2012 GRI report
GRI hereby states that Novartis AG has presented its report “Novartis 2012 GRI report” to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for Application Level A have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methods.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 1 November 2013

Nelmara Arbez
Deputy Chief Executive
Global Reporting Initiative

The “A+” has been added to this Application Level because Novartis AG has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance.

The Global Reporting Initiative (GRI) is a network-based organisation that has pioneered the development of the world’s most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organisations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio-visual material, this statement only concerns material submitted to GRI at the time of the Check on 5 October 2013. GRI explicitly excludes the statement being applied to any later changes to such material.
Standard Disclosures: Profile

1. Strategy and Analysis
1.1 Statement from the most senior decisionmaker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy
1.2 Description of key impacts, risks, and opportunities

2. Organizational Profile
2.1 Name of organization
2.2 Primary brands, products and/or services
2.3 Operational structure of the organization
2.4 Headquarters location
2.5 Countries of operation
2.6 Nature of ownership and legal form
2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)
2.8 Scale of the reporting organization
2.9 Significant changes during the reporting period regarding size, structure, or ownership
2.10 Awards received in the reporting period

3. Report Parameters
REPORT PROFILE
3.1 Reporting period for information provided
3.2 Date of most recent previous report
3.3 Reporting cycle (annual, biennial, etc.)
3.4 Contact point for questions regarding the report or its contents

REPORT SCOPE AND BOUNDARY
3.5 Process for defining report content
3.6 Boundary of the report
3.7 State any specific limitations on the scope or boundary of the report
3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations
3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report
3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/ acquisitions, change of base years/periods, nature of business, measurement methods)
3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report
3.12 Table identifying the location of the Standard Disclosures in the report

ASSURANCE
3.13 Policy and current practice with regard to seeking external assurance for the report
4. Governance, Commitments, and Engagement

GOVERNANCE
4.1 Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight
4.2 Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization’s management and the reasons for this arrangement)
4.3 For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members
4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body
4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization’s performance (including social and environmental performance)
4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided
4.7 Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization’s strategy on economic, environmental, and social topics
4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation
4.9 Procedures of the highest governance body for overseeing the organization’s identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles
4.10 Processes for evaluating the highest governance body’s own performance, particularly with respect to economic, environmental, and social performance

COMMITMENTS TO EXTERNAL INITIATIVES
4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization
4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives the organization subscribes or endorses
4.13 Memberships in associations and/or national/international advocacy organizations

STAKEHOLDER ENGAGEMENT
4.14 List of stakeholder groups engaged by the organization
4.15 Basis for identification and selection of stakeholders with whom to engage
4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group
4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting

Standard Disclosures: Performance Indicators

Economic
ECONOMIC PERFORMANCE
Disclosure on management approach
EC1: Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments
EC2: Financial implications and other risks and opportunities for the organization’s activities due to climate change
EC3: Coverage of the organization’s defined benefit plan obligations
EC4: Significant financial assistance received from government

MARKET PRESENCE
EC5: Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation
EC6: Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation
EC7: Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation
INDIRECT ECONOMIC IMPACTS
EC8: Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement
EC9: Understanding and describing significant indirect economic impacts, including the extent of impacts

Environmental
Disclosure on management approach
MATERIALS
EN1: Materials used by weight or volume
EN2: Percentage of materials used that are recycled input materials *

ENERGY
EN3: Direct energy consumption by primary energy source
EN4: Indirect energy consumption by primary source
EN5: Energy saved due to conservation and efficiency improvements
EN6: Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives
EN7: Initiatives to reduce indirect energy consumption and reductions achieved

WATER
EN8: Total water withdrawal by source
EN9: Water sources significantly affected by withdrawal of water
EN10: Percentage and total volume of water recycled and reused

BIODIVERSITY
EN11: Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
EN12: Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas
EN13: Habitats protected or restored **
EN14: Strategies, current actions, and future plans for managing impacts on biodiversity
EN15: Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk **

EMISSIONS, EFFLUENTS AND WASTE
EN16: Total direct and indirect greenhouse gas emissions by weight
EN17: Other relevant indirect greenhouse gas emissions by weight
EN18: Initiatives to reduce greenhouse gas emissions and reductions achieved
EN19: Emissions of ozone-depleting substances by weight
EN20: NOx, SOx, and other significant air emissions by type and weight
EN21: Total water discharge by quality and destination
EN22: Total weight of waste by type and disposal method
EN23: Total number and volume of significant spills
EN24: Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally
EN25: Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization’s discharges of water and runoff **

PRODUCTS AND SERVICES
EN26: Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation
EN27: Percentage of products sold and their packaging materials that are reclaimed by category **

COMPLIANCE
EN28: Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations
TRANSPORT
EN29: Significant environmental impacts of transporting products and other goods and materials used for the organization’s operations, and transporting members of the workforce

OVERALL
EN30: Total environmental protection expenditures and investments by type

Human Rights
Disclosure on management approach
INVESTMENT AND PROCUREMENT PRACTICES
HR1: Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening
HR2: Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken
HR3: Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained

NON-DISCRIMINATION
HR4: Total number of incidents of discrimination and actions taken **

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING
HR5: Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights

CHILD LABOR
HR6: Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor

FORCED AND COMPULSORY LABOR
HR7: Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor

SECURITY PRACTICES
HR8: Percentage of security personnel trained in the organization’s policies or procedures concerning aspects of human rights that are relevant to operations

INDIGENOUS RIGHTS
HR9: Total number of incidents of violations involving rights of indigenous people and actions taken

Labor Practices and Decent Work
Disclosure on management approach
EMPLOYMENT
LA1: Total workforce by employment type, employment contract, and region
LA2: Total number and rate of employee turnover by age group, gender, and region
LA3: Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations

LABOR/MANAGEMENT RELATIONS
LA4: Percentage of employees covered by collective bargaining agreements
LA5: Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements

OCCUPATIONAL HEALTH AND SAFETY
LA6: 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
LA7: Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region
LA8: Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases
LA9: Health and safety topics covered in formal agreements with trade unions

TRAINING AND EDUCATION
LA10: Average hours of training per year per employee by employee category **
LA11: Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings
LA12: Percentage of employees receiving regular performance and career development reviews

DIVERSITY AND EQUAL OPPORTUNITY
LA13: Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity *
LA14: Ratio of basic salary of men to women by employee category

Product Responsibility

Disclosure on management approach
CUSTOMER HEALTH AND SAFETY
PR1: Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures
PR2: Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services, by type of outcomes *

PRODUCT AND SERVICE LABELING
PR3: Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements
PR4: Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes **
PR5: Practices related to customer satisfaction, including results of surveys measuring customer satisfaction *

MARKETING COMMUNICATIONS
PR6: Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship
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 **

CUSTOMER PRIVACY
PR8: Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data

COMPLIANCE
PR9: Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

Novartis 2012 GRI report | October 2013 | 7
Society

Disclosure on management approach

COMMUNITY
SO1: Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting

CORRUPTION
SO2: Percentage and total number of business units analyzed for risks related to corruption
SO3: Percentage of employees trained in organization’s anti-corruption policies and procedures
SO4: Actions taken in response to incidents of corruption

PUBLIC POLICY
SO5: Public policy positions and participation in public policy development and lobbying
SO6: Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country

ANTI-COMPETITIVE BEHAVIOR
SO7: Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes

COMPLIANCE
SO8: Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations

Other indicators
• Access to medicines in the developing world
• Animal research
• Disclosure of clinical research information
• Living wages

Additional topics
• Human rights
• Counterfeit medicines
• Ethical promotion of pharmaceuticals
• Health Technology Assessment
• Information to patients
• Biosimilars
• Organ donation
• Patient group interaction and disclosure of support
• Biodiversity/Bioprospecting

External assurance statements
• Assurance report on our corporate responsibility reporting
• Report of the statutory auditor on our consolidated financial statements and internal control over financial reporting
• Report of the statutory auditor on our financial statements

All indicators are fully reported unless indicated as follows:
* Partially reported
** Not reported

Please see table on page 9 for categories and aspects partially or not reported.
Please see table on page 10 for partially or not reported indicators.
### Categories and aspects partially or not reported

<table>
<thead>
<tr>
<th>Category</th>
<th>Aspect</th>
<th>Reported</th>
<th>Reason for omission</th>
<th>Explanation</th>
<th>To be reported in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure on management approach EN</td>
<td>Materials</td>
<td>Partially</td>
<td>Not available</td>
<td>EN2 partially reported</td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
<td>Not</td>
<td>Not applicable</td>
<td>EN13, EN15 and EN25 not reported. Our operations are located in specially</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>designated zones for industrial purposes outside of natural conservation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>areas or protected habitats.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Products and services</td>
<td>Partially</td>
<td>Not available</td>
<td>EN27 not reported</td>
<td>2020</td>
</tr>
<tr>
<td>Disclosure on Management Approach LA</td>
<td>Training and education</td>
<td>Not</td>
<td>Not available</td>
<td>LA10 not reported</td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td>Diversity and equal opportunity</td>
<td>Partially</td>
<td>Not available</td>
<td>LA13 partially reported</td>
<td>2020</td>
</tr>
<tr>
<td>Disclosure on Management Approach HR</td>
<td>Non-discrimination</td>
<td>Not</td>
<td></td>
<td>Proprietary information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer health and safety</td>
<td>Partially</td>
<td>Not available</td>
<td>PR2 not reported</td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td>Product and service labeling</td>
<td>Not</td>
<td>Not available</td>
<td>PR4 not reported. PR5 partially reported</td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td>Marketing communications</td>
<td>Not</td>
<td>Not available</td>
<td>PR7 not reported</td>
<td>2020</td>
</tr>
</tbody>
</table>
## Indicators partially or not reported

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Description</th>
<th>Reported</th>
<th>Reason for omission</th>
<th>Explanation</th>
<th>To be reported in</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN2</td>
<td>Percentage of materials used that are recycled input materials.</td>
<td>Partially</td>
<td>Not available</td>
<td>Our current systems do not allow us to track this information.</td>
<td>2020</td>
</tr>
<tr>
<td>EN13</td>
<td>Habitats protected or restored.</td>
<td>Not</td>
<td>Not applicable</td>
<td>Our operations are located in specially designated zones for industrial purposes outside of natural conservation areas or protected habitats.</td>
<td></td>
</tr>
<tr>
<td>EN15</td>
<td>Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.</td>
<td>Not</td>
<td>Not applicable</td>
<td>Our operations are located in specially designated zones for industrial purposes outside of natural conservation areas or protected habitats.</td>
<td></td>
</tr>
<tr>
<td>EN25</td>
<td>Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.</td>
<td>Not</td>
<td>Not applicable</td>
<td>Our operations are located in specially designated zones for industrial purposes outside of natural conservation areas or protected habitats.</td>
<td></td>
</tr>
<tr>
<td>EN27</td>
<td>Percentage of products sold and their packaging materials that are reclaimed by category.</td>
<td>Not</td>
<td>Not available</td>
<td>Data is not available on a global level due to the varying availability of recycling programs and facilities in the countries in which we sell our products.</td>
<td>2020</td>
</tr>
<tr>
<td>LA10</td>
<td>Average hours of training per year per employee by employee category.</td>
<td>Not</td>
<td>Not available</td>
<td>Records are not maintained in a centralized manner, so we cannot report this information on a global level for all employees.</td>
<td>2020</td>
</tr>
<tr>
<td>LA13</td>
<td>Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.</td>
<td>Partially</td>
<td>Not available</td>
<td>Minorities cannot be reported globally due to a lack of standard or global definitions and dimensions for minority.</td>
<td>2020</td>
</tr>
<tr>
<td>HR4</td>
<td>Total number of incidents of discrimination and actions taken.</td>
<td>Not</td>
<td>Proprietary information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR2</td>
<td>Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services</td>
<td>Not</td>
<td>Not available</td>
<td>Novartis tracks incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products on country and functional levels.</td>
<td>2020</td>
</tr>
<tr>
<td>PR4</td>
<td>Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.</td>
<td>Not</td>
<td>Not available</td>
<td>Affiliated companies are responsible for complying with local laws and regulations regarding labeling. Global figures of non-compliance are not available.</td>
<td>2020</td>
</tr>
<tr>
<td>PR5</td>
<td>Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.</td>
<td>Partially</td>
<td>Proprietary information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR7</td>
<td>Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.</td>
<td>Not</td>
<td>Not available</td>
<td>Incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, are handled at the country level.</td>
<td>2020</td>
</tr>
</tbody>
</table>

**Contact:**
Kathleen Sprangers  
Corporate Communications, Novartis  
Email: kathleen.sprangers@novartis.com
Standard Disclosures: Profile

1. Strategy and Analysis

1.1 Statement from the Chief Executive Officer

Two things set Novartis apart and drove our performance in 2012: Our broad healthcare portfolio centered on growing segments of healthcare, and our sustained commitment to science-based innovation. Despite another year of transformational change for the healthcare industry, we met most of our objectives for the year, and made significant progress across our core strategic priorities of innovation, growth and productivity.

[...] Throughout 2012, we’ve been on a journey toward achieving “quality beyond compliance,” and have taken significant steps forward. We had 264 health authority inspections, including 56 from the US Food and Drug Administration (FDA) – the majority with good or satisfactory results. We still have more work to do at our Consumer Health facility in Lincoln, Nebraska, and at two of the Sandoz sites under the warning letter in North America. But we’re making progress. The Sandoz site in Broomfield, Colorado, had a satisfactory FDA inspection; progress on the warning letter items was recognized and resulting compliance status of the facility was upgraded. We continue to invest in improving skills, modifying processes and modernizing equipment to enhance our level of quality as quickly as possible at the sites with remaining issues. Diligence about quality is critical to our reputation with regulators.

[...] We focus on driving growth across the broad spectrum of healthcare through our strategy of science-based innovation, the intersection of cutting-edge science and patient needs. We’re investing significantly in R&D even as other companies cut back.

[...] We are delivering strong performance in emerging markets, and with 6% growth cc, these markets contributed USD 13.8 billion, or 24%, to Group net sales. China, which now ranks among our top 10 markets, led this growth, with net sales up 24% cc over the previous year.

[...] We credit much of this success to our emphasis on recruitment and training in China. It is very important that our associates understand the Novartis medicines for which they are responsible, and that they can discuss them with doctors. That’s why we’ve created the Novartis China University to systematically train associates. This is a competitive advantage, and it’s important for our growth.

In Russia, we are the largest healthcare company, and we continue to expand our presence through the construction of a new plant in St. Petersburg. We’re also actively contributing to the government’s goal of raising life expectancy from 69 years to 71 by 2015. Through a partnership in the Yaroslavl region northeast of Moscow, where cardiovascular problems are common, a new Regional Hypertension Center and public education campaign have been established, and three pilot sites now offer hypertension intervention tools. As a result of these measures, blood pressure control rates at the pilot center have nearly doubled over the past 18 months.

We are also focusing on Africa, where we expect rising demand for healthcare. Africa is home to one-seventh of the world’s population. Sub-Saharan Africa has up to one-quarter of the global disease burden, but only 2% of its doctors. There’s a lot of opportunity to help people in Africa live longer, healthier lives. Today we’re the third-largest multinational healthcare company in Africa, and we’re making a long-term commitment to be part of the solution.

[...] Nothing is more important than ensuring that patients have access to healthcare, regardless of where they live or their ability to pay. We have several efforts under way to make sure this happens. In the developing world, we
are committed to working to eliminate leprosy and malaria. We’re pioneering new business approaches to deliver healthcare sustainably in low-income areas. And our scientists are searching for new therapies and adapting existing medicines to treat neglected diseases.

Our access to healthcare programs reached more than 100 million patients in 2012, and we reached 7.2 million people with health education, infrastructure development and other sustainable programs.

This year we extended our collaboration with WHO in its efforts to end leprosy. Novartis will continue to provide free multidrug therapy, valued at USD 22 million, to treat an estimated 850 000 people through 2020. Additionally, since 2001, we have delivered more than 500 million antimalarial treatments without profit, including 100 million treatments of our child-friendly formulation. We are expanding SMS for Life, a tool to monitor supply of medicines, throughout Kenya and Tanzania. This technology platform uses text messages and electronic mapping to track supply of malaria treatments, diagnostics and patient surveillance data at public health facilities. SMS for Life works with Vodafone, IBM, Roll Back Malaria and the government. It has already reduced stockouts in Tanzania by 70%.

It is clear, however, that philanthropic aid is no longer enough. The best was to improve global quality of life and health is to build locally sustainable solutions that will have an enduring impact. The most important societal issues in developing countries are healthcare education, infrastructure and distribution. We have launched a series of Novartis Social Ventures to address these issues by blending corporate responsibility with innovative business models.

One example is our Arogya Parivar or “healthy family” program in India. Through the program, we recruit and train local people to become health educators. At the same time, mobile clinics provide access to screening, diagnosis and therapies to patients in remote villages. We also increase access to 80 medicines from our Sandoz, Pharmaceuticals, OTC and Vaccines portfolios by selling them in smaller packages, which helps to track a patient’s compliance and keep weekly out-of-pocket costs low. Arogya Parivar now offers improved healthcare for more than 40 million people living in 33 000 villages across India. And we’re in the process of rolling out similar ventures in Asia and Sub-Saharan Africa, with the aim to reach more than 100 million people in need of care.

[...] We’re making a lot of progress in talent development. We have a new leadership development framework in place that helps associates learn how to better lead themselves, their teams, and their businesses.

I’ve personally led the creation of a development program for promising leaders in emerging markets, called LEAD. This year we’ve expanded the program to include people from across divisions and regions, including the Middle East, Asia and Latin America. Over 12 months, LEAD participants will work together in six small teams, each led by a Novartis Executive Committee member. The teams will work on action-learning projects in: 1) meeting and beating the local competition; 2) winning the war for talent; and 3) enhancing affordability and access to medicine. Exploring innovative approaches in each of these categories is important for our future success in emerging markets.

Looking ahead, I’m confident that Novartis will make further progress on moving away from the industry’s traditional business model of simply selling pills, toward an intensified focus on delivering positive patient outcomes. We believe that this will be good for the patients we serve, and good for Novartis.

I’m looking forward to 2013. It will be an exciting year.

Excerpt from “Interview with Joseph Jimenez” in 2012 Novartis Annual Report, p11-14

1.2 Description of key impacts, risks and opportunities

Governance
Corporate responsibility (CR) is endorsed and ingrained at the highest level in our company. It is central to how we run our business.

A Corporate Responsibility Steering Committee (CRSC) meets bi-monthly to give oversight and guidance. Chaired by George Gunn, who is a member of the Executive Committee of Novartis (ECN), and made up of
representatives with operational responsibilities in all divisions and major functions of the company, it demonstrates our commitment to CR for the long term and throughout the business.

The CRSC is a decision-making body that makes recommendations to the ECN to ensure a coordinated and integrated approach to CR that meets our aims of:

- Reaching more patients
- Collaborating for results
- Doing business responsibly

The committee is responsible for the following:

- 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

Please refer to the Novartis Corporate Responsibility Website for further details:

**Transformational changes fueling demand**

- Aging global population and shifting behaviors
- Global rise in healthcare spending led by emerging markets
- Scientific advances opening new opportunities for targeted therapies
- New technologies changing the delivery of healthcare
- Shift to generics and OTC products

**Increasingly challenging business environment**

- Patent expirations and generic competition pressuring industry
- Heightened regulatory and safety hurdles
- Risk of liability and supply disruption from manufacturing issues
- Financial crisis increasing pressures on drug prices
- Potential liability arising from legal proceedings

**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. 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.

Please refer to the Novartis Corporate Responsibility Website for further details:

**Risk management**

The Corporate Risk Management function reports to 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 and Business Continuity, providing support and controlling the effectiveness of risk management by the Divisions in these respective areas.

Novartis strategy for sustainable growth
As the only healthcare company globally with leading positions in pharmaceuticals, eye care, generics, vaccines and diagnostics, over-the-counter medicines and animal health, we believe that Novartis is uniquely positioned to capture growth opportunities across the healthcare marketplace and to mitigate the impact of challenges in particular sectors.

[...] Our strategy, which is based on the focused diversification of our healthcare portfolio, requires a consistent focus on three core priorities: (1) extending our lead in innovation through the research and development of new offerings and the expansion of applications for existing offerings; (2) accelerating growth with new launches and a greater presence in Emerging Growth Markets; and (3) enhancing productivity through efficiency initiatives that free up resources for reinvestment and shareholder returns.

[...] We believe that innovation is a competitive advantage for Novartis.

Focused diversification
The Group’s wholly-owned businesses are organized into six global operating divisions, 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
- Vaccines and Diagnostics: Human vaccines and blood-testing diagnostics
- Consumer Health: OTC (over-the-counter medicines) and Animal Health
Overview of Key Performance Indicators, targets and status of implementation

## CORPORATE RESPONSIBILITY KEY PERFORMANCE INDICATORS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net sales in USD billions</td>
<td>56.7</td>
<td>58.6</td>
<td>50.6</td>
<td>44.3</td>
<td>41.5</td>
</tr>
<tr>
<td>Net income in USD billions; % of net sales</td>
<td>9.6</td>
<td>17%</td>
<td>9.2</td>
<td>16%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Core Research &amp; Development in USD billions; % of net sales</td>
<td>9.1</td>
<td>16%</td>
<td>9.2</td>
<td>16%</td>
<td>8.1</td>
</tr>
<tr>
<td>Personnel costs in USD billions; % of net sales</td>
<td>14.8</td>
<td>26%</td>
<td>14.9</td>
<td>26%</td>
<td>12.2</td>
</tr>
<tr>
<td>Taxes in USD billions; % of net income before taxes</td>
<td>1.6</td>
<td>14%</td>
<td>1.5</td>
<td>14%</td>
<td>1.7</td>
</tr>
<tr>
<td>Dividends in USD billions; % of net income attributable to Novartis shareholders</td>
<td>6.2</td>
<td>65%</td>
<td>6.0</td>
<td>66%</td>
<td>5.4</td>
</tr>
<tr>
<td>Cash returned to shareholders via second-line share repurchases in USD billions; % of Group total net income</td>
<td>0</td>
<td>0%</td>
<td>2.4</td>
<td>26%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Share price at year end (CHF)</td>
<td>57.45</td>
<td>53.70</td>
<td>64.96</td>
<td>58.50</td>
<td>52.70</td>
</tr>
<tr>
<td><strong>Expanding access to healthcare</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total patients reached with Novartis products (millions)</td>
<td>1,200</td>
<td>1,148</td>
<td>913</td>
<td>930</td>
<td>850</td>
</tr>
<tr>
<td>Patients reached through access to healthcare programs (millions)</td>
<td>101.4</td>
<td>89.6</td>
<td>85.5</td>
<td>79.5</td>
<td>73.7</td>
</tr>
<tr>
<td>Value of access to healthcare programs (USD millions)</td>
<td>2,051</td>
<td>1,784</td>
<td>1,544</td>
<td>1,510</td>
<td>1,259</td>
</tr>
<tr>
<td><strong>Doing business responsibly</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time equivalent positions</td>
<td>127,724</td>
<td>123,686</td>
<td>119,418</td>
<td>99,834</td>
<td>96,717</td>
</tr>
<tr>
<td>Resignations (incl. retirements), separations, hiring (% of associates)</td>
<td>9: 5: 17</td>
<td>8: 4: 15</td>
<td>8: 3: 14</td>
<td>8: 3: 14</td>
<td>10: 5: 14</td>
</tr>
<tr>
<td>Woman in management: % of management, % of Board of Directors</td>
<td>37%: 16.7%</td>
<td>36%: 18.2%</td>
<td>36%: 16.7%</td>
<td>35%: 16.7%</td>
<td>37%: 8.3%</td>
</tr>
<tr>
<td>Number of associate fatalities</td>
<td>153</td>
<td>153</td>
<td>149</td>
<td>144</td>
<td>143</td>
</tr>
<tr>
<td>Lost-Time injury and illness rate (per 200,000 hours worked)*</td>
<td>0.14</td>
<td>0.19</td>
<td>0.18</td>
<td>0.22</td>
<td>0.34</td>
</tr>
<tr>
<td>Total recordable case rate (per 200,000 hours worked)**</td>
<td>0.45</td>
<td>0.61</td>
<td>0.73</td>
<td>0.93</td>
<td>1.09</td>
</tr>
<tr>
<td>Transportation-related injuries leading to lost time***</td>
<td>37</td>
<td>39</td>
<td>49</td>
<td>58</td>
<td>77</td>
</tr>
<tr>
<td>Contact water use, excluding cooling water (million m³)**</td>
<td>17.2</td>
<td>17.1</td>
<td>15.1</td>
<td>15.0</td>
<td>15.1</td>
</tr>
<tr>
<td>Energy use (million QJ), on site and purchased**</td>
<td>19.3</td>
<td>19.3</td>
<td>17.5</td>
<td>17.0</td>
<td>16.9</td>
</tr>
<tr>
<td>GHG emissions, Scope 1 vehicles (1,000 t)**</td>
<td>174</td>
<td>172</td>
<td>166</td>
<td>174</td>
<td>180</td>
</tr>
<tr>
<td>GHG emissions, total Scope 1, including vehicles, and Scope 2 (1,000 t)**</td>
<td>1,651</td>
<td>1,703</td>
<td>1,504</td>
<td>1,509</td>
<td>1,523</td>
</tr>
<tr>
<td>Total operational waste not recycled (1,000 t), hazardous and non-hazardous***</td>
<td>132</td>
<td>142</td>
<td>164</td>
<td>141</td>
<td>138</td>
</tr>
<tr>
<td>Active associates trained and certified on Code of Conduct via e-learning course*</td>
<td>98,175</td>
<td>47,499</td>
<td>48,317</td>
<td>55,793</td>
<td>42,740</td>
</tr>
<tr>
<td>Cases of misconduct reported; substantiated**</td>
<td>1,675: 907</td>
<td>1,522: 842</td>
<td>1,236: 743</td>
<td>913: 541</td>
<td>884: 374</td>
</tr>
<tr>
<td>Dismissals and resignations related to misconduct**</td>
<td>426</td>
<td>716</td>
<td>608</td>
<td>584</td>
<td>217</td>
</tr>
<tr>
<td>Total number of suppliers**</td>
<td>214,754</td>
<td>228,500</td>
<td>241,365</td>
<td>206,155</td>
<td>228,769</td>
</tr>
<tr>
<td>Suppliers informed of Novartis Third-Party Guidelines (annual sales of more than USD 100,000 and not requiring a self-declaration)**</td>
<td>37,007</td>
<td>46,209</td>
<td>39,755</td>
<td>46,888</td>
<td>28,792</td>
</tr>
<tr>
<td>Suppliers to confirm key standards (self-declaration)**</td>
<td>3,316</td>
<td>3,926</td>
<td>3,388</td>
<td>842</td>
<td>1,157</td>
</tr>
</tbody>
</table>

1. Dividend payout 2012: proposal to the 2012 Annual General Meeting  
2. See table on page 71 for additional detail  
3. FY2012 number not fully comparable to previous years due to methodology changes  
4. Management defined locally. Data source: % of management: FirstFit (Local Mgmt/Rag) as of December 2012  
5. Includes data for contractors  
6. Excludes data for Novartis  
7. Values shown are group figures from 2011 onwards

2012 Novartis Annual Report, table p66

Novartis 2012 GRI report | October 2013 | 15
<table>
<thead>
<tr>
<th></th>
<th>Novartis Group</th>
<th>Pharmaceuticals</th>
<th>NIBR</th>
<th>Alector</th>
<th>Sandоз</th>
<th>Vaccines and Diagnostics</th>
<th>Consumer Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSE personnel</td>
<td>494</td>
<td>487</td>
<td>212</td>
<td>207</td>
<td>32</td>
<td>26</td>
<td>58</td>
</tr>
<tr>
<td>Lost-time injury and illness rate (LTR)</td>
<td>0.14</td>
<td>0.19</td>
<td>0.12</td>
<td>0.13</td>
<td>0.01</td>
<td>0.09</td>
<td>0.17</td>
</tr>
<tr>
<td>Total recordable case rate</td>
<td>0.45</td>
<td>0.61</td>
<td>0.43</td>
<td>0.54</td>
<td>0.45</td>
<td>0.57</td>
<td>0.57</td>
</tr>
<tr>
<td>Total production (1,000 t)</td>
<td>213</td>
<td>221</td>
<td>33</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>78</td>
</tr>
<tr>
<td>Contact water use (million m³)</td>
<td>17.2</td>
<td>17.1</td>
<td>3.9</td>
<td>4.1</td>
<td>0.6</td>
<td>0.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Energy use (million GJ)</td>
<td>19.3</td>
<td>19.3</td>
<td>5.4</td>
<td>5.4</td>
<td>1.3</td>
<td>1.3</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effluent discharge (million m³)</td>
<td>17.7</td>
<td>18.0</td>
<td>3.9</td>
<td>4.1</td>
<td>0.6</td>
<td>0.6</td>
<td>2.3</td>
</tr>
<tr>
<td>CO₂ in water (1,000 t)</td>
<td>4.0</td>
<td>3.9</td>
<td>0.8</td>
<td>0.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sulfur dioxide SO₂ (t)</td>
<td>47</td>
<td>71</td>
<td>8.3</td>
<td>3.7</td>
<td>0.4</td>
<td>0.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Nitrogen oxide NO₂ (t)</td>
<td>294</td>
<td>317</td>
<td>93</td>
<td>102</td>
<td>10</td>
<td>11</td>
<td>50</td>
</tr>
<tr>
<td>Halogenated VOCs (t)</td>
<td>110</td>
<td>147</td>
<td>1.0</td>
<td>2.1</td>
<td>6.8</td>
<td>6.8</td>
<td>0</td>
</tr>
<tr>
<td>Non-halogenated VOCs (t)</td>
<td>934</td>
<td>1,071</td>
<td>227</td>
<td>233</td>
<td>27</td>
<td>25</td>
<td>51</td>
</tr>
<tr>
<td>GHG Scope 1, combustion and process (1,000 t)</td>
<td>458</td>
<td>462</td>
<td>130</td>
<td>136</td>
<td>19</td>
<td>17</td>
<td>66</td>
</tr>
<tr>
<td>GHG Scope 1, vehicles (1,000 t)</td>
<td>174</td>
<td>192</td>
<td>88</td>
<td>101</td>
<td>0.1</td>
<td>0.1</td>
<td>40</td>
</tr>
<tr>
<td>GHG Scope 2, purchased energy (1,000 t)</td>
<td>1,019</td>
<td>1,049</td>
<td>213</td>
<td>220</td>
<td>80</td>
<td>79</td>
<td>263</td>
</tr>
<tr>
<td>Operational waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous waste not recycled (1,000 t)</td>
<td>41</td>
<td>48</td>
<td>6.7</td>
<td>7.3</td>
<td>1.6</td>
<td>1.6</td>
<td>5.3</td>
</tr>
<tr>
<td>Hazardous waste not recycled (1,000 t)</td>
<td>91</td>
<td>94</td>
<td>63</td>
<td>65</td>
<td>1.2</td>
<td>1.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Non-hazardous waste recycled (1,000 t)</td>
<td>53</td>
<td>48</td>
<td>13</td>
<td>12</td>
<td>1.4</td>
<td>1.4</td>
<td>12</td>
</tr>
<tr>
<td>Hazardous waste recycled (1,000 t)</td>
<td>94</td>
<td>87</td>
<td>20</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>5.3</td>
</tr>
</tbody>
</table>

1 Novartis Group includes Novartis Corporate
2 Alector data includes Ciba Vision, which was previously part of Consumer Health
3 Consumer Health data includes Animal Health and OTC

2012 Novartis Annual Report, table p82
## CORPORATE RESPONSIBILITY: KEY TARGETS AND RESULTS FOR 2012 AND KEY TARGETS FOR 2013

<table>
<thead>
<tr>
<th>ACCESS TO HEALTHCARE</th>
<th>Results 2012</th>
<th>Targets 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete rollout of Coartem and Coartem Dispersible under Phase I of AMFm. Further expand access to Coartem and Coartem Dispersible in select malaria-endemic countries.</td>
<td>More than 95 million Coartem treatments, including 55 million Coartem Dispersible treatments, were provided to the public sector and under Phase I of AMFm. Access to Coartem and Coartem Dispersible was further expanded in the private sector in nine malaria-endemic countries.</td>
<td>Continue to expand access to Coartem and Coartem Dispersible through new channels driven by the private sector in select malaria-endemic countries.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research &amp; Development</th>
<th>Results 2012</th>
<th>Targets 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Arongo supply chain efficiency for remote villages by appointing direct distributors.</td>
<td>Eighty Arongo clinics (30%) had direct distributors serviced from Novartis India warehouses, improving services and availability of medicines in remote areas.</td>
<td>Increase direct distribution to 50% of network. Expand Kenya pilot from three to 20 cells covering 1,000 villages, and increase portfolio to 15 medicines covering four additional disease areas. Expand Vietnam pilot from four to 20 cells. Initiate pilots in Indonesia, Nigeria and Ghana.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARTNERSHIPS</th>
<th>Results 2012</th>
<th>Targets 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter Phase IIa proof-of-concept (PoC) with KAE609 (formerly NITD0609) and Phase I with KAF156. Develop process for vaccine for non-lymphocytic leukaemia. Pilot scale GMP manufacture of Shigella vaccine.</td>
<td>Antimalarial spiroindone compound KAE609 successfully completed clinical PoC study. Phase II clinical testing against Plasmodium falciparum and vivax malaria is underway. Antimalarial imidazolinopiperazine compound KAF156, active against liver and blood-stage malaria, was tested in humans. Phase I clinical testing (PoC) was initiated. Lab scale process was developed for non-lymphocytic leukaemia vaccine; in preclinical studies, prototype showed activity against the two main serotypes in Africa. Pilot scale GMP production process was developed for Shigella vaccine and GMP bulk antigen was produced by late 2012.</td>
<td>Successfully complete clinical 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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSPARENT REPORTING</th>
<th>Results 2012</th>
<th>Targets 2013</th>
</tr>
</thead>
</table>

---

2012 Novartis Annual Report, table p75

For a full list of current Novartis targets and results, please see [www.novartis.com/2012targets](http://www.novartis.com/2012targets)
2. Organizational Profile

2.1 Name of organization
Novartis AG

2.2 Primary brands, products and/or services
Novartis provides healthcare solutions that address the evolving needs of patients and societies worldwide. Our broad portfolio includes innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, over-the-counter and animal health products.

The Group’s wholly-owned businesses are organized into six global operating divisions, 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
- Vaccines and Diagnostics: Human vaccines and blood-testing diagnostics
- Consumer Health: OTC (over-the-counter medicines) and Animal Health

2012 Novartis 20-F Report, p25

For a list of key marketed Pharmaceuticals products, see 2012 Novartis 20-F Report, p27-39
For a list of key marketed Alcon products, see 2011 2012 Novartis 20-F Report, p65-69
For a list of key marketed Sandoz products, see 2012 Novartis 20-F Report, p76-78
For a list of key marketed Vaccines and Diagnostics products, see 2012 Novartis 20-F Report p84-87
For a list of key marketed OTC products, see 2012 Novartis 20-F Report, p91

Also see product overview on the Novartis Website: http://www.novartis.com/products/index.shtml

2.3 Operational structure of the organization
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.

2012 Novartis Annual Report, table p117

Pharmaceuticals
Pharmaceuticals researches, develops, manufactures, distributes and sells patented prescription medicines and is organized in the following business franchises: Oncology; Primary Care, consisting of Primary Care medicines and Established Medicines; and Specialty Care, consisting of Ophthalmology, Neuroscience, Integrated Hospital Care, and Critical Care medicines. Novartis Oncology is organized as a business unit, responsible for the global development and marketing of oncology products. The Novartis Oncology Business Unit is not required to be disclosed separately as a segment since it shares common long-term economic perspectives, customers, research, development, production, distribution and regulatory factors with the rest of the division.

Alcon
Alcon researches, discovers, develops, manufactures, distributes and sells eye care products. Alcon is the global leader in eye care with product offerings in Surgical, Ophthalmic Pharmaceuticals and Vision Care. In Surgical, Alcon develops, manufactures, distributes and sells ophthalmic surgical equipment, instruments, disposable products and intraocular lenses. In Ophthalmic Pharmaceuticals, Alcon discovers, develops, manufactures, distributes and sells medicines to treat chronic and acute diseases of the eye, as well as over-the-counter medicines for the eye. In Vision Care, Alcon develops, manufactures, distributes and sells contact lenses and lens care products.
Sandoz
Sandoz develops, manufactures, distributes and sells prescription medicines, as well as pharmaceutical and biotechnological active substances, which are not protected by valid and enforceable third-party patents. Sandoz has activities in Retail Generics, Anti-Infectives, Biopharmaceuticals & Oncology Injectables.

Vaccines and Diagnostics
Vaccines and Diagnostics consists of two activities: Vaccines and Diagnostics. Vaccines researches, develops, manufactures, distributes and sells human vaccines worldwide. Diagnostics researches, develops, distributes and sells blood testing and molecular diagnostics products.

Consumer Health
Consumer Health consists of two divisions: OTC (over-the-counter medicines) and Animal Health. OTC offers readily available consumer medicine. Animal Health provides veterinary products for farm and companion animals.

2012 Novartis Annual Report, p201

Please refer to the Novartis Website for further details: http://www.novartis.com/products/index.shtml

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

2.5 Countries of operation
Novartis sells products in more than 140 countries. Below is a list of the principal countries in which we operate.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Argentina</td>
</tr>
<tr>
<td>2</td>
<td>Australia</td>
</tr>
<tr>
<td>3</td>
<td>Austria</td>
</tr>
<tr>
<td>4</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>5</td>
<td>Belgium</td>
</tr>
<tr>
<td>6</td>
<td>Bermuda</td>
</tr>
<tr>
<td>7</td>
<td>Brazil</td>
</tr>
<tr>
<td>8</td>
<td>Canada</td>
</tr>
<tr>
<td>9</td>
<td>Chile</td>
</tr>
<tr>
<td>10</td>
<td>China</td>
</tr>
<tr>
<td>11</td>
<td>Colombia</td>
</tr>
<tr>
<td>12</td>
<td>Croatia</td>
</tr>
<tr>
<td>13</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>14</td>
<td>Denmark</td>
</tr>
<tr>
<td>15</td>
<td>Ecuador</td>
</tr>
<tr>
<td>16</td>
<td>Egypt</td>
</tr>
<tr>
<td>17</td>
<td>Finland</td>
</tr>
<tr>
<td>18</td>
<td>France</td>
</tr>
<tr>
<td>19</td>
<td>Germany</td>
</tr>
<tr>
<td>20</td>
<td>Gibraltar</td>
</tr>
<tr>
<td>21</td>
<td>Greece</td>
</tr>
<tr>
<td>22</td>
<td>Hungary</td>
</tr>
<tr>
<td>23</td>
<td>India</td>
</tr>
<tr>
<td>24</td>
<td>Indonesia</td>
</tr>
<tr>
<td>25</td>
<td>Ireland</td>
</tr>
<tr>
<td>26</td>
<td>Italy</td>
</tr>
<tr>
<td>27</td>
<td>Japan</td>
</tr>
<tr>
<td>28</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>29</td>
<td>Malaysia</td>
</tr>
<tr>
<td>30</td>
<td>Mexico</td>
</tr>
</tbody>
</table>
In addition, the Group is represented by subsidiaries, associated companies or joint ventures in the following countries: Algeria, Bosnia/Herzegovina, Bulgaria, Cayman Islands, Costa Rica, Dominican Republic, Guatemala, the Former Yugoslav Republic of Macedonia, Morocco, Ukraine and Uruguay.

2012 Novartis Annual Report, p251-253

2.6 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 76% of Novartis India Limited, with its registered office in Mumbai, India, and listed on the Bombay Stock Exchange (ISIN INE234A01025, symbol: HCBA). The total market value of the 24% free float of Novartis India Limited was USD 92.6 million at December 31, 2012, 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 392.5 million, and that of the shares owned by Novartis was USD 299.9 million.

Significant minority holdings in publicly traded companies
Novartis AG holds:
- 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, 2012, was USD 10.9 billion. The total market value of Roche Holding AG was USD 173.9 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 487.7 million at December 31, 2012, 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 649.3 million and that of the shares owned by Novartis was USD 161.6 million. Novartis does not exercise control over Idenix Pharmaceuticals, Inc., which is independently governed, managed and operated.

2012 Novartis Annual Report, p117

Significant shareholders
According to the share register, as of December 31, 2012, 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:¹

- Shareholders: Novartis Foundation for Employee Participation, with its registered office in Basel, Switzerland, holding 4.0%; and Emasan AG, with its registered office in Basel, Switzerland, holding 3.3%;
- Nominees: JPMorgan Chase Bank, New York, holding 11.4%; Nortrust Nominees, London, holding 3.3%; and The Bank of New York Mellon, New York, holding 5.0% through its nominees, Mellon Bank, Everett, (3.3%) and The Bank of New York Mellon, Brussels, Belgium, (1.7%); and
- ADS depositary: JPMorgan Chase Bank, New York, holding 11.7%.

¹Excluding 4.1% of the share capital held by Novartis AG, together with Novartis affiliates, as treasury shares.

According to a disclosure notification filed with Novartis AG, Norges Bank (Central Bank of Norway), Oslo, Norway, held 2.3% of the share capital of Novartis AG as of December 31, 2012.

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, 2012:

- 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.

2012 Novartis Annual Report, p94
2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)

3. SEGMENTATION OF KEY FIGURES 2012 AND 2011 (CONTINUED)

The following countries accounted for more than 5% of at least one of the respective Group totals for the years ended December 31, 2012 and 2011:

<table>
<thead>
<tr>
<th>Country</th>
<th>USD millions</th>
<th>Net sales1</th>
<th>Total of selected non-current assets2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012 (%)</td>
<td>2011 (%)</td>
<td>2012 (%)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>506</td>
<td>1</td>
<td>726</td>
</tr>
<tr>
<td>United States</td>
<td>18 692</td>
<td>33</td>
<td>19 225</td>
</tr>
<tr>
<td>Germany</td>
<td>3 797</td>
<td>7</td>
<td>4 362</td>
</tr>
<tr>
<td>Japan</td>
<td>5 361</td>
<td>9</td>
<td>5 281</td>
</tr>
<tr>
<td>France</td>
<td>2 709</td>
<td>5</td>
<td>2 848</td>
</tr>
<tr>
<td>Other</td>
<td>25 508</td>
<td>45</td>
<td>26 124</td>
</tr>
<tr>
<td>Group</td>
<td>56 673</td>
<td>100</td>
<td>58 566</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>USD millions</th>
<th>Net sales1</th>
<th>Total of selected non-current assets2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>19 708</td>
<td>35</td>
<td>21 007</td>
</tr>
<tr>
<td>America</td>
<td>24 029</td>
<td>42</td>
<td>24 706</td>
</tr>
<tr>
<td>Asia / Africa / Australasia</td>
<td>12 936</td>
<td>23</td>
<td>12 354</td>
</tr>
<tr>
<td>Group</td>
<td>56 673</td>
<td>100</td>
<td>58 566</td>
</tr>
</tbody>
</table>

1. Net sales from operations by location of third party customer.
2. Total of property, plant and equipment, goodwill, intangible assets and investment in associated companies.

The Group’s largest customer accounts for approximately 10% of net sales, and the second and third largest customer account for 9% and 8% of net sales (2011: 9%, 7% and 7% respectively). No other customer accounted for 4% or more of net sales, in either year.

The highest amounts of trade receivables outstanding were for those same three customers. They amounted to 8%, 7% and 6%, respectively, of the Group’s trade receivables at December 31, 2012 (2011: 10%, 6% and 6% respectively).

2012 Novartis Annual Report, p204

2.8 Scale of the reporting organization
2012 key figures

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Key Figures</th>
<th>Amount</th>
<th>Unit</th>
<th>▲▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of employees</td>
<td>127 724</td>
<td>–</td>
<td>+3.26%</td>
</tr>
<tr>
<td>2</td>
<td>Quantity / volume of products produced</td>
<td>221</td>
<td>Thousand tons</td>
<td>+3.76%</td>
</tr>
<tr>
<td>3</td>
<td>Net sales</td>
<td>56 700</td>
<td>million USD</td>
<td>-3.19%</td>
</tr>
<tr>
<td>4</td>
<td>Total capitalization</td>
<td>124 216</td>
<td>million USD</td>
<td>+5.72%</td>
</tr>
<tr>
<td>5</td>
<td>Capitalization: Debt</td>
<td>54 997</td>
<td>million USD</td>
<td>+6.67%</td>
</tr>
<tr>
<td>6</td>
<td>Capitalization: Equity</td>
<td>69 219</td>
<td>million USD</td>
<td>+4.97%</td>
</tr>
<tr>
<td>7</td>
<td>Total assets</td>
<td>124 216</td>
<td>million USD</td>
<td>-5.72%</td>
</tr>
</tbody>
</table>

We use the following definitions:
Capitalization = debt + equity
Debt = financial debt (non-current liabilities) + financial debt and derivative financial instruments (current liabilities)

2012 Novartis Annual Report, p66, 82, 148, 192
Scale of the reporting organization: breakdown of sales/revenues by countries that accounted for more than 5 percent of at least one of the respective Group totals

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Region / Country</th>
<th>Revenue</th>
<th>% of total</th>
<th>Currency</th>
<th>▲▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>18 592</td>
<td>33</td>
<td>million USD</td>
<td>-3.29%</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>3 797</td>
<td>7</td>
<td>million USD</td>
<td>-12.95%</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>5 361</td>
<td>9</td>
<td>million USD</td>
<td>+1.51%</td>
</tr>
<tr>
<td>4</td>
<td>France</td>
<td>2 709</td>
<td>5</td>
<td>million USD</td>
<td>-4.88%</td>
</tr>
<tr>
<td>5</td>
<td>Switzerland</td>
<td>706</td>
<td>1</td>
<td>million USD</td>
<td>-2.75%</td>
</tr>
<tr>
<td>6</td>
<td>Other</td>
<td>25 508</td>
<td>45</td>
<td>million USD</td>
<td>-2.36%</td>
</tr>
</tbody>
</table>

2012 Novartis Annual Report, p204

Scale of the reporting organization: breakdown of employees by country/region

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Country</th>
<th>Employees</th>
<th>▲▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Europe</td>
<td>59 428</td>
<td>+3.26%</td>
</tr>
<tr>
<td>2</td>
<td>Asia/Africa/Australasia</td>
<td>31 283</td>
<td>+8.04%</td>
</tr>
<tr>
<td>3</td>
<td>United States</td>
<td>26 704</td>
<td>-1.97%</td>
</tr>
<tr>
<td>4</td>
<td>Canada and Latin America</td>
<td>10 309</td>
<td>+3.74%</td>
</tr>
</tbody>
</table>

2012 Novartis Annual Report, p78

2.9 Significant changes during the reporting period regarding size, structure, or ownership

- **September:** Novartis successfully completes a $2.0 billion bond offering in two tranches

- **August:** Novartis and the University of Pennsylvania (Penn) form a broad-based Research & Development alliance to advance novel T-cell immunotherapies to treat cancer. Novartis and Penn enter into a multi-year collaboration to study chimeric antigen receptor (CAR) technology for the treatment of cancer. The parties establish a joint Center for Advanced Cellular Therapies at Penn to develop and manufacture CARs. Novartis licenses worldwide rights to the first CAR investigational therapy, CART-19, from Penn, and obtains worldwide commercial rights to products from the collaboration. Novartis will provide an up-front payment to Penn, research funding, funding for the establishment of the CACT and milestone payments for the achievement of certain clinical, regulatory and commercial milestones and royalty payments.

- **May:** Sandoz announces an agreement to acquire Fougera Pharmaceuticals, based in Melville, New York, for $1.525 billion, to make Sandoz the number one generic dermatology medicines company globally and in the US, and to strengthen Sandoz’s differentiated products strategy. The acquisition was completed in July 2012.

- **March:** Alcon gains exclusive rights outside the US to ocriplasmin, a potential first pharmacological treatment for vitreomacular adhesion. Alcon pays ThromboGenics an upfront payment of EUR 75 million, with potential additional payments based on milestones, and on royalties on sales.

- **January:** Novartis extends its commitment to help achieve the final elimination of leprosy. Our new five-year commitment includes a donation of treatments worth an estimated $22.5 million, and is expected to reach an estimated 850,000 patients. Novartis will also intensify efforts to build a multi-stakeholder initiative in a final push against leprosy. We have a long history in fighting leprosy, donating medicines and developing programs to support patients, valued at more than $100 million since 1986.

Novartis announces the restructuring of its US Pharmaceuticals business to strengthen its competitive position in light of the loss of patent protection for Diovan and the expected impact on the worldwide sales of Tekturna/Rasilez after the termination of the ALTITUDE study. The restructuring of the US General Medicines...
business results in a reduction of 1,960 positions and leads to an exceptional charge of $160 million in the first quarter of 2012 and to expected annual savings of approximately $450 million by 2013.

2012 Novartis 20-F Report, p22

2.10 Awards received in the reporting period

- **2012 SCRIP Awards**: Novartis awarded two of the SCRIP Awards for excellence in Innovation and R&D
- **2012 Newsweek Green Rankings**: Novartis is the greenest healthcare company worldwide
- **2012 Science’s Top Employer**: Novartis ranked no.11 on Science’s Top 20 Employers list
- **Eurobrand’s Global Top 100 Brand Corporations**: Novartis brand ranks no.39 globally and no.2 in Switzerland
- **2012 Working Mother’s 100 Best Companies**: Novartis Pharma US named one of the best employers for working mothers
- **Universum’s World Most Attractive Employers**: Novartis named one of the top 50 most attractive employers worldwide for engineering students by Universum
- **2012 European Graduate Barometer – Frankfurter Allgemeine Zeitung**: Novartis enters the list of the 50 preferred employers among European Engineering/IT students
- **Transparency in corporate reporting: Assessing the world’s largest companies** – Novartis named the most transparent large healthcare company by Transparency International
- **2012 Ethical Corporation Awards**: Novartis wins Ethical Corporation Award for Best Corporate/NGO Partnership for SMS for Life
- **2012 World’s Most Respected Companies by Barron’s**: Novartis ranks again as the most respected healthcare company in “The World’s Most Respected Companies” by US business magazine Barron’s
- **2012 Top Employer in Switzerland by Universum/Bilanz**: Novartis again ranked No.1 employer in Switzerland for students in Natural Science by Swiss business magazine Bilanz and Universum
- **Computerworld’s 21st Century Achievement Awards**: SMS for Life has been honored with the 21st Century Achievement Award in the Innovation IT category of the 2012 Computerworld Honors Program. This award recognizes organizations that promote and advance the public welfare, benefit society and change the world for the better through a visionary application of IT
- **2012 Bilanz magazine Sustainability Ranking**: Novartis again ranked as a top sustainability performer
- **The Scientist’s Best Places to Work: Industry 2012** – Novartis again among top 20 companies globally climbing one spot to No. 17
- **Pharmaceutical Executive “PharmExec 50”**: For the second time, Novartis is No.2 in PharmExe’s 2012 ranking of the top 50 pharma companies based on Rx sales
- **2012 FT Bowen Craggs Index**: Bowen Craggs ranks Novartis No. 8 in its 6th annual index of corporate web effectiveness, making it the second healthcare company on the list
- **Interbrand’s “Most Valuable Swiss Brands 2012”**: Novartis named #3 Most Valuable Swiss Brand 2012 by Interbrand/Bilanz with a brand value of CHF 6.8 billion
- **Novartis CEO Joseph Jimenez receives “CEO in Action” award**: Novartis CEO Joseph Jimenez receives “CEO in Action” award for commitment and engagement in Novartis Diversity & Inclusion initiatives
- **2012 Fortune – Most Admired Companies**: For the second consecutive year Fortune names Novartis the world’s most admired pharmaceutical company. Across industries, Novartis ranks #10 in Europe and #4 in Switzerland.
- **2012 MedAdNews “Most Admired Pharma Company”**: Novartis is named the “Most Admired Pharma Company” for the 4th consecutive year.
- **2012 FT Access to Medicine Index**: Novartis is again listed as one of the companies with the best performance in improving access to medicines to patients in developing countries on #7 in.
- **Novartis is again a member of “FTSE4Good” and “Dow Jones Sustainability Index,” the two most important index families for sustainable investment.
- **2012 DiversityInc’s “Top 50 Companies for Diversity”**: Novartis US ranks #13 – the best result for Novartis in this ranking since its inception.
- **2012 Booz & Company “Global Innovation 1000”**: Novartis is listed as the second biggest investor in R&D worldwide behind Toyota (USD 9.6 billion in 2011)
- **2012 Swiss business magazine Bilanz names Novartis the 3rd “Most Innovative Swiss Company” and calls the company the “biggest winner in this year’s ranking.”

3. Report Parameters

Report Profile

3.1 Reporting period for information provided

Finance Reporting
Period 2012, calendar year
Certain information/data reported in the Annual Report or under the GRI framework are internally collected through the financial reporting process (e.g. number of associates, personnel cost and fluctuations).

HSE Reporting
Period 2012, calendar year
The HSE performance management system and data collection process are key elements of Corporate Responsibility management at Novartis. In gathering this data, we take into account impacts originating from our own operations (Scope 1) as well as major material flows across boundaries and CO₂ emissions from purchased energy (Scope 2).

For more detailed information, please see the HSE Reporting Process: http://www.novartis.com/corporate-responsibility/responsible-business-practices/protecting-the-environment/index.shtml

Corporate Responsibility Reporting
Period 2012, calendar year
Corporate Responsibility reporting lies with the functions (Finance, HSE, Human Resources, Supplier management, Integrity and Compliance and Access-to-medicine programs). This has further streamlined the reporting process and increased the quality and reliability of the information.

3.2 Date of most recent previous report

Finance Reporting
Period 2011, calendar year
Document 2011 Annual Report

HSE Reporting
Period 2011, calendar year
Document 2011 Annual Report

Corporate Responsibility Reporting
Period 2011
Document 2011 Annual Report

3.3 Reporting cycle (annual, biennial, etc.)
Annual reporting, some are updated more frequently (online)

3.4 Contact point for questions regarding the report or its contents
Name: Kathleen Sprangers
Function: Corporate Responsibility Communications, Novartis International
E-Mail: kathleen.sprangers@novartis.com
Report Scope and Boundary

3.5 Process for defining report content

We report on the issues which matter most to Novartis and its key stakeholders. Our stakeholders include authorities, shareholders, financial markets, patients and patient groups, NGOs, academia, think tanks, associates, customers, suppliers, healthcare professionals, local communities, and the media. See here for our stakeholder and issue map: http://www.novartis.com/corporate-responsibility/improving-health/stakeholder-engagement.shtml

We report against the full range of GRI indicators in this report. As a healthcare company, our core business is to discover, develop and market innovative products that save and improve people’s lives and reduce pain and suffering. As such, a prime focus of our reporting is around access to health, research on neglected diseases, right to health, drug and patient safety, clinical trials, marketing practices and pricing.

We use recognized international standards and internal processes to ensure the quality of our reporting.

3.6 Boundary of the report

Finance Reporting

Period 2012

Critical Accounting Policies and Estimates

Our principal accounting policies are set out in note 1 to the Group’s consolidated financial statements, which are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). Given the uncertainties inherent in our business activities, we must make certain estimates and assumptions that require difficult, subjective and complex judgments. Because of uncertainties inherent in such judgments, actual outcomes and results may differ from our assumptions and estimates which could materially affect the Group’s consolidated financial statements. Application of the following accounting policies requires certain assumptions and estimates that have the potential for the most significant impact on our consolidated financial statements.

HSE Reporting

HSE reporting principles

Since 2004, Novartis has reported its HSE performance following the Guidelines for Sustainability Reporting of the Global Reporting Initiative (GRI). The Novartis GRI Report Index – along with a more detailed overview of our HSE performance – is available at:


Reporting entity

HSE performance data for 2012 was collected from 283 reporting units owned and managed by Novartis Group companies and includes 28 Alcon reporting units. This covers all sites with relevant HSE impacts – including all production, formulation and research and development sites, as well as major headquarter offices.

Reporting scope

Novartis believes the performance data presented in its Annual Report and on its website represents a fair and balanced picture of the company’s HSE performance. Performance indicators follow GRI requirements for core environmental and social indicators and for selected additional indicators that we deem relevant.

Please refer to the Novartis Corporate Responsibility Website for further details:


HSE reporting process

Performance of operating units is monitored on a monthly basis. HSE performance data is collected, validated and consolidated with the Novartis HSE data management system. This system provides all management levels throughout the Group with necessary information to take early action if deviations from targets occur. Systems and
processes are reviewed by third parties – in addition to corporate and divisional HSE audits – to ensure compliance with legal and Novartis HSE standards.

Novartis sets HSE targets covering at least three years to allow better analysis, planning and implementation. Divisions are involved in target-setting, based on recommendations by functional experts. Progress is reviewed annually with each division.

Reported data describe our major material flows within company boundaries and environmental impacts originating from our own operations (Scope 1), as well as greenhouse gas emissions from the generation of purchased energy (Scope 2). With the exception of specific products (where life-cycle analyses have been carried out) and of dedicated parameters, we do not monitor environmental impacts linked to the manufacturing and delivery of purchased goods and services, or the use of resources and other related emissions for activities outside company boundaries (Scope 3).

The 2012 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; 2012 data on employees and health/safety are actual from January through December. This section was updated with actual data in the first quarter of 2013.

The 2012 HSE figures are summarized in the table below and are published in the 2012 Annual Report.

<table>
<thead>
<tr>
<th>NOVARTIS HEALTH, SAFETY AND ENVIRONMENT (HSE) DATA 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>HSE personnel</td>
</tr>
<tr>
<td>Novartis Group</td>
</tr>
<tr>
<td>494</td>
</tr>
<tr>
<td>0.14</td>
</tr>
<tr>
<td>4.5</td>
</tr>
<tr>
<td>213</td>
</tr>
<tr>
<td>17.2</td>
</tr>
<tr>
<td>19.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effluent discharge (million m&lt;sup&gt;3&lt;/sup&gt;)</td>
</tr>
<tr>
<td>Novartis Group</td>
</tr>
<tr>
<td>17.7</td>
</tr>
<tr>
<td>4.0</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>294</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>934</td>
</tr>
</tbody>
</table>

| GHG Scope 1, combustion and process (1,000 t) |
| Novartis Group | Pharmaceuticals | NIBR | Alcon<sup>2</sup> | Sandoz | Vaccines and Diagnostics | Consumer Health<sup>2</sup> |
| 458 | 462 | 130 | 136 | 19 | 17 | 66 | 63 | 183 | 189 |
| 174 | 192 | 88 | 101 | 0.1 | 0.1 | 40 | 47 | 27 | 37 |
| 1,019 | 1,049 | 213 | 220 | 80 | 79 | 263 | 265 | 330 | 353 |

| Operational waste |
| Novartis Group | Pharmaceuticals | NIBR | Alcon<sup>2</sup> | Sandoz | Vaccines and Diagnostics | Consumer Health<sup>2</sup> |
| 41 | 48 | 6.7 | 7.3 | 1.6 | 1.6 | 5.3 | 6.1 | 8.4 | 8.8 |
| 91 | 94 | 63 | 66 | 1.2 | 1.2 | 0.8 | 0.9 | 23 | 23 |
| 53 | 48 | 13 | 12 | 1.4 | 1.4 | 12 | 13 | 22 | 17 |
| 94 | 87 | 20 | 20 | 0 | 0 | 5.3 | 2.4 | 68 | 64 |

2012 Novartis Annual Report, p82

3.6.3 Corporate Responsibility Reporting

Period 2012

Corporate Responsibility data are reported with the same boundaries as Financial Reporting (no data are reported for associated companies with ownership below 50%).

Novartis 2012 GRI report | October 2013 | 27
3.7 State any specific limitations on the scope or boundary of the report
The report covers the whole organization globally.

3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations
The consolidated financial statements include all entities that Novartis AG, Basel, Switzerland directly or indirectly controls (generally as a result of owning more than 50% of the entity’s voting interest).

2012 Novartis Annual Report, p194

3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report
We report according to GRI guidelines on the Internet. Our printed Annual Report follows a free format we consider optimal for our shareholders; it refers to the GRI report on the Internet for those who prefer the GRI format.

3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement
The restatement process described above has now been applied to the 2012 Novartis HSE dataset. All forecast values published in the 2012 Annual Report and on the website have been compared with the actual figures for the period 2012.

The actual 2012 HSE figures are summarized in the table below and will be published in the 2013 Annual Report.

<table>
<thead>
<tr>
<th>NOVARTIS HEALTH, SAFETY AND ENVIRONMENT (HSE) DATA 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSE personnel</td>
</tr>
<tr>
<td>494</td>
</tr>
<tr>
<td>0.14</td>
</tr>
<tr>
<td>0.45</td>
</tr>
<tr>
<td>213</td>
</tr>
<tr>
<td>17.2</td>
</tr>
<tr>
<td>19.3</td>
</tr>
<tr>
<td>Effluent discharge (million m³)</td>
</tr>
<tr>
<td>17.7</td>
</tr>
<tr>
<td>CO2 into water (1,000 t)</td>
</tr>
<tr>
<td>4.0</td>
</tr>
<tr>
<td>Sulfur dioxide SO2 (t)</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>Nitrogen oxide NOx (t)</td>
</tr>
<tr>
<td>254</td>
</tr>
<tr>
<td>Halogenated VOCs (t)</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>Non-halogenated VOCs (t)</td>
</tr>
<tr>
<td>934</td>
</tr>
<tr>
<td>GHG Scope 1, combustion and process (1,000 t)</td>
</tr>
<tr>
<td>458</td>
</tr>
<tr>
<td>GHG Scope 1, vehicles (1,000 t)</td>
</tr>
<tr>
<td>174</td>
</tr>
<tr>
<td>GHG Scope 2, purchased energy (1,000 t)</td>
</tr>
<tr>
<td>1,019</td>
</tr>
<tr>
<td>Operational waste</td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td>Hazardous waste not recycled (1,000 t)</td>
</tr>
<tr>
<td>91</td>
</tr>
<tr>
<td>Non-hazardous waste not recycled (1,000 t)</td>
</tr>
<tr>
<td>53</td>
</tr>
<tr>
<td>Hazardous waste recycled (1,000 t)</td>
</tr>
<tr>
<td>94</td>
</tr>
</tbody>
</table>

1 Novartis Group includes Novartis Corporate
2 Alcon data includes S&B Vision, which was previously part of Consumer Health
3 Consumer Health data includes Animal Health and OTC

3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report
No significant changes occurred in the 2012 reporting period.

3.12 Table identifying the location of the Standard Disclosures in the report

<table>
<thead>
<tr>
<th>Identify the page numbers or web links where the following can be found in this report</th>
<th>Page number(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy and Analysis 1.1 – 1.2</td>
<td>11-17</td>
</tr>
<tr>
<td>Organizational Profile 2.1 – 2.10</td>
<td>18-24</td>
</tr>
<tr>
<td>Report Parameters 3.1 – 3.13</td>
<td>25-29</td>
</tr>
<tr>
<td>Governance, Commitments, and Engagement 4.1 – 4.17</td>
<td>30-43</td>
</tr>
<tr>
<td>Core Performance Indicators and GRI Additional Indicators</td>
<td>44-81</td>
</tr>
<tr>
<td>Additional Topics</td>
<td>82-86</td>
</tr>
</tbody>
</table>

3.13 Policy and current practice with regard to seeking external assurance for the report
PricewaterhouseCoopers AG provides an independent assurance report on the Novartis Corporate Responsibility reporting.

4. Governance, Commitments and Engagement

Governance

4.1 Governance structure

The corporate governance framework of Novartis reflects a system of checks and balances between the powers of the shareholders, the Board of Directors and the management with the goal to safeguard the interests of Novartis and its shareholders while creating sustainable value.

Since the creation of Novartis in 1996, the Board of Directors has continuously improved the corporate governance framework of Novartis by proactively implementing emerging best corporate governance standards long before these were embedded in the Swiss Code of Best Practice for Corporate Governance (“the Swiss Code”) or in the law.

In 1999, Novartis established the new position of Lead Director as a check and balance following the election of Chief Executive Officer Daniel Vasella, M.D., to the additional post of Chairman. Moreover, three new Board committees – the Compensation Committee, the Audit and Compliance Committee and the Corporate Governance and Nomination Committee – were created, composed exclusively of independent Board members.

In 2002, five years before legislation came into force in 2007, requiring companies to disclose the total compensation of their executive management group as well as the highest compensation attributed to a member of the executive management, Novartis had already implemented even more rigorous disclosure standards by reporting the individual annual compensation of all members of the Executive Committee.

In 2004, two years earlier than required for non-US corporations, Novartis complied with the challenging certification requirements under the US Sarbanes-Oxley Act, in particular Section 404 of this Act.

In 2009, the Board of Directors established a new Risk Committee that oversees the Group’s enterprise risk management, strengthening the Board of Directors’ supervisory function over management in this critical area. While fostering a culture of risk-adjusted decision making, the Risk Committee ensures that reasonable risk-taking and innovation are not constrained.

In 2010, the Chairman and CEO functions were separated. In addition several emerging best corporate governance standards were proactively implemented, including the introduction of a “say-on-pay” shareholder vote, and making changes to the executive compensation system to further strengthen the alignment of incentives with the long-term success of Novartis and a number of new disclosures, including on qualifications of Board members.

In 2011, the first “say-on-pay” vote was held, where the shareholders endorsed the compensation system of Novartis.

Novartis evaluates emerging best governance standards and adopts those that are found to be appropriate for Novartis. These standards are then tailored to Novartis, its business, management, stakeholders and shareholders with a view to create a corporate governance regime that supports the creation of sustainable value. This cannot be achieved by implementing corporate governance standards “as is” (“one size fits all approach”) and becomes impossible if corporate governance standards (embedded in corporate governance codes) are converted into binding, “one size fits all” rules as is currently contemplated in Switzerland.

[...] At the heart of good corporate governance lies a strong board of directors, which represents the interests of the shareholders and other stakeholders, and the professionalism and integrity of management, creating the foundation for sustainable value. While the size, composition and structure of the board of directors are easy to describe and can be easily checked from the outside, it is difficult to demonstrate that the core processes, like information flow and decision making, are state-of-the-art. It is even more difficult, if not impossible, to describe the prevailing board culture, although the latter is essential for its effective function. Novartis aims to foster an atmosphere in which Board members can pose challenging questions, voice dissenting views and secure access to independent information through extensive contacts with senior Novartis executives – inside and outside the boardroom. Diversity of a board of directors is a critical success factor for its work. The Novartis Board of Directors today is diverse in terms of education, experience, geographical origin and interpersonal skills.
Novartis corporate governance standards

Novartis has incorporated the corporate governance standards described above into the Articles of Incorporation and the Regulations of the Board of Directors, its Committees and the Executive Committee (www.novartis.com/corporate-governance).

The Corporate Governance and Nomination Committee regularly reviews these standards and principles in the light of prevailing best practices and makes recommendations for improvements of the corporate governance framework of Novartis for consideration by the full Board of Directors.

Additional corporate governance information can be found on the Novartis website: http://www.novartis.com/corporate-governance

Printed copies of the Novartis Articles of Incorporation, Regulations of the Board and Charters of Board Committees can be obtained by writing to: Novartis AG, Attn: Corporate Secretary, Lichtstrasse 35, CH-4056 Basel, Switzerland.

The Board of Directors is responsible for the overall direction and supervision of the management and holds the ultimate decision-making authority for Novartis AG, except for those decisions reserved to the shareholders. The Board of Directors has delegated certain responsibilities to five committees: Chairman’s Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee.

The primary responsibilities of the Board of Directors include:

- Setting the strategic direction of the Group;
- Determining the organizational structure and governance of the Group;
- Appointing, overseeing and dismissing key executives and planning their succession;
- Determining and overseeing the financial planning, accounting, reporting and controlling; and
- Approving the annual financial statements and the corresponding financial results releases;
- Approving major transactions and investments.

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. These independence criteria (last revised on December 14, 2011) can be found on the Novartis website: www.novartis.com/investors/governance-documents.shtml

The Board of Directors ensures that it receives sufficient information from the Executive Committee to perform its supervisory duty and to make decisions that are reserved for the Board of Directors. The authority of the Board of Directors to determine the compensation of the members of the Executive Committee is an important element to ensure the alignment of Executive Committee members with the interests of Novartis and its shareholders.

The Board of Directors obtains the information required to perform its duties through several means:

- the Chief Executive Officer informs the Board regularly about current developments;
- the minutes of Executive Committee meetings are made available to the Board members;
- meetings or teleconferences are held as required between Board members and the Chief Executive Officer;
- the Board of Directors regularly meets with all members of the Executive Committee;
- the Board of Directors is updated in detail by each Division Head on a quarterly basis;
- by invitation, other members of management are invited to attend Board meetings to report on areas of the business within their responsibility; and
- Board members are entitled to request information from members of the Executive Committee or any other Novartis associate, and may also visit any Novartis site.
The Board of Directors has delegated to the Executive Committee the coordination of the Group’s business operations. This includes:

- Developing policies, strategies and strategic plans for approval by the Board of Directors and implementing those approved by the Board of Directors;
- Submitting to the Board of Directors and its committees proposed changes in management positions of material significance, investments, financial measures, acquisitions or divestitures, contracts of material significance and budgets;
- Preparing and submitting quarterly and annual reports to the Board of Directors or its committees;
- Informing the Board of Directors of all matters of fundamental significance to the businesses;
- Recruiting, appointing and promoting senior management;
- Ensuring the efficient operation of the Group and achievement of optimized results;
- Promoting an active internal and external communications policy; and
- Dealing with any other matters as are delegated by the Board of Directors to the Executive Committee.


**4.2 Chairman and CEO**

Daniel Vasella, M.D., was Chairman of the Board of Directors for Novartis AG in 2012. Since August 2013, Joerg Reinhardt, Ph.D., is Chairman of the Board of Directors of Novartis AG.

Joseph Jimenez has been Chief Executive Officer (CEO) of Novartis since 2010.

Learn more about the Novartis Board of Directors: [http://www.novartis.com/about-novartis/people/board-directors.shtml](http://www.novartis.com/about-novartis/people/board-directors.shtml)

**4.3 Number of the Board of Directors that are independent, non-executive directors**

In its meeting of December 12, 2012, the Board of Directors determined that all of its members except Dr. Vasella 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. 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.

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. These independence criteria (last revised on December 14, 2011) can be found on the Novartis website: [www.novartis.com/investors/governance-documents.shtml](http://www.novartis.com/investors/governance-documents.shtml)

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.

4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body

Shareholders’ rights
Each share registered with the right to vote entitles the holder to one vote at General Meetings. Shareholders representing at least 10% of the share capital may request that an extraordinary General Meeting of shareholders be convened. Shareholders representing shares with an aggregate nominal value of at least CHF 1 million may request that an item be included in the agenda of a General Meeting of shareholders. Such requests must be made in writing at least 45 days before the date of the General Meeting, specify the item to be included in the agenda and contain the proposal on which the shareholder requests a vote.

Shareholders have the right to receive dividends, appoint another shareholder, the corporate proxy, the independent proxy or a custody proxy as proxy and hold such other rights as are granted under Swiss Law.

Shareholder registration
No restrictions apply on the transferability of Novartis shares. However, only shareholders registered in the Novartis share register may exercise their voting rights. In order to be registered, a shareholder must declare that he or she acquired the shares in his or her own name and for his or her own account. The Articles of Incorporation provide that the Board of Directors may register nominees with the right to vote. For restrictions on registration of nominees, please see below.

The Articles of Incorporation provide that no shareholder shall be registered with the right to vote for more than 2% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction. Exemptions are in force for the registered Significant Shareholders listed under – Our Shareholders – Shareholdings – Significant Shareholders. In 2012, an exemption was requested and granted to Norges Bank (Central Bank of Norway), Oslo, Norway.

The same restrictions apply to holders of ADSs as those holding Novartis shares.

Given that shareholder representation at General Meetings has traditionally been low in Switzerland, Novartis considers the restriction on registration necessary to prevent a minority shareholder from dominating a General Meeting.

The Articles of Incorporation provide that no nominee shall be registered with the right to vote for more than 0.5% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction if the nominee discloses the names, addresses and the number of shares of the persons for whose account it holds 0.5% or more of the registered share capital. The Articles of Incorporation provide that no nominee shall be registered with the right to vote for more than 0.5% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction if the nominee discloses the names, addresses and the number of shares of the persons for whose account it holds 0.5% or more of the registered share capital. Exemptions are in force for the nominees listed under – Our Shareholders – Shareholdings – Significant Shareholders.

The same restrictions apply to holders of ADSs as those holding Novartis shares. The restrictions on registration contained in the Articles of Incorporation may only be removed by a resolution of the General Meeting of shareholders, with approval of at least two-thirds of the votes represented at the meeting.

Shareholders, ADS holders or nominees that are linked to each other or act in concert to circumvent the restrictions on registration are treated as one person or nominee for the purposes of the restrictions on registration.

Resolutions and elections at General Meetings
The General Meeting passes resolutions and elections with the absolute majority of the votes represented at the meeting. However, under the Articles of Incorporation (www.novartis.com/corporategovernance) the approval of two-thirds of the votes represented at the meeting is required for:
• An alteration of the purpose of Novartis AG;
• The creation of shares with increased voting powers;
• An implementation of restrictions on the transfer of registered shares and the removal of such restrictions;
• An authorized or conditional increase of the share capital;
• An increase of the share capital out of equity, by contribution in kind, for the purpose of an acquisition of property, or the grant of special rights;
• A restriction or suspension of rights or options to subscribe;
• A change of location of the registered office of Novartis AG; or
• The dissolution of Novartis AG.

In addition, the law provides for a special quorum also for other resolutions, such as, for example, for a merger or spin-off.

2012 Novartis Annual Report, p95

Employees
Novartis supports an open culture in which associates can speak up, challenge and ask questions to the leadership team. We have established internal dialogue tools, either in the form of online blogs or town-hall meetings, that ensure open and direct dialogue between associates and Novartis leaders, including members of the Executive Committee of Novartis.

4.5 Linkage between compensation for members of the highest governance body and the organization’s performance (including social and environmental performance)

Contracts with Members of the Executive Committee
In accordance with good corporate governance, employment contracts with members of the Executive Committee do not contain unusually long notice periods, change-of-control clauses (including no “golden parachutes,” special provisions on the cancellation of contractual arrangements, agreements concerning special notice periods or long-term contracts exceeding 12 months, waivers of lock-up periods for options, shorter vesting periods, and no additional contributions to pension funds) or severance payments.

2012 Novartis Annual Report, p110

Compensation Committee
The Compensation Committee serves as the supervisory and governing body for compensation policies and plans within Novartis and has overall responsibility for determining, reviewing and proposing compensation policies and plans for approval by the Board of Directors in line with the Compensation Committee Charter.

The Compensation Committee is composed exclusively of members of the Board of Directors who meet the independence criteria set forth in our Board Regulations.

The Compensation Committee undertook a strategic review of our compensation system, and is proposing several fundamental changes to the compensation structure for the CEO and the members of the Executive Committee from 2014 onwards. These changes have been approved by the Board and will be submitted to a consultative shareholder vote at the Annual General Meeting in 2013.

2012 Novartis Annual Report, p141, 122
Compensation determination for the CEO
Based on the performance evaluation made by the Board of Directors, the Compensation Committee decides at its January meeting on the CEO’s total compensation and the target compensation for the coming year without the presence of the CEO. In reaching its decision, the Compensation Committee takes into account other relevant factors, including available benchmark information and the advice of the Compensation Committee advisor.

Compensation determination for the members of the Executive Committee
In the presence of the CEO and based on his recommendations, the Compensation Committee decides on the variable compensation for the members of the Executive Committee and other selected key executives for the previous year. At the same meeting, the Compensation Committee decides on the target compensation for these executives for the coming year.
The compensation policies, performance management process and incentive plans apply equally to the members of the Executive Committee members.

Decisions concerning the compensation of the members of the Executive Committee are based on an evaluation of the individual performance of the members of the Executive Committee as well as on the performance of their respective business area or function. Compensation of the members of the Executive Committee is highly linked to Novartis’ performance against performance objectives.

The financial criteria for short-term performance appraisal of the CEO include growth objectives for net sales, operating income, net income, free cash-flow, earnings per share as well as market share. For long-term performance appraisal, the financial criterion is the Novartis Economic Value Added (NVA). NVA is a measure of the Group’s performance taking into account Group operating income adjusted for interest, taxes and charge for the cost of capital or, more simply, the value created in excess of the expected return of the company’s investors (i.e. the shareholders and debt holders).
The metrics of performance objectives are designed to appropriately balance short-term and long-term objectives. On the one hand, objectives are set at ambitious levels each year to motivate a high degree of business performance with emphasis on longer term financial objectives. On the other hand, they are also designed to avoid inappropriate or excessive risk.

Compensation of the Chairman
The compensation of the Chairman is based on a contract, which provides Dr. Daniel Vasella with a fixed remuneration of CHF 12.4 million, indexed to the average compensation increase for associates based in Switzerland. The Board acknowledges that the compensation of the Chairman reflects his exceptional experience and significant on-going contribution to building the Group, representing our interests in the global business community and delivering sustainable value for our shareholders. One third of his total compensation is paid out in monthly cash installments; the remaining two-thirds are in the form of unrestricted Novartis shares that are granted to him each year at the closing market price of the underlying share at the end of the day at grant date, in 2012 on January 19, 2012.

Following his tenure as Chairman, Dr. Vasella agreed to continue to make available his know-how to Novartis and to refrain from activities that compete with any business of Novartis for a multiyear period. Dr. Vasella will receive fair market compensation in return for his services and for complying with the restriction not to compete. Dr. Vasella carries forward tradable options, shares and benefits (including pension) as a result of his 14-year tenure as our CEO. In his current capacity he receives no variable compensation, tradable options or equity other than the shares that are part of his remuneration as Chairman.

The other members of the Board of Directors receive an annual fixed Board membership fee and additional fees for committee chairmanships, committee memberships, and other functions to compensate for their increased responsibilities and engagements.

They do not receive additional fees for attending meetings. The members of the Board of Directors are paid in unrestricted shares for at least 50% of their fees. With the exception of the Chairman, they do not have pension benefits. Members of the Board of Directors do not receive share options.

Process for performance evaluation of the CEO
At the end of a business year, the CEO prepares and presents to the Chairman and, later, to the Board of Directors the actual results against the previously agreed-upon objectives, taking into account the audited financial results as well as Novartis Values and Behaviors. On this basis, the Board of Directors discusses the performance of the CEO without him being present. It evaluates the extent to which targeted objectives have been achieved and, to the extent possible, compares these results with peer industry companies, taking into account general economic and financial criteria and industry developments. The Board of Directors later shares its assessment with the CEO. In addition, the Board of Directors assesses periodically the Group business performance and progress of the CEO against his objectives and incentive plan targets.

4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided
The primary responsibilities of the Corporate Governance and Nomination Committee include:
- Designing, reviewing and recommending to the Board corporate governance principles;
- Reviewing on a regular basis the Articles of Incorporation with a view to reinforcing shareholder rights;
- Reviewing on a regular basis the composition and size of the Board and its committees;
- Reviewing annually the independence status of each Board member;
- Reviewing directorships and agreements of board members for conflicts of interest and dealing with conflicts of interest;
- Identifying candidates for election as Board member;
- Assessing existing Board members and recommending to the Board whether they should stand for re-election;
- Preparing and reviewing the succession plan for the CEO; and
- Developing and reviewing an orientation program for new Board members and an ongoing education plan for existing Board members.

[2012 Novartis Annual Report, p99]

The Charter of the Corporate Governance and Nomination Committee is published on the Novartis Website: www.novartis.com/corporate-governance

Read the Novartis Conflict of Interest Policy

4.7 Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics

The Corporate Governance and Nomination Committee determines the criteria for the selection of the 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 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.

The biographies of the Board members set out the particular qualifications that led the Board of Directors to conclude that a Board member is qualified to serve on the Board of Directors, creating a Board that today is diverse in terms of background, qualifications, interests and skills.

[2012 Novartis Annual Report, p97]

See biographies of the Board members in 2012 Novartis Annual Report, p105-108

4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation

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 ideas and work in our company.

[2012 Novartis Annual Report, p1]

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 United Nations Global Compact. In 2001 a revised version of the Code of Conduct was distributed to all employees worldwide, and we further revised our code in 2011.

Compliance with the Code of Conduct is included in the terms of employment of all Novartis employees and is closely monitored. A worldwide network of Compliance Officers advises on compliance issues, deals with complaints, and handles any issues that arise locally. Annual reports from Compliance Officers are consolidated by the Group Compliance Officer into a yearly Compliance Report submitted to the Audit and Compliance Committee of the Board.
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

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 United Nations Global Compact. In 2001 a revised version of the Code of Conduct was distributed to all employees worldwide. In 2011, we further revised our Code of Conduct. It 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 to all Novartis associates underlying its importance to everyone, every day and everywhere in the organization. Further, since 2011, every associate is now required to take part in a yearly training including a certification on the Code of Conduct.

Compliance with the Code of Conduct is included in the terms of employment of all Novartis employees. Compliance is supported by a worldwide network of Compliance Officers. They advise on compliance issues and handle any issues that arise locally or in the Novartis divisions.

Novartis Corporate Citizenship Policy

Our Corporate Citizenship Policy, adopted in 2001, reflects the 10 principles of the United Nations Global Compact. The policy is based on the fundamental rights of every individual, such as the protection of privacy, freedom of opinion and expression, freedom of association and non-discrimination.

Novartis Corporate Citizenship Guidelines

The ideals and values which define the Novartis approach to corporate citizenship and give our associates guidance in their daily work are further outlined in our five Corporate Citizenship Guidelines. These documents explain the citizenship responsibilities of our associates, covering material areas such as working conditions, business ethics, human rights and the management of third-party relationships.

Novartis Corporate Citizenship Guidelines

4.9 Board-level processes for overseeing the organization’s identification and management of economic, environmental and social risks and opportunities

The Board of Directors is responsible for the overall direction and supervision of the management and holds the ultimate decision-making authority for Novartis AG, except for those decisions reserved to the shareholders.

The Board of Directors has delegated certain responsibilities to five committees: Chairman’s Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee (responsibilities described with the terms “overseeing” or “reviewing” are subject to final approval by the Board of Directors).
The Novartis Board of Directors takes decisions as a whole, supported by its five Board committees (Chairman’s Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee). Each Board committee has a written charter outlining its duties and responsibilities and is led by a Chair elected by the Board of Directors.

The Board of Directors and its Board committees meet regularly throughout the year. The Chairs set the agendas of their meetings.

Any Board member may request a Board meeting, a meeting of a Board committee or the inclusion of an item on the agenda of such meetings. Board members are provided, in advance of meetings, with materials intended to prepare them to discuss the items on the agenda.

2012 Novartis Annual Report, p98, 101

The primary responsibilities of the Board of Directors include:
- Setting the strategic direction of the Group;
- Determining the organizational structure and governance of the Group;
- Appointing, overseeing and dismissing key executives and planning their succession;
- Determining and overseeing the financial planning, accounting, reporting and controlling;
- Approving the annual financial statements and the corresponding financial results releases; and
- Approving major transactions and investments.

2012 Novartis Annual Report, p98

Corporate responsibility (CR) is endorsed and ingrained at the highest level in our company. It is central to how we run our business.

A Corporate Responsibility Steering Committee (CRSC) meets bi-monthly to give oversight and guidance. Chaired by George Gunn, who is a member of the Executive Committee of Novartis (ECN), and made up of representatives with operational responsibilities in all divisions and major functions of the company, it demonstrates our commitment to CR for the long term and throughout the business.

The CRSC is a decision-making body that makes recommendations to the ECN to ensure a coordinated and integrated approach to CR that meets our aims of:
- Reaching more patients
- Collaborating for results
- Doing business responsibly

The committee is responsible for the following:
- 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

Please refer to the Novartis Corporate Responsibility Website for further details:

The Corporate Risk Management function reports to 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 and Business Continuity, providing support and controlling the effectiveness of risk management by the Divisions in these respective areas.

2012 Novartis Annual Report, p103
4.10 Processes for evaluating the highest governance body's own performance

Novartis is determined to apply high ethical standards of business conduct, while remaining competitive in the marketplace. A comprehensive set of policies and guidelines has been incorporated as an integral part of Group management procedures, and is supported by global training and compliance programs. Our Corporate Citizenship Policy, Code of Conduct and commitment to the 10 principles of the United Nations Global Compact must be lived day-to-day by all associates.

Regulations of the Board

Commitments to External Initiatives

4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization

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 Corporate Citizenship Policy

4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives the organization subscribes or endorses

- Novartis is one of the 54 founding members of the Global Compact LEAD initiative
- Novartis signed the Women’s Empowerment Principles launched by the UN Global Compact and the UN Development Fund for Women (UNIFEM)
- As a signatory to the UN Global Compact, Novartis supports the Universal Declaration of Human Rights, The International Labor Organization’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
- UN Universal Declaration of Human Rights
- Signatory to the CEO Letter on UN Convention against Corruption
- Novartis supports 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/WBCSD initiative of “Caring for Climate: The Business Leadership Platform”
- Novartis classifies and disposes of waste according to the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal
- Novartis is a member of the Carbon Disclosure Project, Water Disclosure Project and Supply Chain Disclosure Project
- Novartis is a signatory to the WBCSD’s Manifesto for Energy Efficiency in Buildings
- Novartis is a signatory to the Guiding Principles on Access to Healthcare (GPAH), which frame the pharmaceutical industry’s approach to expanding access to quality healthcare globally.
- Novartis is a strategic partner of the World Economic Forum (WEF) in Davos
- Novartis is a member of the Private Sector Delegation (PSD) Advisory Group as well as of the Global Fund Private Sector Delegation
- Novartis is a member of the Private Sector Constituency to the Roll Back Malaria Partnership
4.13 Memberships in associations
- Novartis is a member of various chambers of commerce and sustainability industry associations, including Business for Social Responsibility (BSR), CSR Europe, SustainAbility, World Environment Center (WEC), the World Business Council for Sustainable Development (WBCSD), EH&S, Inc. (Corporate Environmental, Health & Safety Roundtable), ORC (Organization Resource Counselors) Safety & Health Forum, Conference Board - Chief EH&S Council II, Conference Board - Business Continuity & Crisis Management Council, European Biosafety Association (EBSA), American Biosafety Association (ABSA), Medichem and European Process Safety Center
- Novartis was actively engaged in the Business Leaders Initiative on Human Rights (BLIHR) – which existed until March 2009
- 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

Stakeholder Engagement
4.14 List of stakeholder groups engaged by the organization
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.


4.15 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 2012, Novartis launched a materiality assessment 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 payors and retailers. Health applications on mobile phones, known as mHealth applications, have provided a low-cost, real-time way to track disease progression and facilitate communication with all sorts of stakeholders. For example, Novartis developed a medical patch for Exelon, our Alzheimer’s treatment that integrates an electronic chip to signal when it is time for a replacement.

2012 Novartis Annual Report, p177

4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group
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 employee 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 case of European patient groups, Novartis also discloses the funding amount. This list is updated annually.

Read our position on Patient group interaction and disclosure of support

More information and a list of patient groups we support is available here: http://www.novartis.com/corporate-responsibility/responsible-business-practices/community-engagement/europe.shtml


4.17 Key topics and concerns that have been raised through stakeholder engagement

Access to medicines, animal research, business ethics including marketing practices, fair working conditions, human rights, third party management, product safety, clinical trials, protection of intellectual property, health technology assessment are among the key topics that have been raised.

Click here to read our positions on various issues affecting our business.
Standard Disclosures: Performance Indicators

**ECONOMIC**

At Novartis, we strive for economic achievement. We do so in a manner that brings value to society, is socially fair, environmentally sustainable, and respects and supports human rights within our sphere of influence. Corporate responsibility is the right thing to do and makes good business sense. It is about responsible behavior and better business.

**ECONOMIC PERFORMANCE**

EC1 (Core): Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments
The Net Novartis Added Value (NNAV) was not published in 2012.

EC2 (Core): Financial implications and other risks and opportunities for the organization’s activities due to climate change
As a company operating in over 140 countries, Novartis understands that potential physical risks are not limited to a particular region or country, but follow patterns predicted by climate change modeling.

In its operations, Novartis may become directly affected by physical risks related to climate change in the same way as any other business that operates worldwide. Extreme weather events, changes in weather patterns, rising temperatures and/or sea levels are not expected to influence our company’s operational plans and decisions mid- to long-term.

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 also affect supply continuity for such materials and services. Novartis has programs in place to ensure business continuity, which include risks of supply interruptions.

Novartis is aware that rising sea levels could result in protective measures being required for industrial areas near the coastline and in low-land areas where Novartis operates facilities (e.g. in Shanghai or Singapore). Novartis operations are often located in industrial parks and a comprehensive set of physical and commercial risks are considered when selecting sites.

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 our anti-infectives sites are located in areas where the availability of fresh water currently is abundant or sufficient and is expected to be so for the next 15 to 20 years.

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 and increases in infectious diseases such as malaria and dengue fever due to changing climatic patterns. Predicted changes to the global climate patterns (temperatures, precipitation patterns, etc.) will have multiple impacts on public health over the next 20 to 30 years globally, increasing the spread of vector diseases and on the world economy.

Potential reductions in biodiversity caused by climate change may have long-term impacts on Novartis business. A temperature increases of 1.5-2.5°C above pre-industrial levels, which are expected by 2050 as part of global warming as a minimum, will lead to the extinction of 20-30% of known plant and animal species (IPCC 2007). With over 60% of all (global) 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.
Greenhouse gas emissions section of the Novartis HSE Report 2012 (page 23):

Novartis response to the Carbon Disclosure Project:
https://www.cdproject.net/

**EC3 (Core): Coverage of the organization’s defined benefit plan obligations**
Apart from the legally required social security schemes, the Group has numerous independent pension and other post-employment benefit plans. In most cases these plans are externally funded in vehicles which are legally separate from the Group.

- Benefit obligation at December 31: USD 25,503 million
- Fair value of plan assets at December 31: USD 20,282 million

*2012 Novartis Annual Report*, p232

**EC4 (Core): Significant financial assistance received from government**
Novartis publishes an overall analysis of the tax rate:
- Effect of tax credits and allowances: -1.7 percentage points of expected tax rate

![ANALYSIS OF TAX RATE](image)

*2012 Novartis Annual Report*, p207

**MARKET PRESENCE**
**EC5 (Additional): Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation**
The major operations of Novartis (based on the number of employees) are Switzerland, Germany, United States, United Kingdom, China and Japan. Novartis annually implements a voluntary minimum pay standard for a living wage in order for its associates to meet basic living needs. These living wages are always at or above the local minimum wage, and always lower than the averages entry wage.
- At major operations 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.
- In emerging markets (i.e. Brazil, India, Russia and China) where local minimum wage requirements exist, the Novartis living wage can be between 1.6 to 3.4 times higher than the legal minimum standard.

*Novartis in Switzerland Passport 2012 edition*, p16
EC6 (Core): Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation

- No global policy regarding local suppliers is established, this is dependent on the supply markets of what is being bought.
- US policy (the country with the largest spending volume): Supplier Diversity confirms our commitment to small business and businesses owned by women, minorities, HubZone, small disadvantaged businesses, veterans and disabled veterans.
- Annual spending with local suppliers (local defined as country) for the top 10 countries (USA, Switzerland, Germany, United Kingdom, France, Canada, Japan, Italy, China, Spain) is USD million 11 200 = 71% of annualized
- Global company spending for goods and services. Novartis does not publish the cost of operation in a country; hence the supplier spending in a country cannot be expressed as a percentage of total cost.
- Factors influencing supplier selection: cost, compliance to the specifications, CSR compliance

Novartis in Switzerland Passport 2012 edition, p16

EC7 (Core): Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation

- For EU27-based operations, Novartis operates within the requirements of European legislation to look first to local workers, then to EC, but is able to apply for work permits for non EC workers where required.
- Novartis in all locations commits to diversity, equal opportunity and fair treatment in the hiring process and bases decisions solely on job-related characteristics. Novartis abides by any relevant local regulations.
- In our Basel (HQ) location, Corporate Executive Group members are comprised of 30% local Swiss and 21% of the overall management level population in Basel are local Swiss.

INDIRECT ECONOMIC IMPACTS

EC8 (Core): Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement

Novartis is transforming the Basel St. Johann industrial complex, including research and production facilities, office buildings and the international headquarters, into a state-of-the-art research, development and management center. With this project, Novartis is creating a Campus of knowledge and innovation and an attractive and highly functional workplace.

The Campus is in line with the Novartis ecological philosophy, e.g. low energy consumption, minimal CO\textsubscript{2} output through the use of renewable energy. The new Campus buildings are highly energy-efficient and thanks to the consumption of electricity from renewable sources, emit low levels of CO\textsubscript{2} emissions. An extensive remediation of the contaminated soil of the Campus area, beyond legal requirements, goes in parallel with the construction activity.

Further, in 2005, Novartis and the Canton of Basel signed an agreement to transform the port of St. Johann which is adjacent to the Novartis Campus. Known as the Campus Plus project, the agreement encompasses the relocation of the port companies, the deconstruction of the current port facilities, soil remediation and the construction of a cycling/walking path along the Rhine river to enable public access to the French and German cities of Huningue and Weil. Completion is expected to take place in 2014. The project also brings a substantial contribution to the local economy and region in creating jobs and business.

EC9 (Additional): Understanding and describing significant indirect economic impacts, including the extent of impacts

Novartis plays an increasingly important role as a buyer of goods and services in Switzerland. In 2012, the company purchased goods and services worth about CHF 2.58 billion in the 26 Swiss cantons, out of a total volume of CHF 6.46 billion worldwide.

The company’s active role as a buyer in the Swiss economy means that, for each job at Novartis, 2.8 additional indirect jobs are created in Switzerland. In other words, the total benefit of Novartis on Swiss employment is more than 45 000 jobs.
Major areas of procurement include: laboratory equipment, information technology products and services, raw materials, building costs, fixtures and fittings, as well as chemical products.

**Novartis in Switzerland Passport 2013 edition, p17**

**Major indirect savings in healthcare**

Novartis aims not only to relieve suffering, but also to help stabilize healthcare costs. As a result of the advancing average age of the population, healthcare costs in Switzerland have steadily risen in the last few years. Something often overlooked here is the steady fall that has taken place in the proportion of costs accounted for by medicines. In 2011, medicines accounted for only 9.4 percent of healthcare costs, whereas in 1960 medicines still made up 25 percent of total costs.

Thanks to its innovative medicines, low-cost generics and products for self-medication, Novartis substantially helps to reduce costs. Appropriate medicines can shorten hospital stays for prevention and treatment of diseases and enable patients to cope with their day-to-day tasks again within a short time.

The use of medicines to minimize the economic impact of diseases is becoming more important than ever, because the increasing age of the population goes hand in hand with a growth in the demand for medical care. Furthermore, our modern lifestyle is leading to an increase in chronic diseases such as hypertension, diabetes and cancer.

**Novartis in Switzerland Passport 2013 edition, p18**

**Study regarding the direct and indirect economic importance of the Pharmaceutical Industry in Switzerland:** (data refers to 2012)
- Value added: 3.3% direct, 2.7% indirect (multiplier 1.8); (6% of Gross Domestic Product)
- Jobs: direct 39 500, indirect 130 300 (multiplier 4.3)

“The Importance of the Pharmaceutical Industry for Switzerland,” Polynomics, p5
“Bedeutung Novartis – Aktualisierung 2013,” Polynomics, p5
**ENVIRONMENT**

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.

**MATERIALS**

**EN1 (Core): Materials used by weight or volume**

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 2012 (including Alcon) was 213kt (2011: 221kt). The biggest contributors to total weight of products are: Sandoz 85kt, Alcon 78kt, Pharmaceuticals 33kt and Consumer Health 17kt.

Production section of the Novartis HSE Report 2012 (page 13):

**EN2 (Core): Percentage of materials used that are recycled input materials**

The use of recovered recycled solvents is an important element in chemical and pharmaceutical manufacturing. Novartis reports recycling of hazardous waste, which primarily consists of solvents, recovered internally or used/sold to/purchased from suppliers. The majority of solvents are recycled during the production process, and as a result, are reused as input materials. Total amounts, however, are not reported because our current systems do not allow us to track this information.

Hazardous waste section of the Novartis HSE Report 2012 (page 46):

**ENERGY**

**EN3 (Core): Direct energy consumption by primary energy source**

In 2012, total energy use increased by 0.2% from 19.27 million GJ in 2011 to 19.31 million GJ.

Total on-site energy (fuels) increased marginally from 7.97 million GJ to 7.99 million GJ (up 0.2%). Total purchased energy also increased slightly from 11.30 million GJ in 2011 to 11.32 million GJ (up 0.2%).

Novartis has maintained a high level of less carbon-intensive and renewable energy resources; 91% of on-site energy came from the combustion of natural gas and 2.3% from renewable sources (decreased compared to 2.5% in 2011). Renewable sources account for approximately 40% of purchased energy, including conventional hydroelectric power. Excluding hydroelectric power, the renewable energy portion amounts to 4.3% (same as in 2011).

Sandoz (7.54 million GJ) was the largest energy user in the Novartis Group in 2012, followed by Pharmaceuticals (5.37 million GJ) and Alcon (2.97 million GJ).

Total energy costs for the Novartis Group were USD 420 million for 2012 (USD 422 million in 2011), of which USD 269 million were spent on electricity.

**Energy use targets and outlook**

Since 2003, the Novartis Group has successfully introduced energy efficiency targets in all its divisions. In 2006, a 10% improvement target was set for the period 2007-2010 (based on 2006 performance). With a performance improvement of 26% in energy efficiency per sales between 2006-2010, this target was overachieved. A new target of 15% improvement of energy efficiency was set for 2011-2015, based on
In 2012, energy efficiency per constant currency sales improved by 11% compared to 2010, which is 5% above the improvement target for the two years.

In 2008, Novartis started to report energy savings achieved with energy projects and use this criterion to set energy performance targets for divisions. Each division is expected to implement energy projects for 10% of its 2008 energy consumption by 2015. As of 2012, total energy savings achieved with energy projects amount to USD 56 million in terms of energy costs and 2.15 million GJ in terms of energy. This accounts for 11.8% of the 2008 energy consumption. In view of the good progress made, Novartis has strengthened the target to implement energy saving projects for 14% of the 2008 energy consumption by 2015, i.e. 2% per year.

We believe these significant achievements result from our ongoing comprehensive energy management programs. We continue our efforts to further improve our energy performance and therewith support the related greenhouse gas emission 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.

Energy use section of the Novartis HSE Report 2012 (page 15):

EN4 (Core): Indirect energy consumption by primary source
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.

Purchased electricity currently accounts for around 77% of the total amount of purchased energy, with approximately 5.8% of all purchased energy originating from renewable sources (which is slightly more than 5.6% in 2011). If all renewable sources for electricity, including conventional large-scale hydroelectric electricity, are considered, the percentage of renewable sources for electricity would be around 40%. Purchased steam accounts for 18% of the total amount of purchased energy, with other energy, such as hot water, making up the remainder.

Energy use section of the Novartis HSE Report 2012 (page 15):

EN5 (Additional): Energy saved due to conservation and efficiency improvements
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. Of existing activities, to date, all our major sites have been audited to assess energy systems and identify potential for improvement in saving energy and using renewable energy.

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

New projects are a major focus — it is more effective to build in energy efficiency from the beginning than redesign an existing system. Many of these 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.¹

Scope 1 GHG emissions from the use of company-owned or leased vehicles are reported separately. In 2012, this totaled 174kt, compared to 192kt in 2011 (a 9.1% decrease). When including Alcon data in the
2010 baseline for the current target, Scope 1 GHG emissions from vehicles have decreased by 19.4%. This decrease is due to the use of more efficient fleet vehicles.

Based on 2008 energy consumption figures, a 10% target on energy savings from projects was required for all divisions and operations by 2015. By 2012, after four years, savings amount to 15.1%.

Energy use section of the Novartis HSE Report 2012 (page 15):

Energy and climate section of the Novartis Corporate Responsibility Website:

EN6 (Additional): Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives

Novartis is committed to using resources efficiently and reducing greenhouse gas (GHG) emissions that affect the global climate. We recently established new targets on total GHG emissions for 2015 and 2020, which represent an absolute reduction of 15% by 2015 and of 20% by 2020, based on 2008 levels.

Novartis has a longstanding, comprehensive energy and climate program with a dual objective:
- Improve energy efficiency for all industrial and commercial operations and use renewable energy sources where available and feasible
- Develop carbon-offset projects.

Reductions in GHG emissions also reflect increased use of renewable energy. Along with bio-fuels and organic-waste fuels, solar energy is being used at a number of Novartis Group company sites.
- In Vacaville, California, US, we operate a 1 megawatt solar panel array that meets 25% of the site’s electricity needs.
- The Sandoz site in Unterach, Austria, runs a hydroelectric turbine, and produced 2,047GJ of electricity in 2011, covering nearly 6% of the site’s electricity usage. Novartis also generates renewable energy from bio-fuels.
- As early as 2004, Sandoz India in Mahad was generating steam from bagasse, a renewable by-product from sugar cane. Today, the Mahad site covers more than 90% of its fuel needs from this renewable source.
- Since 2008, the Pharmaceuticals Division in Wehr, Germany, has covered 77% of its fuel needs for steam generation with wood chips replacing fossil natural gas.

Globally in 2012, Novartis Group companies used renewable energy, primarily replacing fossil sources, for 184TJ (up from 124TJ in 2008), accounting for 10 kilotons of Scope 1 GHG emissions.

While our long-term goal is to lower GHG emissions through internal programs, we have taken additional measures to achieve 2015 and 2020 total GHG emission targets. Our approach includes voluntary carbon-offset options, such as the United Nations Clean Development Mechanism (CDM), that enable companies or countries to compensate for exceeding emission limits through offsetting, particularly in developing countries or emerging markets.

We have created three carbon-offset projects:
- In Argentina, we are growing a forest of more than 3 million trees with the aim of 75% native species to sequester carbon and create sustainable wood products. The plantation, which received CDM registration in 2011, has been certified by the Forest Stewardship Council (FSC) since 2008 and realized sequestration of 114kt CO$_2$e in 2012.
- We established a Jatropha plantation and bio-fuel for a rural energy project in Mali, with a total of 12,000 hectares planned. The seeds of this shrub can be used to press oil, make bio-fuel for energy in rural areas and produce a natural fertilizer. In this smallholder agro-forestry project local farmers plant Jatropha together with their annual crop. The project achieved Verified Carbon Standard (VCS) certification in 2012 and brought 2kt CO$_2$e of savings in 2012.
In 2010, Novartis launched a reforestation initiative in Sichuan, China, involving 3,800 hectares and more than 10 million trees. The project will protect the land from soil erosion, landslides and flooding, provide labor and income (from wood and non-wood products) to local communities and a better habitat for endangered species including the giant panda, as well as sequester carbon. More than 1 million trees were planted in 2011.

Land use carbon-offset projects have been relatively uncommon, but they are attractive to Novartis as platforms to foster long-term economic growth for local populations, provide environmental and biodiversity benefits and help meet the company's overall CO₂ reduction targets.


EN7 (Additional): Initiatives to reduce indirect energy consumption and reductions achieved
See response to EN6 above.

WATER
EN8 (Core): Total water withdrawal by source
With regards to water consumption, Novartis monitors water streams into its sites by source and out by discharge stream, as well as various types of water use. Such water balance methodology allows effective water resource and cost management, and helps achieve complete and accurate information on water use.

In 2012, total water use decreased from 97.3 in 2011 to 94.7 million cubic meters. A total of 30.5 million cubic meters (32%) of the total quantity of water (contact and non-contact cooling water) that Novartis uses is purchased from water suppliers, and 64.4 million cubic meters (68%) is abstracted from groundwater wells or surface water bodies (directly from the environment), mainly for cooling purposes.

The use of contact water slightly increased in 2012 to 17.2 million cubic meters (up from 17.1 million cubic meters in 2011). Major users of contact water were Sandoz (48%), Pharmaceuticals (23%) and Alcon (16%). During 2012, Sandoz decreased contact water use by approximately 0.7 million cubic meters or by 0.9%.

Consumption of non-contact water (mainly for cooling purposes) decreased by 3.4% from 80.2 million cubic meters in 2011 to 77.5 million cubic meters in 2012. The main use of cooling water was for the control of fermentation processes and for comfort cooling of office buildings with water instead of energy-consuming mechanical chilling. For these two purposes, Novartis uses water drawn from groundwater sources next to rivers or directly from rivers in areas where large sources of naturally-cold water are available.

Water efficiency target achievement and outlook
While strategies on water abstraction and the use of cooling water vary from site to site, we have made concerted efforts to further reduce the use of contact water that requires treatment, both in order to reduce pollutant loads, and because this is a growing environmental and cost factor.

Novartis set an efficiency improvement target on contact water of 10% for the period 2006 to 2010 (based on 2005 performance), translating to an average 2% annual improvement. Novartis defines contact water efficiency as contact water use per sales in constant currencies. This target was extended until 2012 with an additional 4% contact water efficiency improvement for the two additional years (2011 and 2012). Contact water efficiency increased by 6.4% between 2010 and 2012.

Water scarcity
Novartis determines the level of water scarcity at all its industrial locations globally based on the World Business Council for Sustainable Development (WBCSD) Global Water Tool, and the availability of water based on estimates by the World Resources Institute (WRI). Sites located in areas where water is highly scarce...
scarce or scarce are identified, and their specific risks considered in a risk portfolio. Sites with high level of water scarcity and high water usage are included in a corporate water saving program.

Water use section of the Novartis HSE Report 2012 (page 18):

**EN9 (Additional): Water sources significantly affected by withdrawal of water**

There are no water sources significantly affected by withdrawal of water from our operations: 32% of total water used is supplied by local public water utilities. The remaining 68% of total water used is drawn from the aquatic environment and used for cooling 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 or for cooling/air conditioning of offices as an environmentally preferred solution compared to the use of chillers.

Novartis is currently assessing 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. Water saving initiatives will be intensified at sites located in these water scarce areas, where appropriate.

**EN10 (Additional): Percentage and total volume of water recycled and reused**

In 2012, Novartis recycled 24 million m³ of water, which is 25% of its total water use (95.6 million m³), including contact water and non-contact cooling water.

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 improve the efficiency of their use.

As an example, 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 reject 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. Over the past two years, this program has enabled the site to reduce its annual purchase of water and other water related costs by USD 37,000 or almost 20% of total water cost. Total water consumption was reduced by 23,000 m³ (17%). The investment needed for the program was around USD 32,000, which was paid back within less than a year.

At the Sandoz site in Kalwe near Mumbai, India 25% of the total water used or about 30,000 m3 is needed in the cooling tower as make-up water. All incoming water must be firstly treated at the site to match potable water quality. The procedure has now been changed to use recycled waste water for the cooling tower. The waste water is processed by reverse osmosis in the site-owned wastewater treatment plant to meet local government norms for drainage. This water is ideally suited to be recycled in the cooling tower. The site’s need for water intake was reduced by 21%, accounting for a water cost saving of USD 13,000 per year. Capital investment for the changes was only USD 2 000, which was paid back within two months. In the Mumbai metropolitan area, clean fresh water is scarce and expensive. So although this is a small project in terms of dollars, it has a very big impact on water savings at the site.

Conserving water section of the Novartis Corporate Responsibility Website:

Water use section of the Novartis HSE Report 2012 (page 18):
**BIODIVERSITY**

**EN11 (Core): Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas**
Pharmaceutical operations are not land-intensive operations. Facilities are in industrial areas, not considered rich in biodiversity. Novartis has no land in biodiversity-rich habitats.

Biodiversity section of the Novartis Corporate Responsibility Website:  

**EN12 (Core): Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas**
Novartis bioprospecting activities have negligible negative impact on biodiversity, as samples taken for lab for further analysis are limited and have little or no impact.

A key challenge is finding an agreement on benefit sharing for the local population and the country. Novartis accepts the principle laid down in the Convention on Biodiversity (CBD) whereby countries have sovereignty over their genetic resources and can control access to them. Novartis contributes to the implementation of the CBD, by conveying know-how to those with whom it collaborates, passing on the latest technologies and building up capacity.

Biodiversity section of the Novartis Corporate Responsibility Website:  

**EN13 (Additional): Habitats protected or restored**
Not applicable to Novartis as our operations are located in specially designated zones for industrial purposes.

**EN14 (Additional): Strategies, current actions, and future plans for managing impacts on biodiversity**
Novartis has a history of natural products research that can be traced back over 90 years. We believe that natural products have significant potential as a source for new drugs and as tools for pathway screening and target identification.

Our efforts at using natural sources for obtaining potential drugs or lead substances are conducted in accordance with the Convention on Biological Diversity (CBD) and local regulations.

We support the objectives of the CBD and recognize the national sovereignty of states over biological resources.

We further support and wish to participate in the development of a regime on Access and Benefit Sharing. This would facilitate the access to and sustainable use of genetic resources and, once clearly defined, associated traditional knowledge. It would also regulate the rights and responsibilities of users and providers of such resources in a transparent way, taking into account related discussions and outcomes from relevant international forums while ensuring compliance with intellectual property law.

Currently Novartis is producing active ingredients from native plants, e.g. Coartem® for malaria, and modified microorganisms, e.g. Cyclosporin for transplantation.

Biodiversity represents an important source of potential new drugs to Novartis. 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) and local regulations.

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,
our effort to drive CBD implementation and promote sustainable society development in less developed
countries, we share know-how and the latest technologies with those with whom we collaborate locally and
help them build capacity, and we fully inform local authorities. One bioprospecting project is currently
ongoing within Novartis in Thailand on rare actinomyetes and fungal microorganisms.

**Scaling up agricultural capacity**

*Coartem*, (artemether and lumefantrine), our leading antimalarial treatment, is a prime example of natural product
development and international cooperation. The Shanghai Institute of Materia Medica (SIMM) played a key
role in its discovery. In 2001, Novartis and SIMM announced a drug discovery collaboration based on natural
products. Under the agreement, SIMM has isolated hundreds of new compounds from medicinal plants known in
traditional Chinese medicine. In return, Novartis provided financial support, shared know-how in natural product
research and advanced drug discovery techniques such as high-throughput screening. In 2004, Novartis and SIMM
extended and expanded the collaboration.

**Investing in local capability**

The Novartis Institutes for BioMedical Research (NIBR) are interested in natural products, especially fungi
and bacteria that can be collected without depleting natural sources, and that can be cultivated in large-
scale fermentors.

When collecting in foreign countries, NIBR uses formal agreements that adhere to the Convention on
Biological Diversity. Principles established by the Convention include compensating developing nations for
use of their biological resources.

There are often royalty provisions in the event that a natural product leads to a successful drug. However,
NIBR also compensates the countries in which it collects in a more immediate fashion, through technology
transfer, scientific training sessions at NIBR facilities, and lectures to students of the collaborating institutes
and universities.

For example, NIBR has furnished collaboration partners in Mexico, Panama, Thailand and China with new
equipment for collection and isolation of microorganisms, innovative methodologies in microbiology and
analytical chemistry, and has invited numerous scientists from developing countries to spend time in NIBR
laboratories in Switzerland.

By donating laboratory equipment and providing scientific education, NIBR invests in local research
capabilities.

Biodiversity section of the Novartis Corporate Responsibility Website:

**EN15 (Additional): Number of IUCN Red List species and national conservation list species with
habitats in areas affected by operations, by level of extinction risk**

Not applicable to Novartis as our operations are located in specially designated zones for industrial
purposes outside of natural conservation areas or protected habitats.

**EMISSIONS, EFFLUENTS AND WASTE**

**EN16 (Core): Total direct and indirect greenhouse gas emissions by weight**

Novartis has reported its Greenhouse Gas (GHG) emissions in accordance with the WRI/WBCSD
Greenhouse Gas Protocol since 2005. The reporting structure includes Scope 1 CO$_2$ emissions from
stationary combustion installations and from production processes, Scope 1 CO$_2$ emissions from company-
owned or leased vehicles and Scope 2 CO$_2$ emissions from purchased energy sources.

For the fourth consecutive year, the Novartis Group achieved a reduction in total greenhouse gas (GHG)
emissions in 2012 from 1,703kt in 2011 to 1,651kt (down 3.0%).

The total amount of Scope 1 GHGs, mainly carbon dioxide (CO$_2$) emitted from on-site combustion of fossil
fuels in 2012 was 458kt, a 1.0% decrease compared to 2011 (462kt). Emission of other GHGs
(hydrofluorocarbons from refrigeration systems), included in the above amount, totaled 6kt. GHG emissions
from production processes, also included in the Scope 1 GHG total, amounted to approximately 3kt. GHG emissions of non-Kyoto gases, such as hydrochlorofluorocarbons (HCFCs) totaled approximately 30kt, primarily HCFC124 which is used as a purging gas at an Alcon facility in the US.

Scope 1 GHG emissions from the use of company-owned or leased vehicles are reported separately. In 2012, this totaled 174kt, compared to 192kt in 2011 (a 9.1% decrease). When including Alcon data in the 2010 baseline for the current target, Scope 1 GHG emissions from vehicles have decreased by 19.4%. This decrease is due to the use of more efficient fleet vehicles.

Scope 2 GHG emissions (mainly from electricity generation) in 2012 totaled 1,019kt, which represents a reduction of about 2.9% from 1,049kt in 2011.

Novartis reduced its GHG emission intensity (in terms of GHG emissions per sales) by 14% for Scope 1 on-site emissions and by 20% for Scope 2 compared to 2008. On an annual basis, compared to 2011, the GHG emission intensities remained approximately constant.

Scope 3 GHG emissions from our global business flights in 2012 totaled an estimated 313kt compared to 274kt the year before. This number is based on detailed information from our worldwide travel agent. GHG emissions from the five company-owned or leased aircrafts, totaling 7kt, have been included in the Scope 1 company vehicle fleet reporting.

Scope 3 GHG emissions from the disposal of waste for 2012 sum up to 98kt, down from 113kt the year before. An estimate has been established for other Scope 3 GHG emissions, e.g. from raw material generation, transports, waste water treatment, creation of company infrastructure and employee commuting.

Greenhouse gas emissions section of the Novartis HSE Report 2012 (page 23):

Novartis response to the Carbon Disclosure Project: https://www.cdproject.net/

**EN17 (Core): Other relevant indirect greenhouse gas emissions by weight**

Carbon dioxide makes up the vast majority of GHG emissions at Novartis (over 99%). Emission of other GHGs (hydrofluorocarbons from refrigeration systems), included in the above amount, totaled 6kt. GHG emissions from production processes, also included in the Scope 1 GHG total, amounted to approximately 3kt. GHG emissions of non-Kyoto gases, such as hydrochlorofluorocarbons (HCFCs) totaled approximately 30kt, primarily HCFC124 which is used as a purging gas at an Alcon facility in the US.

Scope 3 GHG emissions from our global business flights in 2012 totaled an estimated 313kt compared to 274kt the year before. This number is based on detailed information from our worldwide travel agent. GHG emissions from the five company-owned or leased aircrafts, totaling 7kt, have been included in the Scope 1 company vehicle fleet reporting.

Scope 3 GHG emissions from the disposal of waste for 2012 sum up to 98kt, down from 113kt the year before. An estimate has been established for other Scope 3 GHG emissions, e.g. from raw material generation, transports, waste water treatment, creation of company infrastructure and employee commuting.

Greenhouse gas emissions section of the Novartis HSE Report 2012 (page 23):

Novartis response to the Carbon Disclosure Project: https://www.cdproject.net/

**EN18 (Additional): Initiatives to reduce greenhouse gas emissions and reductions achieved**

In 2005, Novartis made a voluntary commitment to reduce Scope 1 on-site GHG emissions to the global average level prescribed in the Kyoto Protocol, i.e. 5% below the 1990 level by 2012. This commitment forms a major part of the Novartis Group environmental targets and programs enacted in 2005. It strongly
correlates with the targets that were already in place on energy efficiency improvement and on energy projects.

In relation to the above GHG target, emissions (excluding Alcon acquired in 2010) have been assessed for the 1990 reference year, based on the level of Novartis business activities in 1990. Global direct on-site GHG emissions in 1990 have been calculated at 308kt. Taking the continued growth of business as well as energy efficiency and emission reduction initiatives into account, emissions were expected to rise on average by some 2% per year. While this was the case between 1990 and 2005, Scope 1 GHG emissions remained more or less constant since 2005 despite the growth of the business.

With 404kt Scope 1 on-site GHG emissions for 2012, Novartis on-site emissions are about 30% above the Kyoto target of 5% below the 1990 levels, i.e. 293kt. In 2012 Novartis closed this gap with carbon offsets of 114kt from its own afforestation projects in Argentina and with 2kt with the Jatropha agro-forestry project in Mali.

Between 2006 and 2010, Novartis has reduced Scope 1 GHG emissions from its owned or leased vehicle fleet by 17%, well above the 10% reduction target set for this period. In 2010, a new 10% reduction target on fleet GHG emissions was set for 2015. Reductions were achieved thanks to more fuel-efficient vehicles through the introduction of hybrid gasoline-electric cars, increased use of diesel engines fitted with particulate filters, and other emission-reduction options such as liquid natural gas or bio-fuels. The 2015 target has been adjusted to 20% reduction compared to 2010 emissions.

In 2010, Novartis set new targets on total GHG emissions for 2015 and 2020, respectively a 15% and 20% reduction compared to 2008. These are in line with targets set by leading countries. We intend to compensate part of our total GHG emissions with carbon offsets in order to achieve our 2015 and 2020 targets.

When including Alcon data for 2008, total GHG emissions for Novartis have decreased by 6.8% between 2008 and 2012. This good performance results from increased energy efficiency and use of renewable energy, as well as other GHG emission reduction measures. 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.

While our main focus is to lower GHG emissions through internal improvement programs, the Novartis Group is also taking advantage of carbon-offset options included in the Kyoto Protocol, such as the United Nations Clean Development Mechanism (CDM) 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.

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. Novartis has established its own carbon-offset projects in Latin America, Africa and China.


Novartis response to the Carbon Disclosure Project: [https://www.cdproject.net/](https://www.cdproject.net/)

**EN19 (Core): Emissions of ozone-depleting substances by weight**

In accordance with the requirements of the GRI Guidelines for Sustainability Reporting, Novartis includes inventories and emissions of Ozone Depleting Substances (ODS) in its reporting.

For 2012, Novartis sites globally reported a total inventory of 119.8t of ozone depleting substances (ODS), compared to 125.5t in 2011. The 2012 figure includes 0.08t of chlorofluorocarbon (CFC), 113.4t of hydrochlorofluorocarbon (HCFC) refrigerants, and 6.4t of halons. Additionally, HCFC inventories are continually replaced with chlorine-free hydrofluorocarbons (HFCs) or with natural refrigerants. In 2012, HFCs – which have an ODS factor of zero – amounted to 130.3t for Novartis.
Emissions caused by ODS losses in 2012, reported in tons of R11-equivalents, were calculated for the Group at 942kg (1,075kg in 2011). The largest ODS emissions by Novartis Division were: 769kg R11e from Alcon, 102kg Pharmaceuticals and 46kg Sandoz. Ozone depleting substances are not included in any Novartis product.

Novartis intends to minimize the use of synthetic refrigerant materials. Natural refrigerant materials are the preferred alternative in new equipment. Novartis had set the target to eliminate CFCs from its global operations by the end of 2012. The target was not fully achieved, with only 95.5% of the inventory being eliminated. The remaining 79.6kg will be eliminated during 2013. Remaining Halons will also be eliminated in 2013. HCFCs in existing equipment are being replaced when refilling becomes necessary.


EN20 (Core): NOx, SOx, and other significant air emissions by type and weight
As a further disclosure of relevant emissions into air, Novartis reports halogenated and non-halogenated Volatile Organic Compounds (VOCs) and SO2/NOx inorganic pollutants. VOCs mainly originate from the use of halogenated and non-halogenated solvents in various production processes. Inorganic pollutants arise primarily from the combustion of fuels for steam generation and heating.

Emissions of halogenated Volatile Organic Compounds (VOCs) decreased to 110t, from 147t in 2011; while at the same time non-halogenated VOC emissions were reduced from 1,071t in 2011 to 934t in 2012. Emissions of halogenated VOCs originated predominantly from Sandoz (93%). Emissions of non-halogenated VOCs came from Sandoz (66%), Pharmaceuticals (24%) and Alcon (6%).

VOC emission targets and outlook
VOCs are the precursors of photochemical (tropospheric) ozone creation that leads to smog and related detrimental effects on health and the environment. Halogenated VOCs can also contribute to emissions of greenhouse gases.

The Novartis Group emphasizes reductions in VOC emissions in operations worldwide and a 15% reduction target was set for both halogenated and non-halogenated VOC emissions for the period 2008 – 2012. Emissions are strongly influenced by products that require solvents-based production processes and by the significant lead time to change production processes.

Emissions of VOCs overall decreased again strongly in 2012, and both targets for reduction of halogenated and non-halogenated VOCs were met, primarily due to the installation of abatement measures in Sandoz. New targets were set for 2015 to keep non-halogenated VOC emissions 40% and halogenated VOCs 45% below 2008 values.

Inorganic air pollutants
In 2012, inorganic air pollutant emissions for the Novartis Group totaled 47t (71t in 2011) for sulfur dioxide (SO2) and 294t (317t in 2011) for nitrogen oxide (NOx). NOx emission levels from company-owned or leased vehicles are not included in these figures. Major contributors to Group SO2 emissions were Sandoz (35t) and Pharmaceuticals (8t). The distribution of NOx emissions is similar to the figure for the consumption of on-site generated energy. The main contributors in 2012 are Sandoz (40%), Pharmaceuticals (32%) and Alcon (17%).

Inorganic pollutants targets and outlook
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 SO2, to increase in the coming years.

EN21 (Core): Total water discharge by quality and destination

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. Roughly 95% of all non-contact water used for cooling is released back into the environment, which accounts for just under 80% of all water outputs. The rest of the cooling water, together with the contact water used in processes, are sent to water treatment plants (19%); with the remaining 2% used in products, evaporating or used for other purposes, such as irrigation.

With regards to the quality of water discharged, Novartis reports total effluent load for the sum parameters COD (Chemical Oxygen Demand) and TSS (Total Suspended Solids). Amounts reported are loads that finally reach the aquatic environment. They are determined from concentrations of effluent parameters multiplied by flow volumes of wastewater discharged from Novartis facilities after treatment. In cases where discharged wastewater is treated off-site, e.g. in public wastewater treatment plants, the specific removal efficiency of such treatment is considered for the amounts reported.

The chemical oxygen demand (COD) load on the aquatic environment from Novartis Group company operations slightly increased in 2012, from 3.90kt in 2011 to 3.96kt. COD loads for 2012 were attributable to: Sandoz 78%, Pharmaceuticals 19% and other divisions 3%.

Total suspended solids (TSS) increased from 0.45kt in 2011 to 0.48kt in 2012. Total nitrogen load increased from 0.57kt in 2011 to 0.59kt in 2012 and phosphate load decreased from 0.057kt in 2011 to 0.042kt in 2012.

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

Release of drug substances into water

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 1% of 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.

In 2012, we conducted a Group-wide effort to monitor and reduce effluent loads of diclofenac, the API for the anti-inflammatory drug Voltaren from all our operations worldwide that process diclofenac. The release to waste water was below 0.3%.

Emissions into water section of the Novartis HSE Report 2012 (page 37):
**EN22 (Core): 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 wastes 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.

For Novartis, operational waste – both hazardous and non-hazardous – is an important area of environmental management for Group company 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 2012, the total amount of hazardous waste for the Novartis Group slightly increased to 185kt (from 181kt in 2011); non-hazardous waste totaled 94kt in 2012, which represents a 2.4% decrease compared to 2011 (97kt). This decrease is primarily due to smaller volumes of waste from vaccine production at Vaccines and Diagnostics sites. Hazardous waste was generated primarily by Sandoz (49%) and Pharmaceuticals (45%). Non-hazardous waste was generated by: Sandoz 32%, Pharmaceuticals 21%, Vaccines and Diagnostics 19%, Alcon 19%, Consumer Health 6%, and NIBR 3%.

For reporting purposes, waste is classified by type and according to the disposal routes, recycling, treatment, incineration with and without energy recovery, and landfill.

**Sustainable packaging initiative**

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.

A guide was developed and issued for packaging design teams to make product packaging more sustainable. Novartis engages 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. Projects include:

- The Sandoz facility in Cambé, Brazil reduced packaging material and related costs between 5 and 10% by optimizing blister layout for a variety of their products. Total quantities saved with 27 individual projects sum up to 3.3 tons of aluminum and over 20 tons of plastic blister foil.

- The Alcon Vision Care site in Singapore introduced a returnable PP transfer packaging for the polypropylene (PP) blister package of its daily contact lenses. These transfer packages replace 32 tons of cardboard packaging, which was wasted before, going forth and back between Alcon and the supplier now for more than four years.

**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 2012 were 41.2kt (down from 48.5kt in 2011); an additional 53.0kt included materials collected for recycling. Of the non-hazardous waste not being recycled, disposal routes were: treatment (39%), incineration (34%) and landfill (27%).

**Non-hazardous waste targets and outlook**

Keeping non-hazardous waste to a minimum and recycling it to a maximum 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. Recycling rate of total non-hazardous waste is up from 49.8% to 56.2%.
A target was set for the Novartis Group, excluding Alcon and Vaccines and Diagnostics Divisions, to reduce the per employee efficiency of non-hazardous waste not being recycled by 20% by 2012, based on 2008 values. In 2012, this intensity indicator was reduced by 23% compared to 2008, achieving the target. The Vaccines and Diagnostics Division reduced its non-hazardous waste not recycled from 21.1kt in 2011 to 16.3kt in 2012, which represents a 49% improvement of intensity by production. Alcon will be included in new waste targets as of 2013.

For 2015 Novartis set a new target to reduce the intensity of non-hazardous waste not recycled per employee by 10% compared to 2010.

**Hazardous waste**
Hazardous waste originates primarily from chemical and pharmaceutical production processes.

Total amounts of hazardous waste not recycled in 2012 for the Novartis Group were 91.2 (down from 93.5kt in 2011); an additional 93.6kt was subject to recycling.

Of the hazardous waste not being recycled in 2012, disposal routes were incineration (98%) and treatment (2%). The recycling rate for hazardous waste was up from 48.2% in 2011 to 50.2% in 2012.

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.

**Hazardous waste targets and outlook**
Novartis puts a high priority on avoiding hazardous waste. In 2008 a target was set to reduce the per production efficiency of hazardous waste not being recycled for the Novartis Group (excluding Alcon) by 10% by 2012 based on 2008 values. In 2012, the hazardous waste intensity was reduced by 3.8% compared to 2008, not achieving the target set for the period.

For 2015 Novartis set a new target to reduce the intensity of hazardous waste not recycled per production by 10% compared to 2010.

Operational waste section of the Novartis HSE Report 2012 (page 40):

**EN23 (Core): Total number and volume of significant spills**
No significant spills were reported in 2012. This was also the case in 2011.

**EN24 (Additional): Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally**
Total amounts of hazardous waste not recycled in 2012 for the Novartis Group were 91.2 (down from 93.5kt in 2011); an additional 93.6kt was subject to recycling.

Of the hazardous waste not being recycled in 2012, disposal routes were incineration (98%) and treatment (2%). The recycling rate for hazardous waste was up from 48.2% in 2011 to 50.2% in 2012.

**EN 25 (Additional): Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization’s discharges of water and runoff**
Not applicable to Novartis as our operations are located in specially designated zones for industrial purposes and waste water is treated in owned or public waste water treatment plants.
PRODUCTS AND SERVICES

EN26 (Core): Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation

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.

Sustainable packaging

As proof of this commitment, 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.

Novartis engages with clients and packaging material suppliers to determine needs and identify more sustainable packaging solutions. A guide was developed and issued for packaging design teams to make product packaging more sustainable. 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.

Pharmaceuticals in the environment

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 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.


Read our position on Pharmaceuticals in the Environment

EN27 (Core): Percentage of products sold and their packaging materials that are reclaimed by category

Data on the percentage of products sold and their packaging materials reclaimed by category is not available on a global level due to the varying availability of recycling programs and facilities in the countries in which we sell our products.
COMPLIANCE

EN28 (Core): 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 20,363 in fines for minor HSE violations in 2012.


TRANSPORT

EN29 (Additional): Significant environmental impacts of transporting products and other goods and materials used for the organization’s operations, and transporting members of the workforce

The largest transportation impact identified at Novartis is the use of passenger cars for sales representatives. CO₂ emissions of owned and leased vehicles are measured and reported.

Scope 1 GHG emissions from the use of company-owned or leased vehicles are reported separately. In 2012, this totaled 174kt, compared to 192kt in 2011 (a 9.1% decrease). When including Alcon data in the 2010 baseline for the current target, Scope 1 GHG emissions from vehicles have decreased by 19.4%. This decrease is due to the use of more efficient fleet vehicles.

Between 2006 and 2010, Novartis has reduced Scope 1 GHG emissions from its owned or leased vehicle fleet by 17%, well above the 10% reduction target set for this period. In 2010, a new 10% reduction target on fleet GHG emissions was set for 2015. Reductions were achieved thanks to more fuel-efficient vehicles through the introduction of hybrid gasoline-electric cars, increased use of diesel engines fitted with particulate filters, and other emission-reduction options such as liquid natural gas or bio-fuels. The 2015 target has been adjusted to 20% reduction compared to 2010 emissions.

Scope 3 GHG emissions from our global business flights in 2012 totaled an estimated 313kt compared to 274kt the year before. This number is based on detailed information from our worldwide travel agent. GHG emissions from the five company-owned or leased aircrafts, totaling 7kt, have been included in the Scope 1 company vehicle fleet reporting.


OVERALL

EN30 (Additional): Total environmental protection expenditures and investments by type

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

In 2012:

• Total costs for waste disposal amounted to USD 59 million
• Total costs for energy amounted to USD 418 million
• Total costs for water supply amounted to USD 34 million
HUMAN RIGHTS
For Novartis, respect for human rights is an essential ingredient of good management and business practice. We do everything in our power to ensure that we are not complicit in any human-rights violations, whether such transgressions are civil, political, economic, social or cultural.

INVESTMENT AND PROCUREMENT PRACTICES
HR1 (Core): Percentage and total number of significant investment agreements that include human rights clauses or that underwent human rights screening
100% of Novartis suppliers are aware that they need to have similar standards as defined in our Code of Conduct and Corporate Citizenship Policy, both of which include specific guidance around support of and respect for the protection of internationally proclaimed human rights. Our contracts with joint ventures and subsidiaries have specific language requesting that they abide by our Code of Conduct and other policies.

HR2 (Core): Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken
494 significant suppliers and contractors, corresponding to 56% of all identified significant and critical suppliers. In case discrepancies were found, a corrective action plan was developed and agreed upon jointly with the supplier.

HR3 (Additional): Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained
A revised Code of Conduct, including several references to human rights, was launched in 2011 and rolled out through an extensive campaign to engage Novartis associates worldwide. E-training on the Code of Conduct including a certification started in early 2012 and is repeated annually: by August 2013, 119'525 associates had been invited to the e-Training in 2013, of which 100'819 had completed it. Each training being estimated to last 25 minutes, this results in approximately 42'008 hours of training globally.

In addition, in an effort to reinforce HR standards, we have trained more than 120 HR associates in train-the-trainer sessions across 85 countries in about 60 webcasts on four Employee Relations Guidelines (non-discrimination, disciplinary actions, life-work integration, and conflict resolution). These associates are also tasked with training HR personnel locally to ensure the local implementation of these standards.

NON-DISCRIMINATION
HR4 (Core): Total number of incidents of discrimination and actions taken
Novartis reports on all cases of misconduct (see SO4). Complaints are investigated by the Business Practices Office (BPO), and substantiated cases are referred to senior management for appropriate disciplinary action. We do not specifically disclose the number of incidents relating to discrimination as this information is business confidential.

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING
HR5 (Core): Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights
- None identified as significant risk.
- As stated in its Code of Conduct, Novartis supports freedom of association and collective bargaining. These principles are included in the basic employment terms/contracts of Novartis associates.
- The company annually monitors the level of communication concerning the right to freedom of association.

Novartis Corporate Citizenship Policy
Novartis Guideline 2 on fair working conditions
Novartis Guideline 4 on Human Rights
CHILDLABOR

HR6 (Core): Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor

- None identified as significant risk.
- The Novartis Code of Conduct, which specifies our position with regards to forced or compulsory labor, is included in the basic employment terms/contracts of associates.
- The company annually monitors the global workforce for any associates below age 15, and takes corrective actions if needed. In 2011, monitoring showed no incidents of child labor in Novartis operations.

FORCED AND COMPULSORY LABOR

HR7 (Core): Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor

- None identified as significant risk.
- The Novartis Code of Conduct, which specifies our position with regards to forced or compulsory labor, is included in the basic employment terms/contracts of associates.
- 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 2011 with suppliers.

Novartis will not engage in forced, compulsory or bonded labor. Forced or compulsory labor means work or services extracted from persons under the threat of non-contractual penalty and work or services which such persons have not voluntarily offered to perform.

Bonded labor means work or services extracted under economic conditions that leave employees without reasonable choice of whether they want to continue to perform the work or service.

SECURITY PRACTICES

HR8 (Additional): Percentage of security personnel trained in the organization's polices or procedures concerning aspects of human rights that are relevant to operations

100% of the security team is trained on human rights issues.

INDIGENOUS RIGHTS

HR9 (Additional): Total number of incidents of violations involving rights of indigenous people and actions taken

In 2012, 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. Additionally, in our effort to drive CBD implementation and promote sustainable development in less developed countries, we share know-how and the latest technologies with those with whom we collaborate locally 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 3-year tranche, the collaboration is working to expand the isolation of strains to further taxonomic classes to diversify the pool of bacteria and fungi.

In 2011, Novartis and the Sarawak Biodiversity Center (SBC) signed a capacity building agreement under which Novartis contributes to strengthening the local natural products research. In this context, Novartis transfers scientific know-how and gives programmatic guidance to foster the existing capacities at SBC. During this scientific exchange program, Novartis scientists will give seminars on pharmaceutical natural products research. Malaysian scientists from SBC will be invited for sabbaticals to Novartis Basel, where they receive dedicated trainings in the field of natural products research according to their local needs. Novartis organizes and supports the anchoring of specific microbiological techniques at SBC for the targeted isolation of natural products producing bacteria.

Read our position on biodiversity/bioprospecting
LABOR PRACTICES AND DECENT WORK

Novartis endeavors to promote the livelihoods of its associates and to be a good neighbor in the communities where it operates. Through our commitment to Diversity and Inclusion, we foster equality of opportunity, fairness and mutual respect. We strive to give our associates opportunities to grow and realize their full potential, and create an environment of continuous performance improvement and personal development.

EMPLOYMENT

LA1 (Core): Total workforce by employment type, employment contract, and region*
- 5.4% of all Novartis Group Company associates work part-time. At our headquarters in Basel (Switzerland), the part-time workforce was approximately 10.5% in 2012
- There are 125,760 permanent contracts and 4,355 temporary contracts
- Novartis employs 130,115 people globally
- 28,091 work in Asia Pacific, 28,554 work in North America, 65,492 work in EMEA and 7,978 work in LATAM

LA2 (Core): Total number and rate of employee turnover by age group, gender, and region *
Overall voluntary turnover by gender is:
- Male: 6.0%
- Female: 6.3%

Overall voluntary turnover by region is:
- Europe, Middle East and Africa: 4.3%
- Asia Pacific: 10.0%
- North America: 6.1%
- Latin America: 7.6%

Voluntary turnover by age group: the highest voluntary turnover of 21.2% is in the age group 21-25 years, the lowest voluntary turnover is in the age group 56-60 (1.3%).

*Source: FirstPort. HC and voluntary turnover reported as of December 2012

LA3 (Additional): Benefits provided to full-time or part-time employees that are not provided to temporary or part-time employees, by major operations
At sites of major operations, full-time employees are eligible for or covered by health, retirement, disability and maternity benefit. 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, paternity leave are also provided.

In emerging market locations, full-time employees are eligible for or covered by health, retirement, disability and maternity benefits. At some emerging market operations, flex time, parental leave, paternity leave, marriage leave are also provided.

LABOR/MANAGEMENT RELATIONS

LA4 (Core): Percentage of employees covered by collective bargaining agreements
62% of Novartis Group Company associates (excluding Management) worldwide are represented by a trade union or covered by a collective bargaining agreement.

LA5 (Core): Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements
- There is no minimum notice period 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, Novartis operations will employ voluntary standards that can range from 30 days to 180 days.
Where relevant, local legislation and collective bargaining agreements specifications on notice periods vary, and can be in the range of 30 days to 180 days.

**OCCUPATIONAL HEALTH AND SAFETY**

**LA6 (Additional): 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, performed on sites with more than 100 Novartis Group Company associates, shows that 80% of the 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, however, safety coordinators are appointed.

**LA7 (Core): Rates of injury, occupational diseases, lost days, absenteeism and total number of work-related fatalities, by region**

Novartis continuously seeks innovative, sustainable strategies and systems to strengthen its commitment to Health, Safety and Environment (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. At the same time, the Occupational Medicine department offers proactive programs to maintain health, reduce absenteeism and enhance motivation to return to work after injury or illness.

**Lost Time Injury & Illness Rate (LTIR)**

Novartis reports work-related injuries or illnesses among its Group company associates that have occurred during the year. The Novartis 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 2012, the LTIR for continuing operations at Novartis (including Alcon) was further reduced to 0.14 per 200,000 hours, from 0.19 the previous year; this represents a 25% reduction.

**Basis of achievement**

Continuing management commitment and rigorous application of safety systems and procedures, combined with ongoing training for Group company associates, have driven progress in injury and illness reduction. Several activities to promote safety awareness, including four key measures, are used by local management and reviewed by divisional HSE teams:

- Walk-through inspections with senior managers on site
- HSE training targeted at 0.1-0.5% of total hours worked yearly, depending on the work area
- Percentage of completed items on incident investigation related to total number of recommendations
- Near misses reported at least 5-10 to 1 versus actual incidents

A significant number of units have introduced safety culture initiatives (behavior-based safety programs) to complement existing measures that provide the backbone for ongoing safety management at sites.

Tailored safety initiatives have been introduced where relevant, e.g., driver safety for fleet or sales organizations and laboratory safety for research and development.

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 (e.g., risk/potential consequences, learning potential) are put in place to ensure that investigations are carried out adequately. A systematic method (e.g., TapRoot®) is applied to guarantee a thorough investigation. In 2012, more than 80 Group company associates from sites across the world were trained in the TapRoot® methodology.

In-depth risk analysis – in accordance with the Zurich Hazard Analysis (ZHA) methodology – is fundamental to Novartis operations and 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 2012, 60 associates from sites across the world were trained. Tailor-made Laboratory Process Safety Training courses were delivered for more than 250 laboratory associates. In addition, extensive on-the-job HSE training is carried out at all sites.

**Fatalities**

Since 2005 there have been a total of 10 fatalities of Novartis Group company associates, of which 9 have are related to traffic incidents while traveling on public roads for business. In 2005, two road fatalities occurred in Indonesia and the Czech Republic; in 2006, two fatalities occurred in Indonesia; in 2008 one fatality occurred in Pakistan; in 2010, two fatalities occurred in Germany and China; and in 2011 two fatalities occurred in Ukraine and in the U.S. In 2007, 2009, and 2012 there were no work-related road fatalities of Novartis associates. However, in 2012, we recorded one road fatality for a third party sales representative in Finland. Also in 2012 we recorded the first fatal industrial accident at Novartis, in India. We recognize the importance of safety at work and when an associate is on the road for Novartis. A comprehensive driver safety campaign with guidance on how to reduce the number of traffic-related accidents, as well as increased level of driver safety training is being rolled out worldwide.

**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 the following:
- 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 2012, the Novartis Group TRCR (including Alcon) was 0.45; down from 0.61 in 2011.

**Occupational injury**

During 2012, a total of 534 Group company associates suffered work-related injuries. Of these, 167 (2011: 211) 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, which together account for 56% of occupational injuries with lost time.

**Occupational illness**

Novartis sites reported a total of 33 occupational illnesses in 2012 (2011: 61). Of these, 9 (2011: 13) led to days off work (integrated into the LTIR; representing 5% of the total lost time cases). There were no recorded chronic poisonings, as a result of the existing preventative health protection strategy of Novartis with regards to handling of potentially hazardous substances.

The most prominent work-related health issue remains musculoskeletal disease, accounting for 73% of the cases in 2012 (2011: 91%). Six cases led to time off. We also had five accounts of occupational skin disease with one person having to have time off due to an allergic reaction (2011: 3 cases, 1 with lost time). There were also three cases of occupational mental ill health, two of which resulted in lost time (2011: 2 cases, 1 with lost time).

Health and Safety statistics are presented for the Novartis Group as a whole on our website. The following table presents selected key health and safety performance figures for continuing operations by region. Please note that the table below contains several restatements that have been made since the publication of the Health data in the Annual Report and on our website:
### Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Total injury &amp; illness cases</th>
<th>Fatalities</th>
<th>Total cases with lost time</th>
<th>Total lost time days</th>
<th>Total working hours</th>
<th>TRCR*</th>
<th>LTIR**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>228</td>
<td>0</td>
<td>94</td>
<td>1,657</td>
<td>93,188,518</td>
<td>0.49</td>
<td>0.20</td>
</tr>
<tr>
<td>North America</td>
<td>209</td>
<td>0</td>
<td>30</td>
<td>474</td>
<td>59,014,122</td>
<td>0.71</td>
<td>0.10</td>
</tr>
<tr>
<td>Latin America</td>
<td>39</td>
<td>0</td>
<td>18</td>
<td>607</td>
<td>12,647,539</td>
<td>0.62</td>
<td>0.28</td>
</tr>
<tr>
<td>Asia</td>
<td>59</td>
<td>1</td>
<td>15</td>
<td>561</td>
<td>58,724,510</td>
<td>0.20</td>
<td>0.05</td>
</tr>
<tr>
<td>Middle East &amp; Africa</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>81</td>
<td>5,069,779</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>Oceania</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>10</td>
<td>34,797,776</td>
<td>0.96</td>
<td>0.48</td>
</tr>
<tr>
<td>Region not defined</td>
<td>23</td>
<td>0</td>
<td>12</td>
<td>177</td>
<td>23,461,272</td>
<td>0.20</td>
<td>0.10</td>
</tr>
<tr>
<td>Total</td>
<td>569</td>
<td>1</td>
<td>177</td>
<td>3,567</td>
<td>253,349,560</td>
<td>0.45</td>
<td>0.14</td>
</tr>
</tbody>
</table>

* TRCR: Total Recordable Case Rate
** LTIR: Lost Time Injury & Illness Accident Rate

### Occupational injury to third party personnel

Beyond its Group company associates, Novartis recognizes its responsibility to promote the health and safety of third party personnel.

Third party personnel 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.

Novartis employed nearly 12,500 people as third party personnel during 2012. There were 145 occupational injuries among this group. Of these, 46 resulted in lost time. There was one fatality among third party personnel in 2012 caused by a traffic accident.

Since 2011, Novartis also records the hours worked for third party personnel in order to calculate an LTIR and a TRCR for this population. This allows comparisons with Novartis associates. As for our own Group company associates, any accident is rigorously investigated in order to reduce the total number of work-related accidents. Please refer to the table below to see third party personnel health and safety performance in previous years.

Health and Safety section of the Novartis HSE Report 2012 (page 5):

Dedicated to safety section of the Novartis Corporate Responsibility Website:
LA8 (Core): Education, training, counseling, prevention and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases
Since 2002, Novartis provides preventive care, diagnosis, treatment and counseling services against HIV/AIDS, tuberculosis and malaria for Novartis Group Company associates in developing countries, as well as their immediate family members (nuclear family). This program is being tailored to eventually include all associates working in countries with insufficient health insurance.

Be Healthy workplace health and well-being promotion
Launched in 2011, Be Healthy is the first Novartis company-wide health and well-being initiative for the benefit of Novartis Group associates. This initiative builds upon a tradition of providing health and well-being programs for Group company associates at Novartis. The health and well-being of associates is a top priority for the Novartis Group and a natural extension of the company purpose to “care and cure.”

At Novartis a particular focus is placed 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 Group company 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 in each of four main pillars:
- Move – Exercise
- Choose – Healthy eating
- Know – Importance of knowing your basic health numbers
- Manage – Support to help associates manage their health at work

Novartis Group Company associates also participate in Be Healthy Celebration Week in September of each year. This is a week-long celebration of health and well-being that includes key aspects of Be Healthy such as free exercise classes and health screenings. In 2012, Celebration Week was September 10–14.

Be Healthy has a broad reach within Novartis. In 2011, 76 of the largest Novartis sites across 32 countries were involved which means that the initiative reached 80% of affiliates’ associates. In 2012, the initiative was expanded to 100 additional sites and reached 95% of associates across more than 50 countries.

Be Healthy section of the Novartis Corporate Responsibility Website:

LA9 (Additional): Health and safety topics covered in formal agreements with trade unions
On an EU level, Novartis does not have any health and safety topics covered in formal agreements with trade unions, nor with Novartis Employee Representative Councils. Yet, on country level, there are various legislations involving either internal Employee Representative Councils and/or Unions for HSE topics. For instance for the Basel/Rhinevalley, Novartis holds consultation processes and commissions with Employee Representative Councils on various HSE topics.

TRAINING AND EDUCATION
LA10 (Core): Average hours of training per year per employee 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, we cannot report this information on a global level for all employees. Various trainings on compliance topics are offered to 100% of Novartis associates. For other trainings, it is estimated that each associate spends 3 days of training per year on average.
LA11 (Additional): Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

- Corporate Learning provides 18 courses for approximately 6,000 Novartis Group Company associates each year as part of formal leadership skills/career management at the company including China and Russia Universities and a LatAm Learning Initiative. Additionally, Novartis operates a global talent management system (TMS) used for career and talent management. Approximately 50,000 associates have a profile in TMS, of which approximately 28,000 undergo organizational talent reviews and are assigned a potential or learning agility sustained performance rating in the system. In order to improve in their current role and prepare for the next one, all other associates maintain their development plans (training and development needs) in a performance management system as part of the annual Novartis performance management process.
- Each operating unit and/or country operation offer relevant learning programs (internal and external) to contribute to the employability of associates, which are too numerous to mention here. Many Novartis country or business operations offer some form of sabbatical program, particularly in our major operating sites.
- All Novartis operations provide severance pay, placement services or transition assistance in compliance with the regulatory or collective bargaining agreement requirements, with many operations providing more than the required minimum.

LA12 (Additional): Percentage of employees receiving regular performance and career development reviews

The Performance Management Process which includes annual objective setting, mid-year review and year-end review applies to permanent Novartis Group Company associates who are not on leave or have separated from their Group Company employer. Compliance monitoring shows 91% of associates worldwide have completed the process in 2012. Development areas are identified and discussed in the mid-year and year-end review discussions.

DIVERSITY AND EQUAL OPPORTUNITY

LA13 (Core): Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity

Board of Directors
- Male: 83%
- Female: 17%

Corporate Executive Group (CEG)
- Male: 80%
- Female: 20%

At least 153 different nationalities are represented at Novartis. Minorities cannot be reported globally due to a lack of standard or global definitions and dimensions for minority.

LA14 (Core): Ratio of basic salary of men to women by employee category

- Ratio of basic salary of men to women at executive level: 1.09
- Ratio of basic salary of men to women at management level: 1.03
- Ratio of basic salary of men to women at non-management level: 1.02
Product Responsibility

Our product safety efforts are based on the notion that more is better. Layers of safety expertise and diligent review across the company help ensure that we check and recheck our assumptions and experiences with the products we hope to bring to market and those already in use.

We are dedicated to learning everything we can about new medicines – and acting upon this learning. Our willingness to continually refine product safety approaches flows from our commitment to act responsibly and in the best interests of all those we serve.

CUSTOMER HEALTH AND SAFETY

PR1 (Core): Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures

Novartis is working to ensure the safety of the products it markets and those still in development. Safety expertise and diligent review across the company help ensure we check our assumptions and experiences with products we hope to bring to market and those already in use. These efforts are accompanied by senior executive boards that regularly review safety and risk-related issues for all products. These boards are not required by law.

In the Pharmaceuticals division, as in all other Novartis divisions, a Portfolio Stewardship Board (PSB) implements appropriate (safety) risk management processes for marketed drugs and those still in clinical 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, performance of benefit-risk assessments, development of appropriate risk mitigation measures and their implementation as well as monitoring and auditing the implementation of these risk mitigation measures. It is chaired by the Chief Medical Officer and reports to senior management in the Pharmaceuticals division through the Development management. Reviews are triggered by new data requiring a re-assessment 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.

Closely linked to this effort are the Signal Detection (SigDet) Board and the Medical Safety Review Board (MSRB), both of which are chaired by the Chief Safety Officer. The SigDet Board includes experienced managers from drug safety and provides an independent, annual review of the safety profile of each drug starting in early stages of clinical development and continuing after the drug is available on the market. It also conducts ad hoc reviews when new safety data becomes available and escalates any safety issues with a potential impact on the benefit-risk assessment via a defined escalation procedure for review by the PSB. The Medical Safety Review Board (MSRB) brings together senior-level expertise that includes drug safety, safety operations, clinical research, biostatistics, epidemiology, legal affairs and more functions, including preclinical, as required. It ensures that the safety risks of each drug are appropriately addressed from early in clinical development to the end of a product lifecycle through detailed review of the risk management plan and also escalates issues impacting the benefit risk profile to the PSB.

By implementing safety risk management as part of the development process – and reporting and investigating adverse events with marketed products on an ongoing basis across Novartis – these boards cooperate and ensure early identification of safety signals. 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.

Drug safety data can come from many different sources. Two key sources are pre-marketing clinical trial data and post-marketing pharmacovigilance reports. Clinical trials are controlled scientific explorations seeking to answer specific questions or confirm hypotheses about how a drug will work in a specific patient population. These studies provide critical information for a company’s regulatory filings for approval of a potential new medicine. A more complete understanding of the safety profile can emerge over time, once a product is approved for marketing and becomes available to thousands or millions of patients around the
world. Post-marketing pharmacovigilance plays an important role in developing a deeper understanding of benefits and risks.

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 regulatory authorities, physicians and, where necessary, also indirectly to patients. With increasing frequency Novartis conducts specific studies after regulatory authority approval of a product to address safety questions that could not be conclusively answered during the pre-approval clinical development process.

**PR2 (Additional): Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services, by type of outcomes**

Novartis tracks incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products on country and functional levels. In quarter four 2012, Novartis implemented a fully configurable Enterprise Quality Incident – and Corrective and Preventive Action – Management System which defines, tracks, manages and reports on all critical quality and compliance incidents. The system allows Novartis to centralize processes into a single, integrated system to help us achieve compliance by integrating related events and actions, automating workflow, and facilitating trending and reporting. Analysis of trends allows Novartis to determine areas of greatest need for mitigating actions, increased awareness or further training. Metrics are produced on a regular basis, reviewed by senior management and measures are taken in the event of unfavorable trends. The availability of a centralized trending and reporting facility has enabled Novartis to develop lessons learned so that learnings can be shared across the organization with the objective of addressing similar needs and preventing non-compliance.

**PRODUCT AND SERVICE LABELING**

**PR3 (Core): Type of product and service information required by procedures, and percentage of significant products and services 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 to Novartis and 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, be implemented in the local product information where the product is registered and be updated or amended when appropriate.

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

**PR4: Total number of incidents of non compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes**

Affiliated companies are responsible for complying with local laws and regulations regarding labelling. In addition, Novartis Pharma has a Product Information Policy and Standard Operating Procedures to ensure that affiliated companies implement labelling updates and amendments received from headquarters in their local labelling texts within defined timelines. Compliance with this policy is continuously monitored. Identified cases of non-compliance are followed up and corrected as appropriate. Global figures of non-compliance are not available.

**PR5 (Additional): Practices related to customer satisfaction, including results of surveys measuring customer satisfaction**

Novartis monitors customer satisfaction in a number of ways.
- In 2012, we measured customer satisfaction and retention using an improved methodology across all divisions (Primary and Specialty Care, Oncology, Vaccines, OTC, Alcon, Sandoz) involving key stakeholders of the healthcare system (physicians, pharmacists, nurses, consumers, retailers/wholesalers) in 16 strategically important markets.
The methodology involved more than 7000 quantitative interviews in 2012 to assess how users/customers perceive Novartis vs. main competitors. Performance across divisions is measured and benchmarked with the previous wave and with competitors on several attributes and adapted for each stakeholder group.

Survey results are shared internally at divisional level and subsequent action plans developed. Results are also integrated in the balance scorecard, i.e. the performance measurement system of senior management members, and progress is reported on an annual basis.

In addition to this unified approach, Novartis has several initiatives by country, therapeutic area and target audience. Each of these initiatives generates customer satisfaction metrics, used to build action plans and set local targets, per brand, per audience.

In the United States, for example, we measure physician perception and satisfaction with our sales force both through internal and external surveys. For major markets Novartis monitors physicians’ perception of sales force quality as compared to competitors. We also use external syndicated industry reports to measure physician satisfaction with the quality of our sales force versus the industry average.

Payer perceptions are monitored on a country-by-country basis. In the United States for instance, payer perceptions are monitored via syndicated research (available for purchase annually) for which the supplier publishes abstracts. Metrics include: pricing flexibility and most valued programs.

Novartis also conducts an internal reputation survey to identify key reputation dimensions and drivers across multiple external stakeholder groups in our most important countries, developed and emerging.

Results of surveys measuring customer satisfaction are confidential.

MARKETING COMMUNICATIONS

PR6 (Core): Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship
Novartis has implemented the IFPMA (International Federation of Pharmaceutical Manufacturers and Associations) Code of Pharmaceutical Marketing Practices. In addition, each Novartis Division that sells and markets products has a sales and marketing practices code. The Novartis Pharmaceuticals Division has had a global policy in place since 2002 on interaction with healthcare professionals since 2002 (Novartis Pharmaceuticals Principles and Practices of Professionals, NP4). NP4 and the other Novartis divisional equivalents are an integral part of the Novartis Group-wide Compliance Program. The divisional policies are updated as appropriate and as relevant industry codes, laws or regulations evolve.

Training on marketing practices is provided online and face-to-face.


PR7 (Additional): Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes
Novartis regulates both promotional and non-promotional practices through its internal policies. 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 (including e-learning), monitoring of existing controls and internal audits.

Incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, are handled at the country level.

The Policies, together covering all Novartis businesses, are as follows:
- 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)
- Diagnostics: Novartis Diagnostics Principles and Practices for Professionals Policy (DP4)
CUSTOMER PRIVACY

PR8 (Additional): Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data

In 2012, Novartis has continued to strengthen its data breach protection, counter measures and investigative capabilities. This is a continuous strategy to ensure data privacy of personal information.

Novartis has a Group-wide information privacy program in place to support the divisions and countries in complying with local privacy laws and regulations and to ensure the compliance of cross-border projects, including international data flows in connection with global databases, systems and outsourcing activities. Novartis has in addition established Binding Corporate Rules (BCR), an instrument provided by the European law, to govern data protection within a group of companies and to ensure effective compliance, in particular relating to transfers of data outside of the EEA and Switzerland.

A global privacy organization and infrastructure is in place and has implemented a Group data privacy program to address privacy and data protection issues globally. The global privacy organization includes privacy officers and coordinators at global, division, country, function and company level.

The particular challenges include compliance with an ever increasing amount of new and changing laws and regulations worldwide, including trends toward global enforcement, increasing international data flows due to centralized systems and outsourcing business processes as well as the use of new technologies including cloud computing, social media, mobile devices, data mining and tracking technologies.

Group Data Privacy has established the global Novartis Guideline for Data Security Incident Response and Breach Notice in 2009. This guideline is applicable to and must be implemented by all companies that process personal information. The guideline includes the obligation to report relevant incidents following a specific procedure. The incident reporting and handling process is aligned with Group Information Governance and Management.

Group Information Governance and Management runs an incident handling process intended to cover all information security related incidents across all Divisions of Novartis, including potential data privacy related incidents/breaches in line with the SOP for handling data security incidents involving personal information.

COMPLIANCE

PR9 (Core): Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

A summary of significant legal proceedings to which Novartis or its subsidiaries are a party or were a party and which were concluded in 2012 is available from: 2012 Novartis 20-F Report, pF-59-pF64
SOCIETY
We are an integral part of the communities that host our operations. We strive to provide our associates with the safest possible workplace, and to promote their health and well-being. We pay a living wage worldwide, contributing to the stability and prosperity in communities where we operate.

Novartis supports local communities through volunteerism and philanthropic activities. Our major local-volunteer activity is our Community Partnership Day which provides an opportunity for our associates to express their personal commitment to corporate responsibility.

COMMUNITY
SO1 (Core): Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting
We strive to make efficient use of natural resources and to minimize the environmental impact of our activities in communities where we operate. Novartis monitors the purchase and use of all types of energy and fuels. Further, we monitor water streams into and out of our sites, as well as types of water use.

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 2012, 25,000 associates took part in the Community Partnership Day. Activities have 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.

Disaster relief is also part of our corporate responsibility 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 the underwriting of cultural events and sports teams.


Examples of our programs and practices on communities include:

- Novartis is the first multinational company to have implemented a living wage for all associates. This is an opportunity to contribute to the improvement of labor standards, and to have a positive impact on the communities where the company operates. Such concerns have gained added urgency as Novartis and other leading pharmaceutical companies have stepped up activities in developing countries, where legal protections for workers usually aren’t as advanced as 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.

- Novartis Argentina established a permanent drug donation program to offer free counseling, medical advice and medicines, allowing even the poorest members of society a chance to keep themselves and their families healthy and move toward self-sufficiency.

- Novartis has sponsored a mobile clinic that travels to remote areas of Brazil to provide diagnosis and treatment for leprosy patients who otherwise would not receive therapy.

- Alcon collaborates with Optometry Giving Sight (OGS) on a “train the trainer” program to help solve the shortage of qualified eye care trainers in India. We measure both the number of eye care trainers having gone through the course and their success in helping create additional eye care providers once...
they have been trained. In other programs, such as Kids Vision For Life, measures include numbers of children screened in each location and eye glasses dispenses – along with the referral of more serious cases that were detected to an ophthalmologist. Additionally, we also assess the programs on the involvement of other community non-profits and service providers to make each area's program sustainable.

- Novartis France is working to take into consideration the family members who are closest to patients in everyday life. Research and education in proximology hold promise for improving patients' health outcomes, compliance, and preventive care as well as helping alleviate the economic burden of chronic diseases.

- In 2007, Novartis started Arogya Parivar (“healthy family” in Hindi), a for-profit social initiative to reach the underserved millions in rural India. The program offers health education, treatment options and prevention, as well as increases access to affordable medicines. In local communities, health educators, usually local women, raise awareness about disease and prevention, and refer people to doctors. In three years, Arogya Parivar has had 550,026 referral cards returned, translating to more than 550,000 people visiting a physician for follow-up care.

- 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 they have in stock once a week, and this data is brought together centrally, where it is used to generate reports for district medical officers to manage their stock and put orders in for malaria medicines where needed. SMS for Life was first introduced in Tanzania and is currently being rolled out in several other African countries. Tracking of tuberculosis and leprosy medicines as well as the inclusion of Rapid Diagnostic Tests (RDT) were also added to the program.

**CORRUPTION**

**SO2 (Core): Percentage and total number of business units analyzed for risks related to corruption**

100%, all operational reporting units (approx. 388 units) undergo a financial risk assessment to ensure compliance with internal and relevant external financial standards and regulations. A revised Code of Conduct containing a strong and clear prohibition of any form of bribery/corruption was launched in 2011 globally to all associates and a new Anti-Bribery policy was launched in spring 2012.

**SO3 (Core): Percentage of employees trained in organization’s anti-corruption policies and procedures**

In 2012 a new anti-bribery policy and 3rd party due-diligence guideline was launched. Novartis associates on all levels were trained intensively. Special focus was given to associates with customer-facing positions. A respective e-Training course was rolled out in 2012/2013. So far, 89’254 associates have been enrolled to the training. In addition, the 2012 Code of Conduct training module included an anti-bribery case completed by 98’175 associates.

**SO4 (Core): Actions taken in response to incidents of corruption**

- Cases of misconduct reported: 1675
- Dismissals/resignations (related to misconduct): 426

Ensuring that our standards of ethical business conduct are put into practice is achieved through an integrated approach to decision-making, the establishment of a system for handling complaints and through our ongoing monitoring and reporting procedures.

We support an open culture in which employees are required to report violations and are protected from retaliation or penalties. We believe this is key to deterring and preventing misconduct, and provides associates with the confidence that action is taken. Violation of Novartis standards may result in disciplinary action, including dismissal.

In 2005, we established the Business Practices Office to provide the company with a formalized system for dealing with complaints of actual or suspected cases of misconduct. The Business Practices Office offers
employees and external stakeholders a channel through which grievances and allegations can be submitted, without fear of reprisal or penalty. All complaints are investigated and substantiated cases are brought up to management so that appropriate action can be taken.

The Business Practices Officer (BPO) provides a rich source of information in order to identify trends, document lessons learned and propose process changes or new training courses to prevent misconduct in the future.

As part of our commitment to foster an open culture, processes guaranteeing confidentiality and non-retaliation have been implemented to help employees report allegations of misconduct. Integrity telephone lines have been introduced in 115 countries granting employees the option of reporting allegations in 42 languages. Confidential messages can be left for the BPO, who endeavors to respond within 72 hours. The BPO generally aims to turn around each case within 8 weeks.


PUBLIC POLICY

SO5 (Core): Public policy positions and participation in public policy development and lobbying

Novartis endeavors to play an active role in public policy debates affecting its business. We believe it is our responsibility to share our perspective, scientific knowledge and technical expertise by providing fact-based information to policymakers and regulatory authorities.

We strive to engage in constructive collaboration with government and other stakeholders to increase access to the best medicines and to health information globally, while preserving incentives for research and innovation through competitive pricing.

Much of this work is done through trade associations, which can be a powerful vehicle for raising standards across industry and an effective forum for the exchange of best practice.

In our lobbying and advocacy activities – as in all other areas of our business – we are governed by the Novartis Code of Conduct and we strive for integrity, openness, transparency and consistency in our business activities.

We have issued public policy positions on the following topics:

• Access to medicines in the developing world
• Animal research
• Biodiversity/Bioprospecting
• Biosimilars science based approval and market access
• Competitive off-patent markets
• Counterfeit medicines
• Disclosure of clinical research information
• Ethical promotion of pharmaceuticals
• Responsible substitution
• Genetic testing (Employment)
• Harmonization of HTA methodology and processes
• Harmonization of Regulatory Requirements for Biosimilar Development
• Health Technology Assessment
• Human rights
• Information to patients
• Interchangeability of Biosimilars
• Naming requirements for Biosimilars
• Nanotechnology-based medicine
• Organ transplantation
• Patent pools for pharmaceuticals
• Patient group interaction and support
• Pharmacovigilance for Biosimilars (Post-marketing surveillance)
• Pharmaceuticals in the environment
• Pricing of Biosimilars
• Safe harbor exemption (Bolar provision)
• The Right to Health

These positions are available at: http://www.novartis.com/corporate-responsibility/resources/positions.shtml

In addition, in line with our commitment to transparency, we are registered on the European Commission’s Register of Interest Representatives: https://webgate.ec.europa.eu/transparency/regrin/welcome.do
This voluntary-based self-regulation system established by the European Commission is supported by a register for interest representatives and is linked to a code of conduct. As a registrant, Novartis is committed to:
• publishing an estimate of the costs associated with direct lobbying of the EU institutions incurred by in-house lobbyists
• subscribing to the Commission’s Code of Conduct or a comparable professional code

SO6 (Additional): Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country
In 2012, Novartis spent USD 25.2 million in support of major international, American and European trade associations.

In 2012, contributions from Novartis political action committees to US Federal and State candidates amounted to USD 350,782.83.

ANTI-COMPETITIVE BEHAVIOR
SO7 (Additional): 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 2012 is available from: 2012 Novartis 20-F Report, pF-59-pF64

COMPLIANCE
SO8 (Core): 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 20,363 in fines for minor HSE violations in 2012.

Access to medicines in the developing world

Access to our medicines clearly favors people who live in affluent, developed societies. To help close that access gap, Novartis has developed programs to enhance access and affordability of treatments for diseases that are curable with modern medicines, but still continue to destroy lives. Responsibility must be shared, however, and each sphere of society has a role to play.

Read our position on Access to medicine in the developing world

2012 Novartis Annual Report, p73

Animal research

Animal research is an essential part of modern drug and medical therapy research and development. 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.

Read our position on Animal Research

Please refer to the Novartis Website for further details: 

Disclosure of clinical research information
Any new medication that is developed has to prove in clinical trials that it is safe and effective. Clinical studies in humans have to comply with ethical principles that protect the safety and well-being of the study subjects, as laid down in the Declaration of Helsinki¹ (DoH).

Providing access to information about clinical research studies and their results serves study participants, patients and their healthcare providers as well as the public at large. Such information can help people to make informed decisions about their potential participation in a clinical study.

Publication of results in biomedical journals allows researchers to receive credit for their scientific work and enables the scientific community to assess, correct and further develop these results.

Read our positions on Disclosure of clinical research information and Information to patients

Please refer to the Novartis Website for further details: http://www.novartis.com/innovation/research-development/clinical-trials/index.shtml

Living wages
Novartis is one of the first international companies to develop and implement a voluntary commitment to pay a “living wage” to all its Group Company employees around the world. As an initial step, Novartis commissioned the consulting firm Business for Social Responsibility (BSR) to establish a methodology to calculate living wage levels. Using those BSR calculations as a starting point, Novartis 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 certain 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 2012, there were no cases of employees with wages below the living wage (17 in 2011; 24 in 2010; 0 in 2009; 3 in 2008; 11 in 2007; 21 in 2006; 93 in 2005).
**ADDITIONAL TOPICS**

**Human rights**

For Novartis, respect for human rights is an essential ingredient of good management. As a responsible corporate citizen, we aim to exert an enlightened presence wherever we operate.

We do everything in our power to ensure that we are not complicit in any violations of human rights – whether these are civil, political, economic, social or cultural in nature.

As well as actively avoiding involvement in the abuse of human rights, we share the notion that companies – within a fair societal division of responsibilities – also have a role to play in promoting human rights, such as the right to an adequate standard of living.

As well as being a signatory of the UN Global Compact, Novartis is one of the few multinational corporations to have developed a guideline on human rights. This sets out our human rights commitments and responsibilities and is implemented through normal management procedures.

Through the work of the Novartis Foundation for Sustainable Development, we have taken a leadership role in helping to define the part business can play in protecting and promoting human rights, particularly with regard to the right to health.

We are involved in pioneering efforts to apply the concept of a living wage across our worldwide operations. Together with institutions like the Danish Institute for Human Rights (DIHR), the International Business Leaders Forum (IBLF), and the International Finance Corporation (IFC), we are helping to develop new tools for mainstreaming human rights into business and assessing corporate impacts.

Read our position on The right to health

Read our position on Human rights

Read the article on corporate responsibility for human rights by Klaus M. Leisinger, who served as the Chairman of the Board of the Novartis Foundation for Sustainable Development (NFSD)

**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.

Novartis 2012 GRI report | October 2013 | 82
- 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 World Health Organization's (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 WHO's International Medical Products Anti-counterfeiting Task Force (IMPACT).

Read our position on Counterfeit medicines

**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.

Read our position on Ethical promotion of pharmaceuticals

Please refer to the Novartis Corporate Responsibility Website for further details:

**Health Technology Assessment**

While health care and HTA systems vary between countries, it is a challenge to identify a single best system. However, we can suggest a set of principles of good HTA practice that reward innovation and encourage health care 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 to deliberate what is best suited 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 consideration poses the danger that it will not benefit the local population. Similarly it is beneficial
if structures, methodologies and processes are reviewed on a regular basis to ensure continued fit for purpose.

Read our positions on:
- Health technology assessment
- Biosimilars: regulatory harmonization

**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 companies 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 information 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.

Read our position on **Information to patients**

**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 pre-clinical and clinical studies have to be provided), adequately mirror the complexity of biologics.
Once approved by a stringent regulatory authority (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.

Read our positions:
- **Biosimilars: science based approval and sustainable market access**
- **Biosimilars: interchangeability**
- **Biosimilars: naming requirements**
- **Biosimilars: pharmacovigilance**
- **Biosimilars: regulatory harmonization**
- **Biosimilars: pricing**

**Organ transplantation**

Novartis has for many years placed a high priority on developing medicines to protect and extend the lives of organ transplant recipients. Transplant surgeons, patients and families alike recognize our pioneering immunosuppressants as essential components in the “gift of life.”

Novartis unequivocally supports and sponsors ethical, legal and non-commercial efforts to promote organ donation and recruit voluntary organ donors. Such efforts should be conducted in accordance with the following, clearly-defined principles: (1) free, uncoerced and informed consent of the organ donor; (2) no exchange of payment for organ donation; (3) 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. In regions where the procurement of donor organs does not fully meet these standards, we are committed to working with local authorities to ensure that these standards are adopted and observed.

Novartis strongly endorses the World Health Organization (WHO) statements on “Human Organ and Tissue Transplantation”\(^1\), which urge member states specifically to protect the poor and vulnerable from transplant tourism and sale of tissues and organs. Novartis specifically condemns all practices for obtaining human organs that do not follow these principles as well as illegal organ trade. Novartis’ policy on organ donation also recognizes the growing importance of organ donation by living donors as an acceptable means to alleviate the shortage of cadaver organs available for transplantation. Support for such altruistic donations also demands the highest standards of protection for the health and human rights of organ donors.\(^2\)


Read our position on **Organ transplantation**

**Patient group interaction and disclosure of support**

Novartis is committed to research and development of treatments for patients with unmet medical need. 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.

Read our position on Patient group interaction and disclosure of support

Biodiversity/Bioprospecting

Biodiversity represents an important source of potential new drugs to Novartis. 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

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.

Read our position on Biodiversity/Bioprospecting
External assurance statements

The bulk of the information contained in this GRI report draws on the information contained in the Novartis 2012 Annual Report which has been assured by PricewaterhouseCoopers AG.

View PwC assurance report on our corporate responsibility reporting in our 2012 Novartis Annual Report, p85
View the report of the statutory auditor on the consolidated financial statements of Novartis AG and internal control over financial reporting in our 2012 Novartis Annual Report, p256-257

REPORT OF THE STATUTORY AUDITOR ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NOVARTIS AG AND INTERNAL CONTROL OVER FINANCIAL REPORTING

TO THE GENERAL MEETING OF NOVARTIS AG, BASEL

REPORT OF THE STATUTORY AUDITOR ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NOVARTIS AG

As statutory auditor, we have audited the consolidated financial statements of Novartis AG and its consolidated subsidiaries (“Novartis Group”), which comprise the consolidated income statements, consolidated statements of comprehensive income, consolidated statements of changes in equity, consolidated balance sheets, consolidated cash flow statements and notes (pages 190 to 254) for the year ended December 31, 2012.

Board of Directors’ Responsibility

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor’s Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards, International Standards on Auditing and the standards of the Public Company Accounting Oversight Board of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity’s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements for the year ended December 31, 2012 present fairly, in all material respects, the financial position, the results of operations and the cash flows in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board and comply with Swiss law.

REPORT ON OTHER LEGAL REQUIREMENTS

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AGA) and independence (article 728 CO and article 11 AGA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.
REPORT ON THE EFFECTIVENESS OF INTERNAL CONTROL
OVER FINANCIAL REPORTING

We have also audited the effectiveness of Novartis Group’s internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The Board of Directors and management of Novartis Group are responsible for maintaining effective internal control over financial reporting and management is responsible for the assessment of the effectiveness of internal control over financial reporting included in the accompanying Report of Novartis Management on Internal Control Over Financial Reporting in this financial report on page 255. Our responsibility is to express an opinion on the effectiveness of Novartis Group’s internal control over financial reporting based on our integrated audit.

We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also includes performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the applicable accounting standards. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the applicable accounting standards, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Novartis Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control—Integrated Framework issued by the COSO.

PricewaterhouseCoopers AG

"Karlheinz" "Michael P. Neilligen"
Audit expert Global relationship partner
Auditor in charge

Basel, January 22, 2013
REPORT OF THE STATUTORY AUDITOR ON THE FINANCIAL STATEMENTS OF NOVARTIS AG

TO THE GENERAL MEETING OF NOVARTIS AG, BASEL

REPORT OF THE STATUTORY AUDITOR ON THE FINANCIAL STATEMENTS OF NOVARTIS AG

As statutory auditor, we have audited the financial statements of Novartis AG, which comprise the income statement, balance sheet and notes (pages 258 to 275), for the year ended December 31, 2012.

Board of Directors’ Responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the Company’s articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor’s Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity’s preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control system. An audit also involves evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended December 31, 2012 comply with Swiss law and the Company’s articles of incorporation.

REPORT ON OTHER LEGAL REQUIREMENTS

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and Independence (article 72B CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 72Ba paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors. We further confirm that the proposed appropriation of available earnings complies with Swiss law and the Company’s articles of incorporation. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers AG

Peter M. Kartscharm
Audit partner
Audit in charge

Gerd Triebach
Audit partner

Basel, January 22, 2013

Notes:


– Italicized product names are Novartis trademarks.