Corporate Responsibility Performance Report

2013

NOVARTIS

Joseph Jimenez
Chief Executive Officer

Juergen Brokatzky-Geiger
Global Head of Corporate Responsibility

Welcome

We are pleased to share our 2013 Corporate Responsibility (CR) Performance Report, which consolidates the company's CR reporting, details our progress and demonstrates our commitment to be a leader in CR.

Our CR work is embedded in our business strategy, which is to use science-based innovation to improve patient health around the world, so people can live longer, healthier lives. In 2013, our medicines reached 1.2 billion people around the world. But the world is home to more than 7 billion people – all of whom have healthcare needs.

To help address that challenge, we focus our CR work in two key areas: expanding access to healthcare and doing business responsibly. We work to develop innovative products for underserved patients, to pioneer new social business approaches in low- and middle-income communities, to drive environmental sustainability and to operate to high ethical standards.

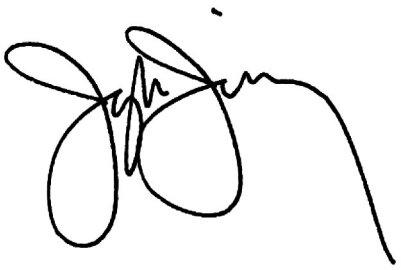
We are proud of our progress in 2013 to help improve access to medicine. Last year we delivered more than 75 million antimalarial treatments to endemic countries without profit. We discovered a potential new class of antimalarial drug which, if compounds in that class are successfully developed, may prevent, treat and block the spread of malaria. We joined Malaria No More's Power of One campaign, committing to donate up to 1 million pediatric antimalarial treatments each year through 2015. During 2013, the Novartis Foundation for Sustainable Development worked with leprosy experts to develop a new strategy to eliminate the disease. We further scaled our Social Venture programs in Africa and Asia to make medicines affordable to rural communities. In an effort to bring more medicines to more people, we also recently established a dedicated Access to Medicine Committee made up of senior business representatives.

Of course, none of our actions would be effective without ensuring trust among our stakeholders. Our industry is under intense scrutiny globally and we understand and respect the need for greater transparency and for further strengthening our ethical business practices. We proactively address compliance by working to ensure 100% of our associates learn and are certified on the Novartis Code of Conduct. We provide extensive training to all our associates to ensure they know, and comply with, all applicable regulations. Still, being proactive is not enough. We have to endeavor to go beyond laws and regulations to fulfill our aspiration to be a leader with integrity. We know there may be pockets of bad behavior in a business such as ours with over 135 000 associates, and we must take swift action when this occurs. In Japan, we reacted quickly to conflict of interest allegations in our operations in 2013. When concerns about non-compliant behavior in the broader pharmaceutical industry arose in China, we enhanced our compliance programs in our Chinese business.

In 2013, we made a number of changes to ensure more oversight of our CR work. Novartis expanded the mandate of one of the Board of Directors committees to oversee CR strategy and governance at the highest levels of the company. Juergen Brokatzky-Geiger, a senior Novartis executive, was named to a newly created role as Global Head of Corporate Responsibility and Ann Aerts, a public health expert, was named as the new head of the Novartis Foundation.

This is an exciting time for Novartis. We are transforming our portfolio to focus on our leading businesses in pharmaceuticals, eye care and generics. These changes are expected to create new opportunities for growth, and we recognize that achieving our business goals requires that we operate with high integrity and transparency.

We look forward to hearing your feedback.



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Chief Executive Officer

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Highlights in 2013

Expanding access to healthcare

- Provided medicine to more than 100 million patients and health education, infrastructure development and other programs to another 8.1 million people worldwide
- Expanded Social Ventures programs in Kenya and Vietnam, covering a population of 1.4 million and 1.2 million respectively
- Developed affordable vaccines for typhoid and paratyphoid A fevers, through the Novartis Vaccines Institute for Global Health
- Joined Malaria No More's Power of One campaign and committed to donate up to 3 million pediatric antimalarial treatments through 2015
- Recognized through several industry awards for our Social Ventures, including: GBCHealth Business Action on Health, Ethics in Business Award for "Outstanding Corporation" by World Forum for Ethics in Business, Scrip Award for "Best Advance in an Emerging Market," and "Responsible CEO of the Year" by CR Magazine
- Worked with leading leprosy experts through the Novartis Foundation for Sustainable Development to develop a new strategy to help eliminate leprosy

Doing business responsibly

- Completed a best-in-class materiality assessment – based on surveys and interviews with approximately 100 internal and external stakeholders
- Launched Responsible Procurement, a new integrated approach to ethical issues in our supply chain including labor rights, health, safety and environment, animal welfare, and anti-bribery
- Included in the Dow Jones Sustainability World Index as one of only six healthcare companies
- Recognized among the 25 best multinational employers by Great Place to Work® Institute based on workplace culture
- Established our new "Governance, Nomination and Corporate Responsibility Committee" in January 2014 to oversee corporate responsibility strategy and governance and key reputational issues
- Included in the new UN 100 Index as one of the best-performing companies regarding adherence to the Global Compact's 10 principles
- Saved 2.65 million gigajoules and USD 68 million through energy projects, achieving the 2015 target two years ahead of time
- Reduced total greenhouse gas (GHG) emissions by 13.7% in 2013 compared with 2008, 96 kt or 5.4% of which was achieved through carbon-offset projects
- Reduced the Total Recordable Case Rate (TRCR) for occupational injuries and illnesses and Lost Time Injury and Illness Rate (LTIR) by 6.8% and 14% respectively, compared to 2012

About this report

G4 SD **General standard disclosures**

G4 EC **Economic**

G4 EN **Environment**

G4 LA **Social: Labor practices and decent work**

G4 HR **Social: Human rights**

G4 SO **Social: Society**

G4 PR **Social: Product responsibility**

United Nations Global Compact

We report our CR performance following the GRI guidelines (G4) 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.

We are committed to transparent reporting, a central part of our commitment to corporate responsibility (CR). We have been reporting on our CR performance since 2000 through our Annual Report and several online and printed materials.

This 2013 CR Performance Report consolidates information previously published in our separate Global Reporting Initiative (GRI), Health, Safety and Environment (HSE) and United Nations Global Compact (UNGC) reports.

We have structured our report content in accordance with the GRI G4 guidelines, with disclosure at Core application level. We also report a number of additional indicators beyond the requirements for Core level.

The GRI Index provides links to content within this report. Where relevant, content from our 2013 HSE Report and our 2013 Annual Report is also referenced or included. We will no longer publish a separate HSE report.

As a LEAD participant and a signatory to the UNGC, this report also fulfills our commitment to producing a UNGC Communication on Progress (COP) – a public disclosure outlining our progress in implementing the 10 principles of the UNGC, and in supporting broader UN development goals. We will not publish a separate UNGC COP in the future.

Our response to GRI indicators G4–28 to 33 provides more detail on our report profile.

The content of this report has been defined by our CR materiality assessment completed in 2013. You can read more about the assessment and how it maps to G4 Aspects and indicators in our response to GRI indicators G4–18 to 21.

Some of our most significant issues are unique to the healthcare sector, and a number of these are not directly covered by the scope of the GRI G4 framework. These topics are referenced in relevant places throughout the report, with a fuller discussion appearing in the Additional topics section:

- Access to healthcare
- Responsible marketing and advertising
- Human rights
- Patient focus
- Pharmaceuticals in the environment
- Product quality
- Research and development
- Responsible clinical trials
- Transparency and communication

In addition to this report, we also publish three specific sustainability reports relating to the CDP Investor Information Request Response, CDP Water Information Request Response and Conflict Minerals.

Learn more about our CR activities: www.novartis.com/corporate-responsibility

See our CR reports: www.novartis.com/corporate-responsibility/metrics-and-reporting

Receive the Novartis CR e-newsletter via e-mail

Send us your feedback: corporate.responsibility@novartis.com

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 (GRI) 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 G4–20 and G4–21 for details of how the report contents 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 Policy on Corporate Citizenship (reflecting the 10 principles of the UNGC). See G4–34: Governance structure of the organization.

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 businesses, we focus our CR contributions on the health-related Millennium Development Goals (MDGs).

2. Strategic social investments and philanthropy
Beyond our core business, the Novartis Foundation for Sustainable Development (NFSD) supports projects in developing countries primarily focused on the achievement of the MDGs, particularly in relation to health.

3. Advocacy and public policy engagement
Novartis contributes to the international CR and sustainability debates. We participate in key UN summits and conferences and are actively engaged with CR stakeholders within and beyond the UN system.

4. Partnerships and collective action
Our ongoing alliances and collaborations with public and private organizations worldwide are vital to advancing access to medicine 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
Michael Fuerst, Senior Manager, Novartis Corporate Responsibility Strategy and Innovation, is a member of the Board of the UNGC Swiss Network.

Novartis supports local UNGC networks. Novartis subsidiaries are free to join their local UNGC network (there is no “headquarters only” policy). Novartis subsidiaries in some countries also publish UNGC COP reports (Argentina, Colombia and Mexico, for instance).

2. Global and local working groups
Juergen Brokatzky-Geiger, Novartis Global Head of Corporate Responsibility, is a member of the UNGC LEAD Steering Committee. Charlie Hough, Novartis Global Head of Corporate Responsibility Strategy and Stakeholder Engagement, is a member of the LEAD Social Enterprise working group.

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. In addition, Novartis is one of the companies leading an initiative on measuring impacts of social business initiatives.

4. Promotion and support of the UNGC
Juergen Brokatzky-Geiger, Novartis Global Head of Corporate Responsibility, is a member of the UNGC LEAD Steering Committee.

G4 Index

G4
SD

General standard disclosures

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Organizational profile				
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G4–4	Primary brands, products and services ▶			17
G4–5	Location of the organization's headquarters ▶			18
G4–6	Countries of operation ▶			18
G4–7	Nature of ownership and legal form ▶			18
G4–8	Markets served ▶			19
G4–9	Scale of the organization ▶			19
G4–10	Number of employees ▶	**6**		20
G4–11	Employees covered by collective bargaining agreements ▶	**3**		20
G4–12	Organization's supply chain ▶	**3, 4, 5, 6, 8, 10**		20
G4–13	Significant changes to the organization's size, structure, ownership, or its supply chain ▶			23
G4–14	Precautionary approach ▶	**7**		24
G4–15	Economic, environmental and social charters, principles, or other initiatives ▶	**1, 8**		24
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Identified material Aspects and Boundaries				
G4–17	Entities included in the organization's consolidated financial statements or equivalent documents ▶			25
G4–18	Process for defining the report content and the Aspect Boundaries ▶			25
G4–19	Material Aspects identified in the process for defining report content ▶			26
G4–20	Aspect Boundary within the organization ▶			29
G4–21	Aspect Boundary outside the organization ▶			29
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Stakeholder engagement				
G4–24	Stakeholder groups engaged by the organization ▶			32
G4–25	Basis for identification and selection of stakeholders with whom to engage ▶			33
G4–26	Approach to stakeholder engagement ▶			33
G4–27	Key topics and concerns raised through stakeholder engagement ▶			34
	Additional topic: Transparency and communication ▶			104

G4 SD

General standard disclosures continued

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
Report profile				
G4–28	Reporting period ▶			35
G4–29	Date of most recent previous report ▶			35
G4–30	Reporting cycle ▶			35
G4–31	Contact point for questions regarding the report or its contents ▶			35
G4–32	'In accordance' option, Index and External Assurance ▶		This report is in accordance with G4 to CORE level	36
G4–33	External assurance policy ▶			36
Governance				
G4–34	Governance structure of the organization ▶			36
G4–38	Composition of the highest governance body and its committees ▶			37
Ethics and integrity				
G4–56	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics ▶	**1, 2, 3, 4, 5, 6, 8, 10**		39

G4 EC

Specific standard disclosures

Economic

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
Economic performance				
G4–EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change ▶	**7, 8, 9**		40
G4–EC4	Financial assistance received from government ▶			41
Market prescence				
G4–EC5	Ratios of standard entry-level wage by gender compared to local minimum wage at significant locations of operation ▶	**6**	Data not split by gender – see full response for detail	42
Indirect economic impacts				
G4–EC8	Significant indirect economic impacts, including the extent of impacts ▶			42
	Additional topic: Access to healthcare ▶	**1**		89
Procurement practices				
G4–EC9	Proportion of spending on local suppliers at significant locations of operation ▶	**6**	Data split by net sales rather than procurement budget – see full response for detail	44

G4
EN

Environment

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
Materials				
G4–EN1	Materials used by weight or volume ▶	**7, 8**	Detail not provided on specific material types, sources and percentage of renewable content – see full response for detail	44
Energy				
G4–EN3	Energy consumption within the organization ▶	**8, 9**		45
G4–EN6	Reduction of energy consumption ▶	**7, 8, 9**		46
Water				
G4–EN8	Total water withdrawal by source ▶	**7, 8**		48
G4–EN9	Water sources significantly affected by withdrawal of water ▶	**7, 8, 9**		48
G4–EN10	Percentage and total volume of water recycled and reused ▶	**7, 8, 9**		49
Emissions				
G4–EN15	Direct greenhouse gas (GHG) emissions (Scope 1) ▶	**7, 8**	Biogenic emissions not reported – see full response for detail	50
G4–EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2) ▶	**7, 8**		51
G4–EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3) ▶	**7, 8**		52
G4–EN19	Reduction of greenhouse gas (GHG) emissions ▶	**7, 8, 9**		52
G4–EN20	Emissions of ozone-depleting substances (ODS) ▶	**7, 8, 9**	Total inventory provided rather than imports and exports	54
G4–EN21	NOx, SOx, and other significant air emissions ▶	**7, 8, 9**		54
Effluents and waste				
G4–EN22	Total water discharge by quality and destination ▶	**7, 8, 9**		56
G4–EN23	Total weight of waste by type and disposal method ▶	**7, 8**		57
G4–EN24	Total number and volume of significant spills ▶	**8, 9**		59
Products and services				
G4–EN27	Extent of impact mitigation of environmental impacts of products and services ▶	**7, 8, 9**		59
	Additional topic: Pharmaceuticals in the environment ▶	**7, 8, 9**		97
Compliance				
G4–EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations ▶	**7, 8**	Non-monetary sanctions and cases brought through dispute resolution mechanisms not reported – see full response for detail	60
Transport				
G4–EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce ▶	**8, 9**		60
Overall				
G4–EN31	Total environmental protection expenditures and investments by type ▶	**7, 8, 9**		61

Environment continued

G4 EN

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
Supplier environmental assessment				
G4–EN32	Percentage of new suppliers that were screened using environmental criteria ▶	**7, 8, 9**	Absolute number provided rather than % – see full response for detail	61
Environmental grievance mechanisms				
G4–EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms ▶	**8**		62

G4 LA

Social: Labor practices and decent work

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	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**		62
G4–LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation ▶	**6**		63
Labor/management relations				
G4–LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements ▶	**3**		64
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	64
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	64
G4–LA7	Workers with high incidence or high risk of diseases related to their occupation ▶			69
G4–LA8	Health and safety topics covered in formal agreements with trade unions ▶			70
Training and education				
G4–LA9	Average hours of training per year per employee by gender, and by employee category ▶	**6**	Figure for average hours not reported – see full response for detail	70
G4–LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings ▶			71
G4–LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category ▶	**6**		71
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**	Data on minority groups not reported due to lack of standard or global definitions	72

Social: Labor practices and decent work continued

G4 LA

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
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**		73
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	74
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	74

G4 HR

Social: Human rights

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
	Additional topic: Human rights policy and living wage ▶	**1, 2**		94
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	75
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, 2**		75
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**		76
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**		77
Security practices				
G4–HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations ▶	**1, 2**		78
Indigenous rights				
G4–HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken ▶	**1**		78

Social: Human rights continued

G4 HR

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
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	79
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

G4 SO

Social: Society

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
	Additional topic: Research and development ▶	1, 2, 7, 8		100
	Additional topic: Responsible clinical trials ▶	1		103
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
	Additional topic: Patient focus ▶			95
Anti-corruption				
G4–SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified ▶	10		82
G4–SO4	Communication and training on anti-corruption policies and procedures ▶	10	Figures for training of governance body members and business partners not reported	82
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	83
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	84
Anti-competitive behavior				
G4–SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes ▶			85

Social: Society continued

G4 SO

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	UNGC PRINCIPLE	NOTES	PAGE
Compliance				
G4–SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations ▶		Non-monetary sanctions and cases brought through dispute resolution mechanisms not reported – see full response for detail	85
Supplier assessment for impacts on society				
G4–SO9	Percentage of new suppliers that were screened using criteria for impacts on society ▶		No % provided – see indicator for detail	85
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	86

G4 PR

Social: Product responsibility

REF.	DESCRIPTION [LINK TO SECTION OF REPORT ▶]	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	86
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	87
	Additional topic: Product quality ▶			98
Marketing communications				
G4–PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes ▶		Data not split by type of non-compliance – see full response for detail	88
	Additional topic: Responsible marketing and advertising ▶	**10**		92
Customer privacy				
G4–PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data ▶			88
Compliance				
G4–PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services ▶			88

General standard disclosures

Strategy and analysis

G4 SD 1 Statement from the most senior decision-maker of the organization

See the letter from the Chief Executive Officer and the Global Head of Corporate Responsibility on page 2.

G4 SD 2 Key impacts, risks and opportunities

We aim to improve global health. Through our business, we make an important contribution to society: we discover and develop innovative medicines and vaccines. Novartis collaborates with others to help address some of the world's greatest health challenges. We focus our corporate responsibility (CR) work on two areas that underscore our mission of caring and curing:

- **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 more than 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

Our CR efforts are guided by common principles:

- We apply our expertise in science and innovation to society's biggest health challenges
- We take a long-term view and commitment to address global health priorities where we can lead and make a significant impact
- We are guided by a central philosophy and programs are conceived of and implemented by our divisions and within our functional areas where the required expertise and infrastructure is strongest
- We apply business principles to investments – talent and capital – where the potential for joint value creation is the greatest; philanthropy plays a useful, but limited, role
- We understand that partnerships are key – improving global health is a goal we share with governments, international agencies, foundations and non-governmental organizations
- We measure and communicate the results of our efforts and the impact on patient and societal health

We undertook a comprehensive CR materiality assessment in 2013 through which we identified the issues that are most important to our stakeholders and our business. G4–18: Process for defining the report content and the Aspect Boundaries and G4–19: Material Aspects identified in the process for defining report content for more details.

In 2013 Novartis received numerous awards for progress in research and development, our working environment, and our CR activities. Some of these awards included:

- *Top 25 World's Best Multinational Workplaces:* Novartis recognized among 25 best multinational employers by Great Place to Work® Institute
- *Fortune's World's Most Admired Companies 2013:* Novartis ranked top pharmaceutical company for the third time in a row
- *PatientView's Corporate Reputation of Pharma:* Novartis ranked #3 and named criteria leader in "having an effective patient-centered strategy"
- *FTSE4Good Index Series:* Novartis included as a member and ranked #2 in the healthcare sector
- *CDPs Global 500 report:* Novartis improved its performance and disclosure score for carbon emissions to 96B (2012: 91B)
- *United Nations Global Compact 100 Index:* Novartis included as a member in the new UN 100 Index for being among the best-performing companies regarding its adherence to the Global Compact's 10 principles

For a list of our most recent awards and awards archive, see the Careers section of the Novartis website.

Strategy for sustainable growth

We believe our diversified portfolio makes Novartis uniquely positioned to capture opportunities across growing segments of the healthcare industry while mitigating risks in other areas.

G4 SD 2

Our priorities: innovation, growth and productivity
Our long-term growth strategy places an emphasis on delivering positive patient outcomes through science-based innovation focused on high-growth segments of healthcare. We remain committed to three core strategic priorities – extending our lead in innovation, accelerating growth and driving productivity – all underpinned by integrity, which means a commitment to people, quality beyond compliance, ethical business practices and CR.

Emerging Growth Markets (EGMs) also performed strongly, up 10% (cc[1]) over 2012 to USD 14.7 billion or 25% of Group net sales in 2013. We made significant investments to strengthen our footprint in key markets and establish ourselves as a market leader. In Russia and Brazil, Novartis is building a significant manufacturing presence. In China, we continued our strong growth trajectory, with net sales up 23% (cc) over the previous year. China became one of our top 10 markets in 2013.

In some EGMs, where healthcare infrastructure is limited, we have created innovative business models, or ''Social Ventures,'' to build local capabilities in healthcare. Social Ventures address societal problems that impact access to healthcare in a way that also creates a financial return for the company. In 2013, Novartis took steps to expand Arogya Parivar ("Healthy Family" in Hindi), a Social Venture that helps enhance access to health education, care and treatments in rural India, to additional countries. Since launching Arogya Parivar in 2007, Novartis has increased access to healthcare across about 30 000 villages in India, home to more than 50 million people.

Opportunity and risk summary
Our financial results are affected, to varying degrees, by the following external factors:

1. Transformational changes fueling demand

- Aging population and shifting behaviors: the aging of the global population, as well as the prevalence of behaviors that increase risk of obesity and other chronic diseases, is driving demand for treatments Novartis provides
- Global rise in healthcare spending: despite cost-containment measures adopted by governments around the world, healthcare spending continues to increase. This is particularly true in emerging markets, where the expanding middle class has contributed to increased demand for quality care
- Scientific advances: advances in the fields of genomics and biotechnology have provided new opportunities to more closely tailor treatments to individual patient groups, helping us demonstrate efficacy and bring innovative products to market for patients in need
- New technologies: the increasing use of connected medical devices and health information technology has made it easier for physicians to monitor patient adherence to our treatments, improving outcomes in clinical trials and the post-marketing setting
- Patient engagement: increased access to health information and tools to communicate with providers is making patients more active participants in their own healthcare, creating a broader audience for our marketing efforts
- Shift to generics and over-the-counter (OTC) products: as healthcare costs continue to rise, both governments and consumers continue to gravitate toward lower-cost treatment options such as generics and OTC products, which we produce at Sandoz and OTC

2. Increasingly challenging business environment

- Patent expirations and product competition: the loss of market exclusivity and the introduction of branded and generic competitors can significantly erode sales of our innovative products
- Regulatory and safety hurdles: the costs associated with bringing a drug to market have increased as a result of heightened regulatory requirements. Even after a drug is approved, there is a possibility that safety events could occur and materially affect our results
- Manufacturing quality and complexity: the manufacture of our products is both highly regulated and complex, and may result in a variety of issues that could lead to extended supply disruptions and significant liability
- Weak economic environment: despite some improvement in the global economy, governments and patients worldwide continue to seek ways to contain rising healthcare costs
- Legal proceedings: there is a trend of increasing government investigations and litigations against companies in the healthcare industry. Despite our best efforts to comply with the laws of the countries in which we operate and sell products, any failure in compliance could have a material adverse effect on our business and reputation

Managing risks
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.

[1] Constant currencies

G4 SD 2

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 independent Risk Committee of the Board of Directors. 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 our Compensation Report). Organizational and process measures have been designed 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 Operations, Corporate Health, Safety, Environment, Business Continuity and Compliance, providing support and controlling the effectiveness of risk management by the Divisions in these respective areas.

For further details about our priorities, strategies, structure and operations, see p107–112 of the Novartis Form 20-F 2013.

For further details on how we manage our risks, see the CR section of the Novartis website and see p265 of the Novartis Form 20-F 2013.

For a full list of our current CR targets, 2013 results, and future targets, see the Targets and results page of the Novartis website.

For an overview of our key performance indicators, targets and results from 2009 to 2013, see the table on p62 of the Novartis Annual Report 2013. To learn more about our progress expanding access to healthcare and doing business responsibly, see p63–67.

For a detailed list of all our HSE targets and performance, from the Total Recordable Case Rate to our greenhouse gas (GHG) emissions reduction target, see p27 of the Novartis HSE Report 2013.

Organizational profile

G4 SD 3

Name of the organization

Novartis AG

G4 SD 4

Primary brands, products and services

Our broad portfolio includes innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, OTC and animal health products.

The Group's wholly owned businesses are organized into six global operating divisions[2], and we report our results in the following five segments:

- Pharmaceuticals: innovative patent-protected prescription medicines
- Alcon: surgical, ophthalmic pharmaceutical and vision care products
- Sandoz: generic pharmaceuticals
- Consumer Health: OTC (over-the-counter medicines) and Animal Health
- Vaccines and Diagnostics: preventive human vaccines and blood-testing diagnostics (following the January 9, 2014 completion of the divestment of our blood transfusion diagnostics unit to Grifols S.A., the division now consists only of Vaccines)

For a list of key marketed Pharmaceuticals products, see p31–41 of the Novartis Form 20-F 2013.

For a list of key marketed Alcon products, see p71–75 of the Novartis Form 20-F 2013.

For a list of key marketed Sandoz products, see p80–82 of the Novartis Form 20-F 2013.

For a list of key marketed Vaccines and Diagnostics products, see p89–90 of the Novartis Form 20-F 2013.

For a list of key marketed OTC and Animal Health products, see p93 of the Novartis Form 20-F 2013.

For further product overviews, see the Products section of the Novartis website.

[2] In April 2014, we announced transactions with GSK and Eli Lilly that are intended to transform our portfolio, focusing the company on leading businesses with innovation power and global scale: pharmaceuticals, eye care (Alcon) and generics (Sandoz). The transactions with GSK are inter-conditional and are subject to approval by GSK shareholders and subject to customary closing conditions including regulatory approvals; these are expected to close in H1 2015. The transaction with Eli Lilly is subject to customary regulatory approvals; it is expected to close in Q1 2015.

G4 SD 5

Location of the organization's headquarters

The registered office of Novartis AG is Lichtstrasse 35, CH-4056 Basel, Switzerland.

G4 SD 6

Countries of operation

Novartis sells products in more than 150 countries.

Principal countries in which we operate (alphabetical order)

1 Argentina
2 Australia
3 Austria
4 Bangladesh
5 Belgium
6 Bermuda
7 Brazil
8 Canada
9 Chile
10 China
11 Colombia
12 Croatia
13 Czech Republic
14 Denmark
15 Ecuador
16 Egypt
17 Finland
18 France
19 Germany
20 Gibraltar
21 Greece
22 Hungary
23 India
24 Indonesia
25 Ireland
26 Italy
27 Japan
28 Luxembourg
29 Malaysia
30 Mexico
31 Netherlands
32 New Zealand
33 Norway
34 Pakistan
35 Panama
36 Peru
37 Philippines
38 Poland
39 Portugal
40 Puerto Rico
41 Romania
42 Russian Federation
43 Saudi Arabia
44 Singapore
45 Slovakia
46 Slovenia
47 South Africa
48 South Korea
49 Spain
50 Sweden
51 Switzerland
52 Taiwan
53 Thailand
54 Turkey
55 United Kingdom
56 United States of America
57 Venezuela

In addition, the Group is represented by subsidiaries and associated companies in the following countries: Algeria, Bosnia/Herzegovina, Bulgaria, Dominican Republic, Guatemala, the Former Yugoslav Republic of Macedonia, Morocco, Ukraine and Uruguay.

See G4–9: Scale of the organization for a regional breakdown of net sales, and the breakdown of associates by country/region.

For a list of our principal group subsidiaries and associated companies' capital, equity interest, and activities, see p249–251 of the Novartis Annual Report 2013.

G4 SD 7

Nature of ownership and legal form

Novartis AG, a holding company, owns directly or indirectly all companies worldwide belonging to the Novartis Group.

Majority holdings in publicly traded group companies

- Novartis AG holds 75% of Novartis India Limited, with its registered office in Mumbai, India, and listed on the Bombay Stock Exchange (ISIN INE234A01025, ID: NOVARTIS). The total market value of the 25% free float of Novartis India Limited was USD 59.9 million at December 31, 2013, using the quoted market share price at the year end. Applying this share price to all the shares of the company, the market capitalization of the whole company was USD 239.7 million and that of the shares owned by Novartis was USD 179 million

Significant minority holdings in publicly traded companies

- 33.3% of the bearer shares of Roche Holding AG, with its registered office in Basel, Switzerland, and listed on the SIX Swiss Exchange (Valor No. 1203211, ISIN CH0012032113, symbol: RO). The market value of the Group's interest in Roche Holding AG, as of December 31, 2013, was USD 14.8 billion. The total market value of Roche Holding AG was USD 241.2 billion. Novartis does not exercise control over Roche Holding AG, which is independently governed, managed and operated

- 24.9% of Idenix Pharmaceuticals, Inc., with its registered office in Delaware, USA, and listed on NASDAQ (Valor No. 1630029, ISIN US45166R2040, symbol: IDIX). The total market value of the 75.1% free float of Idenix Pharmaceuticals, Inc. was USD 602.1 million at December 31, 2013, using the quoted market share price at the year end. Applying this share price to all shares of the company, the

G4 SD 7

market capitalization of the whole company was USD 801.4 million and that of the shares owned by Novartis was USD 199.3 million. Novartis does not exercise control over Idenix Pharmaceuticals, Inc., which is independently governed, managed and operated

For further details about shareholdings and shareholder rights, see p81–83 of the Novartis Annual Report 2013.

G4 SD 8

Markets served

Novartis sells products in more than 150 countries.

Principal markets:

- Pharmaceuticals: US, Europe and Japan
- Alcon: US, Americas (except the US), Japan and Europe
- Sandoz: US and Europe
- Consumer Health: US and Europe
- Vaccines and Diagnostics: US and Europe

For details of net sales for each division in principal markets, see p53, 75, 83, 91 and 94 of the Novartis Form 20-F 2013.

G4 SD 9

Scale of the organization

Novartis Group companies have 109 manufacturing sites worldwide, and employed 138 409 people on December 31, 2013.

For more key details and further information about the scale of the organization, refer to the tables and content found on p2, 71, 73, 140, 187 and 200 of the Novartis Annual Report 2013.

Significant shareholders

According to the share register, as of December 31, 2013, the following registered shareholders (including nominees and the ADS depositary) held more than 2% of the total share capital of Novartis with the right to vote these shares.[3]

- Shareholders: Novartis Foundation for Employee Participation, with its registered office in Basel, Switzerland, holding 3.0%; and Emasan AG, with its registered office in Basel, Switzerland, holding 3.3%
- Nominees: JPMorgan Chase Bank, New York, holding 11.1%; Nortrust Nominees, London, holding 3.2%; and The Bank of New York Mellon, New York, holding 4.6% through its nominees, Mellon Bank, Everett, (2.8%) and The Bank of New York Mellon, Brussels, Belgium, (1.8%)
- ADS depositary: JPMorgan Chase Bank, New York, holding 11.7%

According to a disclosure notification filed with Novartis AG, Norges Bank (Central Bank of Norway), Oslo, Norway, held 2.03% of the share capital of Novartis AG as of December 31, 2013.

According to disclosure notifications filed with Novartis AG and the SIX Swiss Exchange, each of the following shareholders held between 3% and 5% of the share capital of Novartis AG as of December 31, 2013

- Capital Group Companies, Inc., Los Angeles, USA
- BlackRock, Inc., New York, USA

Disclosure notifications pertaining to shareholdings in Novartis AG that were filed with Novartis AG and the SIX Swiss Exchange are published on the latter's electronic publication platform, and can be accessed via the database search page.

Novartis has not entered into any agreement with any shareholder regarding the voting or holding of Novartis shares.

Cross shareholdings

Novartis has no cross shareholdings in excess of 5% of capital or voting rights with any other company.

For a breakdown of net sales by country/region, see table on p200 of the Novartis Annual Report 2013.

Key financial figures (USD millions) [4]

Key figures	Amount
Net sales	57 920
Total capitalization	126 254
Capitalization: debt	51 782
Capitalization: equity	74 472
Total assets	**126 254**

2013 net sales (USD millions)

Region	Net sales	% of total
Europe	21 078	36
Americas	24 257	42
Asia/Africa/ Australasia	12 585	22
Group	**57 920**	**100**

[3] Excluding 4.9% of the share capital held by Novartis AG and its subsidiaries (excluding foundations) as treasury shares.

[4] We use the following definitions:
Total capitalization = debt + equity
Debt = financial debt (non-current liabilities) + financial debt and derivative financial instruments (current liabilities)

G4 SD 10

TRUE GLOBAL COMPACT 6

Number of employees

- Novartis Group companies employed 138 409 people globally on December 31, 2013
- 32 266 work in Asia Pacific, 29 191 work in North America, 68 511 work in Europe, Middle East and Africa and 8 441 work in Latin America
- 4.4% of all Novartis Group Company associates work part-time (less than 90% of the full-time equivalent (FTE) working hours). At our headquarters in Basel (Switzerland), the part-time workforce was approximately 10.6% in December 2013 (includes also part-timers working 90–99% of the FTE)
- There are 131 472 permanent contracts and 6 937 temporary contracts

Source: Global HR FirstPort Reporting

[5,6] December 31, 2013

[7] The systems for reporting this data were not available in 2013. This data therefore pertains to the status in April 2014. "Externals" are defined as third party resources who invoice Novartis Group companies for their time or services provided.

Total number of Group company associates by gender and contract type 2013 [5]

Contract type	Female #	Female %	Male #	Male %
Permanent	60 439	46	71 033	54
Temporary	4 284	62	2 653	38
Overall result	**64 723**	**47**	**73 686**	**53**

Total number of managers and supervised workers by gender 2013 [6]

Employee type	Female #	Female %	Male #	Male %
Local manager	6 612	38	10 751	62
Non-manager	58 111	48	62 935	52
Overall result	**64 723**	**47**	**73 686**	**53**

Total number of externals [7]

Total number of externals	Externals FTE #
50 097	14 186.92

G4 SD 11

TRUE GLOBAL COMPACT 3

Employees covered by collective bargaining agreements

According to a global survey in 2013, 51% of Group company non-management associates are represented by an internal employee reresentation (works council or any local employee representative body) and 27% are (also) represented by an external employee representation (e.g. trade union). 43% of Novartis Group Company associates (excluding management) worldwide are represented by a trade union or covered by a collective bargaining agreement (agreement with trade union).

G4 SD 12

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

Organization's supply chain

Procurement, accountable for an annual global spend of over USD 22 billion, is a strategic partner to the business. Operating across six global divisions in 60 countries, Novartis has a network of approximately 1 200 procurement professionals.

Supplier spending by country

	Spend			Supplier[10]	
Country	Total %	Direct spend[8] %	Indirect spend[9] %	Total	%
USA	29.88	6.35	23.53	29 166	15.59
Switzerland	14.14	2.46	11.68	13 700	7.32
Germany	10.66	4.17	6.49	21 190	11.32
United Kingdom	5.59	0.77	4.83	8 786	4.70
Japan	3.43	1.16	2.27	9 881	5.28
China	3.41	1.29	2.12	5 232	2.80
Italy	3.14	1.06	2.08	6 085	3.25
France	3.11	1.12	1.99	9 216	4.93
Austria	2.43	0.69	1.74	4 974	2.66
India	2.36	1.10	1.26	5 175	2.77
Spain	2.12	0.74	1.38	5 680	3.04
Canada	1.93	0.43	1.50	4 914	2.63
Belgium	1.62	0.88	0.74	3 217	1.72
Russian Fed.	1.43	0.07	1.36	3 063	1.64
Brazil	1.36	0.19	1.17	5 929	3.17
Rest	13.38	3.93	9.45	50 904	27.21
	100.00	**26.42**	**73.58**	**187 112**	**100.00**

[8] Direct spend: purchases of goods and services directly incorporated into a product being manufactured. Examples: raw materials, subcontracted manufacturing services, packaging.

[9] Indirect spend: all supplies necessary to run an organization, such as utilities, IT hardware/software, furniture, capital expenditure, marketing supplies, etc.

[10] Supplier: suppliers with whom we have a direct contractual relationship pertaining to the delivery of goods and services.

G4 SD 12

3,4,5,6, 8,10

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 (PSCI) and our standards are based on the UNGC and other applicable international standards or accepted good practices such as the International Labor Organization (ILO).

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.

The Supplier Code is universally applicable to all types of suppliers and is independent of the applicability of the Responsible Procurement (RP) practice. However, there are some exceptions, for example, when individuals, such as healthcare professionals, supply services to Novartis, we may not expect them to comply with all aspects of the Code, only what is practical and relevant.

Responsible Procurement

Launched in April 2013, the Novartis RP program replaced the former CC5 compliance program. RP ensures that the Novartis commitment to CR is reflected in how we select and work with our suppliers.

RP focuses on ethical risk and is built on four key principles:

- **Risk-based:** Using risk assessments that take country and sector into account, we identify suppliers who pose elevated risks and accurately target our efforts to where they are most needed: on high-risk suppliers
- **Modular:** Covers five areas: 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 who present little or no ethical risk, allowing 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.

We focus on the suppliers who pose an elevated risk, and over whom we have higher influence, since the higher our influence, the greater our responsibility to work with the supplier to improve their practices.

The factors determining our responsibility are:

- **Association with our brand:** We take more responsibility for suppliers that are closely associated with our business through making products on our behalf, providing key ingredients or branded packaging, because they are essential to the delivery of our core business activities
- **A close commercial relationship:** We concentrate our follow-up on suppliers who are actively managed by our Procurement teams, those with whom we have a direct contractual relationship (and not usually their sub-suppliers), and where we have continuous or regular relationships. We also take the scale of the supply contract (measured in terms of spend over the entire lifecycle of the project) into account

continued...

G4 SD 12

3,4,5,6, 8,10

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 a 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 Country risk Contract value	Category risk Country risk 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 questionnaire, 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 non-compliance is found through assessment and due diligence, the matter is escalated to a Case Review				

Critical non-compliances

We recognize that some suppliers do not yet reach the standards we expect and we acknowledge our responsibility to help them improve. We do this through engagement and collaboration.

However, there are some breaches of standards – "critical non-compliances" – which we require to be resolved immediately before we will start working with a new supplier, or continue to work with an existing supplier. These cannot always be codified but critical non-compliances will generally fall into the following three categories:

Type of critical non-compliance	Examples
1. Systematic and regular breaches of standards attributable to lack of management attention or will	Persistent breaches of environmental discharge limits or legal permits or repeated hiring of underage workers
2. Breaches that pose an immediate danger to the health or well-being of workers or those living around the facility	Immediate fire or explosion risk, exposure to hazardous chemicals, or discharges or releases to local communities
3. Breaches of local laws or standards which fall conspicuously far below the sector or industry average	Wages below the legal minimum, working hours far above the mandated standards, or physical abuse of workers

When a critical non-compliance is identified, we respond by undertaking a Case Review.

Example of a Case Review: contract manufacturing (Pakistan)

Supplier	Manufacturer of mosquito repellant cream – a non-pharmaceutical product produced in their Islamabad facility. Sales of the product total USD 0.64 million per year, and Novartis spends USD 0.34 million per year with this supplier
Background	Business partner of Sandoz TPO
Critical issues identified	Critical issues were identified in the Labor Review in December 2013: ■ Non-payment of minimum wages for unskilled workers ■ Discharging waste water without treatment in public drain, without the consent of local regulatory authorities ■ Lack of Legal License, inspection reports and consents from relevant authorities for fire-fighting installation, electrical installation, labor department and environment protection department The HSE Audit was pending and incomplete.

Continued...

G4 SD 12

3,4,5,6, 8,10

Case Review participants	Business: senior associates responsible for supplier relationships and quality assurance from the business division and country organization. RP Expert Team: Head Responsible Procurement, RP Manager India Cluster
Agreed actions	Supplier: ■ From February 2014, supplier must pay legal minimum wages for all workers and provide monthly evidence of payment of wages to all workers ■ Identify and contract a waste water transporter and a common effluent treatment plant, and provide weekly evidence of contract and receipts ■ Provide evidence of applications, and fortnightly follow-up with the legal authorities for licenses, No Objection Certificates (NOCs) and inspection certificates ■ Prepare improvement plans for all the other priority issues, within timelines agreed with the RP manager ■ The supplier has been very responsive and resolved some key issues (labor minimum wages, key licenses) with documented evidence so far Novartis: ■ Schedule Quality Assurance Audit earlier and finalize HSE Audit report

For more about our RP practice see the CR section of the Novartis website.

Novartis supplier performance and innovation process

Novartis revised its approach to supplier management in 2013. The supplier performance and innovation process focuses on how we select the suppliers we want to partner with to improve performance, manage risk and collaborate to generate innovation. In order to achieve this we are establishing sponsorship and governance of the major relationships on both the Novartis and supplier side. This structure is used to build a common agenda for projects that we will work on together so that over time we build the right level of trust to drive collaboration.

G4 SD 13

Significant changes to the organization's size, structure, ownership, or its supply chain

■ **November 2013:** Novartis announces a USD 5 billion share buyback. The buyback begins on the date of the announcement and will be executed over two years on the second trading line. Novartis announces a definitive agreement to divest its blood transfusion diagnostics unit to Grifols S.A. of Spain, for USD 1.7 billion. This transaction was completed in January 2014. Novartis announces that it will co-locate certain scientific resources in order to improve the efficiency and effectiveness of its global research organization. Changes include establishing a respiratory research group in Cambridge, Massachusetts, a proposal to close the Horsham, UK research site, a plan to exit from the Vienna, Austria research site, consolidation of the US-based component of oncology research from Emeryville, California to Cambridge, Massachusetts, closure of the biotherapeutics development unit in La Jolla, California, and a plan to exit research in topical applications for dermatology

■ **September 2013:** Novartis announces that it has entered into an exclusive global licensing and research collaboration agreement with Regenerex LLC, a biopharmaceutical company based in Louisville, Kentucky, for use of the company's novel Facilitating Cell Therapy (FCRx) platform

■ **July 2013:** The Novartis Board of Directors announces a final agreement with its former Chairman, Dr. Daniel Vasella. From the date of the Annual General Meeting held on February 22, 2013, until October 31, 2013, Dr. Vasella was to provide certain transitional services, including select Board mandates with subsidiaries of Novartis and support of the ad-interim Chairman and the new Chairman. For his transitional services during such period, Dr. Vasella would receive cash of CHF 2.7 million, and 31 724 unrestricted shares as of October 31, 2013 (the market value of the shares as of the date of the announcement was approximately CHF 2.2 million). Novartis announces that it has entered into a development and licensing agreement with Biological E Limited (BioE), a biopharmaceutical company based in India, for two vaccines to protect against typhoid and paratyphoid fevers

■ **April 2013:** The Novartis Responsible Procurement (RP) program is launched, replacing the old CC5 compliance program. RP ensures the Novartis commitment to CR is reflected in how we select and work with our suppliers. See G4–12: Organization's supply chain for further detail about the RP program.

For complete details of important corporate developments from 2011 to 2013, see p24–25 of the Novartis Form 20-F 2013.

G4 SD 14

UNGC 7

Precautionary approach

We take a precautionary approach in 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. Although there may not be full scientific certainty about the link between our activities and potential environmental degradation, we will continue to do what we can to reduce or mitigate our environmental impacts.

For more about how we take a precautionary approach in the innovation and development of new products and technologies, see the Novartis Policy on Corporate Citizenship.

For more about reducing risk and ensuring continuity, see the CR section of the Novartis website.

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
- International Chamber of Commerce's Business Charter for Sustainable Development
- 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
- Voluntarily agreed to reduce GHG emissions in line with the Kyoto Protocol 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 of "Caring for Climate: The Business Leadership Platform"
- Classifies and disposes 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 (WEF) in Davos

G4 SD 16

UNGC 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, or 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 (NTDs) by 2020
- The Clinton Global Initiative, which convenes global leaders to create solutions to the world's most pressing challenges
- The UNGC LEAD initiative, of which it was one of the 54 founding members

G4 SD 16

UNGC 1, 8

- The Private Sector Delegation Advisory Group as well as of 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 and Business Continuity & Crisis Management council, European Biosafety Association (EBSA), American Biosafety Association (ABSA), Medichem and European Process Safety Center
- Pharmaceutical Industry Associations: Novartis is a member of national pharmaceutical industry associations in countries or regions where the company operates, notably:
  - Switzerland, where the national association is 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 such as: the IFPMA and IFAH
- National associations in most markets where Novartis has a legal subsidiary

Identified material Aspects and Boundaries

G4 SD 17

Entities included in the organization's consolidated financial statements or equivalent documents

Business operations are conducted through Novartis Group companies. Novartis AG, a holding company, owns directly or indirectly all companies worldwide belonging to the Novartis Group. The report covers all entities included in the organization's consolidated financial statements or equivalent documents.

In 2013, the Group's businesses were divided on a worldwide basis into six global operating divisions, which report results in five segments (Pharmaceuticals, Alcon, Sandoz, Consumer Health, and Vaccines and Diagnostics), and Corporate activities. Except for Consumer Health, which comprises two divisions (OTC and Animal Health) that are not material enough to the Group to be reported on an individual basis, these segments reflect the Group's internal management structure and are disclosed separately because they research, develop, manufacture, distribute and sell distinct products that require different marketing strategies. In April 2014, we announced that we are transforming our portfolio, focusing the company on leading businesses with innovation power and global scale: pharmaceuticals, eye care (Alcon) and generics (Sandoz).

For further information about the group structure of Novartis and its six global operating divisions, see p104, 144 and 145 of the Novartis Annual Report 2013, and the Products section of the Novartis website.

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. This process is summarized below.

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 CR materiality survey.

Prioritization and validation
We surveyed 43 internal stakeholders via an online questionnaire, 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 executives from across the company and

G4 SD 18

representatives of patient 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.

Review

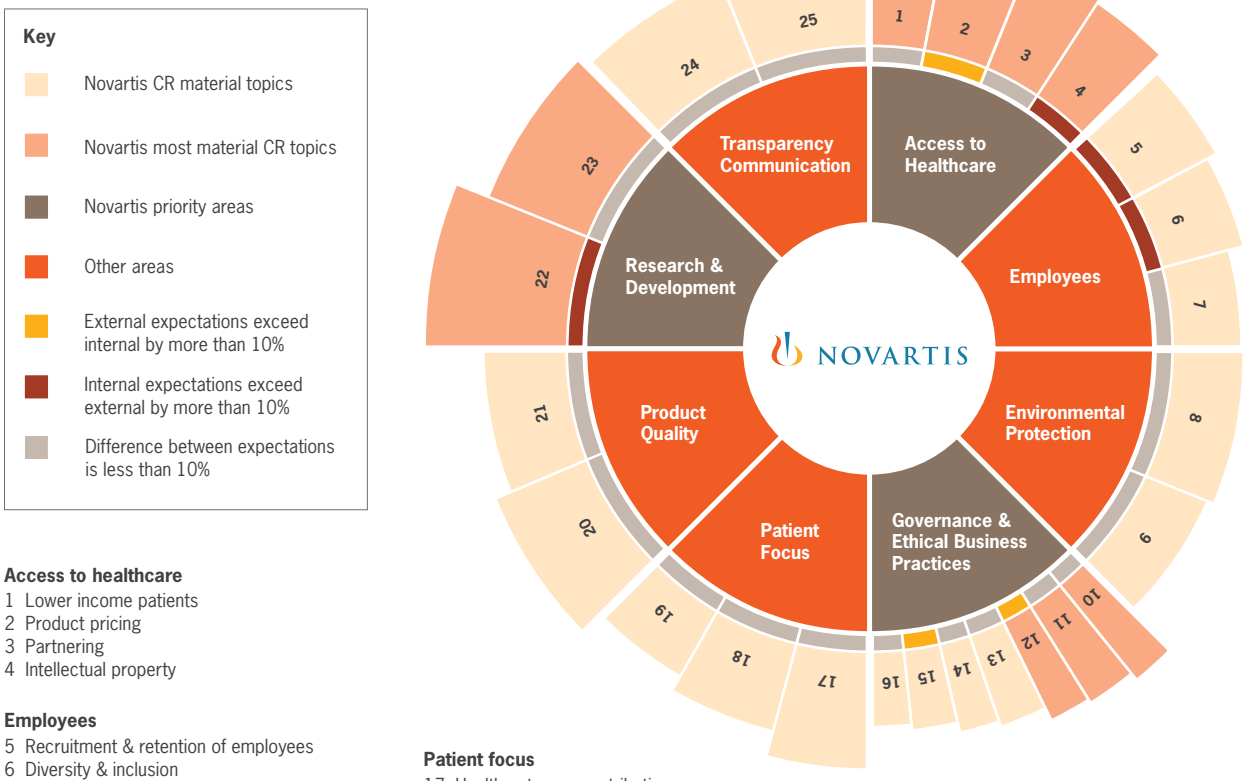
We are using findings from the materiality analysis to guide our business strategy, track issues of concern, inform and prioritize our CR programs, and establish meaningful metrics against which to measure our performance. We also plan to use the analysis to strengthen the focus and content of our CR reporting.

For more about our materiality assessment process, see the CR section of the Novartis website.

G4 SD 19

Material Aspects identified in the process for defining report content

The following 25 issues, grouped into eight key clusters, consistently stood out as most material.



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

Employees
5 Recruitment & retention of employees
6 Diversity & inclusion
7 Health & safety

Environmental protection
8 Pollution, waste & effluents
9 Energy & climate change

Governance & ethical business practices
10 Integrity & compliance management
11 Responsible clinical trials
12 Bribery & corruption
13 Responsible marketing/advertising
14 Board structure & independence
15 Responsible lobbying & political contributions
16 Risk & 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 & development
22 Innovation & R&D pipeline
23 R&D in neglected diseases

Transparency & communication
24 Stakeholder engagement & dialogue
25 Disclosure & labeling

Topics gaining importance

- Demographic changes
- Health outcome contribution
- Integrity & compliance management
- Lower income for patients
- Product pricing
- Quality of drugs
- Responsible marketing
- Stakeholder engagement

G4 SD 19

Inclusion of additional indicators relevant to the UNGC

Novartis is a member of the 2013 UNGC Index and continues to commit to following the 10 UNGC principles, as well as encouraging others to do so. We have therefore included a number of additional indicators not necessary for achieving Core "in accordance" status for GRI G4, but which are relevant to our commitment to the UNGC.

This year we are not reporting against the GRI biodiversity Aspect. Although the indicators within this Aspect are relevant to UNGC principles 7, 8 and 9, they are not significant to us because our operations are located in specially designated zones for industrial purposes outside of natural conservation areas or protected habitats. However, we have included details of our approach toward biodiversity from a research and development perspective as part of the Additional topics section.

The table below shows how these clusters map to the GRI G4 Aspects contained within this report, and highlights additional topics to address issues not directly covered by the GRI G4 indicators.

Material clusters and GRI G4 Aspects

Material cluster	Cluster description	Key material issues	Relevant G4 Aspects and Additional topics
Access to healthcare	How we enhance access to healthcare across the world	Lower-income patients Product pricing Partnering Intellectual property	**ECONOMIC ASPECTS** ■ Indirect economic impacts **SOCIAL ASPECTS** **Society** ■ Local communities **ADDITIONAL TOPICS** ■ Access to healthcare
Governance and ethical business practices	How we promote ethical behavior and manage governance and risks	Integrity and compliance management Responsible clinical trials Bribery and corruption Responsible marketing/ advertising Board structure and independence Responsible lobbying and political contributions Risk and crisis management	**ECONOMIC ASPECTS** ■ Economic performance **ENVIRONMENTAL ASPECTS** ■ Compliance ■ Supplier environmental assessment ■ Environmental grievance mechanisms **SOCIAL ASPECTS** **Labor practices and decent work** ■ Supplier assessment for labor practices ■ Labor practices grievance mechanisms **Human rights** ■ Investment ■ Non-discrimination ■ Freedom of association and collective bargaining ■ Child labor ■ Forced or compulsory labor ■ Security practices ■ Indigenous rights ■ Assessment ■ Supplier human rights assessment ■ Human rights grievance mechanisms **Society** ■ Anti-corruption ■ Public policy ■ Anti-competitive behavior ■ Compliance ■ Supplier assessment for impacts on society ■ Grievance mechanisms for impacts on society **Product responsibility** ■ Product and service labeling ■ Marketing communications ■ Customer privacy ■ Compliance **ADDITIONAL TOPICS** ■ Human rights ■ Responsible clinical trials ■ Responsible marketing/advertising

Continued...

G4 SD 19

Material cluster	Cluster description	Key material issues	Relevant G4 Aspects and Additional topics
Research and development	How we develop innovative products	Innovation and R&D pipeline R&D in neglected diseases	**SOCIAL ASPECTS** **Product responsibility** ■ Customer health and safety **ADDITIONAL TOPICS** ■ Research and development
Employees	How we treat our employees around the world	Recruitment and retention of employees Diversity and inclusion Health and safety	**ECONOMIC ASPECTS** ■ Market presence **SOCIAL ASPECTS** **Labor practices and decent work** ■ Employment ■ Labor/management relations ■ Occupational health and safety ■ Training and education ■ Diversity and equal opportunity ■ Equal remuneration for women and men ■ Supplier assessment for labor practices ■ Labor practices grievance mechanisms
Environmental protection	How we protect the environment	Pollution, wastes and effluents Energy and climate change	**ECONOMIC ASPECTS** ■ Economic performance **ENVIRONMENTAL ASPECTS** ■ Materials ■ Energy ■ Water ■ Emissions ■ Effluents and waste ■ Products and services ■ Compliance ■ Transport ■ Overall ■ Supplier environmental assessment ■ Environmental grievance mechanisms **ADDITIONAL TOPICS** ■ Pharmaceuticals in the environment
Patient focus	How we put patients first and ensure security of product and service supply	Health outcome contribution Demographic changes in society Security of product supply	**ECONOMIC ASPECTS** ■ Economic performance ■ Procurement practices **ENVIRONMENTAL ASPECTS** ■ Supplier environmental assessment **SOCIAL ASPECTS** **Labor practices and decent work** ■ Supplier assessment and labor practices **Human rights** ■ Supplier assessment on human rights **Society** ■ Local communities ■ Supplier assessment for impacts on society **Product responsibility** ■ Customer health and safety **ADDITIONAL TOPICS** ■ Patient focus
Product quality	How we ensure products and services adhere to the highest quality standards	Quality of drugs Counterfeit medicines	**SOCIAL ASPECTS** **Product responsibility** ■ Customer health and safety **ADDITIONAL TOPICS** ■ Product quality
Transparency and communication	How we communicate with stakeholders	Disclosure and labeling Stakeholder engagement and dialogue	**ECONOMIC ASPECTS** ■ Procurement practices **SOCIAL ASPECTS** **Society** ■ Local communities **ADDITIONAL TOPICS** ■ Transparency and communication

G4 SD 20

G4 SD 21

Aspect Boundaries within and outside the organization

Aspect	Indicators	Aspect Boundary within the organization	Aspect Boundary outside the organization
Economic			
Economic performance	G4 EC 2, G4 EC 4	Whole organization (as defined by inclusion in this report)	■ Academia ■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Local communities ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Market presence	G4 EC 5	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Local communities ■ NGOs ■ Patients and patient groups ■ Regulators ■ Shareholders ■ Suppliers
Indirect economic impacts	G4 EC 8	Whole organization	■ Governments ■ Health authorities ■ NGOs/IGOs ■ Patients and patient groups
Procurement practices	G4 EC 9	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Environment			
Materials	G4 EN 1	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Energy	G4 EN 3, G4 EN 6	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Water	G4 EN 8, G4 EN 9, G4 EN 10	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Emissions	G4 EN 15, G4 EN 16, G4 EN 17, G4 EN 19, G4 EN 20, G4 EN 21	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Effluents and waste	G4 EN 22, G4 EN 23, G4 EN 24	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Products and services	G4 EN 27	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Compliance	G4 EN 29	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers

Continued...

G4 SD 20

G4 SD 21

Aspect	Indicators	Aspect Boundary within the organization	Aspect Boundary outside the organization
Transport	G4 EN 30	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Overall	G4 EN 31	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Supplier environmental assessment	G4 EN 32	Whole organization	■ Academia ■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Local communities ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Environmental grievance mechanisms	G4 EN 34	Whole organization	■ Academia ■ Customers ■ Health authorities ■ Local communities ■ NGOs ■ Shareholders ■ Suppliers
Social: Labor practices and decent work			
Employment	G4 LA 1, G4 LA 2	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Labor/ management relations	G4 LA 4	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Occupational health and safety	G4 LA 5, G4 LA 6, G4 LA 7, G4 LA 8	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Training and education	G4 LA 9, G4 LA 10, G4 LA 11	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Diversity and equal opportunity	G4 LA 12	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Equal remuneration for women and men	G4 LA 13	Whole organization	■ Customers ■ Financial markets ■ Local communities ■ NGOs ■ Regulators ■ Shareholders ■ Suppliers
Supplier assessment and labor practices	G4 LA 14	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Labor practices grievance mechanisms	G4 LA 16	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Social: Human rights			
Investment	G4 HR 1, G4 HR 2	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Non-discrimination	G4 HR 3	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Freedom of association and collective bargaining	G4 HR 4	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers

Continued...

G4 SD 20

G4 SD 21

Aspect	Indicators	Aspect Boundary within the organization	Aspect Boundary outside the organization
Child labor	G4 HR 5	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Forced or compulsory labor	G4 HR 6	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Security practices	G4 HR 7	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Indigenous rights	G4 HR 8	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Assessment	G4 HR 9	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Supplier human rights assessment	G4 HR 10	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Human rights grievance mechanisms	G4 HR 12	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Social: Society			
Local communities	G4 SO 1	Whole organization	■ Customers ■ Financial markets ■ Governments ■ Health authorities ■ Healthcare professionals ■ Local communities ■ NGOs/IGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Anti-corruption	G4 SO 3, G4 SO 4, G4 SO 5	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Public policy	G4 SO 6	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Anti-competitive behavior	G4 SO 7	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Compliance	G4 SO 8	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Supplier assessment for impacts on society	G4 SO 9	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ NGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers
Grievance mechanisms for impacts on society	G4 SO 11	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Product responsibility			
Customer health and safety	G4 PR 1	Whole organization	■ Customers ■ Financial markets ■ Governments ■ Health authorities ■ Healthcare professionals ■ NGOs/IGOs ■ Patients and patient groups ■ Shareholders ■ Suppliers

Continued...

G4 SD 20
G4 SD 21

Aspect	Indicators	Aspect Boundary within the organization	Aspect Boundary outside the organization
Product and service labeling	G4 PR 3	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Marketing communications	G4 PR 7	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Customer privacy	G4 PR 8	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers
Compliance	G4 PR 9	Whole organization	■ Customers ■ Financial markets ■ Health authorities ■ Healthcare professionals ■ Patients and patient groups ■ Shareholders ■ Suppliers

G4 SD 22

Restatements of information

The restatement process has been applied to the 2013 Novartis HSE dataset. All forecast values published in the Novartis Annual Report 2013 and on the website have been compared with the actual figures for the period 2013.

The actual 2013 HSE figures are summarized in the Novartis HSE table found on p73 of the Novartis Annual Report 2013, and will also be published in the Novartis Annual Report 2014.

For more information on 2013 HSE performance data see the Novartis HSE Report 2013.

G4 SD 23

Significant changes from previous reporting periods in the Scope and Aspect Boundaries

No significant changes occurred in the 2013 reporting period.

Stakeholder engagement

G4 SD 24

Stakeholder groups engaged by the organization

Our stakeholders include our associates, civil society, companies, governments, international agencies, foundations, customers, shareholders, financial markets, suppliers, local communities and others. We must engage with these diverse groups to understand their needs and expectations, and to improve access to healthcare.

Refer to the CR section of the Novartis website for further details about stakeholder engagement.

Ann Aerts, Head of the Novartis Foundation for Sustainable Development, meets Indonesian authorities to launch leprosy project in Indonesia

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*. Our stakeholders include companies, governments, international agencies, foundations, customers and others. We must engage with these diverse groups to understand their needs and expectations, and to improve access to healthcare. In order to deepen these insights, in 2013 Novartis completed an extensive CR materiality analysis to gauge the views of key internal and external stakeholders.

We are embracing new technologies and information channels to better engage with our stakeholders, from patients to physicians to payors and retailers. Health applications on mobile phones, known as mHealth applications, are expected to provide a low-cost, real-time way to track disease progression and facilitate communication with all sorts of stakeholders. For example, Novartis is working to develop a medical patch for *Exelon*, our Alzheimer's treatment that would integrate an electronic chip to signal when it is time for a replacement.

See G4–18: Process for defining the report content and the Aspect Boundaries.

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 at scientific congresses to interact with the scientific community, public policy work to meet with authorities and regulators, bi-annual global associate surveys to gauge associates' perspectives on the company, or 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 management 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 in order to optimize our business success
- Reach trust and common understanding when differences arise

We find this approach to be beneficial in many ways. It serves as an early warning system, supplies us with knowledge of stakeholders and their opinion leaders, and provides an opportunity to influence the development of a debate through sound arguments.

A key example of our stakeholder engagement is our interaction with patient groups. Building and sustaining relationships with patient advocates and the groups they represent is an important way we can help meet our patient commitment and our commitment to society as a whole. As we share balanced, accurate and easy-to-understand scientific information on diseases, treatments, and health policies impacting patients, we learn about patient concerns and needs. Patient advocates also offer us valuable insights and counsel that inform our work around the world and across therapeutic areas – from drug development through regulatory approval and reimbursement into product launch and marketing.

Novartis believes open dialogue and transparent exchange of information among all the stakeholders in the healthcare community is vital to advancing access and healthcare delivery to patients. In all our interactions with patient groups, we are committed to working ethically and transparently while respecting their integrity. With regards to the disclosure of patient group support, Novartis strives to be fully compliant with all applicable legal requirements in every country in which it operates. We commit to disclose the names of patient groups that have received funding or non-monetary support from Novartis as well as the purpose of this support in Europe and the US. In the case of European patient groups, Novartis also discloses the funding amount. This list is updated annually.

In 2013, we undertook a thorough materiality analysis among our stakeholders. With support from AccountAbility, a CR consultancy, Novartis interviewed nearly 100 individuals, including executives from across the company and representatives of patient organizations, NGOs, health institutions, customers, academics and other groups considered important to the industry and our business.

G4 SD 26

Launched in April 2013, the Novartis Responsible Procurement program ensures that our commitment to CR is reflected in how we select and work with our suppliers. It is an active program of supplier engagement on ethical issues, with a risk-based approach taking into account supplier country and sector. See G4–12: Organization's supply chain for more details.

Regarding investors, we typically directly engage 10–20 institutional investors per year in face-to-face meetings or phone conversations about our Environment, Social and Governance (ESG) performance, and respond to additional written information requests.

For more on our approach to stakeholder management, including a list of patient groups we support, see the CR section of the Novartis website. See G4–18: Process for defining the report content and the Aspect Boundaries and G4–19: Material Aspects identified in the process for defining report content for more detail of how we identified issues most material to Novartis.

G4 SD 27

Key topics and concerns raised through stakeholder engagement

Twenty-five key topics, grouped into eight key clusters, consistently stood out as most significant to the internal and external stakeholders we engaged in our CR materiality analysis. Stakeholders included executives from across the company and representatives of patient organizations, NGOs, health institutions, customers, academics and other groups considered important to the industry and our business.

Of these eight clusters, we decided to focus on three priority clusters: Access to healthcare; Governance and ethical business practices; and Research and development.

Each of the three priority clusters has been assigned two lead sponsors from the Corporate Responsibility Steering Committee, comprising senior executives from key functions and all divisions. They will be accountable for the development of action plans, with tangible targets, and have committed to report back on progress by mid- and end-2014.

The remaining areas – associates, environmental protection, transparency and communication, patient focus and product quality – are being championed and addressed by the central CR team in partnership with relevant areas of the business.

We are also using findings from the materiality analysis to strengthen the focus and content of our CR reporting.

For more about the key topics and concerns that have been raised through our CR materiality analysis, see G4–18: Process for defining the report content and the Aspect Boundaries and G4–19: Material Aspects identified in the process for defining report content.

For our positions on various issues affecting our business, see the Positions page found in the CR section of the Novartis website.

Eight clusters and 25 issues (three priority clusters highlighted in brown)

Clusters	Issues
Access to healthcare	– Lower-income patients – Product pricing – Partnering – Intellectual property
Employees	– Recruitment and retention of employees – Diversity and inclusion – Health and safety
Environmental protection	– Pollution, waste and effluents – Energy and climate change
Governance and ethical business practices	– Integrity and compliance management – Responsible clinical trials – Bribery and corruption – Responsible marketing/ advertising – Board structure and independence – Responsible lobbying and political contributions – Risk and crisis management
Patient focus	– Health outcome contribution – Demographic changes in society – Security of product supply
Product quality	– Quality of drugs – Counterfeit medicines
Research and development	– Innovation and R&D pipeline – R&D in neglected diseases
Transparency and communication	– Stakeholder engagement and dialogue – Disclosure and labeling

Report profile

G4 SD 28

Reporting period

This CR Performance Report covers the 2013 calendar year with some exceptions. The 2013 environmental and resource data published in the Novartis Annual Report are actual data for the period from January through September and best estimates for the period from October through December; 2013 data on associates and health/safety are actual from January through December. HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision & OTC until 2011 – Ciba Vision is included under Alcon from 2011. Sum of individual values may vary due to rounding. Additional exceptions are clarified with footnotes.

'Novartis', 'Novartis Group', 'Group', 'Novartis Group Company'	All references to 'Novartis', 'Novartis Group', 'Group' and 'Novartis Group Company' in this report refer to Novartis and all its divisions: Pharmaceuticals; Alcon; Sandoz; Consumer Health; Animal Health; and Vaccines and Diagnostics. See G4–4: Primary brands, products and services for further details about the divisions that are included within the scope of this report
Units of measurement	This report uses the metric system of measurement
Product names	All product names appearing in italics are trademarks licensed to or owned by Novartis Group companies

G4 SD 29

Date of most recent previous report

To learn more about our reporting, see the About this report section.

Financial reporting

Novartis Annual Report 2013

Novartis Form 20-F 2013

HSE reporting

Novartis Annual Report 2013

Novartis HSE Report 2013

CR reporting

Novartis Annual Report 2013

Novartis 2012 GRI Report

Novartis 2012 UNGC COP

CDP 2014 Investor Information Request Response

CDP 2014 Water Information Request Response

G4 SD 30

Reporting cycle

The majority of our reports are published annually, while some are updated more frequently online. This newly consolidated CR Performance Report was published for the first time in July 2014, and will be published annually.

G4 SD 31

Contact point for questions regarding the report or its contents

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G4 SD 32

'In accordance' option, Index and External Assurance

We have chosen the Core "in accordance" option for this report.

The GRI Content Index can be found on p8–14.

For details of our external assurance policy, see G4–33: External assurance policy.

G4 SD 33

External assurance policy

PricewaterhouseCoopers AG provides an independent assurance report on the Novartis CR chapter in the Annual Report.

For more details, see the Independent Assurance Report on the Novartis CR reporting on p75 of the Novartis Annual Report 2013.

Governance

G4 SD 34

Governance structure of the organization

The highest governance body is the Board of Directors. It has five committees with various responsibilities. For full detail of all the committees, refer to p79 of the Novartis Annual Report 2013.

The Board of Directors approved the expansion of the mandate of the former Corporate Governance and Nomination Committee to include CR, effective January 1, 2014. The new "Governance, Nomination and Corporate Responsibility Committee" will oversee our company's strategy and governance on CR and key issues related to CR that may affect the company's business and reputation. It is the highest- level Board committee related to CR.

Our company's shared commitment to CR rests with every Novartis associate. Across Novartis, we aim for transparent reporting of annual targets and long-term objectives, as well as to incentivize management and associates to create sustainable value for Novartis in all areas of our business, including CR.

In October 2013, we created a new, full-time position to lead our CR efforts. Juergen Brokatzky-Geiger, formerly Global Head of Human Resources, took on the role of Global Head of Corporate Responsibility effective February 26, 2014. Juergen is fully dedicated to supporting our company-wide CR efforts and better coordinating our many ongoing activities.

Our CR efforts will continue to be driven by a team of senior leaders that has a special role in holding the company accountable for delivering on our commitments. Led by Juergen Brokatzky-Geiger, the Corporate Responsibility Steering Committee (CRSC) meets bi-monthly to monitor our progress on meeting CR targets. It is charged with continually assessing whether we are creating and seizing the right opportunities to realize our commitment to improving health. Each Novartis division has a seat at the table. The CRSC is ultimately responsible for shaping the company's strategy and performance measurements for CR and making recommendations to the Executive Committee of Novartis (ECN). The CRSC is the highest-level operational-level committee related to CR.

The CRSC is responsible for:

- Defining CR strategy, policies and standards
- Reviewing the CR portfolio
- Setting targets, defining key performance indicators, and monitoring progress for CR
- Making recommendations to the ECN to define priorities

In 2014, a new Access to Medicines Committee, chaired by the CEO, was established to develop and implement company-wide positions, commitments, and targets on access to medicines and related issues.

There are a number of other steering committees that address CR-specific topics, such as the Integrity and Compliance Steering Committee, the HSE Steering Committee, and the Board of Trustees of the Novartis Foundation for Sustainable Development.

For further details about governance at Novartis, including a summary of our corporate governance regime, and listed responsibilities of the Board committees, see p79–91 of the Novartis Annual Report 2013.

G4 SD 38

Composition of the highest governance body and its committees

The Board of Directors has delegated to the Executive Committee the overall responsibility for and oversight over the operational management of Novartis.

The Board of Directors is led by an independent, non-executive Chairman and all its members qualify as independent non-executive Directors.

The Executive Committee is headed by the Chief Executive Officer. The members of the Executive Committee are appointed by the Board of Directors.

The Chief Executive Officer, in addition to other duties that may be assigned to him/her by the Board of Directors, leads the Executive Committee, building and maintaining an effective executive team, and, together with the Executive Committee, is responsible for the operational management of Novartis.

For further detail about the functions of the Board of Directors, Executive Committee, CEO, and other management details, see p79, p98 and p99 of the Novartis Annual Report 2013.

Independence

The independence of Board members is a key corporate governance issue. Accordingly, Novartis established independence criteria that are intended to reflect international best-practice standards.

The Novartis independence criteria require that the majority of Board members and any member of the Audit and Compliance Committee, the Compensation Committee and the Corporate Governance and Nomination Committee meet the Novartis independence criteria. In summary, these include, *inter alia:* (i) a Board member not having received compensation of more than USD 120 000 per year from Novartis, except for Board Compensation; (ii) a Board member not having been within the last three years an associate of Novartis; (iii) a family member not having been within the last three years an executive officer of Novartis; (iv) a Board member or a family member not being employed by the auditor of Novartis; (v) a Board member or a family member not being a board member, associate, or 10% shareholder of an enterprise, that has made payments to, or received payments from, Novartis, in excess of the greater of USD 1 million or 2% of that enterprise's gross revenues. For more details see the complete Independence Criteria for the Board of Directors and its Committees.

In addition, the Board members are bound by the Novartis Conflict of Interest Policy, which guarantees that a Board member's potential personal interests cannot influence the decision-making of the Board of Directors.

The Corporate Governance and Nomination Committee annually submits to the Board of Directors a proposal concerning the determination of the independence of each Board member. For this assessment, the Committee considers all relevant facts and circumstances of which it is aware – not only the explicit formal independence criteria. This includes an assessment of whether a Board member is truly independent, in character and judgment, from any member of the top management and from any of his/her current or former colleagues.

In its meeting of December 13, 2013, the Board of Directors determined that all of its members are independent. The Board of Directors has delegated Rolf M. Zinkernagel, M.D., to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD), and both Dr. Zinkernagel, M.D. and William Brody, M.D., Ph.D. to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF). The Board of Directors concluded that these activities are supervisory and not consultatory in nature and do not affect Dr. Zinkernagel's or Dr. Brody's independence as a Board member.

For further detail, see p89 of the Novartis Annual Report 2013.

For further details about the Board of Directors and Board committees, see p88 and p90 of the Novartis Annual Report 2013.

Qualifications, competences, tenure and representation

The Corporate Governance and Nomination Committee determines the criteria for the selection of Board members and Board Committee members. Factors considered include skills and knowledge, diversity of viewpoints, professional backgrounds and expertise, business and other experience relevant to the business of Novartis, the ability and willingness to commit adequate time and effort to Board and committee responsibilities, the extent to which personality, background, expertise, knowledge and experience will enable them to interact with other Board members to build an effective and complementary Board, and whether existing board memberships or other positions held by a candidate could lead to a conflict of interest.

G4 SD 38

For further information about Board member qualifications, see p85 of the Novartis Annual Report 2013. Board members represent important stakeholder interests for the company, including areas of research, science, academia, ethics, health and development, environmental stewardship, and sustainable development. For instance:

- **Verena A. Briner, M.D.,** is a member of various medical and ethical institutions and commissions, a professor of internal medicine at the University of Basel, Switzerland, and chief medical officer and head of the department of medicine at the Lucerne Cantonal Hospital in Switzerland. Dr. Briner has been a member of the Board of Directors since 2013
- **Pierre Landolt, Ph.D.**, is a member of the board of EcoCarbone SAS, France, a company he co-founded in 2000 active in the design and development of carbon-sequestration processes. He is also associate and chairman of AxialPar Ltda., Brazil, an investment company focused on sustainable development. He has been a member of the Board of Directors since 1996 and is Chairman of the Corporate Governance and Nomination Committee
- **Charles L. Sawyers, M.D.**, serves on US President Barack Obama's National Cancer Advisory Board, is president of the American Association of Cancer Research, and is a professor of medicine and cell and developmental biology at the Weill Cornell Graduate School of Medical Sciences in the US. He has been a member of the Board of Directors since 2013
- **Rolf M. Zinkernagel, M.D.**, was a professor and director of the Institute of Experimental Immunology at the University of Zurich, and is a member of various scientific advisory boards worldwide. He has received many awards and prizes for his work and contribution to science, notably the Nobel Prize in medicine, which he was awarded in 1996. Dr. Zinkernagel has been a member of the Board of Directors since 1999, and is a member of the Corporate Governance and Nomination Committee
- **Ann Fudge** is a former chair and CEO of a global marketing communications company, is a trustee of the Rockefeller Foundation, and is chair of the US Programs Advisory Panel of the Bill & Melinda Gates Foundation. She has been a member of the Board of Directors since 2008 and is a member of the Risk Committee, the Compensation Committee, and the Corporate Governance and Nomination Committee

For detailed profiles of all 14 members of the Board of Directors, see p93–97 of the Novartis Annual Report 2013.

Board diversity

The diversity of a board of directors is a critical success factor for its effectiveness. Thus, when the Corporate Governance and Nomination Committee identifies new Board member candidates to propose to the shareholders for election, the maintenance and improvement of the diversity of the Board is an important criterion. The Board's aspiration is to have a diverse Board in all aspects of diversity. This includes diversity in terms of geographic origin, background, gender, race, faith, education, experience, viewpoint, interests and technical and interpersonal skills. In 2013, 14% of Board members were women.

For further information about Board diversity, and to view tables detailing the responsibilities of Board members and committees, see p85–87 of the Novartis Annual Report 2013.

Adapting our corporate governance

"The Novartis corporate governance regime consistently meets international best-practice standards as we continually strive to improve our leadership principles and practices through an intensive exchange with our shareholders and other stakeholders.

Our corporate governance regime supports Novartis in protecting the interests of our shareholders, by creating long-term and sustainable shareholder value and to care and cure for another fundamental group of our stakeholders – patients. To achieve this, our governance is structured to address conflicts, align interests and allow for efficient and well-founded Board and management decisions. As in all other aspects, we continuously strive to improve in the interests of all stakeholders. In 2013, we have undertaken an extensive review of our corporate governance regime, benchmarking it against international best practice, and have identified a number of improvement opportunities that we will implement in 2014: We are creating a new 'Research and Development Committee' of the Board to oversee our research and development strategy and evaluate the effectiveness and competitiveness of our research and development organization. We are extending the scope of the mandate of the Corporate Governance and Nomination Committee to cover CR matters. We are disbanding the Chairman's Committee, while empowering the Executive Committee and accelerating decision-making."

Excerpt from the letter to shareholders from Joerg Reinhardt, Chairman of the Board of Directors, found on p78 of the Novartis Annual Report 2013.

Ethics and integrity

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 mission is to care and cure. We want to discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life.

We also want to provide a shareholder return that reflects outstanding performance and to adequately reward those who invest their money, their time and their ideas in our company.

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. In 2001 a revised version of the Code of Conduct was distributed to all associates worldwide. The most recent revision of the Code of Conduct was in 2011.

Our Code of Conduct is based on five core principles:

- **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

A global communications campaign introduced the revised Code of Conduct to all Novartis associates underlying its importance to everyone, every day and everywhere in the organization. Subsequent, annual global communications campaigns reinforced these messages. Additionally, since 2011, every Novartis associate is required to take part in yearly Code of Conduct training, including certification, in their local language. 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 to the overarching Code of Conduct. These policies set global minimal standards for the most common business practices in Novartis. Implementation and enforcement of these policies is supported by regular training in local languages (including e-learning), monitoring of existing controls, and internal audits.

The policies, together covering all Novartis businesses, are:

- 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)
- Vaccines: Novartis Vaccines Principles and Practices for Professionals Policy (VP4)
- Over the Counter: OTC Promotional Practices Principles (OTCP3)
- Animal Health: Novartis Animal Health Principles and Practices for Professionals (AHP3)
- Novartis Institutes for Biomedical Research: Policy for Interactions with Patients, Physicians, and Institutions for NIBR (PIPPIN)

A worldwide network of Compliance Officers advises on compliance matters and handles any issues that arise locally. Annual reports from Compliance Officers are consolidated by the Novartis Chief Compliance Officer into a yearly Compliance Report submitted to the Audit and Compliance Committee of the Novartis Board of Directors.

For details of our five core principles, see the Novartis Code of Conduct.

The Novartis Chief Compliance Officer reports to the Group General Counsel, who is a member of the Executive Committee of Novartis. The Novartis Chief Compliance Officer also has a functional ("dotted") reporting line to the Group CEO and has responsibility for the Code of Conduct, anti-bribery and ethical business practices.

For more about our ethics, governance and compliance, see the CR section of the Novartis website.

Economic

Economic performance

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 CDP 2014 Investor Information Request Response. An overview is provided below.

Physical risks

As a company that sells products in more than 150 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 to 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 USD 2–5 million cost per site.

Suppliers of chemicals and intermediates, suppliers of energy and suppliers of packaging materials could be affected by 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 ensure business continuity, which include risks of supply interruptions. Prices for agricultural commodities may increase by 20–30% over the next 10 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 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 be required to relocate.

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 so for the next 15 to 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 2013 were USD 30 million and total water costs were USD 10 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 the World Business Council for Sustainable Development's (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) will lead to the extinction of 20–30% of known plant and animal species (IPCC 2007). With over 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 over the next 30 to 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 over the next 6 to 10 years, with a strong likelihood that they will directly impact Novartis. We have invested USD 20–25 million on our energy and climate management programs to ensure that we minimize the associated risks and position ourselves to benefit from potential opportunities.

G4 EC 2

7,8,9

Energy projects over the last five years had an average payback of less than two to 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 68 million through projects, compared to a business-as-usual scenario.

With respect to regulatory schemes (such as the Kyoto Protocol and potential future agreements), 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. For more details about our Corporate Energy and Climate Strategy, see G4–EN15: Direct greenhouse gas (GHG) emissions (Scope 1).

Other risks and opportunities – changes in consumer demand

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.) will have multiple and increasing impacts on public health over the next 20 to 30 years, including the spread of vector-borne diseases.

As part of our proactive energy and climate strategy, we voluntarily initiated four carbon-offset projects to help minimize the impacts of our operations on the climate. Our carbon-offset projects will generate about 6 million t of offsets over 30 years. With a current credit price of USD 5–10 per metric ton for sustainable afforestation/reforestation offsets, the projects have a total long-term value of USD 30–60 million. Assuming an increase of the credit price to USD 20 per metric ton, this total value could increase to USD 120 million.

For further details of our carbon-offset projects, see G4-EN19: Reduction of greenhouse gas (GHG) emissions.

G4 EC 4

Financial assistance received from government

The government is not present in the shareholding structure.

Government grants

The Group was awarded government grants in the United States for the construction of a manufacturing facility to produce flu vaccines. The contracts included a maximum of USD 330 million of cost reimbursement for construction activities and equipment, of which USD 260 million was received up to December 31, 2013 (2012: USD 240 million). These grants are deducted in arriving at the balance sheet carrying value of the assets since the receipt of the respective government grant is reasonably assured. There are no onerous contracts or unfulfilled conditions in connection with this grant. For further details see p208 of the Novartis Annual Report 2013.

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 major tax benefit results from R&D credits which are typically offered to the pharmaceutical industry as an incentive to intensify R&D activities in the respective jurisdiction. The overall effect from credits and allowances on the expected tax rate amounts to –2 percentage points (approximately USD 200 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 subsidary) and the effective tax rate are:

	2013 (%)	Restated 2012[11] (%)
Expected tax rate	12.1	13.3
Effect of disallowed expenditures	3.5	2.9
Effect of utilization of tax losses brought forward from prior periods	–0.1	–0.1
Effect of income taxed at reduced rates	–0.1	–0.3
Effect of tax credits and allowances	–2.0	–1.7
Effect of write-off of deferred tax assets	0.3	
Effect of tax rate change on opening balance	–0.2	
Effect of tax benefits expiring in 2017	–0.7	–0.8
Prior year and other items	0.6	0.8
Effective tax rate	**13.4**	**14.1**

[11] 2012 restated to reflect the adoption of revised IAS19 on *Employee Benefits*

G4 EC 4

The utilization of tax-loss carry-forwards lowered the tax charge by USD 13 million in 2013 and by USD 11 million in 2012.

For further details see p203 of the Novartis Annual Report 2013.

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), the Novartis Institute for Tropical Diseases (NITD) and the Novartis Vaccines Institute for Global Health (NVGH) – 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.

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 are not material to the Group since most of the Novartis third party sales transactions occur on domestic sales rather than export sales.

Market presence

G4 EC 5

G4 6

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 can cover the costs of their basic living needs. These living wages are always at or above the local minimum wage, and always lower than the average entry wage. At major operations[12] where local minimum wage requirements exist, the Novartis living wage can be between 1.1 to 1.9 times higher than the legal minimum standard.

Where local minimum wage requirements exist in BRIC countries (Brazil, Russia, India and China), the Novartis living wage can be between 1.6 to 3.4 times higher than the legal minimum standard. In 2013, four associates in Algeria were identified to be earning less than a living wage, and their salaries were corrected upwards.

We do not track living wage data by gender. Associate-level data on compliance with our living wage policy is tracked by countries, who are tasked with ensuring that all associates, regardless of gender, are paid the living wage. They report back on any incidents of non-compliance to the global Human Resources function, but the figures are not routinely consolidated to produce global-level data.

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

Indirect economic impacts

G4 EC 8

Significant indirect economic impacts, including the extent of impacts

Significant indirect impacts in Switzerland
Novartis plays an increasingly important role as a buyer of goods and services in Switzerland. In 2013, we spent CHF 2.6 billion – nearly 40% of our total spend on procuring goods and services – on goods and services from the 26 Swiss cantons.

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

A study by Polynomics, on behalf of Interpharma, examined and quantified the direct and indirect

G4 EC 8

economic importance of the pharmaceutical industry in Switzerland. The study revealed that in addition to the 39 500 jobs offered directly by the industry, 130 300 jobs were dependent on the industry itself in 2012. In the same year, the indirect importance of the industry was calculated to total CHF 16.2 billion gross value added. For the study in full, see p5 of The Importance of the Pharmaceutical Industry for Switzerland, Polynomics, October 2013.

Our purchases are very significant for the Swiss labor market and economy. For every job within the company, Novartis indirectly creates four further jobs in Switzerland. For further information about the local activities of Novartis in Switzerland, see the Novartis in Switzerland Passport 2014 edition.

Significant indirect impacts globally

Diseases cause governments to spend more on healthcare and also have wider economic and social costs. Our medicines, medical devices and vaccines 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.

Examples of global efforts to promote economic development:

- In 2010, Novartis launched "Jian Kang Kuai Che" (JKKC, Health Express) in China's remote Xinjiang province to promote health through community and physician education. As part of "Health Express," Novartis trains local health educators, who address students at rural schools – the most effective channel for community education. In two years, the program has provided education for more than 400 000 students and 10000 adults. The program also supports local healthcare professionals by offering access to training at urban hospitals, through training courses as well as remote education sessions
- Our carbon-offset projects can help to foster long-term economic growth for local populations in developing economies. Novartis currently operates four projects in Argentina, China, Colombia and Mali. For further details, see G4–EC2: Economic performance
- At its production site in Jamshoro, Pakistan, Novartis Over-the-Counter (OTC) provides clean drinking water to neighboring communities. With this free-of-charge service, communities receive between 40 and 65 m^3 of clean fresh water every day, representing 20% of what the site is using in its operations. In Jamshoro, where drinking water is a scarce resource, the availability of clean water is a critical issue for people's health and well-being

The Novartis Foundation for Sustainable Development works to create sustainable health service models and improve access to healthcare for those most in need, resulting in positive indirect economic impacts. For more details, see the Novartis Foundation for Sustainable Development Annual Report 2012.

See G4–SO1: Percentage of operations with implemented local community engagement for information about how Novartis engages with local communities.

A woman from rural India consults a doctor as part of the Novartis Arogya Parivar Social Venture

Access to healthcare

Novartis reached more than 1.3 billion patients with medicines and vaccines in 2013 – and 100 million of these patients were reached through access to healthcare programs. See Additional topics – Access to healthcare for more information about our position on access to healthcare, including lower-income patients, product pricing, partnering and intellectual property. This section also details how our business brings value to people and society.

Procurement practices

G4 EC 9

UN Global Compact 6

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 to Group and Divisional guidelines but are managed locally. In 2013, Novartis Procurement managed spending in relation to net sales in significant locations[13]; details are provided in the chart opposite.

For the list of countries accounting for more than 5% of at least one of the respective Group totals for 2013, see p200 of the Novartis Annual Report 2013. See G4–12: Organization's supply chain for further detail of our procurement practices.

Spending in relation to net sales in significant locations (USD millions)

Country	Net sales %	Spend[14] %
USA	33	39.17
Switzerland	1	476.19
Germany	7	64.43
Japan	8	19.20
France	5	26.19

[13] Significant locations: countries accounting for more than 5% of at least one of the respective Group totals

[14] Spending: purchases of goods and services from suppliers based in the same geographical market as the reported net sales

Environment

Materials

G4 EN 1

UN Global Compact 7,8

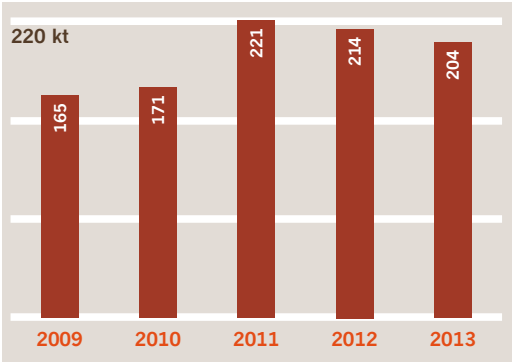
Materials used by weight or volume

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 (APIs) and finished dosage forms, as well as eye care products.

Total production for 2013 was 204 kt (2012: 214 kt). The biggest contributors to total weight of products are: Sandoz (83 kt), Alcon (73 kt), Pharmaceuticals (30 kt) and Consumer Health (18 kt).

Novartis collects measured data on raw material use and packaging material use on a quarterly basis. However, at this stage, due to the many thousand different materials used in our production, we believe it is not meaningful for our business to provide details on material types, their sources

Production total (kt)



HSE data reflects continuing operations, including Alcon from 2011.

or the percentage of renewable content. We will evaluate the feasibility of collecting this data in the future.

For further detail see p9 of the Novartis HSE Report 2013.

Energy

G4 EN 3

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Energy consumption within the organization

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

- Improve energy efficiency for all industrial and commercial operations and use renewable energy sources where available and feasible
- Develop carbon-offset projects and account for achieved carbon sinks to compensate for operational greenhouse gas (GHG) emissions

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 2013, total energy use increased by 2.8% to 19.98 million GJ, compared to 19.43 million GJ in 2012. This included an increase of energy generated on-site of 2.9%, from 8.03 million GJ in 2012 to 8.25 million GJ in 2013.

Low carbon-intensity and renewable sources

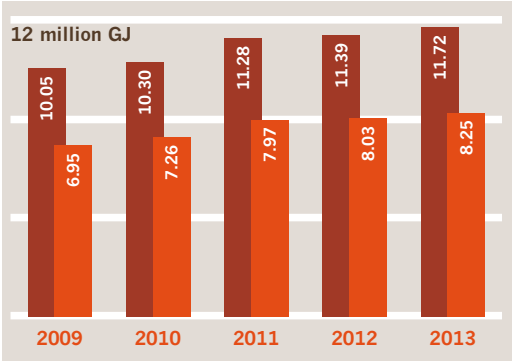
A high proportion of our energy use comes from less carbon-intensive and renewable energy resources. In 2013, 92% of our on-site energy came from the combustion of natural gas and 2% from renewable fuel sources – a decrease compared to 2.2% in 2012 due to limited availability of some biofuels.

On-site renewable sources are primarily wood chips, sugar cane residues (bagasse) and biogas from mycelium waste. Additional photovoltaic (PV) arrays of 405 kW peak capacity were added in 2013 at East Hanover, New Jersey, USA and Torre Annunziata, near Naples, Italy. A new 120 kW system is currently under construction in Barcelona, Spain. The East Hanover site was the first Novartis site to install PV panels in 2006 and has now expanded its PV solar capacity to over 500 kW, with the largest array of 800 panels on the roof of the new oncology building. The total PV capacity installed at Novartis now totals 2 100 kW, producing 10.4 TJ or about 0.1% of total electricity consumed.

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

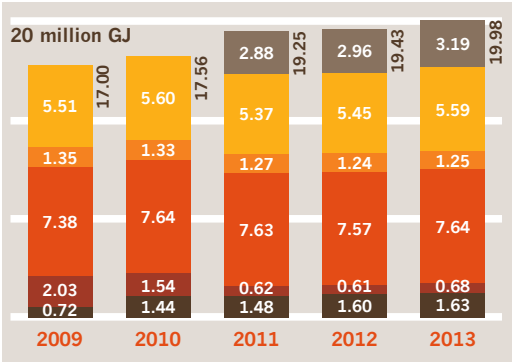
Energy use (in million GJ)



Energy, purchased Energy generated on-site

HSE data reflects continuing operations, including Alcon from 2011.

Energy use by division (in million GJ)



Alcon Pharmaceuticals NIBR Sandoz
Consumer Health V&D

HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision & OTC until 2011 – Ciba Vision included under Alcon from 2011.

Full breakdown of energy consumption

Energy type	Quantity in terajoules (TJ)
Gas fuel	7 741
Light oil fuel	279
Other oil fuel	39
Fossil waste fuel	168
Energy use, total biomass fuel	159
Generated on-site from renewable energy	13
Purchased electricity	9 078
Purchased steam	2 000
Other purchased energy	638
Purchased renewable energy (included under purchased energy totals above)	905
Sold electricity	11
Sold steam and other energy	127
Total energy used (energy generated – energy sold)	**19 977**

G4 EN 3

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are based on standards used by the IEA. Our total purchased energy increased by 2.9% from 11.39 million GJ in 2012 to 11.72 million GJ in 2013. Sandoz (7.64 million GJ) was the largest energy user in the Novartis Group in 2013, followed by Pharmaceuticals (5.59 million GJ) and Alcon (3.19 million GJ).

Purchased electricity currently accounts for around 78% of the total amount of purchased energy, with approximately 7.7% of all purchased energy originating from renewable sources, compared to 6.5% in 2012. Purchased steam accounts for 17% 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 420 million for 2013 (USD 423 million in 2012), of which USD 273 million were spent on electricity.

For further detail, see p10 of the Novartis HSE Report 2013.

New 313 kW peak solar panel array on the East Hanover 337 East Village building in the US

Energy efficiency vs sales targets [15]

Target	2013 progress	Future plans
Improve energy efficiency by 15% by 2015 based on 2010	11.4% improvement based on 2010 – we are on track to achieve our 2015 energy efficiency target	Improve energy efficiency 15% by 2015 and 18% by 2016, based on 2010

[15] Calculated with sales changes in constant currencies

G4 EN 6

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Reduction of energy consumption

The availability of resources, predominantly energy and fresh water, is becoming more constrained and prices will continue to increase. 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 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 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.

G4 EN 6

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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 very short payback periods: for two-thirds of projects payback is less than two years, and for more than half it is one year or less. The annual energy savings from completed projects represent more than 4% of the company's total energy consumption.

In 2012, Novartis expanded the scope of the former Energy Excellence Awards to include water, waste and emission reduction initiatives, as well as sustainable packaging projects. The new Energy and Environment Awards received a total of 130 project submissions from across the Novartis global organization in 2013. Of these projects, 46% were already completed prior to submission and 55% had a payback of less than 2 years. Annual savings of the projects implemented at the end of 2013 amounted to USD 11.5 million energy cost savings, 620 TJ energy savings, 47 000 t CO_2 GHG emissions reduction and 500 000 m^3 water savings. In addition, the projects contributed to a 15 000 t reduction of primarily solvent waste, which have a large Scope 3 GHG impact.

Energy efficiency targets and outlook

Since 2003, the Novartis Group has successfully introduced energy-efficiency targets in all of our divisions. In 2006, we set a 10% improvement target for 2007–2010 (based on 2006 performance). We exceeded the target, improving energy efficiency per sales by 26% between 2006 and 2010. A new target of 15% improvement in energy efficiency was set for 2011–2015, based on 2010 levels. In 2013, energy efficiency per sales improved by 11.4% compared to 2010 – this is 2.4% ahead of the expected improvement of 9% for 2011 to 2013.

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 with 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 by 14% by 2015, or 2% per year. As of 2013, total annual energy savings achieved with energy projects amounted to USD 68 million of energy costs and 2.65 million GJ of energy. This accounts for 14.2% of the 2008 energy consumption across all sites and divisions, achieving the 2015 target two years ahead of time.

We believe these significant achievements result from our ongoing comprehensive 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. See the energy efficiency case studies below for successful examples of energy efficiency projects.

Energy efficiency case studies

The Novartis Institute for Tropical Diseases (NITD) in Singapore is dedicated to drug discovery research on tropical diseases such as dengue fever and malaria. In 2013, its conditioned airflow systems were updated to dramatically reduce electricity and chilled water usage. Airflows respond to needs of laboratories and a "night mode" reduces the air change rate after business hours and during weekends. These measures have led to significant savings on purchased chilled water and electricity. With an investment of less than USD 50 000, the project has saved more than USD 230 000 – 27% of our annual spend on chilled water. Together with other energy projects, the site expects even bigger savings on annual electricity costs in the future.

At the Novartis Biotechnology Center in Huningue, France, the process of deactivating biological omponents in wastewater uses a lot of energy. Changes were implemented to increase the efficiency of the process, recover heat and relax the conditions under which wastewater can be discharged. This led to an energy saving of 78% for deactivation and cooling of the bio-wastewater, representing 12% of the site's total steam consumption and 45% of its consumption of cooling water extracted from the nearby river.

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

For further details see p9–17 of the Novartis HSE Report 2013.

Water

Total water withdrawal by source

Conserving water at our facilities is a priority, especially in geographical areas where water is already scarce, and particularly at our manufacturing facilities where our water use is greatest. Novartis monitors water streams into its sites by source and out by discharge stream, as well as various types of water use, every quarter. 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 consumption of 40 liters per person, per day. Such water balance methodology allows effective water resource and cost management, and helps achieve complete and accurate information on water use.

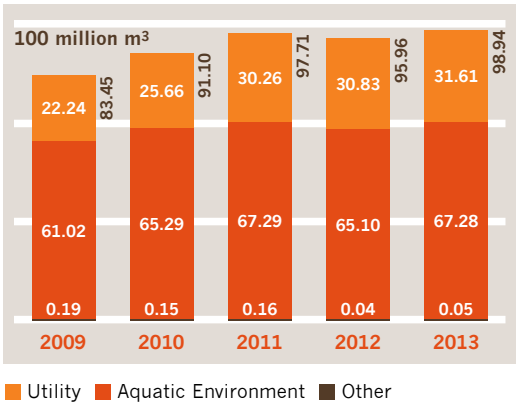
Our total water use increased from 95.7 million m^3 in 2012, to 98.6 million m^3 in 2013. We purchased 31.6 million m^3 (32%) from water suppliers, and 67.3 million m^3 (68%) is abstracted from groundwater wells or from surface water bodies (directly from the environment). The water directly abstracted from the environment is used mainly for cooling purposes before being returned to the source with a minor increase in temperature. This water is primarily used for the cooling of fermentation and other chemical processes and for the cooling of data centers, or for air conditioning of offices, because the environmental impact is lower than using chillers.

The use of contact water slightly increased in 2013 to 17.3 million m^3, compared to 17.1 million m^3 in 2012. Major users of contact water were Sandoz (48%), Pharmaceuticals (23%) and Alcon (16%). Our operational water footprint slightly increased to 20.3 million m^3 in 2013, compared to 20.0 million m^3 in 2012. Our operational water footprint includes our grey water footprint (water output that goes through wastewater treatment, 18.1 million m^3) and blue water footprint (water that is lost mainly through evaporation from cooling towers, 2.2 million m^3).

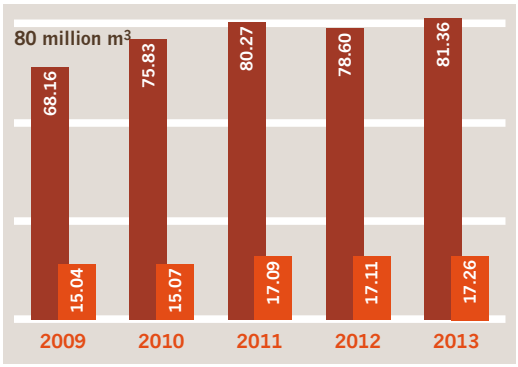
We have reported water use via the CDP water program since 2010.

For further details, see p12 of the Novartis HSE Report 2013.

Water input by source (in million m^3)

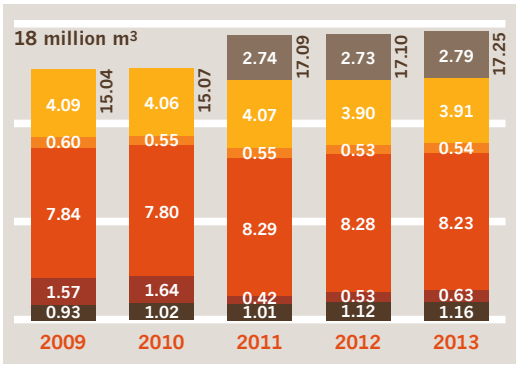


Water use (in million m^3)



HSE data reflects continuing operations, including Alcon from 2011.

Contact water use by division (in million m^3)



HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision and OTC until 2011 – Ciba Vision included under Alcon from 2011.

Water sources significantly affected by withdrawal of water

There are no water sources significantly affected by withdrawal of water from our operations: 33% of total water used is supplied by local public water utilities. The remaining 67% of total water used is drawn from groundwater wells or from surface water bodies and used for cooling before being returned to the source with a minor increase in temperature.

G4 EN 9

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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, where appropriate.

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 or extremely scarce. Sites located in areas where water is extremely scarce or scarce are identified, and their specific risks considered in a risk portfolio. Sites with a high level of water scarcity and high water usage 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. The 10 sites, located in South and South East Asia, the United States and Europe, conducted water audits, determined water flows, identified water-saving opportunities and set local water-saving targets. The sites committed to reduce their water footprint by 10% by 2015 compared to 2010. Some have already implemented water-saving programs and achieved substantial reductions since 2006. The experience gained at the top 10 sites will be replicated where feasible at other operations. An additional 10 sites with high footprint and/or high scarcity will be added to the program in 2014.

For further details see p13 of the Novartis HSE Report 2013.

Water targets

Target	2013 progress	Future plans
Specific water-saving targets issued to top 10 sites in water-scarce regions	In progress	Continue the water-savings program in 2014 and apply experience of potential water savings identified in 10 additional manufacturing locations

At the Sandoz manufacturing site in Turbhe, near Mumbai in India, the reject water from the Reverse Osmosis plant can be reused in the site's cooling towers and boilers

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 will continue to increase. Novartis makes every effort to protect the environment, limit the intake of natural resources and use them more efficiently.

In 2013, Novartis recycled 23 million m^3 of water, which is 23% of our total water use, including contact water and non-contact cooling water. For more detail on overall volumes and calculation methods, see G4–EN8: Total water withdrawal by source.

Water use case studies

At its production facility on the island of Batam in Indonesia, where fresh water is a scarce resource, the Alcon Division's contact lens facility achieved considerable water savings during 2011 and 2012. The use of city water for sanitary purposes has been reduced and the rejected water from reverse osmosis is now being recycled for use in flushing systems. The condensate recovered from the product sterilization process is being reused as preheated supply water for the steam boiler, saving both water and energy.

Continued...

G4 EN 10

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Across two years, this program enabled the site to reduce its water-related costs by USD 37 000, almost 20% of total water cost. Total water consumption was reduced by 23 000 m^3, or 17%. The investment needed for the program was around USD 32 000, which was paid back within less than a year.

The Sandoz site Turbhe, located in the greater Mumbai metropolitan area in India, has developed a comprehensive water-saving strategy and action plan in recent years. Since the start of the program in 2009, a number of water-saving actions have been implemented, including recycling of water for injection, recovery of steam condensate and cleaned wastewater reuse for sanitary purposes. With a total cost of less than USD 10 000, annual water and energy savings of more than USD 17 000 have been achieved. Although the savings are not large in financial terms, water savings are important for a site located in an area where clean water is a scarce resource. The program leads to annual water savings of more than 10 000 m^3 of fresh water, or about 10% of the total water used at the site.

The Alcon Johns Creek Manufacturing site in Georgia, US, produces about 4 million contact lenses per day. Clean water is a key resource for this process and the site had used water recycling proactively for many years. The site team reviewed how utilities were used and identified additional water recycling options. Water drained from multiple reverse osmosis units before reaching operating conditions is now being reused in the cooling towers. The design was simple and the effect significant. The investment cost USD 30 000, and savings on purchased water and wastewater treatment enabled a payback within a few months. Annual water savings from this project amount to more than 100 000 m^3.

For further details see p14 of the Novartis HSE Report 2013.

Emissions

G4 EN 15

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Direct greenhouse gas (GHG) emissions (Scope 1)

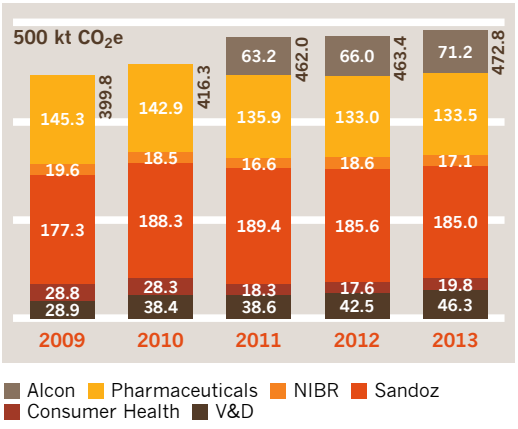
Novartis has reported its GHG emissions in accordance with the World Resources Institute (WRI) and WBCSD Greenhouse Gas Protocol for all sites under our operational control since 2005, and has reported emissions via the CDP since 2003. The reporting structure includes Scope 1 CO_2 emissions from stationary 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 (GWP) 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 greenhouse gas (GHG) emissions.

We have achieved our Scope 1 GHG from vehicles target (see table on next page).

The total amount of Scope 1 GHGs, mainly carbon dioxide (CO_2), emitted from the combustion of fossil fuels at Novartis sites in 2013 was 473 kt, a 2.2% increase compared to 2012 (463 kt). Emissions of hydrofluorocarbons (HFCs) from refrigeration systems totaled 9 kt. GHG emissions from production processes amounted to approximately 3 kt.

GHG emissions, Scope 1, combustion and process by division (in kt CO_2e)



G4 EN 15

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Scope 1 GHG emissions from the use of company-owned or leased vehicles are monitored and reported separately. In 2013, these totaled 170 kt, compared to 177 kt in 2012 – a 4.4% decrease. When including Alcon data in the 2010 baseline for our current 2015 target on GHG emissions, Scope 1 GHG emissions from vehicles have decreased by 21.6%. This decrease is due to the use of more efficient fleet vehicles. Carbon offsets are not considered for this target.

GHG emissions of non-Kyoto gases such as hydrochlorofluorocarbons (HCFCs), which are not included in Scope 1 GHG emissions, totaled approximately 10 kt. The primary source of these emissions was an Alcon facility in the US where HCFC124 is used as a purging gas. This process has now been replaced and HCFC emissions will be significantly lower from 2014 onwards.

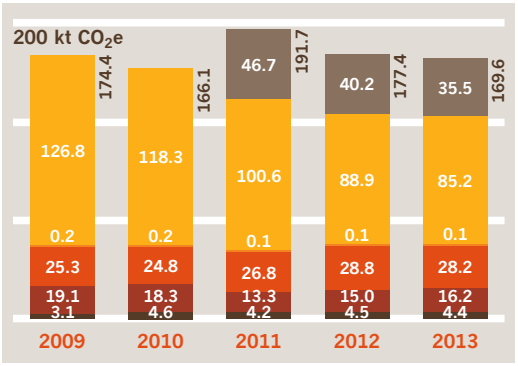
Novartis does not collect data on biogenic CO_2 emissions as the potential quantities are not considered relevant.

External schemes

Novartis has seven sites in the European Union that are part of the European Emissions Trading Scheme (EU-ETS). With respect to regulatory schemes – such as the Kyoto Protocol and potential future agreements – we have taken a proactive approach towards existing legal schemes on GHG emissions.

For further details see p14–15 of the Novartis HSE Report 2013.

GHG emissions, Scope 1 from vehicles (in kt CO_2e)



HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision and OTC until 2011 – Ciba Vision included under Alcon from 2011.

Scope 1 GHG emissions from vehicles target

Target	2013 progress	Future plans
Decrease Scope 1 GHG emissions from vehicles by 20% by 2015 based on 2010	21.6% reduction based on 2010	Reduce Scope 1 GHG emissions from vehicles, based on 2008, by: 2014: –16% 2016: –24%

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Energy indirect greenhouse gas (GHG) emissions (Scope 2)

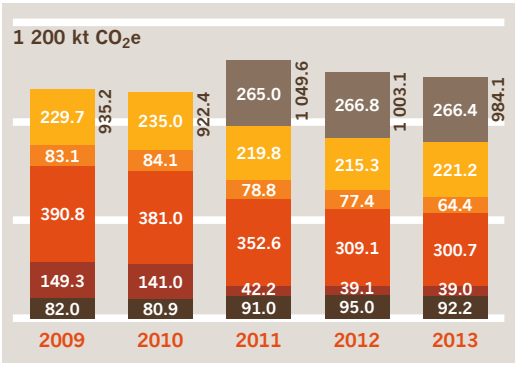
Novartis has reported its GHG emissions in accordance with the WRI and WBCSD Greenhouse Gas Protocol for all sites under our operational control since 2005. The reporting structure includes Scope 2 GHG emissions from purchased energy sources such as electricity, steam and other purchased energy sources. 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 2013 – mainly from electricity generation – totaled 984 kt, which represents a reduction of about 1.9% from 1 003 kt in 2012, and a reduction of 6.2% since 2011.

For more detail on our GHG emissions target and reduction measures, see G4–EN19: Reduction of greenhouse gas (GHG) emissions.

For further details see p15 of the Novartis HSE Report 2013.

GHG emissions, Scope 2, by division (in kt CO_2e)



HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision and OTC until 2011 – Ciba Vision included under Alcon from 2011.

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 2013 totaled an estimated 304 kt compared to 313 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 (DEFRA) emission factors. GHG emissions from the six company-owned or leased aircrafts, totaling 9 kt, have been included in the Scope 1 company vehicle fleet reporting.

A study was undertaken in 2010 to quantify Scope 3 GHG emissions for purchased goods and services based on the volume of spend with the top 6 922 suppliers to Novartis, linked with average emission intensities by industry sector. The methodology followed the GHG Protocol standard and estimated total Scope 3 emissions for purchased goods and services at approximately 1 020 kt of CO_2 equivalent. The study described has not been repeated, although further work on more accurately quantifying Scope 3 GHG emissions from the supply chain will be undertaken in the future.

Another study undertaken in 2009 estimated Scope 3 emissions from capital goods, based on floor area and GHG emission factors from the Ecoinvent database, at approximately 180 kt of CO_2 equivalent.

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 2013, Scope 3 GHG emission from the disposal of waste was calculated to be 100 kt of CO_2 equivalent.

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 2013 amounted to 83 kt of CO_2 equivalent.

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

Scope 3 GHG emissions from other sources were estimated in a study undertaken in 2009. They included transportation (57 kt of CO_2 equivalent), creation of company infrastructure (180 kt of CO_2 equivalent) and associate commuting (144 kt of CO_2 equivalent).

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 2013; decreasing by 1.1% from 1 644 kt of CO_2 equivalent in 2012 to 1 626 kt of CO_2 equivalent in 2013, not considering carbon offsets. Total Scope 1 GHG emissions remained stable between 2012 and 2013, while Scope 2 GHG emission were reduced by 2% over the same period due to more sites purchasing CO_2-free energy. For more detail on specific GHGs and calculation methods, see G4–EN15: Direct greenhouse gas (GHG) emissions (Scope 1).

In 2010, we set targets on total GHG emissions for 2015 and 2020: respectively a 15% and 20% reduction compared to 2008, including our carbon-offset projects. These are in line with targets set by leading countries for the same target years. Compared to a 2008 baseline, which includes acquisitions made since then, total GHG emissions for the Novartis Group have decreased by 8.3%. This has been achieved through our comprehensive energy-savings program, as well as increased use of renewable energy.

We set a separate 20% reduction target on fleet GHG emissions for 2015 compared to 2010 emissions. Reductions of 21.6% compared to the 2010 baseline have been achieved as a result of more fuel-efficient vehicles, introduction of hybrid gasoline-electric cars, increased use of diesel engines fitted with particlate filters and other emission-reduction measures such as use of liquid natural gas or biofuels.

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

Carbon offsetting

Novartis has established four carbon-offset projects in Argentina, Mali (West Africa), China and Colombia so far.

1. Around 3 million trees were planted in Argentina on Novartis-owned land between 2007 and 2010. The forestry project was certified by the Forest Stewardship Council (FSC) and registered by the United Nations Framework Convention on Climate Change (UN-FCCC) as a Clean Development Mechanism (CDM) project in February 2011. Carbon credits were formally issued by UN-FCCC on December 9, 2013 for the period May 2007 to October 2012

G4 EN 19

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2. Novartis sponsors a jatropha plantation and biofuel project in Mali, West Africa, which is the first agro-forestry project registered under the voluntary Verified Carbon Standard (VCS) 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
3. In China we are supporting 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 2013, more than 2 000 hectares were planted with the help of local communities. The project will also generate benefits for the local communities and biodiversity
4. In 2013 we purchased 2 264 hectares of farmland in Colombia for afforestation, and are preparing to plant the first 356 hectares with native tree species in 2014

While our main focus is to lower GHG emissions through internal improvement programs, the Novartis Group is also taking advantage of carbon-offset options such as the UNCDM and voluntary-offset schemes. These schemes are designed to offset the amount of carbon released into the atmosphere by removing GHGs elsewhere through the use of renewable energy, energy conservation or carbon sequestration into biomass.

Carbon offsets achieved in 2013 from our forestry projects in Argentina and Mali equal 96 kt CO_2e, or 5.4% of our 2008 baseline emissions. As of 2013, we have reduced total GHG emissions, taking into account offset projects, by 13.7% compared with 2008. We believe carefully selected carbon-offset projects can help to foster long-term economic growth for local populations in developing economies, while also supporting Novartis in meeting its Group GHG reduction target.

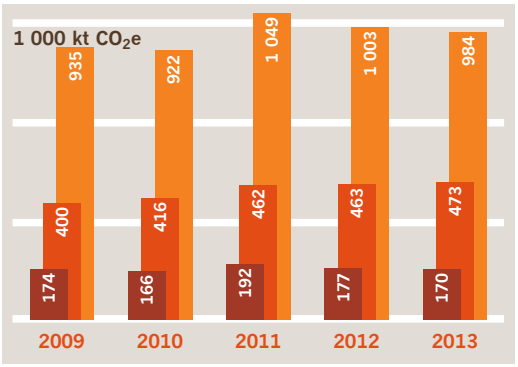
GHG emissions target

Target	2013 progress	Future plans
Reduce total GHG emissions by 15% by 2015 and 20% by 2020, including carbon offsets, based on 2008	GHG emissions (gross emissions minus offsets, including Scope 1 on-site and from vehicles and Scope 2 from purchased energy) totaled 1 530 kt CO_2e (carbon dioxide equivalent), a reduction of 13.7% compared to 2008, and a reduction of 1.1% compared to 2012	Reduce total GHG emissions by 15% by 2015 and 20% by 2020, including carbon offsets, based on 2008

We are on track to achieve our total GHG target.

For further details see p14–16 of the Novartis HSE Report 2013.

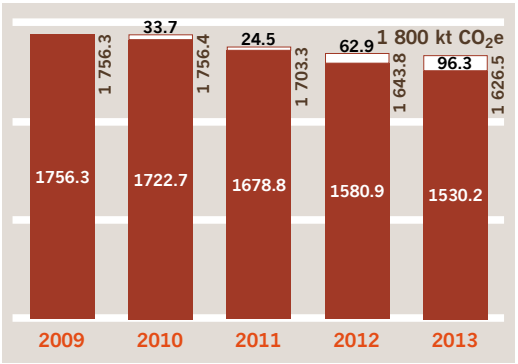
GHG emissions (in kt CO_2e)



Scope 2 GHG
Scope 1 GHG on-site
Scope 1 GHG vehicles

HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision and OTC until 2011 – Ciba Vision included under Alcon from 2011.

GHG balance (total emissions minus offsets) (in kt CO_2e)



GHG balance [kt CO_2e] GHG offsets [kt CO_2e]

Data includes Alcon for all years.

The Novartis forestry project in Argentina was registered as a Clean Development Mechanism project in 2011 – so far, more than 3 million trees have been planted to sequester carbon and create sustainable wood products

G4 EN 20

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Emissions of ozone-depleting substances (ODS)

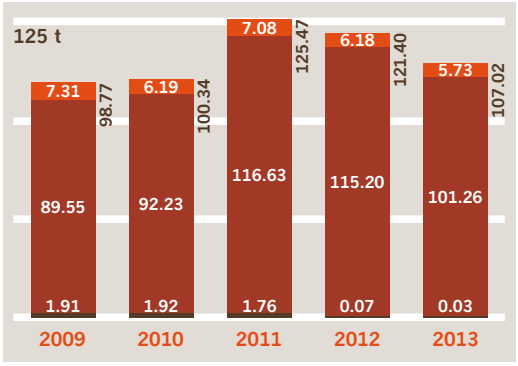
In 2013, Novartis sites globally reported a total inventory of 107 t of ozone-depleting substances (ODS), which equates to 61 t of CFC-R11 equivalent – compared to 121 t in 2012 (66t of CFC-R11 equivalent). The 2013 figure includes 30 kg of chlorofluorocarbon (CFC), 101 t of HCFC refrigerants, and 5.7 t of halons. Additionally, HCFC inventories are continually replaced with chlorine-free HFCs or with natural refrigerants. In 2013, HFCs – which have an ODS factor of zero – amounted to 141 t for Novartis. Novartis does not produce ODS through its processes or products.

Emissions caused by ODS losses in 2013, reported in metric tons of CFC-R11 equivalents, were 293 kg, compared to 2 905 kg in 2012. The largest ODS emissions in 2013 by division were 147 kg R11e from Alcon, 67 kg from Pharmaceuticals and 57 kg from Sandoz. 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. CFCs have been practically eliminated from Novartis sites. HCFCs and halons in existing equipment are being replaced when refilling becomes necessary.

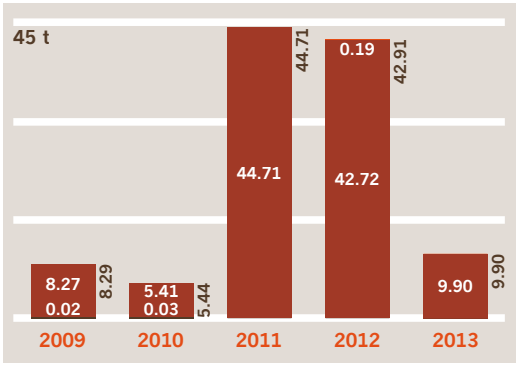
Data is calculated into CFC-R11 equivalents using the factors from the 2007 IPCC Report.

For further details see p18 of the Novartis HSE Report 2013.

ODS inventories (in t)



ODS losses (in t)



Key for both charts:
Halons HCFC CFC

HSE data reflects continuing operations, including Alcon from 2011.

G4 EN 21

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NOx, SOx, and other significant air emissions

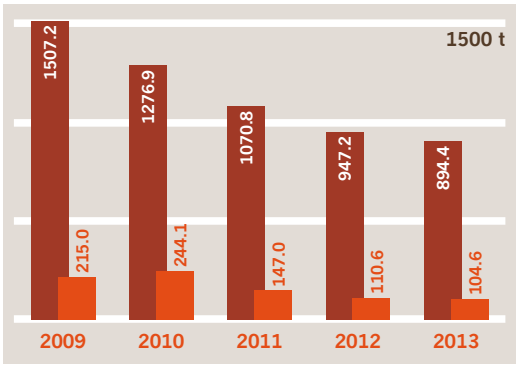
As a further disclosure of relevant emissions into air, Novartis reports halogenated and non-halogenated Volatile Organic Compounds (VOCs), sulfur dioxide (SO_2) and nitrogen oxide (NOx) inorganic pollutants and particulates. VOCs mainly originate from the use of halogenated and non-halogenated solvents 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 2013, our emissions of halogenated VOCs decreased to 105 t, from 111 t in 2012. Similarly, non-halogenated VOC emissions were reduced from 947 t in 2012 to 894 t in 2013. Emissions of halogenated VOCs originated predominantly from Sandoz (98.5%). Emissions of non-halogenated VOCs came from Sandoz (66%), Pharmaceuticals (26%) and Alcon (5%) Divisions.

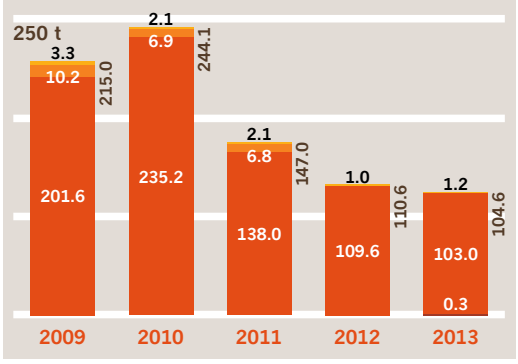
VOCs are the precursors of photochemical (tropospheric) ozone creation that leads to smog and related detrimental

VOCs emissions (in t)



Non-halogenated VOCs Halogenated VOCs

Halogenated VOC emissions by division (in t)



Alcon Pharmaceuticals NIBR Sandoz
Consumer Health V&D

G4 EN 21

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effects on health and the environment. Halogenated VOCs can also contribute to emissions of GHGs.

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 VOCs by 45% below 2008 values by 2015. Emissions are strongly influenced by products that require solvent-based production processes and by the significant lead time to change production processes.

VOCs targets

Target	2013 progress	Future plans
Keep halogenated VOCs more than 45% below 2008 level by 2015	105 t (54.8% reduction based on 2008)	Decrease emissions compared to 2008 baseline by: 2014: <140 t (–40%) 2016: <120 t (–48%)
Keep non-halogenated VOCs more than 40% below 2008 level by 2015	894 t (46.0% reduction based on 2008)	Decrease emissions compared to 2008 baseline by: 2014: <1 040 t (–37%) 2016: <960 t (–42%)

Emissions of VOCs overall decreased significantly again in 2013, and both 2015 targets have already been exceeded – primarily due to the installation of abatement measures in Sandoz. We are leaving our existing VOC targets in place, as they take into account the fact that the product portfolio may change and affect emissions in the future.

Inorganic air pollutants and particulates

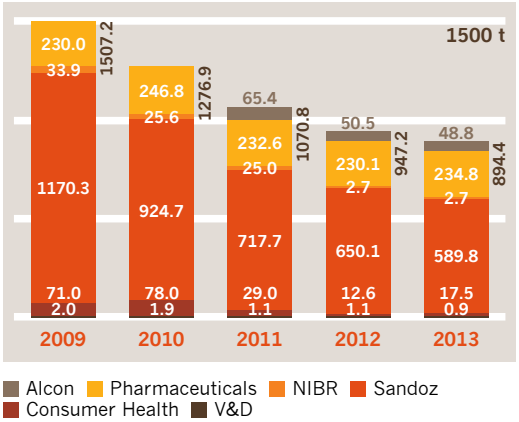
In 2013, inorganic air pollutant emissions for the Novartis Group totaled 49 t for SO_2 and 302 t for NOx, compared to 65 t and 302 t in 2012 respectively. NOx emission levels from company-owned or leased vehicles are not included in these figures. Major contributors to Group SO_2 emissions were Sandoz (42 t) and Pharmaceuticals (4.4 t). The distribution of NOx emissions is similar to that for the consumption of on-site-generated energy. The main contributors in 2013 were Sandoz (45%), Pharmaceuticals (30%) and Alcon divisions (14%).

Inorganic air pollutants have long been a focus of environmental improvement at Novartis. Given the measures we have implemented to increase energy efficiency and fuel switches, we do not anticipate inorganic air pollutants, including SO_2, to increase in the coming years.

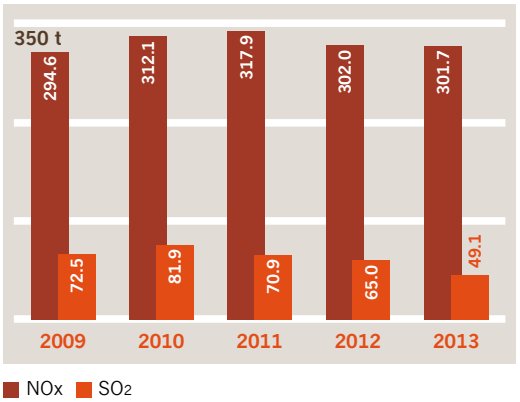
Particulate emissions amounted to 73 t in 2013, which is the same as those in 2012.

For further details see p19–20 of the Novartis HSE Report 2013.

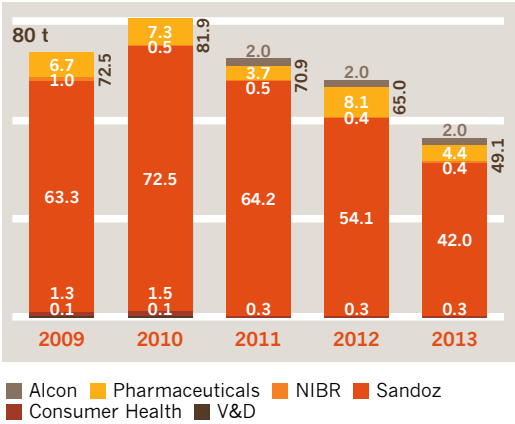
Non-halogenated VOC emissions by division (in t)



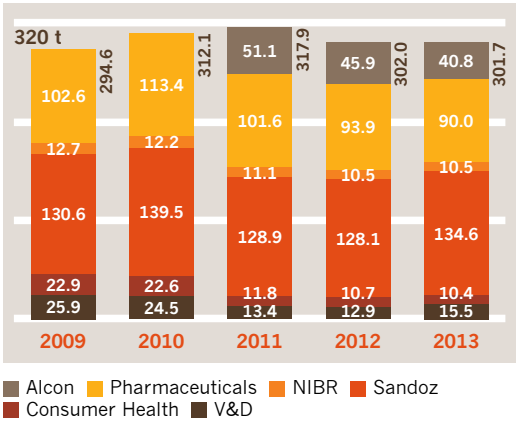
Inorganic air pollutants (in t)



SO_2 emissions by division (in t)



NOx emissions by division (in t)



Effluents and waste

G4 EN 22

7,8,9

Total water discharge by quality and destination

Novartis monitors water streams into its sites by source and out 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 closely match input and usage volumes, and amounted to 18.1 million m^3 in 2013. Roughly 95% of all non-contact water used for cooling is released back into the environment, which accounts for 79% 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 19% of our water outputs – as treatment generally occurs in off-site wastewater treatment plants, treatment methods will vary. The remaining water is used in products, evaporates, or is used 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) para-meters. 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 for the amounts reported.

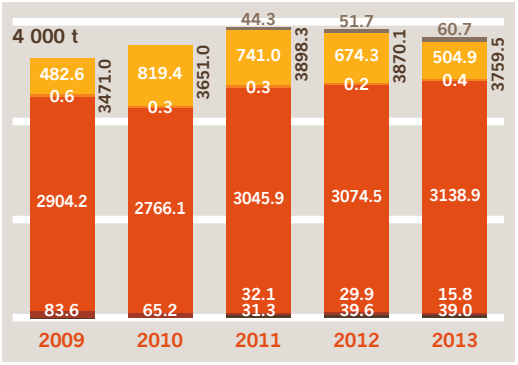
The COD load on the aquatic environment from Novartis Group operations slightly decreased in 2013, from 3 870 t in 2012 to 3 760 t. COD loads for 2013 were attributable to: Sandoz (83%), Pharmaceuticals (13%) and other divisions (4%). TSS increased from 480 t in 2012 to 495 t in 2013. Total nitrogen load decreased from 573 t in 2012 to 558 t in 2013 and phosphate load increased from 43 t in 2012 to 45 t in 2013. Novartis has not set a Group target on emis-sions into water. Effluent water is always treated in state-of-the-art facilities and therefore remaining effluent loads do not have a big 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 minimi-zation measures when necessary.

Read more about our approach see Additional topics – Pharmaceuticals in the environment.

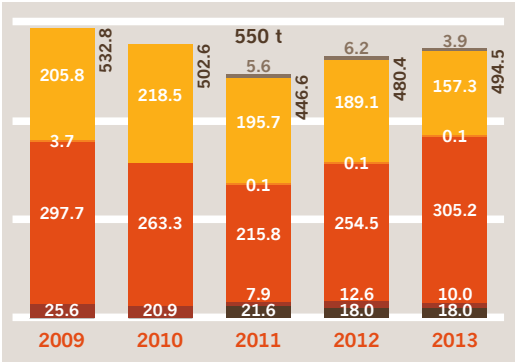
For more about our approach to the release of drug sub-stances into water, see Additional topics – Pharmaceuticals in the environment.

For further details see p21 of the Novartis HSE Report 2013.

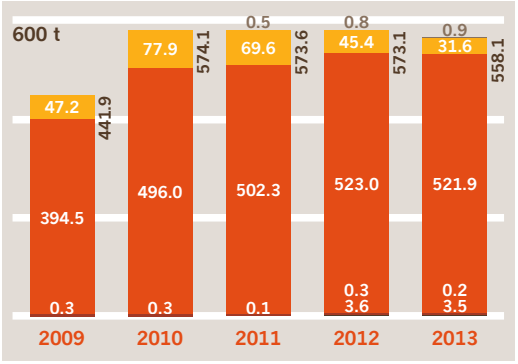
Chemical oxygen demand load by division (in t)



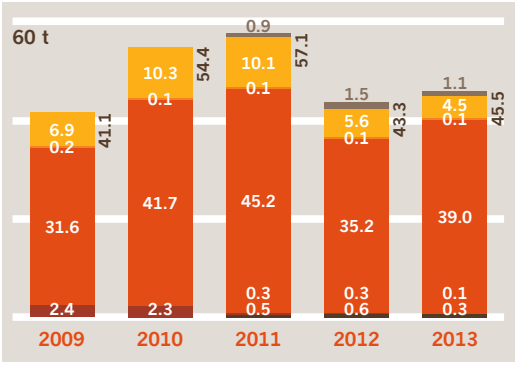
Total suspended solids emissions into water by division (in t)



Nitrogen load by division (in t)



Phosphate load by division (in t)



Key for all charts:

Alcon Pharmaceuticals NIBR Sandoz Consumer Health V&D

HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision and OTC until 2011 – Ciba Vision included under Alcon from 2011.

G4 EN 23

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 as an energy source, before safe disposal. Waste prevention and reduction is always preferred to treatment, incineration or disposal. This ensures that 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. 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 landfill regardless of local regulations that may 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 2013, the total amount of hazardous waste for the Novartis Group increased to 193 kt, from 185 kt in 2012; non-hazardous waste totaled 109 kt in 2013, compared to 98 kt in 2012. Increases were related to a growth in manufacturing activities during 2013.

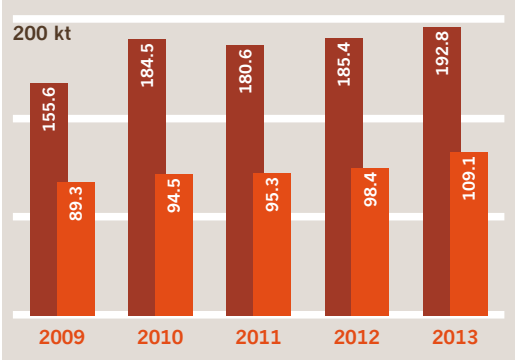
Hazardous waste was generated primarily by Sandoz (48%) and Pharmaceuticals (45%). Non-hazardous waste was generated by: Sandoz (42%), Pharmaceuticals (17%), Vaccines and Diagnostics (19%), Alcon (15%), Consumer Health (5%), and NIBR (2%).

Hazardous waste

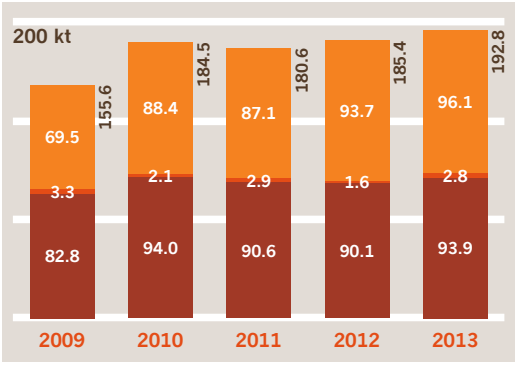
The total amount of hazardous waste not recycled in 2013 for the Novartis Group was 96.7 kt, compared to 91.7 kt in 2012. An additional 96.1 kt of hazardous waste was subject to recycling. The recycling rate for hazardous waste could not be further increased in 2013 but remains constant at around 50%. Novartis has completely eliminated disposal of hazardous waste with organic content to landfills. No such waste has been disposed in landfill sites since 2010. Small amounts of some inorganic residues for which no other disposal route exists, such as incinerator ash, continue to be disposed in accredited landfills.

Novartis puts a high priority on reducing the amount of hazardous waste generated and on increasing recycling rates. We have set a target to reduce the intensity of hazardous waste not recycled per production by 10% by 2015 compared to 2010. However, in 2013 the hazardous

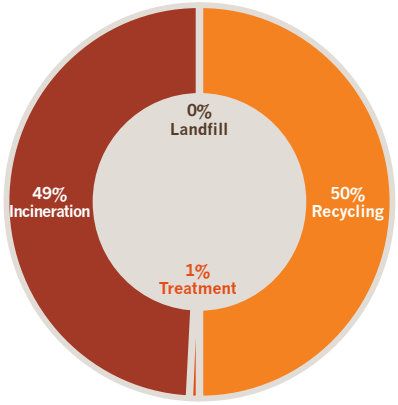
Total operational waste (in kt)



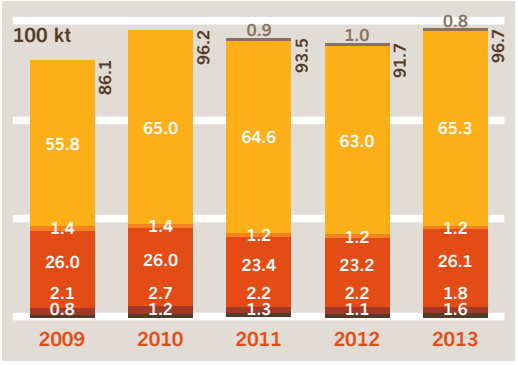
Hazardous waste by disposal route (in kt)



Disposal of hazardous waste in 2013



Hazardous waste not recycled by division (in kt)



Data excludes construction debris. HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision & OTC until 2011 – Ciba Vision included under Alcon from 2011.

G4 EN 23

7,8

waste intensity increased by 6%, and further efforts will be needed to reach the 10% reduction target by 2015.

Solvent recycling case study

Solvents are an important raw material in the synthesis steps of pharmaceutical manufacturing and cleaning. Used solvents represent the highest quantities of hazardous waste for Novartis Grimsby, a major chemical operations site within the Pharmaceuticals Division. In recent years, the site has intensified its focus on the recycling of waste, which is now seen as a resource for solvent recovery and reuse. Total waste recycled increased from 37% in 2010 to 77% in 2012 and is associated with more than USD 3.9 million of cumulative savings achieved in the past three years. In 2013, the site initiated a new solvent optimization effort with proposals to further reduce the site's solvent waste quantities. Solvent waste is no longer considered as an output and growing cost factor, but rather as an input and a commodity. With an initial investment of USD 4.3 million, annual material cost savings of USD 3.7 million will be achieved and solvent waste reduced by more than 3 577 t per year. As a consequence, the recycling rate could now increase to more than 80%.

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 2013 were 41.6 kt, a slight increase from 41.0 kt in 2012. An additional 67.5 kt of non-hazardous waste was collected for recycling.

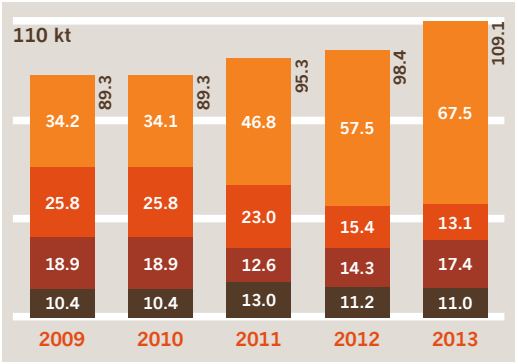
Keeping non-hazardous waste to a minimum and maximizing its recycling rate is a constant challenge. Novartis makes ongoing efforts in all areas to minimize non-hazardous waste that cannot be recycled at its operations globally. We are installing waste-segregation programs at many sites that allow better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

The recycling rate for non-hazardous waste is up from 58% in 2012 to 62% in 2013. We have set a target to reduce the per-associate intensity of non-hazardous waste not being recycled by 6% in 2013 and 10% by 2015, based on 2010 values. In 2013, the non-hazardous waste intensity was already reduced by 19% compared to 2010, which is substantially better than envisioned by our target path.

Sustainable packaging

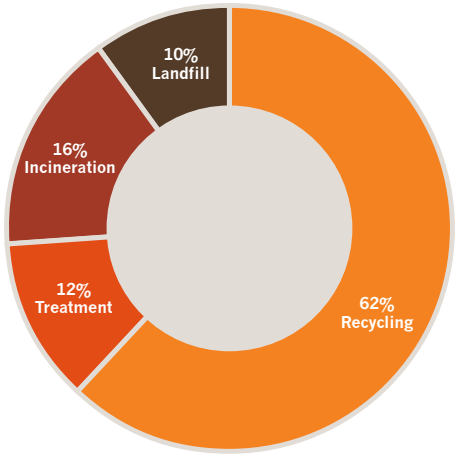
Novartis has launched a Group-wide initiative on sustainable packaging, and seeks to design packaging that both minimizes environmental impact and meets all regulatory, quality, functional and design requirements.

Non-hazardous waste by disposal route (in kt)

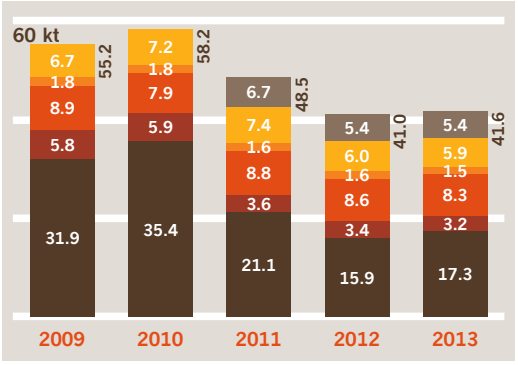


Data excludes construction debris. HSE data reflects continuing operations, including Alcon from 2011. Consumer Health data includes Animal Health, Ciba Vision & OTC until 2011 – Ciba Vision included under Alcon from 2011.

Disposal of non-hazardous waste in 2013



Non-hazardous waste by division (in kt)



G4 EN 23

UN Global Compact 7,8

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.

Sustainable packaging case study

The Novartis Animal Health technical development unit developed a program to reduce the use of corrugated cardboard boxes for the shipment of bulk drug substances. The team worked closely with the site where the drug substance is manufactured and with the packaging material supplier. The team simplified the packaging and harmonized two formats into one. These improvements led to a weight reduction of 20%, a cost reduction of 17%, 33% less pallet handling and a carbon footprint reduction of 23%, as well as a simplified assembly at the production sites. The new design has achieved annual material costs savings of USD 43 000 for one product so far, and it is expected to lead to additional annual material cost savings of USD 250 000 for other products.

For further details see p23–25 of the Novartis HSE Report 2013.

Waste targets

Target	2013 progress	Future plans
Improve efficiency of hazardous waste not recycled by 10% by 2015, based on 2010	5.7% decrease in efficiency	Improve efficiency of hazardous waste not recycled, based on 2010, by: 2014: –8% 2016: –12%
Maintain organic hazardous waste to landfill at zero	Achieved in 2013	Maintain organic hazardous waste to landfill at zero
Improve efficiency of non-hazardous waste not recycled by 10% by 2015 based on 2010	18.6% improvement in efficiency	Improve efficiency of non-hazardous waste not recycled, based on 2010, by: 2014: –8% 2016: –12%

G4 EN 24

UN Global Compact 8,9

Total number and volume of significant spills

No significant spills were reported in 2013. This was also the case in 2012.

Products and services

G4 EN 27

UN Global Compact 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.

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

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

PHARMACEUTICALS IN THE ENVIRONMENT

See p97 for the additional topic on our strategy to minimize the impact of pharmaceuticals on the environment, including the release of drug substances into water.

Compliance

G4 EN 29

7,8

Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations

Novartis Group companies around the world paid a total of USD 155 534 in fines for minor Health, Safety and Environment (HSE) violations in 2013. Novartis does not currently report the number of non-monetary sanctions or cases brought through dispute resolution mechanisms for HSE violations. We have evaluated the reporting of non-monetary sanctions and cases brought through dispute resolution mechanisms in future, and plan to begin reporting on this in 2015.

Management systems

We operate using robust environmental management systems to drive good practice and compliance across our sites. A total of 50 Novartis Group company facilities have ISO 14001 or Eco-Management and Audit Scheme (EMAS) certification for their environmental management systems: Sandoz (17), Alcon (14), Pharmaceuticals (13), Vaccines and Diagnostics (4), NIBR (1), and Consumer Health (1). Five sites also have ISO 50001 energy management system certification: Sandoz (3), Alcon (1) and Vaccines and Diagnostics (1).

In addition, 32 sites have OHSAS 18001 (British Standard for Occupational Health and Safety management systems) certification: Sandoz (14), Pharmaceuticals (10), Alcon (4), Vaccines and Diagnostics (3), and Consumer Health (1).

ISO/EMAS certifications cover 86% of the Vaccines and Diagnostics, 79% of Pharmaceuticals, 85% of Sandoz and 79% of Alcon production. OHSAS certifications cover 81% of Vaccines and Diagnostics, 55% of Pharmaceuticals and 64% of Sandoz 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 – see G4–14: Precautionary approach for more detail. We undertake site analyses and audits to assess site-specific risks, and 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 2013, 14 Corporate and 14 divisional HSE audits of Novartis facilities were undertaken. In addition, a business continuity audit of the Alcon Division was carried out. The Corporate HSE department held six process safety, one systematic incident investigation and 19 HSE data-reporting training courses, as well as three environment and energy workshops in 2013. A new online HSE training platform was developed and will be launched in 2014.

Transport

G4 EN 30

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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 2013, Scope 1 GHG emissions from the use of company-owned or leased vehicles totaled 170 kt, a 4.4% decrease compared to 177 kt in 2012. When including Alcon data in the 2010 baseline for our current 2015 emissions target, Scope 1 GHG emissions from vehicles have decreased by 21.6%. 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 2013 totaled an estimated 304 kt compared to 313 kt the year before. This number is based on detailed information from our worldwide

G4 EN 30

8,9

travel agent. GHG emissions from the six company-owned or leased aircrafts, totaling 9 kt, have been included in the Scope 1 company vehicle fleet reporting. Other impacts, such as emissions from product transport, are not deemed significant – a Scope 3 study undertaken in 2009 to determine GHG emissions from the transportation of Novartis products found that such emissions equated to less than one third of the emissions from the Novartis sales fleet.

Overall

G4 EN 31

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[16]

Type of expenditure	Amount (USD million)
Total costs for waste disposal	60
Total costs for energy	420
Investments in energy-saving projects	34
Total costs for water supply and treatment	59

[16] Figures are correct for nine months of real data and three months of best estimates.

Supplier environmental assessment

G4 EN 32

7,8,9

Percentage of new suppliers that were screened using environmental criteria

We engage with an extensive network of suppliers worldwide and their contributions are crucial to our success. With such global reach, ensuring that our goods and services are ethically sourced is paramount.

Active monitoring of the standards within the Novartis Supplier Code is carried out through our Responsible Procurement (RP) practice. This is the end-to-end process by which we assess ethical risk in suppliers, evaluate adherence to our Supplier Code and implement corrective actions. It applies across the whole supplier selection process run by our procurement team.

For more detail on our RP practice, see G4–12: Organization's supply chain.

Suppliers posing an elevated risk of labor, HSE, animal welfare and anti-bribery are reported globally. For suppliers where no risk is indicated, documentation is retained by our local organization only. Not all suppliers that are evaluated will be awarded a contract and become a Novartis partner, but all are included in the reported number below.

In 2013, 367 suppliers[17] identified as posing a potential risk were screened for ethical risks including HSE aspects. Of these, 204 suppliers were identified as posing an elevated HSE risk.

Active follow-up actions were taken with 125 suppliers, including desktop review and/or audits. In 17 cases, HSE audits were conducted, with four of these being connected to a new relationship with a waste contractor (Novartis has set out specific standards for contractors handling waste). In cases of non-compliance, improvement plans have been developed in collaboration with the relevant suppliers.

RP is designed to enable effective management of supplier risk. Because we screen potential suppliers during selection and existing suppliers as part of our performance management of suppliers, the absolute figure includes organizations that did not go on to become Novartis suppliers as well as those that did – we therefore do not report a percentage of new suppliers. Our current approach to capturing and reporting this data is effective and meets our needs. However, we regularly review our processes and will adjust them in the future if appropriate.

[17] Suppliers in scope: new suppliers, new supplier sites, and new products and/or services from existing suppliers, with whom we have a direct contractual relationship pertaining to the delivery of goods and services.

Environmental grievance mechanisms

G4 EN 34

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 2013.

Social: Labor practices and decent work

Employment

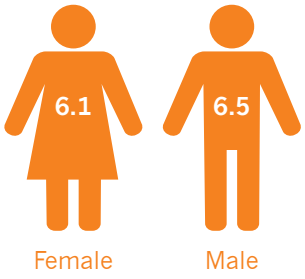
G4 LA 1

6

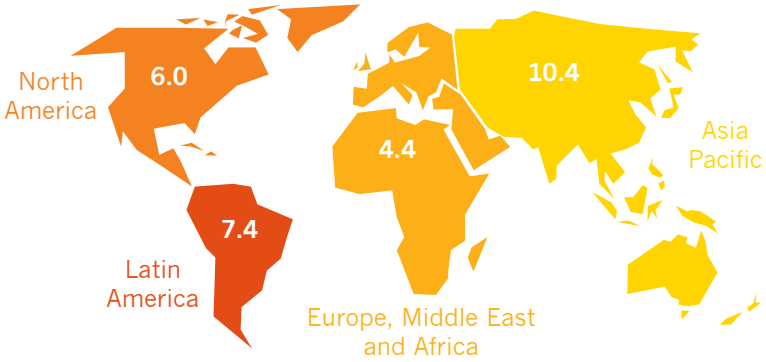
Total number and rates of new employee hires and employee turnover by age group, gender and region

The highest voluntary turnover – 11.1% – is in the 21–25 years age group. The lowest voluntary turnover – 2.6% – is in the 56–60 years age group. More comprehensive information is reported by generation groups[18] rather than age group.

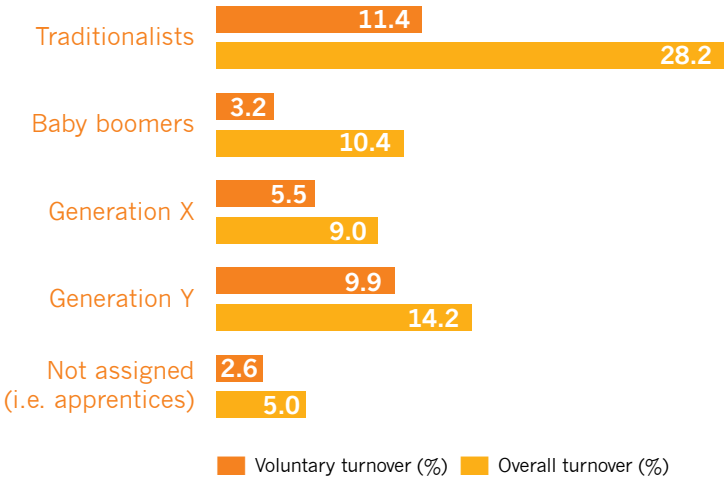
Voluntary turnover by gender[19] (%)



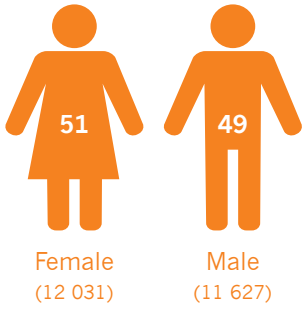
Voluntary turnover by region[20] (%)



Turnover by generation group[21] (%)



New hires overall[22] (%)



18 Generation groups are defined as:
"Traditionalists" – born between 1928 and 1944
"Baby boomers" – born between 1945 and 1964
"Generation X" – born between 1965 and 1979
"Generation Y" – born between 1980 and 1994

19, 20, 21 December 31, 2013

22 New hires are associates who started working for Novartis Group companies in the reporting year (Jan–Dec 2013), with data captured and correct as of December 31, 2013.

G4 LA 1

New hires by generation group, gender and region[23]

Region	Gender	No of new hires (generation group for each region)	% of new hires (generation group for each region)
Traditionalists			
Asia Pacific	Male	0	0
	Female	0	0
Europe, ME and Africa	Male	6	66.7
	Female	3	33.3
Latin America	Male	0	0
	Female	0	0
North America	Male	2	66.7
	Female	1	33.3
Baby boomers			
Asia Pacific	Male	95	66.9
	Female	47	33.1
Europe, ME and Africa	Male	307	61.4
	Female	193	38.6
Latin America	Male	28	60.9
	Female	18	39.1
North America	Male	351	52.5
	Female	317	47.5
Generation X			
Asia Pacific	Male	959	56.9
	Female	724	43.0
Europe, ME and Africa	Male	1 722	49.1
	Female	1 787	50.9
Latin America	Male	289	51.8
	Female	269	48.2
North America	Male	919	50.3
	Female	908	49.7
Generation Y			
Asia Pacific	Male	3 245	48.2
	Female	3 493	51.8
Europe, ME and Africa	Male	2 670	46.8
	Female	3 038	53.2
Latin America	Male	429	41.9
	Female	596	58.1
North America	Male	605	48.7
	Female	637	51.3

Associates collaborate in a courtyard at Novartis headquarters in Basel, Switzerland

[23] December 31, 2013

G4 LA 2

Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation

At sites of major operations[24], full-time Group company associates are eligible for or covered by health, retirement, disability and maternity benefits. In most major operation locations, Novartis Group company associates are also eligible for flex time, telecommuting, child care, bereavement leave, sabbatical programs, and employee assistance programs. At some major operations, 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 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.

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

Labor/management relations

G4 LA 4

Minimum notice periods regarding operational changes, including whether these are specified in collective agreements

We believe in constructive dialogue between employer and employees.

Minimum notice periods regarding operational changes are not defined legally in all countries. Where there is no legal minimum notice period, Novartis Group company associates and their representatives are informed at the earliest possible time. Often in these cases, we will employ voluntary standards that can range from 30 days to 180 days.

Where relevant, local legislation and collective bargaining agreement specifications on notice periods vary, and can also range from 30 days to 180 days.

Social plans and balance of interests negotiated with associate representatives may allow longer pre-notice and notice periods.

We 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.

Occupational health and safety

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

The 2008 Novartis safety culture survey, undertaken at sites with more than 100 Novartis Group Company associates, showed that 80% of these sites have Health and Safety Committees. Relevant sites like manufacturing, research and development have 100% coverage. Office sites infrequently have Health, Safety and Environment (HSE) committees, and tend to appoint safety coordinators instead.

Following recent acquisitions and divestments since the last survey, Novartis does not currently have data on the percentage of total workforce represented in such committees. We will evaluate the feasibility of collecting this information. However, internal inspections and audits show that all manufacturing, research and development sites have 100% coverage.

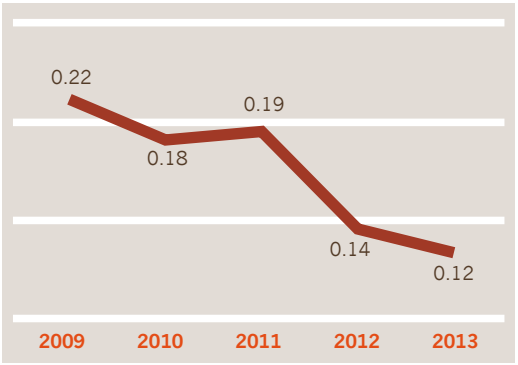
G4 LA 6

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 safety is an integral part of an employer's responsibility. Novartis Group companies are committed to providing our 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 to ensure that the workplace is safe for Novartis Group company associates, remain the foundation of HSE performance. 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 motivation to return to work after injury or illness.

Lost Time Injury and Illness Rate



HSE data reflects continuing operations, including Alcon from 2011.

G4 LA 6

Injury and illness targets

2013 target	2013 progress	Future plans
Lost Time Injury and Illness Rate (LTIR): Sustain 2012 performance of Novartis Group and improve Alcon Division performance by 12% based on 2012; 0.14 including Alcon	LTIR: 0.12 (LTIR including Third Party Personnel (TPP) 2012: 0.16) (LTIR including TPP 2013: 0.13)	Include TPP in LTIR and achieve a Group performance of 0.14 or less Reduce Serious Injury and Fatality cases by 10% vs. baseline number of cases in 2013 in medium term (2014–2016)
Total Recordable Case Rate (TRCR): Reduce TRCR of Novartis Group by 5% and improve Alcon Division performance by 7% based on 2012	TRCR: 0.42 (6.8% reduction on 2012) (TRCR including TPP 2012: 0.52) (TRCR including TPP 2013: 0.44)	Include TPP in TRCR and achieve a Group performance of 0.46 or less

Lost Time Injury and Illness Rate (LTIR)

Novartis reports work-related injuries or illnesses among Group company associates. Our Lost Time Injury and Illness Rate (LTIR) is a key performance indicator, enabling direct comparison between the performance of our units and on a country-by-country basis.

In 2013, the overall LTIR for continuing operations at Novartis was further reduced to 0.12 per 200 000 hours, from 0.14 the previous year; this represents a 14% reduction. Continuing management commitment and rigorous application of safety systems and procedures, combined with ongoing training for Group company associates, have driven our progress in 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 measures:

- Walkthrough inspections with senior managers on-site
- HSE training targeted at 0.1–0.5% of total hours worked yearly, depending on the work area
- Increase percentage of recommendations from audits, inspections, walkthroughs and incident investigations that are implemented
- Ensure near misses are reported at a rate of 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.

We introduce tailored safety initiatives where relevant, for example driver safety for fleet or sales organizations and laboratory safety for research and development. We are also placing increasing emphasis on the analysis and reduction of cases with Serious Injury and Fatality potential.

Lost Time Injury and Illness Rate targets and performance 2012/2013

	Target 2012	Achievement 2012	Target 2013	Achievement 2013
Alcon	≤ 0.30	0.17	≤ 0.15	0.14
Pharmaceuticals	≤ 0.15	0.12	≤ 0.14	0.12
Novartis Research	≤ 0.15	0.01	≤ 0.14	0.06
Sandoz	≤ 0.15	0.16	≤ 0.14	0.11
OTC	≤ 0.15	0.26	≤ 0.14	0.10
Animal Health	≤ 0.15	0.30	≤ 0.14	0.03
Vaccines & Diagnostics	≤ 0.15	0.09	≤ 0.14	0.16
Novartis Group	**≤ 0.19**	**0.14**	**≤ 0.14**	**0.12**

All significant incidents without lost time, accidents 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 2013, 12 investigation experts were trained in the TapRooT® methodology.

In-depth risk analysis – in accordance with the Zurich Hazard Analysis (ZHA) 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 2013, more than 100 associates from sites across the world were trained. Tailor-made Laboratory Process Safety Training courses were delivered for associates working in the Chemical and Pharmaceutical Development areas. In addition, extensive on-the-job HSE training is carried out at all sites.

G4 LA 6

Fatalities

Since 2005 there have been a total of 10 fatalities of Novartis Group company associates, of which nine were related to traffic incidents while traveling on public roads for business. These road fatalities were as follows: in 2005, two fatalities in Indonesia and the Czech Republic; in 2006, two fatalities in Indonesia; in 2008, one fatality in Pakistan; in 2010, two fatalities in Germany and China; and in 2011, two fatalities in Ukraine and the US. In 2012 we recorded a fatal industrial accident at Novartis, India. In 2007, 2009 and 2013 there were no work-related fatalities of Novartis associates. However, in 2013, we recorded one fatality for a contractor working at a Novartis site in Mexico.

We recognize the importance of safety at work, including where our associates travel by road as part of their job. We are rolling out a comprehensive driver safety campaign worldwide. This includes 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)

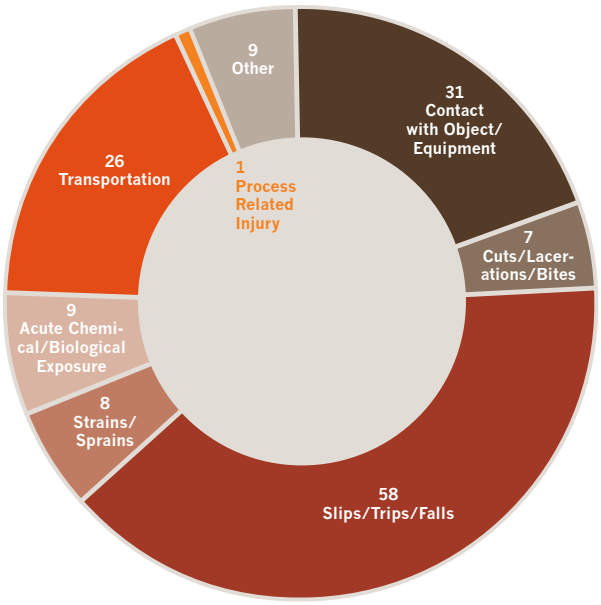
Many injury and illness cases without lost time have the potential to lead to lost time. Identifying and managing the circumstances in which these incidents occur ultimately reduces the overall risk of having a serious accident, lost time injuries and illnesses, or even fatalities. A recordable case 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 Total Recordable Case Rate (TRCR) equals the division of all recordable cases by the hours worked, multiplied by 200 000 for standardization. In 2013, the Novartis Group TRCR was 0.42, down from 0.45 in 2012.

Injury with lost time in 2013

Total: 149 associates



Occupational injury and illness

During 2013, a total of 503 Group company associates suffered work-related injuries. Of these, 149 (2012: 168) 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 57% of occupational injuries with lost time.

Novartis sites reported a total of 40 occupational illnesses in 2013, compared to 34 in 2012. Of these, eight – compared to seven in 2012 – led to days off work. This figure is integrated into the LTIR, and represents 4% 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

Total Recordable Case Rate performance

	Achievement 2012	Achievement 2013
Alcon	0.58	0.56
Pharmaceuticals	0.43	0.39
Novartis Research	0.45	0.69
Sandoz	0.37	0.33
OTC	0.40	0.40
Animal Health	0.67	0.33
Vaccines & Diagnostics	0.34	0.27
Novartis Group	**0.45**	**0.42**

G4 LA 6

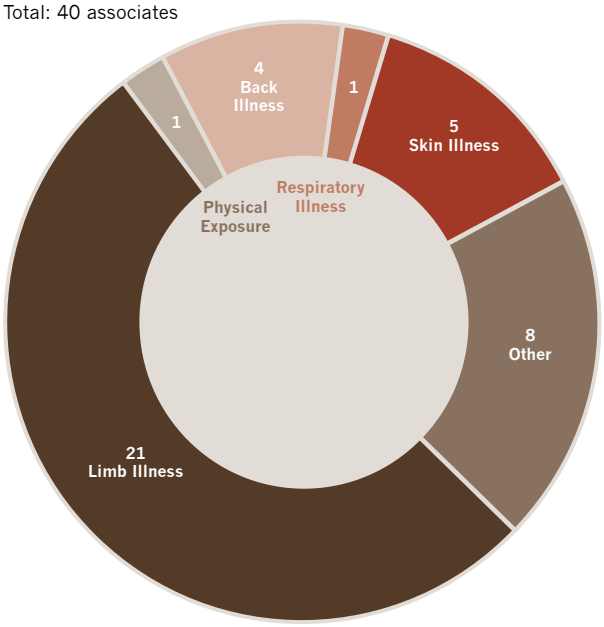
hazardous substances.The most prominent work-related health issue remains musculoskeletal disease, which accounted for 67% of illness cases in 2013, compared to 73% in 2012. Of these cases, one led to time off.

In addition, two cases of occupational skin disease resulting in lost work time due to allergic reactions were reported in 2013 (compared to four cases in 2012, one with lost time). A total of eight cases of occupational mental ill health were recorded in 2013, three of which resulted in lost time (compared to three cases in 2012, two with lost time).

The Lost Time Occupational Illness Rate was 0.01 per 200 000 working hours in 2013, which is the same low rate as recorded in 2012. The Total Recordable Occupational Illness Rate was 0.03 per 200 000 working hours in 2013, which is also the same as that reported in 2012.

Illness in 2013

Total: 40 associates



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	230	0	79	1 620	100 135 206	0.46	0.16
North America	228	0	39	974	61 905 478	0.74	0.13
Latin America	31	0	17	139	17 438 359	0.36	0.19
Asia	57	0	20	338	67 556 978	0.17	0.06
Middle East and Africa	2	0	0	0	9 300 703	0.04	0.00
Oceania	3	0	2	10	5 083 754	0.12	0.08
Total	**551**	**0**	**157**	**3 081**	**261 420 480**	**0.42**	**0.12**

Overall health and safety data by region

The following table presents 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 planning to have a global aggregated report for non-work-related absences by 2015.

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 2013, Novartis employed more than 14 000 TPP. There were 82 occupational injuries and illnesses among this group. Of these, 32 resulted in lost time. There were no fatalities among TPP in 2013. Since 2011, we have been recording the hours worked for TPP so that we can calculate and compare the LTIR and a TRCR with Novartis associates. As with our own Group company associates, any accident is rigorously investigated in order to reduce the total number of work-related accidents.

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

G4 LA 6

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	42	0	20	9 953 435	0.84	0.40
North America	23	0	5	7 384 580	0.62	0.14
Latin America	6	0	4	1 577 933	0.76	0.51
Asia	5	0	1	6 773 490	0.15	0.03
Middle East and Africa	2	0	0	538 413	0.74	0.00
Oceania	0	0	0	128 891	0.00	0.00
Undetermined Region	4	0	2	1 364 002	0.59	0.29
Total	**82**	**0**	**32**	**27 720 745**	**0.59**	**0.23**

Due to the increasing number of TPP working for Novartis, LTIR and TRCR targets for 2014 and beyond will include this population. The combined LTIR for Novartis associates and TPP was 0.13 in 2013, while the combined TRCR for Novartis associates and TPP was 0.43.

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. We will evaluate the feasibility of collecting this information in the future.

Third party personnel injuries

Year	Number of TPP	Number of injury cases w/wo lost time
2009	7 000	117
2010	8 000	123
2011	11 400	90
2012	12 400	145
2013	14 100	81

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.

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 24 000 contractors during 2013. There were 84 occupational injuries and illnesses with lost time and one fatality at a Novartis site in Mexico among this group in 2013.

G4 LA 6

Contractors health and safety, by region

Region	Fatalities	Total cases with lost time	Total working hours	LTIR
Europe	0	63	29 571 020	0.43
North America	0	7	6 705 211	0.21
Latin America	1	8	2 990 791	0.53
Asia	0	5	4 811 465	0.21
Middle East and Africa	0	1	392 696	0.51
Oceania	0	0	72 202	0.00
Undetermined Region	0	0	6 695	0.00
Total	**1**	**84**	**44 550 080**	**0.38**

The LTIR for contractors was 0.38 in 2013. 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 about our approach to creating a safe workplace, see the Dedicated to safety section of the Novartis website.

For further details see p4–7 of the Novartis HSE Report 2013.

G4 LA 7

Workers with high incidence or high risk of diseases related to their occupation

Novartis sites reported a total of 40 occupational illnesses in 2013. For more detail on types and occurrence of illness, see G4–LA6: Type and rates of injury, occupational diseases, lost days, and absenteeism.

Be Healthy workplace 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. The health and well-being of associates is a top priority and a natural extension of our company purpose to “care and cure”.

We place particular focus on prevention because statistics from the World Economic Forum (WEF) show that workplace health and well-being programs addressing lifestyle changes can help prevent up to 40% of non-communicable diseases (NCDs) such as cardiovascular disease, 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 is based on four main pillars:

- Move – Exercise
- Choose – Healthy eating
- Know your numbers – Be aware of basic health indicators
- Manage – Supporting associates to manage their health at work

As part of Be Healthy, all Novartis sites with more than 100 people should have a Care Management Framework in place, as well as 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 the 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. The Celebration Week was held at all participating sites between September 23 and 27, 2013.

Be Healthy reaches 95% of Group company associates worldwide – more than 176 sites in more than 50 countries.

For more, see the Be Healthy section of the Novartis Website.

G4 LA 7

Be Healthy target

2013 target	2013 progress	Future plans
Expand and further embed Be Healthy in Novartis culture with a particular focus on topics of interest to associates, for example energy management and resilience	In 2013, more than 9 000 Novartis associates in over 40 countries participated in the Global Corporate Challenge®. These associates walked, cycled and swam an average of 13 742 steps per day, effectively pushing well beyond the unhealthy 3 000 daily step count of an average worker and the 10 000 steps a day recommended by the World Health Organization. The GCC is a leading corporate health initiative where teams of associates race around a virtual map of the world	Increase Novartis associate participation in the GCC by 5%

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, and experimental or transgenic animals.

We take great care to ensure we prevent material misuse. 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.

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. Our emphasis on the health and well-being of associates is a natural extension of our mission to “care and cure”.

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 with 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 Employee Representative Councils on various HSE topics.

We are committed to providing our associates with safe workplaces, fair working conditions and 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 of the workplace. It describes how programs promoting health at the workplace and beyond should be set up, executed and monitored.

Training and education

G4 LA 9

UN GLOBAL COMPACT 6

Average hours of training per year per employee by gender, and by employee category

There are extensive voluntary and compulsory/regulatory training programs delivered each year across the organization. Yet, as records are not maintained in a centralized manner for all courses, we cannot report this information on a global level for all Group company associates – we will investigate the possibility of reporting this information in future. Depending on the topic, various trainings on compliance are offered to 100% of Novartis associates.

G4 LA 10

Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

Our Corporate Learning organization provides 22 courses for approximately 6 000 Novartis Group company associates each year as part of our formal process of leadership skills and career management. This includes courses delivered through Chinese and Russian Universities and a Latin American Learning Initiative.

Additionally, Novartis operates a global talent management system (TMS). Approximately 70 000 Group company associates have a profile in TMS, of which approximately 29 000 undergo annual organizational talent reviews and are assigned a potential or Learning Agility Sustained Performance (LASP) rating[25] in the system. In order to improve in their current role and prepare for the next one, all other associates maintain their development plans – including training and development needs – as part of the annual Novartis performance management process.

Each operating unit and/or country of operation offers a range of relevant learning programs – both internal and external – to contribute to the employability of associates. We do not currently capture this data on a global level, but this is an area we are working to improve and we intend to collect and report this data in the future.

Many of our major operating sites offer some form of sabbatical program. When restructuring occurs, we aim to offer career counseling to affected associates through our internal job centers.

Learning programs by division

Division	Number of programs
Alcon	200
Animal Health	24
Corporate functions	66
Corporate learning	22
NIBR	30
OTC	56
Pharma	1 829
Sandoz	174
V&D	17
Total	**2 418**

[25] LASP is a performance rating methodology, which takes an individual's potential and actual performance into account.

G4 LA 11

UN Global Compact 6

Percentage of employees receiving regular performance and career development reviews, by gender and by employee category

The Novartis Performance Management Process includes annual objective setting, mid-year review and year-end review. The process applies to permanent Novartis Group company associates who are not on long-term leave. Development areas are identified and discussed in the mid-year and year-end review discussions. 93% of associates worldwide completed the process in 2013. This figure is not 100% because some employee groups subject to works council or collective labor agreements are excluded from Performance Management Process participation. Associates on long-term leave – including maternity absence, military service and sabbaticals – may also not be eligible.

The proportion of Group company associates with performance management review ratings by gender aligns with the proportions of men and women in the workforce, i.e. there is no gender imbalance in the availability of performance management reviews.

Associates with a performance management review rating[26]

Employee type	Gender	Number of employees with performance review rating
Local manager	Female	6 427
	Male	10 536
	Total	16 963
Non-manager	Female	48 812
	Male	54 750
	Total	103 562
Total		**120 525**

[26] The performance rating year is January to December. This data was compiled on March 31, 2014 and therefore only includes associates that were employed in 2013 and were still with the company in March 2014.

Diversity and equal opportunity

G4 LA 12

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

Gender

The Novartis Board of Directors is 86% male and 14% female.

The Corporate Executive Group includes 384 of the most senior managers at Novartis, 21% of whom are women and 79% men.

For a summary of women in management positions in key Novartis locations, see G4–LA13: Ratio of basic salary and remuneration of women to men.

For a breakdown of employee gender by employee category, see G4–10: Number of employees.

For more information about the diversity of the Board, see G4–38: Composition of the highest governance body.

Age group

The tables (right) show the composition of the Corporate Executive Group by age and generation group.

Diversity

At least 157 different nationalities are represented at Novartis. Minority groups are not reported globally due to a lack of standard or global definitions for minority.

Projects and activities:

- Cross-divisional "Best-Talent" initiative to emphasize integrity and leadership standards for internal and external hires
- Group-wide Diversity and Inclusion (D&I) strategy to promote greater diversity of talent, inclusion, engagement, innovation and customer/patient focus throughout the organization. Use an integrated approach with Talent Management and Organizational Development to increase female representation, develop local leaders and track our leadership pipeline through the use of talent metrics in scorecards; leverage the organizational talent review (OTR) process to further identify and develop key talents and continue to focus on several development programs to increase diversity at leadership levels
- Leverage D&I initiatives through: 1) Building and advocating diversity; 2) Targeted recruitment of diverse talent; 3) Learning and development resources; 4) Initiatives to support a diverse workforce; 5) Internal network and employee resource groups; 6) External network; 7) Participation in external platforms and recognition in external rankings and awards
- Conduct the bi-annual Global Employee Survey and implement outcomes related to employee engagement from survey results

Corporate Executive Group composition by age group[27]

Age	Number of CEG
31–35	2
36–40	18
41–45	58
46–50	129
51–55	97
56–60	62
61–65	18
Total	**384**

Corporate Executive Group composition by generation group[28,29]

Generation group	Number of CEG
Traditionalists	0
Baby boomers	237
Generation X	147
Generation Y	0
Total	**384**

All employees by age group[30]

Age	Number of employees
0–15[31]	31
16–20	1 237
21–25	7 579
26–30	20 967
31–35	26 588
36–40	24 277
41–45	20 494
46–50	16 491
51–55	11 619
56–60	6 686
61–65	2 092
66–99	345
Undisclosed (US and Canada)	3
Total	**138 409**

27 December 31, 2013

28 Generation group definitions:
"Traditionalists" – born between 1928 and 1944
"Baby Boomers" – born between 1945 and 1964
"Generation X" – born between 1965 and 1979
"Generation Y" – born between 1980 and 1994

29, 30 December 31, 2013

31 There are no associates under the age of 15 years

G4 LA 12

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Diversity and inclusion targets

2013 target	2013 progress	Future plans
Accelerate inclusion throughout the organization: ■ Maintain or improve the Global Employee Survey (GES) favorability rating of 77 for Diversity and Inclusion (D&I) category, which is above external Pharma benchmark ■ Maintain or improve the GES Employee Engagement Score of 82 ■ Maintain or improve Inclusion index on GES of 71 Implement aligned group and divisional D&I strategy actions: ■ Develop and execute quarterly scorecards, measuring gender and/or local representation in leadership, as well as diverse succession pipeline ■ Execute talent strategy (programs including EFLP, BOOST and LEAD)	The 2013 GES showed a slight decline in score for the D&I category to 69%, with Alcon integration and a new question likely impacting the score There is a slight decline in employee engagement scores to 79% showing resilience among associates Overall a slight decline in the Inclusion Index to 65%. One key area of decline: Level of involvement in decision-making (61% in 2013 vs 70% in 2011). Factors affecting decline: Additional 5 questions from 9 to 14 questions in Index As part of the Organizational Talent Review process, gender and local talents in emerging markets are reported and tracked Efforts are ongoing to implement scorecards in all divisions, including Pharmaceuticals, Alcon and Sandoz, which measure gender and local representation in leadership as well as succession pipeline Integrated people management scorecard in Pharmaceuticals to include diversity-related goals under development Talent programs: Talent Management programs to increase diversity have been conducted, EFLP Alumni (Pharmaceuticals), OWL (Oncology), BOOST and LEAD: Talent Centricity	■ Maintain or grow Inclusion Index score from 65% in 2015 GES (to maintain or increase score of 65) ■ Maintain or grow Employee Engagement scores from 79% in the 2015 Global Employee Survey (e.g. female employee engagement) By 2015, grow representation of women at top three seniority bands to: ■ 25% female representation in corporate executive group (CEG; Executive officers who set the strategic and/or operational direction of the organization) positions ■ 30% female representation in job family band 1 ■ 35% female representation in job family band 2

Equal remuneration for men and women

G4 LA 13

Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation

Novartis sells products in more than 150 countries with different legal and socio-economic environments. The table on the right shows the representation of women in management positions for Novartis Group company in the significant locations of operation (based on number of employees).

Ratio of basic salary of women to men[32]

Level	Ratio
Executive level	0.93
Management level	0.94
Non-management level	0.97

Women in management[33]

Country[34]	Male management (%)	Female management (%)	Female overall (%)
Switzerland	66	32	43
Germany	75	25	54
United States	80	20	49
United Kingdom	62	38	44
China	45	55	51
Japan	85	15	27

[32,33] December 31, 2013

[34] Six countries where Novartis has most associates

Supplier assessment for labor practices

G4 LA 14

6

Percentage of new suppliers that were screened using labor practices criteria

We engage with an extensive network of suppliers worldwide and their contributions are crucial to our success. With such global reach, ensuring that our goods and services are ethically sourced is paramount.

Active monitoring of the standards within the Novartis Supplier Code is carried out through our Responsible Procurement (RP) practice. This is the end-to-end process by which we assess ethical risk in suppliers, evaluate adherence to our Supplier Code and implement corrective actions. It applies across the whole supplier selection process run by our procurement team.

For more detail on our Responsible Procurement practice, see G4–12: Organization's supply chain.

Suppliers posing an elevated risk of labor, health, safety and environment (HSE), animal welfare and anti-bribery are reported globally. For suppliers where no risk is indicated, documentation is retained by our local organization only. Not all suppliers that are evaluated will be awarded a contract and become a Novartis partner, but all are included in the number reported below.

In 2013, 367 suppliers[35] identified as posing a potential risk were screened for ethical risks, including labor rights. Of these, 190 suppliers were identified posing an elevated labor rights risk.

Actions were taken with 104 suppliers, including desktop reviews and a total of 10 labor rights audits. In cases of non-compliance – which include wages, working hours and record keeping – improvement plans have been developed in collaboration with the relevant suppliers.

RP is designed to enable effective management of supplier risk. Because we screen potential suppliers during selection and existing suppliers as part of our performance management of suppliers, the absolute figure includes organizations that did not go on to become Novartis suppliers as well as those that did – we therefore do not report a percentage of new suppliers. Our current approach to capturing and reporting this data is effective and meets our needs. However, we regularly review our processes and will adjust them in the future if appropriate.

[35] Suppliers in scope: new suppliers, new supplier sites, and new products and/or services from existing suppliers, with whom we have a direct contractual relationship pertaining to the delivery of goods and services.

Labor practices grievance mechanisms

G4 LA 16

6

Number of grievances about labor practices filed, addressed and resolved through formal grievance mechanisms

Novartis Group companies employ more than 138 000 associates around the world. While we do not have a category called labor practices, our category employee relations includes issues pertaining to labor practices such as discrimination, harassment, inappropriate behavior, performance management violations, retaliation, unfair dismissals, etc. In 2013, 1 427 cases of alleged misconduct related to employee relations were reported, the majority of which were minor.

All 1 427 reports related to employee relations have been investigated or addressed and resolved:

- 1 009 reports that were not related to misconduct were delegated to local management for review and action
- 418 investigations were conducted by the Business Practices Office in 2013
- Of the 418, there were 58% substantiated cases, resulting in 100 dismissals or resignations and 66 written warnings

Social: Human rights

HUMAN RIGHTS POLICY AND LIVING WAGE

See p94 for the additional topic on our approach to human rights and living wages.

Investment

G4 HR 1

G4 1, 2

Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening

We strive to ensure that activities within our sphere of influence do not negatively impact fundamental human rights, as set out by the United Nation's Bill of Rights and the core conventions of the International Labor Organization, either directly or through our business relations.

Investment agreements are not managed by our procurement team but through other functions such as Business Development and Licensing, or Mergers and Acquisitions.

Novartis Group company attorneys support the sourcing process by systematically establishing and updating general sourcing contract templates. These templates include specific references to the Novartis Supplier Code – similar references are also contained in standard Purchase Order language. Our Supplier Code sets the expectation that suppliers commit to uphold the human rights of workers and to treat them with dignity and respect. It includes guidance on freely chosen employment, child labor and young workers, non-discrimination, fair treatment, wages, benefits and working hours, and freedom of association.

We are not able to report a specific figure for the number or percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening. We will evaluate the feasibility of collecting this information in the future.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

G4 HR 2

G4 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 Universal Declaration of Human Rights of the United Nations within our sphere of influence.

In 2011, we launched our revised Code of Conduct, which includes several references to human rights; this was rolled out through an extensive campaign to engage Novartis associates worldwide. E-training on the Code of Conduct, including certification, started in early 2012 and is repeated annually. By December 31, 2013, 116 850 associates had been invited to undertake the e-training, of which 113 092 had completed it. However, it is not possible to provide a percentage of total associates trained; note that e-training targets active, internal associates with an email address. All remaining associates are required to be trained face-to-face or through shared kiosks, but this is not tracked centrally. Each e-training session is estimated to last 25 minutes, which resulted in approximately 47 122 hours of e-training globally in 2013.

In 2013, we rolled out a New Hire e-training module, which includes a reference to human rights. By December 31, 2013, 17 316 associates had been invited to undertake this training and 15 805 of new hires had completed it. However, it is not possible to provide a percentage of total new hires trained; note that e-training targets active, internal associates with an email address. All remaining associates are required to be trained face-to-face or through shared kiosks, but this is not tracked centrally.

In addition, in an effort to reinforce Human Resources (HR) standards, we have trained more than 130 HR associates across 85 countries via around 80 webcast train-the-trainer sessions. These sessions covered four Employee Relations Guidelines:

non-discrimination, disciplinary actions, life-work integration, and conflict resolution. These Group company associates are also tasked with training their HR colleagues to ensure these standards are implemented locally.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Non-discrimination

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 Business Practices Office (BPO), and substantiated cases are referred to senior management for appropriate disciplinary action. Novartis Group company associates encourages 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. We do not specifically disclose the number of incidents relating to discrimination as this information is business confidential.

Freedom of association and collective bargaining

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 and suppliers is 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. Novartis commits to a constructive dialogue with workforce representatives and to the involvement of work councils or trade unions according to local laws and regulations.

Through the annual Corporate Citizenship survey we gain insights from countries that allow 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 far as allowed by local laws.

In addition to our commitment to human rights and the right to freedom of association, we also 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, Employee Representative Bodies (ERBs), such as the NEF, must be involved in certain Novartis activities in the countries of the European Union and Switzerland. The respective agreement – a legally binding document – defines 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.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Child labor

G4 HR 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 2013, monitoring showed no incidents of child labor in Novartis operations.

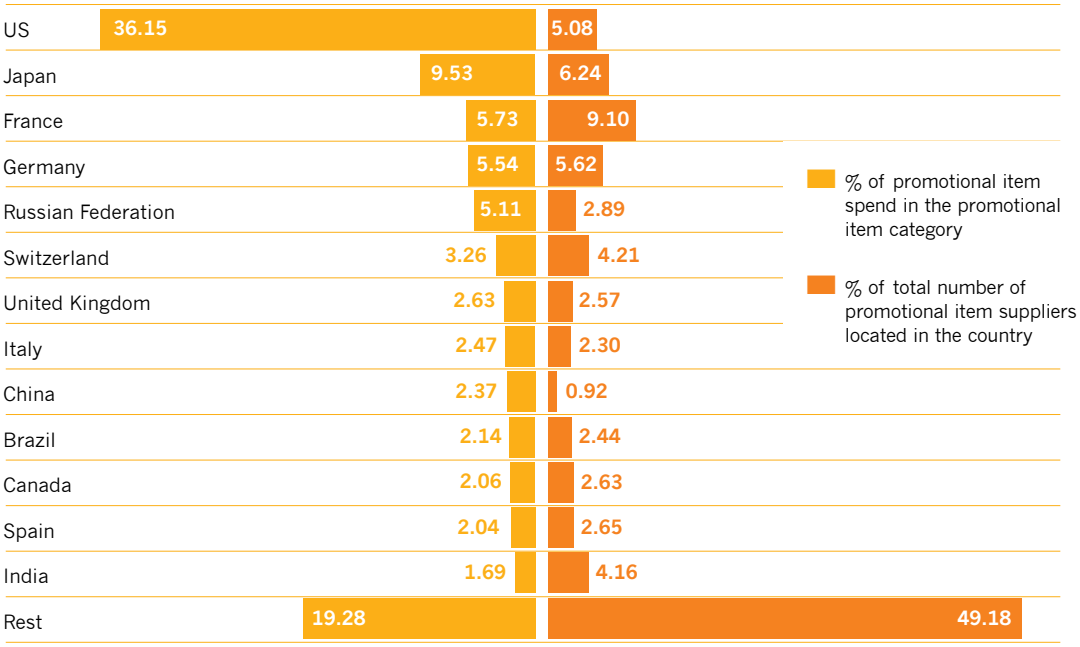
Our understanding is that the risk of child labor in our supply chain is low, and we have not identified any of our operations or suppliers where we have a direct relationship as having a significant risk of incidents of child labor. This is because the majority of our key suppliers are involved in chemical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

We conducted a gap analysis to confirm this assumption. Based on external consultation and learning from other industries, we have identified the manufacturing of promotional items – typically low-value marketing items – as a potential risk area for child labor, since the workers are typically less skilled.

Although our relationship with this type of supplier is indirect and our influence is low, we have decided to launch a new project in 2014 to further assess this part of our supply chain.

Distribution of promotional item suppliers

Based on a Novartis total spend of 2% in the promotional item category



Forced or compulsory labor

G4 HR 6

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 or suppliers is 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 or unethical working conditions, including bonded, forced or child labor, or any unsafe working conditions.

G4 HR 6

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

Novartis surveys suppliers to assess potential risk of forced or compulsory labor, and will terminate the relations if incidents are found. No incidents were reported in 2013.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Security practices

G4 HR 7

Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations

100% of the Novartis security team is trained on human rights issues. Site security personnel contracted through external service providers are 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 Additional topics – Human rights policy and living wage.

Indigenous rights

G4 HR 8

Total number of incidents of violations involving rights of indigenous peoples and actions taken

In 2013, there was no incident of violations involving rights of indigenous people.

Novartis uses natural sources for obtaining potential drugs or lead substances only in accordance with the UN Convention on Biological Diversity (CBD) 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 deriving from future products in accordance with the principles of the Convention, while ensuring compliance with intellectual property law. To drive CBD implementation and promote sustainable society development in less-developed countries, we share know-how and the latest technologies with local partners to help them build capacity, and we work closely with local authorities.

For more about our activities with respect to biodiversity and bioprospecting, see Additional topics – Research and development.

Read our position on Biodiversity/Bioprospecting.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Assessment

G4 HR 9

Total number and percentage of operations that have been subject to human rights reviews or impact assessments

Novartis believes that respect for human rights is a paramount aspect of good clinical practices. We subscribe to the core principles embedded in the Declaration of Helsinki and mandate that all clinical studies, independent of geography, must comply with the same ethical principles to protect the safety and well-being of study subjects. All clinical studies sponsored by Novartis must be conducted according to Good Clinical Practice (GCP) standards. GCP is an international ethical and scientific quality standard for designing, conducting, recording and reporting trials that involve the participation of human subjects. Compliance with this standard provides public assurance that the rights, safety and well-being of trial subjects are protected – consistent with the principles that have their origin in the Declaration of Helsinki – and that the clinical trial data are credible.

In 2013 Novartis conducted approximately 1 500 interventional clinical trials involving approximately 250 000 patients. A total of 553 audits were conducted to assess adherence to the GCP

principles in all Novartis-sponsored clinical development activities in humans. These included:

- 341 audits at investigational sites
- 56 audits at Novartis own sites
- 156 audits of service providers (clinical research organizations, laboratories, ethics committees, etc.)

Novartis acknowledges that the situation of clinical study participants in developing nations is more complex than for those conducted in the developed world. We strive for the highest possible protection of all study participants and are globally committed to a single set of core principles that governs all studies sponsored by Novartis.

Read our Policy for clinical trials in developing countries.

Novartis does not conduct human rights reviews or assessments in its operations. Yet, our Business Practices Office 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.

Supplier human rights assessment

Percentage of new suppliers that were screened using human rights criteria

We engage with an extensive network of suppliers worldwide and their contributions are crucial to our success. With such global reach, ensuring that our goods and services are ethically sourced is paramount.

Active monitoring of the standards within the Novartis Supplier Code is carried out through our Responsible Procurement (RP) practice. This is the end-to-end process by which we assess ethical risk in suppliers, evaluate adherence to our Supplier Code and implement corrective actions. It applies across the whole supplier selection process run by our procurement team.

For more detail on our RP practice, see G4–12: Organization's supply chain.

Suppliers posing an elevated risk of labor, HSE, animal welfare and anti-bribery are reported globally. For suppliers where no risk is indicated, documentation is retained by our local organization only. Not all suppliers that are evaluated will be awarded a contract and become a Novartis partner, but all are included in the number reported below. In 2013, 367 suppliers[36] identified as posing a potential risk were screened for ethical risks, including human rights. Of these, 190 suppliers were identified as posing an elevated labor rights risk.

Actions were taken with 104 suppliers, including desktop review and a total of 10 labor rights audits. In cases of non-compliance – which included wages, working hours and record keeping, but no cases of child labor – improvement plans have been developed in collaboration with the relevant suppliers.

RP is designed to enable effective management of supplier risk. Because we screen potential suppliers during selection and existing suppliers as part of our performance management of suppliers, the absolute figure includes organizations that did not go on to become Novartis suppliers as well as those that did – we therefore do not report a percentage of new suppliers. Our current approach to capturing and reporting this data is effective and meets our needs, however we regularly review our processes and will adjust them in the future if appropriate.

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

[36] Suppliers in scope: new suppliers, new supplier sites, and new products and/or services from existing suppliers, with whom we have a direct contractual relationship pertaining to the delivery of goods and services.

Human rights grievance mechanisms

Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms

Novartis Group companies employ more than 138 000 associates around the world. While we do not have a category called human rights, our category employee relations includes issues pertaining to human rights such as discrimination, harassment, inappropriate behavior, performance management violations,

G4 HR 12

retaliation, unfair dismissals, etc. In 2013, 1 427 cases of alleged misconduct related to employee relations were reported, the majority of which were minor.

All 1 427 reports related to employee relations have been investigated or addressed and resolved:

- 1 009 reports that were not related to misconduct were delegated to local management for review and action
- 418 investigations were conducted by the Business Practices Office in 2013
- Of the 418, there were 58% substantiated cases, resulting in 100 dismissals or resignations and 66 written warnings

For more detail on our approach to managing human rights and why we think it is important, see Additional topics – Human rights policy and living wage.

Social: Society

RESEARCH AND DEVELOPMENT

See p100 for the additional topic on research and development (R&D), including innovation in R&D pipeline, R&D in neglected disease, biodiversity/bioprospecting and biosimilars.

RESPONSIBLE CLINICAL TRIALS

See p103 for the additional topic on responsible clinical trials.

Local communities

G4 SO 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 strive to contribute to their stability and prosperity.

As such, we support local communities through volunteerism and philanthropic activities. Our major locally focused volunteer activity is our Community Partnership Day, a site-by-site initiative replicated at Novartis operations globally. In 2013, more than 16 500 associates took part in the Community Partnership Day. Activities included renovating schools, accompanying children with disabilities on day-trips, working at food-donation banks, and using business skills to help local organizations improve their efficiency. In Switzerland alone, 4 500 associates volunteered in some 200 local projects.

Disaster relief is also part of our corporate responsibility (CR) commitment. We support the proportionate allocation of the right aid – medicine donations, financial contributions and matching gift programs – at the right time.

We operate a range of foundations and emergency relief programs globally. We give back to society through contributions to schools and universities, research prizes, and sponsorship of cultural events and sports teams.

Novartis does not currently compile global data regarding activities conducted in local communities. We will evaluate the feasibility of collecting this data in the future.

For more details, see the Community engagement section of the Novartis website. The Novartis Foundation for Sustainable Development works to create sustainable health service models and improve access to healthcare for those most in need, leveraging its on-the-ground experience and partnerships to bring private sector solutions to public health problems. For more details on its work, see the Novartis Foundation for Sustainable Development website.

We also aim to make efficient use of natural resources and to minimize the environmental impact of our activities in communities where we operate.

For details, see the Environment section of this report.

For more detail on our economic contribution to communities, see G4–EC8: Significant indirect economic impacts.

G4 SO 1

1

Community case studies

Novartis is the first multinational company to have implemented a living wage for all Group company associates – read our Living wage brochure for more detail. This is an opportunity to contribute to the improvement of labor standards, and to have a positive impact on the communities where we operate. Such concerns have increasing urgency as Novartis and other leading pharmaceutical companies have stepped up activities in less-developed countries, where legal protections for workers are often less stringent than in industrialized countries.

In 13 African countries, an initiative started by the Novartis Foundation for Sustainable Development with Swiss and Swedish development agencies helps children affected by HIV/AIDS, poverty and conflict. To date, the initiative has reached more than 5 million children. For further information about the Regional Psychosocial Support Initiative (REPSSI) for children affected by poverty, conflict and HIV/AIDS, see the Novartis Foundation for Sustainable Development website.

Novartis supports the One Million Community Health Workers campaign to increase the number and quality of skilled health workers across sub-Saharan Africa ahead of 2015 – the target date for the Millennium Development Goals (MDGs). Novartis has donated USD 1 million to the campaign and the Novartis Foundation for Sustainable Development supports the project rollout.

Alcon donates products in support of medical missions, where local healthcare professionals travel abroad to help populations with unmet medical needs. In general, these missions focus on eye care, which can include addressing refractive errors, eye infections, cataracts, glaucoma, and other eye issues. In 2013, Alcon supported nearly 600 medical missions to over 80 countries, reaching more than 500 000 patients and enabling nearly 43 000 sight-saving surgeries.

In 2007, Novartis started Arogya Parivar ("Healthy Family" in Hindi), a for-profit social initiative to reach millions of people in rural India. The program offers health education, treatment options and prevention, as well as increasing access to affordable medicines. In local communities, the health educators involved in the program – usually local women – raise awareness about disease and prevention, and refer people to doctors. In 2013, we increased the number of medicines available through the program from 28 to 109. These additional medicines target illnesses that typically affect rural Indians, including a majority of prevalent communicable diseases such as infections, tuberculosis, malaria and diarrhea. In addition, these medicines cover more than half of non-communicable diseases such as diabetes and heart disease, which represent a fast-growing area of need. Since 2010, Arogya Parivar employees in India have organized more than 300 000 village health meetings and health camps, attended by almost 11 million people. Through a system of referral cards, at least 12% of the people who attended village health information meetings subsequently consulted a doctor – compared to just 2% at the venture's outset.

The Novartis Malaria Initiative spearheaded SMS for Life, a public-private initiative to help prevent public health facilities in rural Africa from running out of critical malaria treatments. Using mobile phones and electronic mapping technology, health facilities report levels of medicines in stock once a week. This data is used to generate reports for district medical officers to help them manage their stock and ensure they put orders in for malaria medicines where needed. SMS for Life was first rolled out in Tanzania. Pilots have been completed in Ghana and Kenya, both of which have indicated they will progress to national scale-ups, while Cameroon has already started a full country rollout. SMS for Life is currently also being implemented in five provinces of the Democratic Republic of the Congo. Further, the solution is now being used to track bed nets, rapid diagnostic tests (RDTs) and health data, as well as antibiotics, medicines against leprosy and tuberculosis, and blood supplies. For further information about our efforts to fight malaria, see the Malaria Initiative website.

PATIENT FOCUS

See p95 for the additional topic on patient focus.

Anti-corruption

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 400 units) undergo a financial risk assessment to ensure compliance with internal and relevant external financial standards and regulations. There are a number of significant risk areas 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 2011 we launched a revised Code of Conduct, which contains a strong and clear prohibition of any form of bribery or corruption. This was communicated globally to all associates. In Spring 2012 we also launched a new anti-bribery policy.

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 integral part of business decision-making. Units are required to report the outcome of this exercise to their regional or divisional functions annually.

In all contracts relating to charitable donations and/or sponsorships, it is specified that the beneficiary should adhere to the Novartis Code of Conduct regarding our anti-bribery and corruption principles and rules. All contracts require donation and/or sponsorship beneficiaries to provide Novartis with a yearly – sometimes biannual – progress report on how the financial and/or in-kind contributions have been used.

G4 SO 4

10

Communication and training on anti-corruption policies and procedures

In 2012, we launched a new anti-bribery policy as well as a third party due diligence guideline, on which Novartis associates at all levels were trained intensively. Special focus was given to managers and associates with customer-facing positions. A respective e-training course was rolled out in 2012/2013; 105 474 associates had been invited to the e-training, of which 100 379 had completed it, including members of the Executive Committee of Novartis. This represents 95% of the invited population. The Board of Directors was briefed on the anti-bribery policy via the policy approval process.

In 2013, we rolled out a New Hire e-training module, including a case on anti-bribery. As of December 31, 2013, 17 316 associates had been invited and 15 805 had completed it.

Face-to-face training was also carried out at a local level to defined 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 e-training by region

	Associates invited	Associates completed	Completion %
United States	16 713	16 280	97
Canada and Latin America	9 392	8 767	93
Europe	49 978	47 626	95
Asia/Africa/ Australasia	29 391	27 706	94
Total	**105 474**	**100 379**	**95**

G4 SO 5

10

Confirmed incidents of corruption and actions taken

In 2013, 3 334 cases of alleged misconduct were reported. These fall under eight categories:

- Employee relations
- Fraud
- Professional practices/Bribery
- Conflict of interest
- Information protection
- Quality assurance
- R&D
- Other

"Corruption" cases are mainly found in the following categories: Fraud; Professional practices/Bribery; and Conflict of interest.

All 3 334 reports have been investigated or addressed and resolved.

- 1 833 reports that were not related to misconduct were delegated to local management for review and action
- 1 501 investigations were conducted by the Business Practices Office, resulting in 68% substantiated cases across all misconduct categories
- These led to 430 dismissals or resignations and 335 written warnings

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 Group company associates can speak up and raise concerns. In 2005, we established the Business Practices Office (BPO) to provide a formalized system for dealing with complaints, offering employees and external stakeholders a channel to report, anonymously or not, actual or suspected cases of misconduct without fear of retaliation. All complaints are investigated professionally, independently and with proportionality. The investigation results are shared with the appropriate management and, in general and where appropriate, for information with our Compliance, Legal and HR teams, to allow them to implement appropriate action on the basis of the findings. We believe this is key to deterring and preventing misconduct, and provides associates with the confidence that action is taken when cases are found to be substantiated. Violation of Novartis standards may result in disciplinary action, including dismissal. The BPO also provides support in the identification of root causes and lessons learned, to prevent similar issues arising elsewhere in the future.

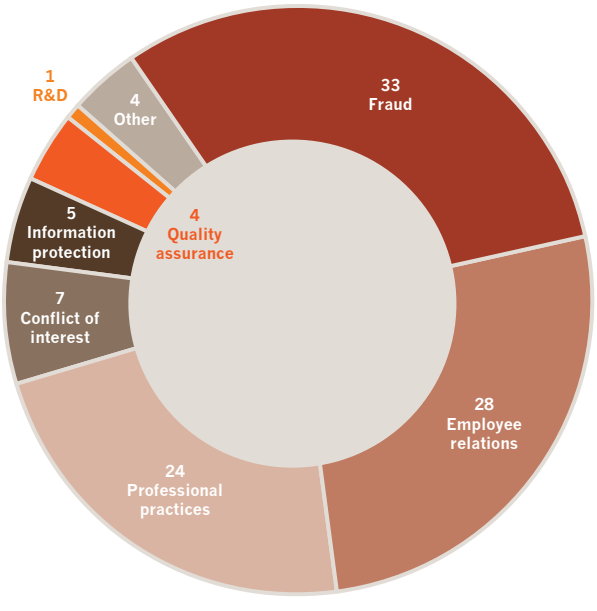
As part of our commitment to foster an open culture, we have implemented processes guaranteeing confidentiality and non-retaliation, to help Group company employees report allegations of misconduct. We have introduced integrity telephone lines in 115 countries, through which employees have the option of reporting allegations in 41 languages. Confidential and anonymous messages can be left for the BPO, who endeavors to respond within three working days. The BPO generally aims to turn around each case within six weeks.

Novartis does not currently report data on nature of confirmed incidents of corruption, or on 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.

A summary of significant legal proceedings to which Novartis or its subsidiaries are a party or were a party and which were concluded in 2013 is available from the Novartis Form 20-F Report 2013, pF-60-F-67.

Cases investigated through BPO process, 2013 (%, by type of violations)



One case can fall under several categories so the total is greater than 100%

Public policy

Total value of political contributions by country and recipient/beneficiary

Novartis will only make political contributions that support the strategic interests of Novartis, its shareholders and other stakeholders. 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.

In 2013, Novartis made political contributions (excluding contributions to industry associations) totaling approximately USD 1 million, mostly in the US and in Switzerland.

In 2013, contributions from the Novartis political action committee to US Federal and State candidates amounted to USD 337 957. An up-to-date overview of the PAC disbursements/beneficiaries can be found on: www.fec.gov.

In 2013, Novartis contributed USD 258 380 to non-federal candidates.

No in-kind contributions were identified.

Novartis does not currently report political contributions by specific recipients or countries. We will evaluate the feasibility of collecting this data in the future.

For more information on responsible lobbying and our political contributions, see the Public policy and advocacy section of the Novartis website.

Information on trade associations funding (tracked separately since it does not correspond to political contributions) can be found in the table below.

Government relations/lobbying targets

2013 target	2013 progress	Future plans
Engage stakeholders to focus on patient outcomes and fast access to high-quality medical therapies	Engaged various stakeholders in multiple countries to maintain patient access to cancer diagnostics. Engaged government and other stakeholders to shape high-quality biosimilars approval pathways. Supported legislative proposals avoiding unsafe use of medicines based on economic considerations. Supported the creation of top-up options to provide cataract patients with wider treatment choices. Supported existing orphan drug legislation which is enabling access to treatment for patients with rare diseases. Supported fast-track procedure established to allow negotiation and commercialization for innovative drugs and orphan drugs within 100 days	Provide a report on key public policy engagement and Novartis positions with the goal of: ■ Helping healthcare systems to become more effective in improving patient outcomes ■ Protecting IP as a fundamental enabler for innovation ■ Enabling access of patients to high-quality Biosimilars ■ Ensuring quality and ethical conduct in interactions with political stakeholders ■ Guidance for interactions with public officials and advocacy activities ■ Training on Novartis stance on key issues of public policy
Safeguard medical research and ability to innovate	Worked with EU stakeholders to establish new watch list concept for priority substances and encouraged high standards for science that is used to make policy decision for medicines. Supported existing IP protections related to biosimilars exclusivity. Engaged government and other stakeholders to improve IP protection and innovation in India, amongst others as part ofthe TPP (Transpacific Partnership) and TTIP (Transatlantic Trade and Investment Partnership) FTAs. Operationalized Novartis participation in IMI (Innovative Medicines Initiative) aimed at boosting medical innovation and efficient sharing of knowledge. Worked with major trade associations to foster framework conditions enabling medical research and ability to innovate (USD 23.5 million)	

Continued...

G4 SO 6

UN Global Compact 10

2013 target	2013 progress	Future plans
Educate stakeholders on Novartis commitment to CR	Educated political stakeholders on Novartis commitment to patient access to medicines via Patient Assistance Programs. Engaged in Development of a Novartis Patient Academy to support patient empowerment and strengthen their participation in the healthcare system discussions. Participated in panels and public events in EU, US and other countries to share Novartis commitment and activities relating to access to medicines in developing and emerging markets	

Anti-competitive behavior

G4 SO 7

Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes

A summary of significant legal proceedings to which Novartis or its subsidiaries are a party or were a party and which were concluded in 2013 is available from pF-60 to F-67 of the Novartis Form 20-F 2013.

Compliance

G4 SO 8

Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations

Novartis Group companies around the world paid a total of USD 155 534 in fines for minor HSE violations in 2013. Novartis does not currently report the number of non-monetary sanctions or cases brought through dispute resolution mechanisms for HSE violations. We have evaluated the reporting of non-monetary sanctions and cases brought through dispute resolution mechanisms, and plan to begin reporting on this in 2015.

Supplier assessment for impacts on society

G4 SO 9

Percentage of new suppliers that were screened using criteria for impacts on society

We engage with an extensive network of suppliers worldwide and their contributions are crucial to our success. With such global reach, ensuring that our goods and services are ethically sourced is paramount.

The Novartis Supplier Code sets out ethical standards we expect suppliers to adhere to related to fair labor practices, health and safety, environment protection, animal welfare, anti-bribery and data privacy, as well as compliance with applicable laws, regulations, standards and relevant customer requirements.

Active monitoring of the standards within the Novartis Supplier Code is carried out through our Responsible Procurement (RP) practice. This is the end-to-end process by which we assess ethical risk in suppliers, evaluate adherence to our Supplier Code and implement corrective actions. It applies across the whole supplier selection process run by our procurement team.

For more detail on our RP practice, see G4–12: Organization's supply chain.

Novartis currently does not have a strategy to screen suppliers for impacts on society. We include anti-bribery criteria in our supplier screening process but do not screen suppliers specifically for wider impacts on society. 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.

Grievance mechanisms for impacts on society

G4 SO 11

Number of grievances about impacts on society filed, addressed and resolved through formal grievance mechanisms

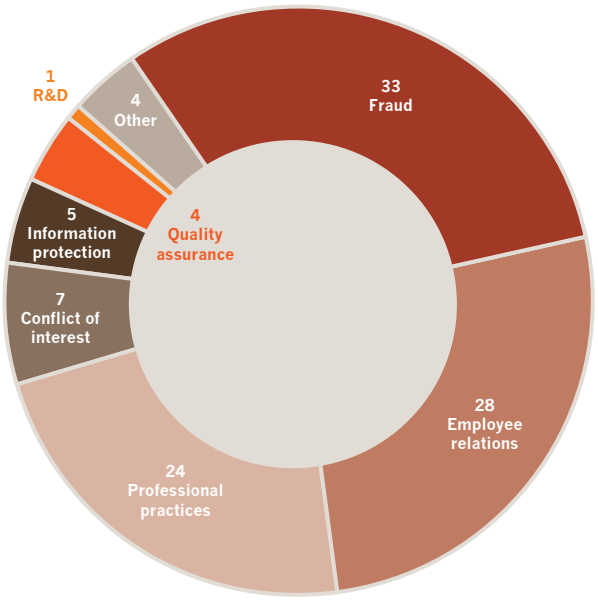
In 2013, 3 334 cases of alleged misconduct were reported. These fall under eight categories:

- Employee relations
- Fraud
- Professional practices/Bribery
- Conflict of interest
- Information protection
- Quality assurance
- R&D
- Other

All 3 334 reports have been investigated or addressed and resolved.

- 1 833 reports that were not related to misconduct were delegated to local management for review and action
- 1 501 investigations were conducted by the Business Practices Office, resulting in 68% substantiated cases across all misconduct categories
- These led to 430 dismissals or resignations and 335 written warnings

Cases investigated through BPO process, 2013 (%, by type of violations)



One case can fall under several categories so the total is greater than 100%

Social: Product responsibility

Customer health and safety

G4 PR 1

Percentage of significant product and service categories for which health and safety impacts are assessed for improvement

We work to ensure the safety of the products we market and those still in development.

In addition to diligent ongoing internal review, we have standing senior executive boards that regularly review safety and risk-related issues. These boards are not required by law. In all Novartis divisions, a Portfolio Stewardship Board (PSB) implements appropriate (safety) risk management processes for both marketed drugs and those in development. This includes risks that these product-related issues pose to the company's reputation or legal position. The PSB ensures the continuous, systematic, proactive and timely identification of product-related risks. It also drives the performance of benefit-risk assessments, development of appropriate risk mitigation measures and monitoring their implementation. It is chaired by the Head of Clinical Development Sciences and reports to senior management in the Pharmaceuticals division. Reviews are triggered by the availability of new data requiring a reassessment of the benefit-risk profile of any Novartis product. Such data may be related to a Novartis product or to a product belonging to the same drug class from other companies.

G4 PR 1

In addition, our Chief Safety Officer chairs the Signal Detection (SigDet) Board and the Medical Safety Review Board (MSRB). The SigDet Board has the mandate to provide an independent, annual review of the safety profile of each drug – both those in development and those on the market. It also conducts *ad hoc* reviews when new safety data becomes available. MSRB brings together senior-level experts in drug safety, safety operations, clinical research, biostatitics, epidemiology, legal affairs and preclinical, as required. It ensures appropriate review of the safety risks of each drug through a detailed appraisal of the risk management plans. Issues identified via the SigDet or MSRB can be escalated to the PSB if necessary. Common to the boards are their independence from specific project teams and business franchises, representation by senior leaders and functional as well as cross-functional expertise.

Two key sources of safety data include pre-marketing clinical trial data and post-marketing pharmacovigilance reports.

Clinical trials are well controlled and seek to answer specific questions about how a drug will work in a specific patient population. These studies provide critical information for a company's regulatory filings. A more complete understanding of the safety profile of a specific product emerges once that product is approved for marketing and becomes available to a wider number of patients.

Post-marketing pharmacovigilance plays an important role in our ability to gain a deeper understanding of risks. With increasing frequency, we conduct specific studies after regulatory approval to address safety questions that could not be conclusively answered in pre-approval trials. In each country, Novartis medical directors and patient safety teams are responsible for reporting and tracking adverse events, investigating their causes, and communicating that information to appropriate groups – both internal and external to the company.

Novartis does not report an overall percentage of significant product and service categories for this indicator.

Product and service labeling

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) as well as over-the-counter (OTC) 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 which 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 drugs 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.

For OTC products, there is an increasing need for consumers to have easily readable and understandable information about the drugs they are buying. Again, information which is known to Novartis and believed to be supported by reasonable scientific proof should be legible and accessible. For OTC products, this includes information on active ingredients, warnings, contraindications, directions, and purposes. This is particularly important as OTC products are widely available and used without medical supervision, and as more potent drugs have been switched from prescription to OTC status.

Novartis does not currently report an overall percentage of significant product and service categories for this indicator. We will evaluate the feasibility of collecting this information in the future.

PRODUCT QUALITY

See p98 for the additional topic on product quality and counterfeit medicines.

Marketing communications

G4 PR 7

Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes

In 2013, 354 cases of alleged 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 Business Practices Office conducted 354 investigations which resulted in 72% substantiated cases. These led to 115 dismissals or resignations and 113 written warnings.

RESPONSIBLE MARKETING AND ADVERTISING

See p92 for the additional topic on responsible marketing and communications, including ethical promotion of pharmaceuticals.

Customer privacy

G4 PR 8

Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data

In 2013, Novartis had one external data privacy breach and no substantiated complaints.

Compliance

G4 PR 9

Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

For a summary of significant legal proceedings to which Novartis or its subsidiaries are a party or were a party and which were concluded in 2013, see pF-60 to F-67 of the Novartis Form 20-F 2013.

Winners of an internal employee challenge, asking how the Novartis Malaria Initiative could better support the business, play football with orphans in Kisumu, Kenya

Additional topics

Access to healthcare

A third of the world's population does not have regular, reliable access to essential medicines. Affordability is one factor, but it is also because of a lack of basic health education, limited healthcare infrastructure, too few trained healthcare workers and long distances to hospitals or treatment centers.

The world's population is growing rapidly, from over 7 billion today to a projected 9 billion by 2050, with most of this growth in developing countries. Ensuring broad access to medicine and healthcare will remain a major challenge. Solving this issue will require the combined efforts of governments, healthcare companies and NGOs.

The Novartis Access to Medicines Committee was established in 2014 and is chaired by CEO Joseph Jimenez. Its charter outlines a commitment to establish guiding principles, continually assess opportunities to expand access to medicines and treatments to more patients, develop positions, commitments, and targets related to access to medicines and treatments, and share best practices.

Our role in expanding access

One of our key corporate responsibility (CR) ambitions is to expand access to healthcare. During 2013, Novartis reached more than 1.2 billion patients with medicines and vaccines, and more than 100 million patients through access to healthcare programs. We focus our access work in three areas, where we believe we can make the most impact: controlling and eliminating diseases; pioneering new business approaches; finding new treatments.

1. Controlling and eliminating diseases

We operate innovative patient assistance programs that include donation and shared-contribution models. For example, we have:

- Provided more than 600 million treatments of the antimalarial *Coartem* at no profit for public-sector use in developing countries, at an average cost of less than USD 1 per treatment
- Donated free treatment to more than 5 million leprosy patients and committed to continue the drug donations through 2020, expecting to reach around 850 000 more patients
- Provided *Glivec* and *Tasigna* through Novartis Oncology Access for free and through co-pay programs to patients with rare cancers, reaching patients in 80 low- and middle-income countries as well as in the developed world
- Supported groups of doctors traveling on medical missions through Alcon, our eye care division, reaching over 500 000 patients in developing countries in 2013. Alcon provides in-kind product donations, including sight-saving and sight-restoring treatment and equipment, and supports training of local eye care practitioners

Where Novartis is the single source of life-sustaining products, we work to establish patient assistance programs, with the type of support based on each country's economic and health infrastructure context (including healthcare spend per capita, and percentage of gross domestic product spent on healthcare).

The Novartis Foundation for Sustainable Development works to create sustainable health service models and improve access to healthcare for those most in need, leveraging its on-the-ground experience and partnerships to bring private-sector solutions to public health problems. Its key focus is on leprosy and malaria elimination.

We joined forces with Malaria No More, a leading global charity determined to end malaria deaths, on the Power of One campaign to help close the treatment gap and accelerate progress in the fight against malaria. Through 2015, we will support the campaign financially and also donate up to 1 million full courses of our pediatric antimalarial drugs every year to match the treatments donated by the public.

2. Pioneering new business approaches

Novartis invests in Social Ventures, new business models that build local, sustainable healthcare capabilities in the developing world. These shared-value models are sustainable, scalable and replicable. Our Arogya Parivar ("Healthy Family") program brings health education and medicines to rural India. We are expanding this model to other emerging economies including Kenya, Vietnam and Indonesia. Novartis and our generics division, Sandoz, are supporting the development of a network of health shops in Zambia – with a vision to bring high-quality, affordable essential medicines to rural areas.

We implement differential pricing for medicines on a case-by-case basis, based on income level and specific needs in individual countries. Since 2012

Novartis has further expanded access to *Coartem* and *Coartem* Dispersible through differential pricing in the private market, reaching patients without access to public hospitals. We also use second brands as a means of implementing differential pricing strategies where appropriate.

We partner with healthcare system payors on programs to increase access, including price-volume agreements, outcome guarantees and disease-management programs that combine innovative medicines and generic pharmaceuticals. One example is offering refund guarantees for patients who do not respond to a medicine.

3. Finding new treatments

The Novartis Institutes for BioMedical Research (NIBR) and Novartis Pharmaceuticals Development conduct research and development in neglected diseases that predominantly affect patients in developing countries. Disease targets range from malaria and dengue to chagas disease and typhoid fever. During 2013, Novartis dedicated 192 full-time-equivalent positions and contractors to these research efforts (valued at USD 34 million) and an additional 51 full-time-equivalent positions and contractors to development efforts (valued at USD 12 million).

Through Sandoz, Novartis performs additional stability studies to confirm its products are effective in hotter and more humid climates (i.e. Zone IV regions). In 2013, Sandoz registered many high-quality, affordable generic medicines in sub-Saharan Africa, expanding our offerings and directly addressing supply shortage and market demand in those countries. New products include treatments for communicable diseases as well as non-communicable diseases (e.g. diabetes, heart disease), which are a growing problem in emerging markets. Sandoz is one of the few companies developing products specifically for children to treat diseases like pneumonia and tuberculosis.

These access strategies align with Business for Social Responsibility's Guiding Principles on Access to Healthcare[37], which Novartis and other companies signed in 2013.

For more on our approach to Intellectual Property, see Additional topics – Research and development.

For more about our investment in access to healthcare programs, see p66 of the Novartis Annual Report 2013.

For more information, updates and details on calculation methodology on access to healthcare programs, see the Access to healthcare section of the Novartis website.

37 Business for Social Responsibility Guiding Principles on Access to Healthcare: http://gpah.bsr.org/en/principle

Access to healthcare targets

2013 target	2013 progress	Future plans
Control and eliminate disease		
Continue to expand access to *Coartem* and *Coartem* Dispersible through new channels driven by the private sector in select malaria-endemic countries	Access to lower-priced *Coartem* and *Coartem* Dispersible was improved through wider availability in the private sector of nine malaria-endemic countries, benefiting the emerging middle-class population	Expand access to *Coartem* and *Coartem* Dispersible through new private sector channels in at least five additional malaria-endemic countries by 2015 Match up to 3 million malaria treatments by 2015 through the Power of One campaign with Malaria No More Obtain health authority approvals and WHO prequalification for a new formulation of *Coartem* to treat adults with malaria with fewer tablets; the reduced pill burden is expected to improve adherence to treatment and possibly improve clinical effectiveness; make the new formulation available in at least five countries in 2014, and another 10 countries in 2015
Intensify efforts to build a multi-stakeholder initiative to work toward the elimination of leprosy	Consensus reached on the way forward to eliminate leprosy, following an expert meeting convened by the Novartis Foundation in Geneva	Engage at least 50 National Malaria Control Program managers and malaria experts in continuous exchange of learning and best practices via the online community in 2014 Expand disease awareness activities to reach over 60 000 children in sub-Saharan Africa in 2014 In 2014, support the training of over 15 000 community and facility-based health workers in sub-Saharan Africa to improve malaria case management

Continued.

2013 target	2013 progress	Future plans
		Pioneer "Targeted Parasite Elimination" in Namibia to build the knowledge to shrink the malaria map by 2018 Anchor the electronic Tool to Improve Quality of Healthcare (e-TIQH) in Tanzanian health policy by 2014, as the supportive supervision tool to optimize overall quality of primary care, leveraging improved malaria management; scale up e-TIQH to all districts across Tanzania by 2016 Intensify the fight against leprosy by demonstrating the feasibility of an innovative approach toward zero transmission of leprosy in several sites across Asia, Africa and Latin America; and by continuing to provide free multidrug therapy (MDT) to all leprosy patients through WHO until 2020 Work with the African Union, the African-WHO, and the Pan-African Society of Cardiology to develop a policy roadmap aimed at controlling and eliminating Rheumatic Heart Disease (RHD) on the continent
Pioneer new business approaches		
Increase direct distribution to 50% of Arogya Parivar network	Initiated direct distribution to about 25% of India Arogya Parivar network	Provide health education to 12 million people through at least 300 000 community education meetings in rural communities across Kenya, India, Indonesia and Vietnam by 2016 Working with the Ministry of Health and the Lusaka University Teaching Hospital in Zambia, reach healthcare workers in 20 clinics and communities in 50 schools with an RHD awareness campaign, screen at least 3 000 children for RHD and train 50 healthcare workers in RHD diagnosis and treatment in Zambia by 2016 Initiate filing submission of five local, price-discounted brands of existing medicines in middle-income countries in 2014. Initiate filing submission of 40 local, affordable brands of existing medicines during 2014 and 2016; launch 100 discounted pricing access schemes (Patient Assistance Programs and Managed Entry Agreements) for medicines in emerging markets during 2014 and 2016 Donate products to more than 1 500 medical missions between 2014 and 2016, to enable more than 80 000 cataract surgeries to be performed among underserved populations; donate medicines to more than 15 000 patients who cannot afford their medication through Alcon's Patient Assistance Program in the US each year between 2014 and 2016 In 2014 the Novartis Patient Assistance Foundation, Inc. plans to provide free medications worth an estimated USD 500 million to about 70 000 US patients who are experiencing financial hardship. Between 2014 and 2016, we plan to provide medications worth over USD 1.5 billion to about 170 000 patients Train 80% of top 150 Novartis senior leaders on holistic healthcare system-level partnerships with ministries of health by 2015 Working with local ministries of health and hospitals, support the setup of clinical study sites for investigative trials in China and for bioequivalence and ethnic sensitivity studies in at least four African countries and Brazil; train healthcare workers in each of the sites in good clinical and good laboratory practices (clinical data management, pharmacology, bioanalytics and regulatory issues) Make USD 5 million per year available for trainings and health systems improvement in the developing world, with a focus on Africa; support scientific capacity building through hands-on trainings of 500 scientists and clinicians per year and through targeted equipment transfers to universities and hospitals in the developing world; focus areas include drug discovery and clinical development-related topics, including pharmacology, clinical trials, epidemiology, regulatory sciences and vaccinology
Expand Kenya social business pilot from 3 to 20 cells covering 1 000 villages, and increase portfolio to 15 medicines covering four additional disease areas	Expanded Kenya program to 20 cells, covering a population of 1.4 million, and increased portfolio to 14 medicines, covering four additional disease areas	
Expand Vietnam pilot from 4 to 20 cells	Expanded Vietnam program to 10 cells, covering a population of 1.2 million	
Initiate pilots in Indonesia, Nigeria and Ghana	Pilot launched in Indonesia; Nigeria and Ghana launches deferred to increase focus on four existing country programs	

Continued...

2013 target	2013 progress	Future plans
Find new treatments		
Successfully complete clinical Proof-of-Concept (POC) study for KAF156 Identify new preclinical compound to eradicate liver-stage infection of *Plasmodium vivax* Continue Phase II clinical testing for KAE609 against *Plasmodium falciparum* and *vivax*	Phase II clinical studies with KAE609 demonstrated rapid parasite clearance for both types of malaria (*Plasmodium vivax* and *falciparum*); long-half-life of the drug supports a once-daily oral dosing regimen Clinical POC study with KAF156 achieved a positive outcome (parasite clearance of *Plasmodium vivax* and *falciparum*) New malaria target identified with potential to treat multiple stages of the malaria life cycle, including liver-stage infections of *Plasmodium vivax* Entered agreement with an Indian biopharmaceutical company (BioE) to deliver affordable vaccines against typhoid and paratyphoid fever	Continue Phase II clinical testing with KAE609 in combination, and identify other partner compound opportunities to be combined with KAE609 for further and complementary drug product profiles Continue clinical development of KAF156 Obtain health authority approvals and WHO prequalification for a new formulation of *Coartem* to treat adults with malaria with fewer tablets; the reduced pill burden is expected to improve adherence to treatment and possibly improve clinical effectiveness; make the new formulation available in at least five countries in 2014, and another 10 countries in 2015 Between 2014 and 2016, invest at least USD 35 million per year into research for vaccines and medicines targeted at diseases that disproportionately affect populations in the developing world; diseases include malaria, dengue fever, diarrhea, Chagas disease, Leishmaniasis and African Sleeping Sickness Bring new medicines and vaccines into the clinic by 2016 (at least one compound against dengue fever and one vaccine) and advance into preclinical toxicity testing at least one compound against Chagas disease and Leishmaniasis by 2016

For more about doing business responsibly, see the Targets and results page of the Novartis website.

Responsible marketing and advertising

Transparency and communication are central to building trust and credibility with stakeholders. Ethical business practices, including how we promote our products, inform patients, interact with patient groups and disclose the financial support we provide them with, are of utmost importance. Poor ethical practices can lead to fines, public scrutiny and distrust, ultimately affecting sales and profits. Overall, ethics and governance is an industry-wide challenge, and a lack of transparency on ethical dilemmas hinders trust and credibility.

In April 2014, Novartis announced wide-ranging measures to identify and address problems with the company's Investigator-Initiated Trial (IIT) research programs in Japan. This followed the release of the findings of the independent panel of experts commissioned by Novartis and Novartis Japan (NPKK) to investigate the company's involvement in the SIGN trial.

Among the measures were the appointments of new senior executives at NPKK. Additionally, the company announced a broad third party internal review of IITs, which was initiated in early February after concerns were raised about the involvement of NPKK associates in Tokyo University Hospital's SIGN IIT. The internal review is expected to be completed by the summer and a summary of the main findings and response by Novartis will be made public. In the meantime, the company is placing a temporary moratorium on all IIT funding in Japan.

For more about the IITs in Japan, see the Newsroom section of the Novartis website.

Ethical promotion of pharmaceuticals

Novartis is absolutely committed to conducting its pharmaceutical marketing and sales activities in compliance with high quality and ethical standards. This commitment is essential, not just to ensure the effective, appropriate use of our products and services by patients and healthcare professionals, but also to protect the reputation and credibility of our company.

All Novartis Group affiliates engaged in the promotion of prescription pharmaceutical products must adhere to promotional practice policies and guidelines based on the following 10 principles:

1. Promotional practices must be consistent with patients' benefit, must be ethical and must be in good taste

2. Information provided must take account of customer needs and must be based on product information as it has been approved by the local authority, derived from the approved Basic Product Information

3. Event sponsorship must be clearly disclosed and the primary objective of a meeting must be scientific in nature

4. Hospitality must be appropriate, in good taste consistent with local practices and secondary to the main purpose of the meeting

5. Gifts must be modest and relevant to the practice of medicine

6. Personal incentives to prescribe are prohibited

7. Samples must be handled with the prime objective of familiarizing the customer

8. Sales representatives must have appropriate training and product knowledge

9. Post-approval studies must be conducted in accordance with the referenced guidelines and local laws

10. Compensation for healthcare professionals must be provided only for actual, reasonable and necessary services

Our promotional practice policies and guidelines are intended to supplement national and international legislation and industry codes.

Where local requirements are less stringent than Novartis policy, we insist our more stringent requirements take precedence.

For more on this topic, see our position on Ethical Promotion of Pharmaceuticals.

For more about how we promote our products, see the Marketing practices page of the Novartis website.

Information to patients

Novartis believes that providing patients with broad access to balanced information about the medicines they take is in the best interest of both the patient and society. Informed patients have greater health and disease awareness. They are more likely to practice preventive measures and to seek timely, effective diagnosis and treatment. Society gains because a better-informed patient is a healthier patient who is less likely to draw healthcare and social benefits and more likely to be a productive participant in the economy.

Patients can and should receive accurate health information from a wide range of sources, among which pharmaceutical companies have a legitimate role to play. Given the extensive knowledge that pharmaceutical compnies have about their medicines, Novartis believes it should be possible for them to provide patients with appropriate information about these medicines, consistent with local regulatory agency guidelines.

While Novartis respects and adheres to existing local regulations on consumer and patient information about prescription medicines, we believe strongly in the value of direct-to-consumer (DTC) advertising of medicines. In countries where DTC advertising is allowed, we believe that it has been shown clearly to enhance patient disease-awareness and support prompt, effective therapeutic intervention, while not adding measurably to expenditure on drugs, increasing drug prices, or interfering in an unacceptable way with the doctor-patient relationship.

Within the European Union (EU), we support greater provision of information to patients and advocate for pharmaceutical companies to play a role alongside other health information providers. Within the EU, citizens of individual member states now have access to very different levels and quality of informa-tion about health and medicine. We advocate EU harmonization of patient information consistent with current practice in those member states that have the greatest experience in this field (e.g. UK and Sweden) and support the six principles proposed by the European Federation of Pharmaceutical Industries and Associations (EFPIA) for advancing the provision of medicines information.

We recognize the internet as an important medium for the transmission of healthcare and medicines information and support the principles advanced by EFPIA to guide the quality and standards of website pages sponsored by medicines manufacturers. As an appropriate way to regulate the provision of medicines information to the public, whether promotional or non-promotional, Novartis advocates a co-regulatory system, where strong industry self-regulation is overseen directly by an expert third party. In supporting such a system, we stress our continuing commitment to adhere to high standards of marketing conduct, as prescribed in our Promotional Practices Policy, and to ensure that all our corporate product information is fair, balanced and scientifically based.

For more on this topic, see our position on Information to Patients.

Patient group interaction and disclosure of support

We believe that open dialogue and transparent exchange of information with all stakeholders in the healthcare community, including patient organizations, is vital to advancing access and healthcare delivery to patients.

As we share balanced, accurate and easy-to-understand scientific information on diseases, treatments (where permissible by law) and health policies impacting patients, we gain valuable insights and counsel about patient concerns and needs. Patient groups can use information gained in this dialogue and thus enable patients to act with increased accountability and gain access to optimal treatment for their condition.

In all Novartis interactions with patient groups, we strive to build relationships based on mutual respect and transparency. We have developed internal guidelines on interacting with patient groups to establish consistently high standards of conduct. Ensuring independence of the patient voice, providing transparency on interactions and working cooperatively for the benefits of patients are at the core of these standards.

With regards to disclosure of patient group support, Novartis is fully compliant with all legal and statutory requirements as a minimum standard in a given country. In addition we commit to publish on www.novartis.com the names of patient groups that receive financial and non-financial support from us in Europe and the United States as well as the purpose of this support. This listing is updated annually.

For more on this topic, see our position on Organization.

For a list of the patient organizations we support, see the Community engagement section of the Novartis website.

Human rights policy and living wage

The right to health is a basic human right. Respecting, protecting and fulfilling human rights is, first and foremost, the responsibility of the state and international community. But we have an important role to play, working in partnership with international organizations, governments, NGOs and others.

We use a three-tiered approach to classify our human rights responsibilities:

- Essential compliance requirements enshrined in laws (i.e. paying our associates, paying taxes, abiding to laws, etc.)
- Responsibilities which can reasonably be expected by society, such as the right to a decent standard of living for our associates (we pay a living wage) or helping patients in need through our access-to-medicine programs
- Engagement which is desirable, such as the company's philanthropic commitment through its community engagement or voluntarism activities

As well as being a signatory of the UN Global Compact, Novartis has developed a Guideline on human rights. This sets out our human rights commitments and responsibilities and is implemented through normal management procedures.

Together with institutions like the Danish Institute for Human Rights (DIHR), the International Business Leaders Forum (IBLF), and the International Finance Corporation (IFC), we have helped to develop new tools for mainstreaming human rights into business and assessing corporate impacts.

For more on this topic, see our position on the Right to Health.

Living wages

Novartis is one of the first international companies to have developed and implemented a voluntary commitment to pay a living wage to all its Group company associates.

We commissioned Business for Social Responsibility (BSR) to establish a methodology to calculate living wage levels. Using those BSR calculations as a starting point, we rolled out the living wage program, working in close consultation with local management in countries with divergent economic systems and standards of living.

A living wage reflects the cost of a basket of goods and services that are required to cover certain basic goods, taking into account the social circumstances and requirements of the environment. A living wage generally is higher than the minimum wage in the same country.

In 2013, there were four cases of Novartis employees with wages below the living wage (0 in 2012; 17 in 2011; 24 in 2010; 0 in 2009; 3 in 2008; 11 in 2007; 21 in 2006; 93 in 2005). In these cases, salaries were increased to reflect the living wage.

For more on the living wage, see the Responsible business practices section of the Novartis website. For living wage targets and results, see the Metrics and reporting section of the Novartis website.

Living wage target

2013 target	2013 progress	Future plans
Continue using established process to update living wage levels annually and adjust associate salaries that are below those levels	Completed wage-level review: four employees were identified to be earning less than a living wage, and salaries were corrected upwards	Continue using established process to update living wage levels annually and adjust associate salaries that are below those levels

Patient focus

We are committed to strengthening our focus on patient outcomes as this is the right thing to do for patients and for health systems. Making improving health outcomes a shared goal will align the interests of all stakeholders, increase predictability for industry, and drive sustained research and development (R&D) investment in the right direction.

We have launched a series of partnerships that focus on improving patient outcomes related to a range of chronic diseases. Our most advanced project is in the Yaroslavl region of Russia, where we have helped to nearly double hypertension control rates in under three years with minimal investment and healthcare system spending.

We are using new commercial models, such as integrated care programs that bring pharmaceutical companies and payors together to offer patients a comprehensive package of products and services, and new risk-sharing models that link payment to health outcomes.

To achieve this, we must re-engineer our healthcare systems, moving from a transaction-based approach to one that focuses on patient outcomes, with clear measurement and performance management.

Organ transplantation

Advances in surgical techniques, immunosuppressive drugs and supportive medical care have greatly increased the success of organ and tissue transplantation in recent decades. However, the supply of solid organs for transplantation does not match demand for them, and is not expected to do so in the future. Donation and procurement of solid organs and tissue can raise a number of ethical challenges and concerns. All Novartis transplantation-related studies carried out in any country should be conducted in accordance with these principles:

- Free, uncoerced and informed consent of the organ donor and recipient
- No payment for organ donation
- Clear evidence that the physician responsible for the care of the potential transplant recipient is not the same physician who ascertains the death of the potential organ donor
- Adherence to Good Clinical Practice and to these principles must be fully documented and is subject to audit by the sponsor and related health authorities

In regions where the procurement of donor organs does not fully meet these standards, we are seeking to engage local authorities to ensure that the standards are adopted and observed.

For more on this topic, see our position on Organ Transplantation.

Health technology assessment

While healthcare and health technology assessment (HTA) systems vary between countries, it is a challenge to identify a single best system. But we can suggest a set of principles of good HTA practice that reward innovation and encourage healthcare system sustainability. There is no one-size-fits-all approach to determining the best scope, methodology or process of an HTA system so countries should spend sufficient time deciding what is best for their special circumstances, ensuring that HTA systems reflect their national context, including values, ethics and philosophy. Taking systems and methods from other countries without significant adaption to local circumstances may not benefit the local population.

For more on this topic, see our position on Health Technology Assessment.

Global transformational changes fueling demand for healthcare

A number of key factors, which include demographic and socioeconomic shifts, scientific and technological advances and changing patient behaviors, will continue to drive growth in the demand for, and access to, healthcare.

1. Aging population and shifting behaviors

Scientific advances in treating diseases and increased access to healthcare worldwide have contributed to a rise in life expectancy and fall in birth rates, increasing the proportion of elderly people around the world. According to the United Nations Population

Fund, the number of people aged 60 or over has quadrupled in just 60 years and is projected to reach 2 billion by 2050. With the aging of the global population, we have seen an increase in diseases and conditions that disproportionately affect the elderly, such as lung cancer and Alzheimer's disease.

Another major trend is an increase in obesity rates. In the last 20 years, these have doubled among adults and tripled among children. Together with inactive lifestyles, this has boosted the prevalence of chronic diseases, including cardiovascular disease, diabetes and chronic respiratory diseases, which now account for over 60% of deaths worldwide, according to the World Health Organization (WHO).

2. Global rise in healthcare spending led by emerging markets

Despite a difficult economic environment, global healthcare spending continues to rise around the world. In OECD countries, for example, average public healthcare expenditures are expected to comprise 8% of total GDP in 2060, a 2.5 percentage point increase from 2010.

While developed countries still dedicate a higher percentage of their GDP to healthcare than the rest of the world, emerging markets are contributing an increasing proportion of total global healthcare expenditures, due in part to a growing middle class. In 2013, we generated USD 14.7 billion, or approximately 25% (2012: 24%) of net sales from Emerging Growth Markets (defined as all markets except the US, Canada, Western Europe, Japan, Australia and New Zealand), as compared with USD 43.2 billion, or approximately 75% (2012: 76%) of our net sales, in the Established Markets.

3. Scientific advances opening new opportunities for targeted therapies

We have successfully utilized our understanding of basic molecular pathways to expand the applicability of medicines towards novel targets. For example, we unraveled the biology of cytokine IL-17A by studying the effect of AIN457 in clearing skin lesions in psoriasis patients. We are also studying the applicability of AIN457 in multiple other diseases based on its ability to inhibit IL-17A, including psoriatic arthritis, ankylosing spondylitis, rheumatoid arthritis, uveitis, multiple sclerosis and asthma. Further, we are gaining a greater capability to identify specific biological factors, called "biomarkers," that could indicate whether or not a given drug will be effective for a particular patient. The science of biomarkers is just one element of a larger industry trend toward personalized medicine, which has the potential to shape not only the way diseases are managed, but also how new drugs are developed. It could, for example, accelerate the drug-development process if regulators were to accept smaller trials geared toward patients with specific disease subtypes or mutations, as opposed to traditional large-scale clinical trials for which it can be more difficult to demonstrate that a drug is effective in certain subsections of the patient population. This would further enhance our ability to streamline the innovation process and deliver customized medicines for improved patient outcomes.

4. New technologies changing the delivery of healthcare

New technologies, such as connected medical devices and health information technology systems, are streamlining the delivery of healthcare and improving patient outcomes. Connected medical devices, for example, offer the potential to record and share information about a patient's daily medicine intake, making it easier for doctors to monitor patient compliance and response to treatment. In the R&D setting, new technologies can also help improve the accuracy of clinical trials and accelerate drug development. For example, the need to travel to and from clinical trial sites poses an inconvenience for many patients and contributes to low retention rates. By using mobile apps to check and record relevant data from clinical trial participants in their homes, we expect to improve retention and streamline the reporting process, which in turn has the potential to contribute to increased accuracy. In clinical trials, Novartis also uses electronic tablets to reduce the potential for human error in transcribing patient data on paper forms, and facilitate monitoring from a central database. With this approach, we both enhance accuracy and lower costs, which could help us to bring drugs to market more quickly and efficiently.

5. Patient engagement

Greater access to health information and tools to communicate with providers is making patients more active participants in their own healthcare. With patients actively seeking health information online, we have an opportunity to deliver more holistic healthcare solutions. For example, we are developing the myGIST Companion app for patients with gastrointestinal stromal tumors (GIST). The app is designed to be interactive, and provide a checklist for patients to chart their symptoms and measure their progress, which we expect will allow them to play an active role in managing their disease.

In addition, we are engaging patients by providing them with tools and platforms to share their experiences and learn about their conditions and

treatment options. For example, in multiple sclerosis (MS), we launched a set of interactive, patient-friendly web-based tools, including an animated video series and a Pinterest page. Through these online interactions, we gain a better understanding of patient concerns, which we can then address in our product development and marketing.

6. Shift to generics and OTC products

Rising healthcare costs have precipitated greater consumer demand for affordable products, such as generic equivalents and alternatives to the originating pharmaceutical products. By 2017, it is projected that generics will account for 87% of all prescriptions filled. Similarly, a study by Booz & Company found that OTC products are used by 79% of US consumers, or 240 million people, and save the US healthcare system more than USD 100 billion per year.

For more information, see p170–172 of the Novartis Annual Report 2013.

Demographic changes leading to rise in non-communicable diseases

Because of demographic change – which affects developing and emerging countries and coincides with growing urbanization and high environmental pollution – chronic and age-related disorders such as eye diseases, diabetes, cardiovascular conditions, and cancer are rising. This will continue to put a great strain on public health, the economy and the labor market.

Non-communicable diseases (NCDs) like diabetes, cancer and high blood pressure are projected to overtake communicable and nutritional diseases as the most common causes of death in Africa by 2030. We are conducting a range of activities in the area of NCDs in sub-Saharan Africa.

For more on how we are improving healthcare in Africa, see the Novartis in Africa Factsheet.

For more on our targets and results about doing business responsibly, see the CR section of the Novartis website.

Pharmaceuticals in the environment

Recent research, with a focus on surface waters, confirms the presence of low levels of pharmaceuticals in the environment. The natural excretion of medicines by patients is recognized as the main source of pharmaceuticals entering the environment. Improper disposal of medicines and effluents from manufacturing facilities can result in pharmaceutical substances entering the environment as well, however the overall impact through human use is much larger.

In order to better understand and minimize the potential impact of pharmaceuticals on the environment, Novartis uses a four-fold strategy that applies to all its operations involved in the R&D, production and disposal of pharmaceutical products.

1. Environmental risk assessment

Novartis evaluates the potential impacts of new medicines on human and environmental health during the R&D process before the products reach the marketplace. Where necessary, we develop tailored strategies to minimize that impact.

2. Manufacturing

Novartis minimizes discharges of active pharmaceutical ingredients into the aqueous environment from operations. We monitor potential emissions on an ongoing basis and take appropriate corrective action if necessary.

3. Safe disposal

Novartis does not dispose of waste containing pharmaceutical ingredients into landfills. We recommend that individuals also avoid disposing of unused or expired medicines into sewers or with waste that goes to landfills. Instead, we welcome when countries use state-of-the-art wastewater treatment and are implementing processes and systems to ensure incineration of waste containing active pharmaceutical ingredients.

4. Increase knowledge

To advance society's understanding of the environmental fate and effects of pharmaceuticals, we support research initiatives of academia and regulators to close data gaps and find new solutions.

Release of drug substances into water

One key area of concern is the prevention of pharmaceuticals entering the aquatic environment. The majority of pharmaceuticals in the environment are a result of excretions of 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 (APIs) 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

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and therefore do not present a health risk. The total quantity of drug substance released has been reduced to below 0.2%.

Many of the major Novartis products have undergone a full regulatory assessment for potential environmental long-term risks, including *Aclasta/Reclast, Afinitor/Votubia, Diovan/Co-Diovan, Exelon, Exforge, Galvus, Gilenya, Glivec/Gleevec, Lucentis, Rasilez/Tekturna, Rasilez-HCT, Sandostatin* and *Tasigna*.

Various late-stage pipeline products are currently being assessed and the key results of these investigations will be made available to the public by European Union regulators.

We constantly strive to minimize any release of APIs into wastewater from our operations, following a site- and-substance-specific approach. We have banned the disposal of any organic hazardous waste, including pharmaceutical waste, in landfills. Such waste is treated for further processing or incinerated in approved, state-of-the-art facilities.

Since 2001, the Novartis Pharmaceuticals Division has conducted a program to reduce the release of active drug substances from production processes into water.

In the past several years, the total amount released to the aquatic environment has been less than 0.05% of the total amount of active pharmaceuticals processed for the Pharmaceuticals Division globally.

Having reached such low release levels overall, efforts are now focused on the potential environmental risks linked to such releases. To this end, the Novartis Divisions apply programs to prevent remaining environmental risks associated with individual active drug substances and with the specific situation at each manufacturing location.

The programs, covering all manufacturing sites, combine a science-based, substance-specific risk assessment methodology with an evaluation of process-efficiency improvements and the most stringent international regulatory requirements.

Specific targets have been set for sites to achieve further reductions on individual drug substances, if the specific risk assessment indicates a concern, if the release is above 1%, or if effluents from the sites could lead to concentrations in the aquatic environment bigger than the respective risk limit for the particular substance. At several pharmaceutical production sites, we use advanced wastewater treatment technology to specifically eliminate drug substances from effluents, such as membrane bioreactors, ultra-filtration and activated charcoal filtration.

During 2012, Novartis conducted an eco-toxicological and bio-concentration study following OECD guidelines on diclofenac, the API for the anti-inflammatory drug *Voltaren*, in order to close data gaps on this Novartis legacy compound. The study results showed a Predicted No Effect Concentration (PNEC) for diclofenac of 32 micrograms per liter (µg/L), which was more than 300 times higher than the value being used by regulators based on earlier, non-standard academic pathology studies in fish. In 2013, Novartis arranged a pathological review and pathological working group to compare the results of these studies in a blinded test. The review confirmed the results of our study and the PNEC for diclofenac in fresh water of 32 µg/L.

For more on this topic, see our position on Pharmaceuticals in the Environment.

For more on our targets and results about doing business responsibly, see the CR section of the Novartis website.

Product quality

The products we market and sell are either manufactured at our own dedicated manufacturing facilities or by third parties. In either case, we must ensure that all manufacturing processes comply with current Good Manufacturing Practices (cGMP) and other applicable regulations, as well as with our own high quality standards.

Governmental health authorities around the world, including the US Food and Drug Administration (FDA), closely regulate the manufacture of our products, and continue to intensify their scrutiny of manufacturers' compliance with their requirements.

If we or our third party suppliers fail to comply fully with these requirements and the health authorities' expectations, then we could be required to shut down our production facilities or production lines.

In 2013, Novartis made a significant investment and strengthened measures toward achieving "quality beyond compliance". We completed 262 health authority inspections across our network, with 258 assessed as good or satisfactory. These included 31 inspections from the FDA, of which 28 were assessed as good or satisfactory.

We also continued to make progress on quality remediation at Consumer Health's manufacturing facility in Lincoln, Nebraska, US, where we suspended operations and shipments at the end of 2011. In 2013, the FDA re-inspected the Lincoln site and made zero Form 483 observations relating to its manufacturing operations. Consequently, we resumed shipments of newly validated *Sentinel* and *Excedrin*, two of the products produced at that site, to our customers in North America.

In 2013, Sandoz continued to upgrade its systems and processes to ensure one quality standard across the organization following a warning letter from the US FDA in 2011 pertaining to three of the division's North American manufacturing facilities, and another received in 2013 with respect to the Sandoz site in Unterach, Austria.

Sandoz has now achieved upgraded compliance status at two of those sites (Broomfield, Colorado, US in 2012 and Boucherville, Canada in 2013). Sandoz had more than 72 successful health authority inspections at its global manufacturing facilities in 2013.

Longer term, we are implementing a comprehensive plan for all of our 109 manufacturing sites worldwide to strengthen our sustainable culture of quality. The plan includes upgraded standards, technology and training for our people.

As a result of such manufacturing issues, we have been unable to supply certain products to the market for significant periods of time, and so have suffered and may continue to suffer significant losses in sales and market share. In addition, supply issues have required us to outsource the production of certain key products that were previously manufactured in our own production facilities, as well as expend considerable resources on the remediation of the issues at our sites, which may limit the potential profitability of such products. To meet increasing health authority expectations, we are devoting substantial time and resources to improve quality and assure consistency of product supply at our other manufacturing sites around the world.

For more information, see p9, 36, 117 and 174 of the Novartis Annual Report 2013 and p14 of the Novartis 20-F Report 2013.

Counterfeit medicines

The counterfeiting of pharmaceutical products has increased dramatically on a global scale in the last few years and poses serious risks to the health of patients. Novartis is an industry leader in anti-counterfeiting efforts.

Novartis Corporate Security is responsible for the direction of the company's anti-counterfeiting program, which includes:

- Investigation of all incidences of counterfeit product by means such as market sweeps, development and direction of intelligence sources, intelligence-driven investigations, undercover purchases, and enforcement actions. Successful enforcement in LATAM, Asia, the Middle East and the Former Soviet Union has resulted in the seizure of large quantities of counterfeit products, the arrest of hundreds of suspects and the confiscation of many tons of raw materials, packaging, printing presses and other illicit processing equipment
- Monitoring of diverted products to identify countries and companies from which diverted goods flow in order to stop this often illegal activity
- Oversight of the investigation of product tampering cases in cooperation with law enforcement and health authorities in order to protect public health
- Liaison with and training of law enforcement, regulatory and health authorities
- Support for governments to develop and implement stronger anti-counterfeiting legislation, better enforcement and more severe penalties, while enhancing public information efforts against counterfeiters
- Awareness and training programs for Novartis personnel
- Review of new technology to assess its potential value and application to Novartis product security initiatives
- Representing Novartis anti-counterfeiting interests in the Pharmaceutical Security Institute, the industry's law enforcement liaison and intelligence association, and other relevant industry associations, such as the European Federation of Pharmaceutical Industries and Associations and the Pharmaceutical Research and Manufacturers of America
- Participation in anti-counterfeiting efforts with public health agencies. Following the WHO call for an international campaign, Novartis endorsed the WHO-led international campaign to combat the growing epidemic of counterfeit drugs (WHO's Declaration of Rome on Counterfeiting Medicines) and is participating in the WHO's International Medical Products Anti-counterfeiting Task Force (IMPACT).

For more on this topic, see our position on Counterfeit Medicines.

Research and development

Innovation in the R&D pipeline
R&D and a strong pipeline of potential medicines are critical for our future business and long-term success. They help us respond to unmet medical needs of patients throughout the world and support our growth.

The foundation of our success is our approach to discovery, which centers on studying molecular pathways in homogenous populations. We focus on the underlying causes of diseases, where scientific understanding is strongest and where unmet patient need is greatest. Once we achieve success with one disease, we expand into other disease areas that are impacted by the same pathway.

We are among the leaders of dynamic change in R&D, marked by emerging technologies that are transforming pharmaceutical development. For example, our bioinformatics capability is revolutionizing drug-discovery efforts, such as our work to understand the specific mutations that lead to cancers and rare diseases. Big data also has the potential to unlock personalized medicine and accelerate clinical trials. For example, up to 95% of the variability in patient drug response may be due to genetic differences. By interpreting the data, we can find the most effective treatments for individual patients. This could lead to improved patient response rates and potentially shorter development times, safer therapies and faster regulatory approvals. Our broad portfolio in oncology also gives Novartis a strategic advantage in developing targeted and cellular therapies. This provides us access to single agents and unique proprietary combinations that can target specific tumor mutations and potentially overcome resistance mechanisms.

For more information, see p8–9 of the Novartis Annual Report 2013.

For more about responsible R&D, see the Research and development page of the Novartis website.

Biodiversity and Bioprospecting
Biodiversity represents an important source of potential new drugs. In our quest to develop new therapies to cure diseases, we maintain a strong commitment not only to biodiversity, but also to basic principles of human rights and social justice. As such, our efforts at using natural sources for obtaining potential drugs or lead substances are conducted only in accordance with the UN Convention on Biological Diversity (CBD).

We accept the CBD provision whereby countries maintain sovereignty over their genetic resources and may limit access to them, and we support sharing the benefits deriving from future products in accordance with the principles of the Convention, while ensuring compliance with intellectual property law. Additionally, in our effort to drive CBD implementation and promote sustainable society development in less-developed countries, we share know-how and the latest technologies with our local collaboration partners and help them build capacity, and we fully inform local authorities.

A joint bioprospecting project between Novartis and Thailand's National Center for Genetic Engineering and Biotechnology (BIOTEC) is exploring natural substances derived from the country's rich microbial diversity as a source for new drug discovery and development projects. From 2005 to 2011, Novartis worked to develop the capacity at BIOTEC in two areas: the implementation of novel microbiological technologies and concepts to identify novel microorganisms, and natural-products chemistry and analytics to identify new molecules from rare microorganisms of high diversity for drug discovery. Both objectives have been quickly accomplished and a substantial number of highly diverse microbial strains and pure natural products have been made accessible for drug screening at Novartis. Now in its third three-year tranche, the collaboration is working to expand the isolation of strains to further taxonomic classes to diversify the pool of bacteria and fungi.

For more on this topic, see our position on Biodiversity/Bioprospecting.

Biosimilars
Biosimilars are biopharmaceutical products that are approved after patent expiry of the originator ("reference") product. Biosimilars are judged on the same quality, efficacy and safety standards as the original biologic. Biopharmaceuticals, including biosimilars, are generally more complex than small chemical compounds. This complexity makes the development of a follow-on version after patent expiry by a different manufacturer much more challenging for a biosimilar than for a generic.

The requirements laid down in the European approval pathway for biosimilars, which is more stringent and extensive than an approval for a small molecule generic (e.g. data from extensive, comparative preclinical and clinical studies have to be provided), adequately mirror the complexity of biologics. Once approved by a stringent regulatory authority

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(e.g. EMA, FDA), a biosimilar should generally be considered as interchangeable with the originator brand. Since they are biologics like the originator, biosimilars should not be subject to requirements beyond those for any other biologic of the same class.

For more on this topic, see our positions on:

Biosimilars: Science Based Approval and Sustainable Market Access

Biosimilars: Interchangeability

Biosimilars: Naming Requirements

Biosimilars: Pharmacovigilance

Biosimilars: Regulatory Harmonization

Biosimilars: Pricing

For more on our targets and results about doing business responsibly, see the CR section of the Novartis website.

Intellectual property and the future of medicine

Pharmaceutical R&D is an extremely expensive and time-consuming process with a dishearteningly high rate of failure. Overall, only one new chemical compound out of 10 000 studied in the laboratory ultimately becomes a marketed medicine, and the time to market is frequently over 10 years. Despite the odds and costs (on average, it costs more than USD 1 billion to bring a new medicine to market), our Pharmaceutical Division reinvested USD 7.2 billion, or 22% of its net sales, in R&D in 2013, focusing on the areas of greatest patient need and scientific promise. We choose to reinvest such a high percentage of our sales in R&D because the future of medicine depends on it. But our ability to maintain this level of investment depends on the existence of reliable incentives to help balance the high risks and high costs inherent to the R&D process, and to allow us to recoup enough of a return on our successes to offset the losses from our R&D failures.

Intellectual Property (IP) provides this incentive in the form of a limited period of market exclusivity which allows us to generate the returns needed to fund the next round of R&D, leading to the next generation of innovative medicines. At the same time, with one of the world's leading generics manufacturers, Sandoz, in our Group, we recognize the critical role that generic medicines play in helping to lower healthcare costs and increase access to medicine. Generics are able to produce lower-cost versions of medicines because regulatory authorities allow them to forego independent R&D and the costs and risks that it requires, and to instead copy the successful outcomes of innovator-funded R&D. Thus, while IP may temporarily postpone the introduction of lower-cost generic medicines, it is also indispensable to their existence, enabling the originator-funded R&D cycle that leads to the medicines that generics copy. Global respect for IP rights is thus essential to the future of medicine, both for innovative drugs and lower-cost generics.

Novartis strongly supports the World Trade Organization's TRIPS (Trade-related Aspects of Intellectual Property Rights) Agreement and the standards for IP protection that its member countries have agreed to provide. Properly interpreted in the context and spirit in which it was signed, TRIPS strikes an appropriate balance between the IP protections that are necessary to continue to incentivize medical innovation, and the flexibility that may be needed in limited circumstances of extreme urgency to increase access to essential treatments. Countries should strongly consider strengthening IP rights beyond the minimum TRIPS requires, particularly in ways that would help to incentivize further research into second medical uses, neglected diseases, and critical areas of incremental innovation.

Sharing innovation to fight neglected diseases

Novartis is a founding member of WIPO Re:Search, a consortium established to accelerate discovery and development of medicines, vaccines and diagnostics for neglected tropical diseases. Sponsored by the World Intellectual Property Organization (WIPO), the consortium includes pharmaceutical companies, leading research institutions and NGOs.

Novartis and other member organizations will voluntarily provide intellectual property and expertise on a royalty-free basis to qualified researchers across the global health research community. Products developed using WIPO Re:Search data will be granted royalty-free licenses when distributed in least-developed countries.

By providing a searchable public database of available IP assets – information on individual compounds and associated data, screening hits from compound libraries and clinical trial data – the consortium aims to foster interactions with research organizations focusing on neglected tropical diseases, malaria, and tuberculosis.

For more about our involvement, see the Research consortium page on the Novartis website.

Research for neglected diseases

Two specialized Novartis institutes research medicines and vaccines for diseases of the developing world. The Novartis Institute for Tropical Diseases

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in Singapore is dedicated to finding treatments for infectious tropical diseases, including malaria, dengue fever and others. The Novartis Vaccines Institute for Global Health in Italy works to create affordable vaccines for neglected diseases, such as diarrheal diseases, which cause 2 million deaths every year.

During 2013, Novartis dedicated 192 full-time-equivalent positions and contractors to these research efforts, valued at USD 34 million and an additional 51 full-time-equivalent positions and contractors to development efforts, valued at USD 12 million.

We continuously search for new and more effective treatments, because diseases can evolve and outpace current drugs.

For example, Novartis is working toward new breakthroughs against malaria, which still kills a child every 60 seconds. Two exciting new molecules, currently in Phase 2 clinical trials, could provide completely new options to treat the disease. One belongs to the spiroindolone class, and rapidly and potently kills malaria parasites. The second molecule discovered by our scientists belongs to another new class of dual-acting compounds, known as imidazolepiperazines.

It targets the parasite at both the liver and blood stage of its reproductive cycle. Both compounds are completely new classes of antimalarial compounds that treat malaria in different ways from current therapies.

In November 2013, Novartis and collaborators announced the discovery of yet another new malaria drug target and a new compound class with potential to prevent, block and treat malaria. Called imidazopyrazines, this is the third new class of malaria compounds discovered by Novartis scientists within the last five years.

For more about our malaria research, see the Malaria initiative section of the Novartis website.

Typhoid is a significant public health problem in countries with insufficient clean water and proper sanitation. The bacteria cause more than 200 000 deaths per year and are growing resistant to antibiotics. That's why Novartis developed a typhoid vaccine. To make it available quickly, we licensed the vaccine to the Indian firm BioE, which has a proven track record in developing, manufacturing and delivering vaccines to the developing world.

We are also developing a dual-acting vaccine with components against both typhoid and paratyphoid fevers.

For more about these two vaccines, see the Newsroom on the Novartis website.

Building local research capacity

In addition to our ongoing work of discovering new medicines for infectious diseases, we are building local research capabilities through infrastructure improvements and training for African scientists, as well as fighting non-communicable diseases by collaborating with African partners to strengthen health systems.

For more about how we are supporting scientific education and research in the developing world, see the Novartis in Africa Factsheet.

For more on our efforts to advance global health, see Advancing Global Health.

Nanotechnology

We anticipate that nanotechnology, which spans many areas, will play an important role in the development of future medicinal treatments, diagnostic products and biomedical support technologies. Novartis currently evaluates potential practical applications of nanotechnology, especially in the area of nanomedicine. In accordance with our general drug development process, both the safety and efficacy of all nano-scale drug-delivery systems are and will continue to be rigorously investigated and evaluated by in-depth study. These investigations will be followed by well-controlled clinical studies. The safety of patients, workplace safety and protection of the environment will continue to be of paramount importance to Novartis.

For more about this topic, see our position on Nanotechnology-based Medicines.

Responsible clinical trials

Clinical studies are conducted to determine whether a new treatment is both safe and effective. Such studies are possible because volunteers (healthy volunteers and patients) agree to participate and try new medicines or vaccines.

Drugs tested in clinical trials can be:

- Drugs that have not yet been approved by health authorities
- Drugs that are currently available for sale, and are being tested to improve existing formulations or evaluate the potential of the drug to treat other diseases

For more about our approach to clinical trials, see the Novartis website.

Disclosure of clinical research information
In alignment with the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) and the WHO, Novartis has taken several important steps to ensure that information about clinical trial results reach the public in a timely and balanced manner.

Results are to be made publicly available whatever their outcome.

We make the results of our clinical trials publicly available through peer-reviewed publications and posting of results in the Novartis clinical trial results database and/or at ClinicalTrials.gov. Knowing the results of these trials enables both patients and their healthcare providers to make well-informed decisions regarding treatment risks and benefits.

We make all efforts to comply with national and international standards for disclosure of clinical trial information and clinical studies are designed and conducted in accordance with the ethical principles of the Declaration of Helsinki Good Clinical Practice guidelines as well as national and international regulatory requirements.

For more about how Novartis has been addressing this issue, see Leaders in clinical trial data transparency. For more about the results of Novartis-conducted trials, see the Novartis clinical trial results database.

Clinical trials in developing countries
The rise of capabilities and education in developing nations has enabled globalization of businesses or activities including biopharmaceutical R&D. Investments of multinational companies in the developing world contribute to the development of national economies and healthcare systems, enabling higher standards of quality as well as global access to academic expertise and patient populations. As a result, industry is adapting its clinical trials footprint to the global pattern of disease and availability of ethnically diverse patient pools, as well as responding to emerging markets' expectation for relevant local clinical trial data.

However, practices in the developing world are frequently scrutinized to ensure they are not used to escape high regulatory burden or ethical standards in Europe or the USA. While every country has general ethical and legal standards, most developing nations have no specific legislation for this critical part of the R&D value chain.

For more, see our position on Clinical Trials in Developing Countries.

Clinical research capacity in developing countries
The Novartis Institutes for BioMedical Research (NIBR) support specific research initiatives, including one that is building local capabilities to conduct clinical trials that test the safety and effectiveness of new drug candidates. People in different parts of the world respond differently to drugs due to their unique genetic makeups. So the ability to run early clinical trials in Africa is crucial for designing drugs that work well in African patients. But today, very few such trials are conducted in Africa, even for diseases primarily found there.

In 2013, NIBR and Novartis Pharmaceuticals created a workshop to help African researchers construct safe and effective Phase I trial facilities. These workshops were very successful in Kenya and Ghana, and Novartis is now responding to requests to bring this capability to colleagues in Tanzania, Ethiopia and other countries.

For more information, see p26–27 of the Novartis Annual Report 2013.

Animal research
Animal research is an essential part of modern drug and medical therapy R&D. Despite encouraging methods for computer and cell-based culture research, there are still many areas where better understanding of disease mechanisms cannot be achieved without the use of animals. The knowledge acquired through such procedures is essential for the development of innovative treatments for unmet medical need.

Regulatory authorities worldwide and key principles laid down in the declaration of Helsinki require that new drugs be tested in animals before being introduced to human beings. Healthcare companies have to use knowledge that can only be obtained through animal studies to ensure the safety and efficacy of their products.

Animal research nevertheless is controversial to some, who question the right of human beings to use animals in such a manner or are unaware of the high animal welfare standards in industry.

Novartis would rather see the end of medical research involving animals. Unfortunately this is not completely possible today. There are two reasons for this:

- Although much research and development can be done in a "test tube" (*in vitro*) or using computers, complex disease mechanisms can often only be better understood through the use of animal studies
- Governments and regulatory authorities require that medicines be tested in animals before they are tested in humans

Novartis is committed to refining, reducing and replacing animals in research and to upholding the highest standards in animal welfare. We have a Global Animal Welfare Organization that is dedicated to ensuring the animal's well-being. Our Animal Welfare Policy meets or exceeds governmental regulations in the countries where we have operations.

For more information, see our position on Animal Research.

For more about our approach to animal welfare, visit the Innovation section of the Novartis website.

For more on the role animals play in medical research, see the Animal research section of the Novartis website.

Animal welfare target

2013 target	2013 progress	Future plans
Continue to promote and monitor best animal welfare practices Advance 3Rs (Reduction, Refinement, Replacement) initiatives in all Divisions Develop guidelines for the rehoming of research animals Decrease ratio of total number of animals used in research to R&D spend	NIBR 3R award for the best NIBR contribution to the global 3R initiative, NAH innovation award for the AW category and NVD implementation of Quality Control Innovation Facilitators 3R award annually and awards for each of the 3Rs Guidelines for rehoming have been developed and need further review and approval by the GAWC (Global Animal Welfare Committee) The R&D spend numbers will be published by end of Q1 2014	In 2014 implement an onboarding tool for all new Novartis associates on Animal Welfare and the responsible use of animals

For more about our targets and results about doing business responsibly, see the CR section of the Novartis website.

Transparency and communication

The business case and motivations for undertaking our various CR activities, the reasons for selecting and investing in particular initiatives, and the value they deliver, are described throughout this report.

For a more detailed discussion, see G4–1: Statement from the most senior decision-maker of the organization, G4–2: Description of key impacts and risks, Additional topics – Access to healthcare and Additional topics – Research and Development.

Learn more about our CR activities:
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