INFORMATION REQUIRED BY THE ORGANIZATION'S PROCEDURES FOR PRODUCT AND SERVICE INFORMATION AND LABELING, AND PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES SUBJECT TO SUCH INFORMATION REQUIREMENTS

Product information on pharmaceutical products is heavily regulated in each market and takes into account national medical practice, regulations and the decisions of the competent health authorities. This applies to all pharmaceutical (patented or generic) products.

As required by law, labels of pharmaceutical products provide important safety and efficacy information as well as dosing and administration instructions. Novartis strives to ensure that information on a product that is known or believed to be supported by reasonable scientific proof – including information related to safety such as contraindications, warnings and precautions, drug-drug interactions, adverse drug reactions and preclinical safety data – is included as part of the local product information where the product is registered, and is updated or amended when appropriate.

G4 PR 4

### TOTAL NUMBER OF INCIDENTS OF NONCOMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING PRODUCT AND SERVICE INFORMATION AND LABELING, BY TYPE OF OUTCOMES

Novartis does not currently report the number of incidences of noncompliance with regulations and voluntary codes concerning product and service information and labeling. We will evaluate the feasibility of collecting this information in the future.

G4 PR 5

### RESULTS OF SURVEYS MEASURING CUSTOMER SATISFACTION

Surveys measuring customer satisfaction are conducted on a divisional level as they pertain to specific business areas (e.g., pharmaceutical products, generic medicines, eye care products).

Novartis does not aggregate results from such surveys at a Group level. Further, this information is not disclosed for confidentiality reasons.

In 2015, we surveyed 1 230 stakeholders including physicians, the general public, and future talent. We measured perceptions of Novartis and the pharmaceutical industry. We also tracked the likelihood of stakeholders engaging with Novartis and the industry in the future.

G4 PR 6

### SALE OF BANNED OR DISPUTED PRODUCTS

Novartis does not sell any products that are banned in a particular market. All Novartis products comply with drug regulatory and safety requirements.

Yet, we are aware that certain practices inherent to research, and development activities, such as animal research can cause sensitivities and be a matter of public interest. We also recognize that scientific advances, such as stem cell research and organ transplantation, can raise ethical challenges and concerns.

Read Novartis positions here.

G4 PR 7

### TOTAL NUMBER OF INCIDENTS OF NONCOMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING MARKETING COMMUNICATIONS, INCLUDING ADVERTISING, PROMOTION AND SPONSORSHIP, BY TYPE OF OUTCOMES

In 2015, 765[1] allegations of misconduct related to professional practices, including both compliance with our company's own marketing codes and compliance with industry codes and regulations, were reported. The BPO initiated investigations for 378 allegations in 2015; the investigations of 278 allegations were completed by December 31, 2015, and the rest are still pending. Of these investigated cases, 62% were substantiated. These led to 69 dismissals or resignations and 77 written warnings.

[1] All numbers exclude the divested divisions.

G4 PR 8

## TOTAL NUMBER OF SUBSTANTIATED COMPLAINTS REGARDING BREACHES OF CUSTOMER PRIVACY AND LOSSES OF CUSTOMER DATA

Everyone expects their personal information to remain confidential. This includes anything that can identify them – name, work and home address, family information, employment and financial details, and more sensitive health information. We strongly condemn the disclosure of any information that could lead to any form of discrimination, as well as the use of identifiable genetic data without informed consent.

We adhere to all privacy laws and enforce clear policies on protecting personal information, including genetic data. Our data privacy program includes a global organization and infrastructure as well as procedures and trainings to support local activities and ensure compliance.

The Novartis Binding Corporate Rules are a system of principles, rules and tools to ensure effective levels of data protection, in particular relating to transfers of personal information outside Europe.

In 2015, Novartis had no substantiated complaints regarding breaches of customer privacy or the loss of customer data.

# NOVARTIS AND THE UNITED NATIONS GLOBAL COMPACT


Source: United Nations Global Compact

**IMPLEMENTING THE 10 PRINCIPLES INTO STRATEGIES AND OPERATIONS**

This report forms our UN Global Compact (UNGC) Communication on Progress (COP). We report against Global Reporting Initiative indicators relevant to each of the 10 UNGC principles, outlining our commitments and policies, management and monitoring systems, projects and activities, results and targets. See our content index for details on how the report content maps against the UNGC principles.

Corporate responsibility (CR) is endorsed and ingrained at the highest level in Novartis. We work to embed our approach to CR across the organization, including through our CR Guideline (reflecting the 10 principles of the UNGC). See our governance structure on p.30.

Our Novartis Supplier Code sets out the CR requirements we expect our suppliers to meet. We promote the societal and environmental values of the UNGC to our suppliers and use our influence where possible to encourage their adoption.

## TAKING ACTION IN SUPPORT OF BROADER UN GOALS AND ISSUES

**1. Core business contribution to UN goals and issues**
Through our core business, we have focused our CR contributions on the health-related Millennium Development Goals (MDGs) by researching and developing medicines for neglected diseases, improving access to healthcare, and building capacity to strengthen healthcare systems around the world.

Our commitment remains unchanged toward the new Sustainable Development Goals (SDGs) agenda, and testimony to this was the launch in September 2015 of Novartis Access, a new social business program to support further access to our medicines in low- and lower-middle-income countries. Novartis Access offers a portfolio of 15 on- and off-patent Novartis medicines addressing four key noncommunicable diseases: cardiovascular diseases, diabetes, respiratory illnesses, and breast cancer.

**2. Strategic social investments and philanthropy**
Beyond our core business, for the past 15 years, the Novartis Foundation has also supported on-the-ground projects in developing countries that have helped to make progress on the MDGs by improving access to healthcare, strengthening human resources for health, and empowering vulnerable groups such as children and leprosy patients.

**3. Advocacy and public policy engagement**
Novartis contributes to the international CR and sustainability debate. We participate in key UN summits and conferences, and are actively engaged with CR stakeholders within and beyond the UN system. We bring experts together from private, public, civil and academic organizations to share ideas and best practices, and catalyze new thinking. For instance, during the UN Sustainable Development Summit in September 2015 in New York, we hosted a dialogue on how Novartis can help address the growing health needs of populations across the world, in line with the new SDGs. Called “Wellbeing for all: Innovation for Society’s Biggest Health Challenges,” the event discussed the role of public-private partnerships in the new SDGs.

**4. Partnerships and collective action**
Our ongoing alliances and collaborations with public and private organizations worldwide are vital to advancing access to medicines and healthcare delivery to patients. We work with a range of organizations to improve access to healthcare.

Read more about our approach to access to healthcare.

## ENGAGING WITH THE UNGC

**1. Local networks and subsidiary engagements**
Novartis supports local UNGC networks. As our company is headquartered in Switzerland, Novartis is a member of the UNGC Network Switzerland.

Novartis subsidiaries are free to join their local UNGC network (there is no “headquarters only” policy). Novartis subsidiaries in some countries also publish a UNGC COP report.

**2. Global and local working groups**
Juergen Brokatzky-Geiger, Novartis Global Head, Corporate Responsibility, is a member of the UNGC LEAD Steering Committee and the co-chair of the Roadmap for Integrated Sustainability project. Novartis also has representatives participating in two other projects: Post-2015 Development Agenda, and Shaping the Future Business Leader.

**3. Issue-based and sector initiatives**

Novartis Group companies are members of various chambers of commerce, sustainability industry associations, and pharmaceutical industry associations. We also participate in sector initiatives such as the Pharmaceutical Supply Chain Initiative to promote high ethical standards in the supply chain, and the Pharmaceutical Security Institute to combat counterfeit medicines. Novartis has signed the BSR Guiding Principles on Access to Healthcare.

Further, Novartis contributed to the United Nations Development Program foundational report on The Role of the Private Sector in Inclusive Development.

**4. Promotion and support of the UNGC**

Juergen Brokatzky-Geiger is a member of the UNGC LEAD Steering Committee and co-chairs one of the project teams.

# Independent Assurance Report on the Novartis 2015 Corporate Responsibility Reporting

**TO THE BOARD OF DIRECTORS OF NOVARTIS AG, BASEL**

**Independent Assurance Report on the Novartis Corporate Responsibility Reporting**

We have been engaged to perform assurance procedures to provide limited assurance on the following aspects of the 2015 Corporate Responsibility (CR) reporting of Novartis AG and its consolidated subsidiaries (Novartis Group) included in the CR Performance Report 2015.

**Scope and Subject matter**

Our limited assurance engagement focused on the following data and information disclosed in the consolidated CR reporting of Novartis Group for the year ended December 31, 2015:

- The Social and Environmental key figures on pages p.6 and 7.
- The materiality determination and stakeholder engagement process of Novartis at Group level according to the requirements of the GRI G4 guidelines and disclosed on pages 11 and 34 to 43.
- Reporting processes and related controls in relation to data aggregation of CR indicators.

**Criteria**

The management reporting processes with respect to the CR reporting and CR indicators were assessed against GRI G4 guidelines and Novartis Group internal policies and procedures, as set forth in the following:

- Guideline on Corporate Responsibility Management at Novartis and the Code of Conduct.
- Procedures, by which the data for the CR indicators reporting is gathered, collected and aggregated internally.

The accuracy and completeness of CR indicators are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Our Assurance Report should therefore be read in connection with Novartis Group guidelines, definitions and procedures on CR reporting.

**Responsibilities and Methodology**

The Board of Directors of Novartis AG is responsible for both the subject matter and the criteria as well as for selection, preparation and presentation of the selected information in accordance with the criteria. Our responsibility is to form an independent opinion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the CR indicators are not stated, in all material respects, in accordance with the reporting criteria.

We planned and performed our procedures in accordance with the International Standard on Assurance Engagements (ISAE) 3 000 (revised) 'Assurance engagements other than audits or reviews of historical financial information'. This standard requires that we plan and perform the assurance engagement to obtain limited assurance on the identified CR indicators.
A limited assurance engagement under ISAE 3 000 (revised) is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement and therefore less assurance is obtained with a limited assurance engagement than for a reasonable assurance engagement.

**Our Independence and Quality Control**

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.
Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements

**Summary of Work performed**

Our assurance procedures included the following:

- **Evaluation of the application of Group guidelines**
  Reviewing application of the Novartis Group internal CR reporting guidelines.
- **Management inquiry**
  Interviewing personnel responsible for internal reporting and data collection at Group, Divisional and local level.
- **Assessment of key figures**
  Performing tests on a sample basis of evidence supporting selected HSE data concerning completeness, accuracy, adequacy and consistency.
- **Inspection of documentation and analysis of relevant policies and principles**
  Inspecting relevant documentation on a sample basis, including Group CR policies, management reporting structures and documentation.
- **Assessment of the processes and data consolidation**
  Reviewing the management reporting processes for CR reporting and assessing the consolidation process of data at Group level and their related controls.

We have not carried out any work on data other than outlined in the scope and subject matter section as defined above. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusions.

**Limited assurance conclusion**

Based on our work described in this report nothing has come to our attention causing us to believe that in all material respects that:

- The CR indicators outlined in the scope and subject matter section and disclosed in the 2015 CR reporting of Novartis Group are not stated in accordance with Novartis Group internal policies and procedures
- The materiality determination and stakeholder engagement process of Novartis does not adhere to the principles and guiding factors defined with GRI G4
- The reporting processes and related controls in relation to data aggregation of CR indicators are not functioning as designed

pwc

PricewaterhouseCoopers AG

**Bruno Rossi** **Raphael Rutishauser**

Basel, January 26, 2016