



# Responding to a changing world





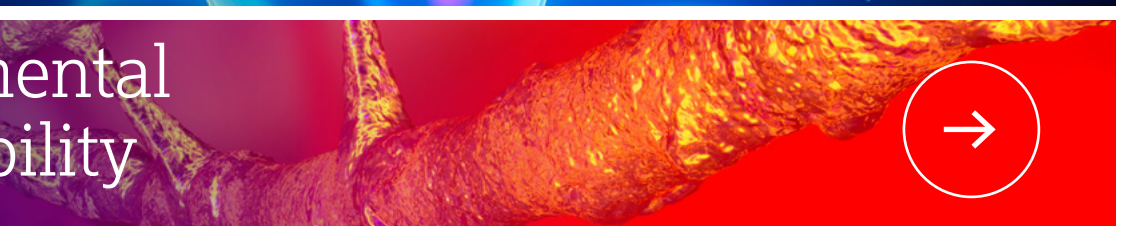




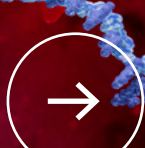
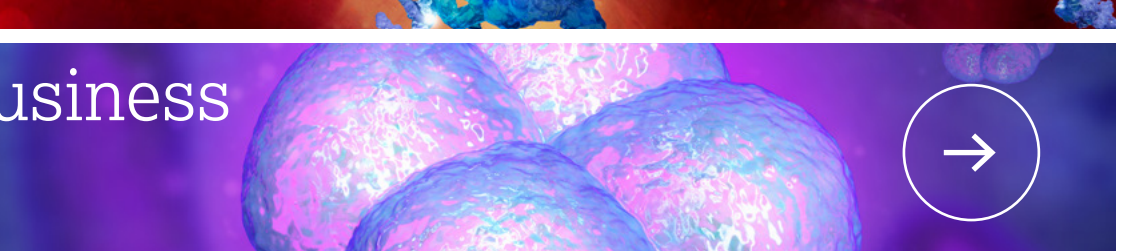

Our sustainability journey

# Introduction

We want to be valued for achieving success in a way that promotes the long-term health of our company, our society and our planet.

This update gives an overview of our commitments to this bigger picture, the progress we have made towards our goals and what we are doing to embed sustainability more deeply into the DNA of our organisation.

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# Sustainability at AstraZeneca

We are a global, science-led biopharmaceutical business. We want to be valued for pushing the boundaries of science to deliver life-changing medicines in a way that promotes the long-term health of our company, our society and our planet.

## 2015 highlights



### Materiality assessment

final phases currently being carried out to further inform our strategy and commitments



### New Safety, Health and Environment (SHE) Strategy

launched, covering 2016–25



### Stronger governance model

and a new, expanded Sustainability Advisory Board

# Chairman's statement

For AstraZeneca, sustainability means implementing our strategy and delivering the targets we have set ourselves in a way that promotes the long-term health of AstraZeneca, the societies in which we work and the planet. Employees and external stakeholders expect it, and AstraZeneca's future ability to get new medicines to patients in the most efficient way depends on it. Moreover, it helps attract and retain talented employees and enhances trust in our business and our reputation. In acting in this way, we not only protect our licence to operate but also deliver value to those who benefit from our medicines: our shareholders, society and the environment.

## A sustainable business

AstraZeneca has been working for over a decade to achieve business success in a responsible manner. For example, we have delivered safety, health and environment improvements and created a diverse workforce; we have promoted the development of our products in an ethical way; and we have taken steps to broaden access to our medicines.

## Achievements recognised

I am pleased to report that, in 2015, we met all our obligations under our five-year Corporate Integrity Agreement in the US, which has now come to an end. Maintaining high ethical standards in the way we conduct our business remains a priority.

Our achievements were once again recognised in 2015 with an improved score of 84% (79% in 2014) in the Dow Jones Sustainability Index. Our score contributed to the Silver Class rating awarded to us for our sustainability performance by RobecoSAM, the respected sustainability investment specialist.

## Strengthening our approach

Looking ahead, if we are to be among the best performers, there is more we need to do. We have refreshed and strengthened our governance arrangements, as outlined in this update, and we are integrating sustainability into how we measure the success with which we are delivering our strategic priorities. We need to build on this by focusing our work and ensuring that sustainability thinking is embedded in our culture and the way we do business.

## Appreciation

Before closing, and on behalf of the Board, I want to thank the employees of AstraZeneca. Their outstanding efforts helped make 2015 a great year for science and patients. I would also like to thank all those stakeholders – particularly the members of our external Sustainability Advisory Board – who have provided the invaluable insight and support that is now shaping our approach to sustainability.

**Leif Johansson**  
Chairman



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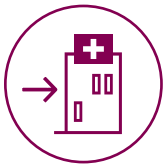
# Our sustainability framework

As a company built on delivering positive health outcomes, sustainability underpins everything we do. As we strive to reach 200 million patients by 2025, we are evolving our approach and developing a roadmap that will further embed sustainability into our DNA. This will ensure we effectively address the most fundamental issues for our business and for society.

Our sustainability framework demonstrates our commitment to operating responsibly, working with integrity and delivering sustainable growth. In 2015, the AstraZeneca Board endorsed an initiative to pursue a clear and prioritised sustainability framework that is closely aligned to the company's overall business strategy.

Our sustainability priorities were initially set in 2013. In late 2015, we initiated a refreshed materiality assessment that includes input from internal and external stakeholders. We are using the assessment to refine our priorities further and confirm our strategy, as we develop a roadmap towards further embedding sustainability into the DNA of our company.

## Our five pillars of sustainability



Access to healthcare	Environmental sustainability	Great place to work	Responsible research	Ethical business practices
<p>Increasing access to healthcare for underserved patient populations in a sustainable way.</p>	<p>Managing our environmental impacts with a focus on:</p> <ul style="list-style-type: none"> <li>• Carbon emissions</li> <li>• Waste</li> <li>• Water use</li> <li>• Product stewardship.</li> </ul>	<p>Building an inclusive, safe and trusting organisation that embraces the skills, knowledge and unique ability of our employees. Supporting them to make a positive contribution to local communities.</p>	<p>Underpinning innovation with sound bioethics worldwide. Maintaining a strong focus on patient safety. Taking responsibility for our medicines throughout research and development, and after launch.</p>	<p>Delivering globally consistent standards of ethical sales and marketing. Working only with suppliers who have standards consistent with our own. Taking a responsible and fair approach to tax.</p>

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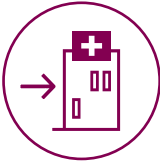







Stakeholder engagement

Global involvement

**Our sustainability goals and progress**

To drive continuous improvement across our business, we set targets that are designed to stretch what we achieve. Over the past year, we have made substantial progress in many areas. In others, we have fallen short of our ambitious targets but we are moving in the right direction. The following table provides an overview of our progress against targets and you can read the full explanation in the detailed sections of our 2015 sustainability update.

**What we have achieved**

Access to healthcare	Our aims	Goals	Progress highlights	Target progress
	Increase access to healthcare for underserved patient populations	Reach one million people through Young Health Programme by 2015	Over 1.4 million young people engaged since 2010	
		Reach 10 million patients across Sub-Saharan Africa with treatment for hypertension (abnormally high blood pressure) by 2025 through Healthy Heart Africa	Over one million patients screened in 2015, exceeding its year one target	
		Screen over 750,000 people in 2015 through Healthy Heart Africa		
<b>Environmental sustainability</b> 	Enhancing our competitiveness through resource conservation and efficiency across our business and supply chain	By 2015, reduce operational greenhouse gas footprint (excluding emissions from patients' use of inhaler therapies) by 20% from 2010 levels	Achieved a 21.2% cut in our greenhouse gas footprint from 2010 levels	
		By 2015, reduce hazardous waste by 15% indexed to sales and reduce non-hazardous waste by 15% indexed to the number of employees	Hazardous waste generation indexed to sales increased 5% against the 2010 baseline, while non-hazardous waste indexed to employees increased 11%	
		By 2015, reduce water use by 25% against 2010 levels	Water use was 3.9 million m <sup>3</sup>  Though we were not able to achieve our ambitious target, we made substantial progress with a reduction of 14% against our 2010 baseline	

**Key**

Target exceeded

Full target achieved

Ongoing progress

Target not achieved, some progress



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**Great place to work**



Our aims	Goals	Progress highlights	Target progress
Build an inclusive, open and trusting organisation that embraces the skills, knowledge and unique ability of our employees	Increase female representation at Global Career Level F and above from 38% (2010) to 41% by 2015	Increased the number of senior managers who are women to 42%	
	Increase female representation in the global talent pool from 33% (2010) to 38% by 2015	We changed our focus from a global talent pool to a succession pool approach  Representation is currently at 39%	
Promote a safe and healthy work environment, and embed international human rights in our operations and our sphere of influence	More than 80% of sites offering six essential health programmes or services by 2015	60% of sites offered six programmes, 84% offered five or more	
	Accidents and illness – 25% reduction in lost time injury/illness rate per million hours worked from 2010 baseline by 2015	46% reduction achieved	
	Driver safety – 40% reduction in collisions per million kilometres driven from 2008 baseline by 2015	55% reduction achieved	
	Make AstraZeneca a great place to work	Achieve target 83% employee survey score for AstraZeneca as a great place to work by 2015	Q4 Pulse survey found 83% of employees identified AstraZeneca as a great place to work
Improve employee perception of the opportunities for personal development and growth in AstraZeneca to 73% by 2015		Q4 Pulse survey found 79% of employees saw opportunities for growth	

**Key**

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress



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**Great place to work (continued)**



**Ethical business practices**



Our aims	Goals	Progress highlights	Target progress
Make AstraZeneca a great place to work (continued)	Deliver further organisational simplification (target: relevant Pulse survey score to be over 60%) by 2015	Q4 Pulse survey found 67% of employees recognised that the organisation has been simplified	
Provide employees with opportunities to develop their skills and careers to create a professional, motivated workforce	All employees have a development plan in place by end Q3 (2015 target was over 95%)	Q3 Pulse survey score showed 87% of employees have had a development discussion	
	All employees to have had at least one quality development discussion with their line manager by the end of Q3 (2015 target was over 70%)	82% of colleagues reported in the Q3 Pulse survey, rising to 87% by the end of the year, that they had had at least one quality development discussion with their line manager	
Ensure ethical business practices and integrity underpin everything we do	All employees to be trained on our Code of Conduct by the end of 2015	100% of employees trained	
	Communicate clear policies to employees	Updated our <u>Ethical Interactions &amp; Anti-Bribery/Anti-Corruption Policy</u> to provide greater clarity and simplicity for the business	
	Ensure employees and other stakeholders can raise concerns and that they are properly addressed	326 reports of alleged compliance breaches or other ethical concerns made through the Code of Conduct helpline in 2015	
	Meet high ethical standards across all our procurement activities and decisions worldwide	Conducted 61 supplier audits in 2015	

**Key**

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress





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### Our new Safety, Health and Environment (SHE) Strategy

In 2015, we finalised a new 2016 to 2025 SHE Strategy to build on our 2010 to 2015 performance. It will ensure we continue to protect the safety and health of our people and do our 'fair share' to protect the planet.

Achieving these targets during a period of expected strong growth will require significant business commitment. We have established a fund for capital projects that can drive substantial improvement in natural resource efficiency.

#### New SHE Strategy targets, 2016 to 2025

##### Eliminate workplace accidents and illnesses

###### Accidents:



75% reduction in total injury rate from 2015 baseline

###### Health and wellbeing:



80% of sites/marketing companies have all four Essential Health Activities<sup>1</sup>

###### Driver safety:



55% reduction in collisions per million kilometres driven

##### Protect natural resources

###### Carbon:



Compared to a 2015 baseline, operational carbon to remain at the same level and reduce overall carbon intensity by 30%<sup>2</sup>

###### Waste:



10% absolute reduction from 2015 baseline

###### Water:



Cap usage from 2015 baseline



90% of active pharmaceutical ingredient (API) syntheses meet resource efficiency targets at launch and establish equivalent targets for biologics

##### Ensure the environmental safety of our products:



Ensure effective environmental management of our products from pre-launch through to product end-of-life

<sup>1</sup> Healthy eating and drinking, tobacco cessation, physical fitness, workplace pressure management.

<sup>2</sup> Carbon target follows the science and uses the Science-Based Target Setting tool developed by the World Resources Institute. Operational footprint = energy and process emissions, business travel, waste incineration, freight/logistics, first tier supply chain energy and patients' use of inhalers. Carbon intensity = CO<sub>2</sub> tonnes/\$m sales.

# Refreshing our materiality process

We operate in an exciting and fast-paced environment. It is vital that we stay ahead of developments and respond effectively. Over the past year, we have been working on a refreshed materiality assessment that will inform our sustainability strategy and roadmap for 2016 and beyond.

Our goal is to ensure that sustainability is effectively aligned to our business strategy and truly embedded in the way we operate and define success. To do that, we need to understand the sustainability issues that are most important to our business and to our stakeholders, so that they help inform our future strategy and roadmap to be launched in late 2016.

Materiality is the principle of defining the social, environmental and governance issues that matter most to our business and our stakeholders. In early 2015, we commissioned an independent think-tank to help us carry out a materiality assessment that would further:

- Inform our priorities and long-term strategy
- Help us connect sustainability directly to our business strategy and operations
- Understand non-financial risks and opportunities
- Meet stakeholder expectations about our approach.

We believe that these elements combined will create long-term value for the business.

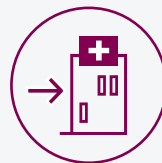
## Relevant sustainability issues

The issues identification process generated 27 issues mapped against AstraZeneca's current categories



### Responsible research

- Product safety and quality
- Bioethics
- Research with animals
- Health outcome contribution
- Clinical trials
- Product counterfeiting



### Access to healthcare

- Health systems development
- Product affordability
- Disease prevention (including antimicrobial resistance)
- Healthcare reform
- Intellectual property



### Environmental sustainability

- Climate change
- Resource efficiency
- Biodiversity
- Pharmaceuticals in the environment



### Great place to work

- Employee retention
- Compensation
- Diversity and inclusion
- Health and safety
- Human rights



### Ethical business practices

- Patient interaction
- Ethical sales and marketing
- Bribery and corruption
- Public policy/advocacy
- Community investment
- Supply chain management
- Fair taxation

**Our analysis consisted of 5 core steps:****Business assessment**

We reviewed key corporate business risks and opportunities through AstraZeneca's risk management framework and assessed the business landscape and external context influencing the operating environment in order to identify emerging sustainability issues.

**Identify and categorise**

Potentially relevant issues were initially identified using a wide variety of sources, including: sector material issues as identified by the Sustainability Accounting Standards Board; performance rankings such as the Dow Jones Sustainability Index and Access to Medicines Index; peer materiality assessments; media, non-governmental organisation (NGO) and government reports; trend analysis; and global frameworks such as the UN Sustainable Development Goals.

A 'long list' of issues facing the industry was consolidated and grouped into relevant categories. This process generated 27 issues of potential relevance to AstraZeneca.

**Validate and prioritise**

Each issue was assessed across several dimensions.

**Business impact** – likely impact on AstraZeneca based on its existing activity.

**Stakeholder concern** – estimated level of interest in the issue as it relates to AstraZeneca among select stakeholders (based on a qualitative review of inputs, media reports, NGO activity, surveys, investor ratings, interviews and monitoring of relevant trends).

**Level of opportunity** – extent to which this issue presents an opportunity to AstraZeneca.

**Degree of influence** – degree to which the company has direct influence on outcomes on the issue.

**Internal and external engagement**

The results of the initial assessment and high-level findings were reviewed by an internal focus group of 13 experts from across key functions who expressed broad support for the list of identified sustainability issues.

Issues were then mapped onto a matrix according to the level of stakeholder interest and potential business impact (see next page). In February 2016, we shared the draft matrix at the inaugural joint meeting of AstraZeneca's internal Sustainability Council and external Sustainability Advisory Board for discussion and validation.

**Develop strategy framework**

Building upon the strong foundations of our existing sustainability framework, we will seek to use the results of the materiality assessment to confirm our priorities and develop a strategy comprised of our vision, goals and targets.

Initial reflections and feedback suggest that our strategic focus on promoting access to healthcare (exemplified by our [Healthy Heart Africa programme](#)) and environmental sustainability (particularly doing our 'fair share' to combat [climate change](#)) will continue to drive and create value for the business, patients and society.

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# Governance

We are committed to operating with integrity and high ethical standards across all our activities. This year, we further developed our governance model to lead the future delivery of our sustainability programme.

**How we govern sustainability**

Our well-established robust governance model helps us deliver, monitor and report progress on the framework across the business.

We have also repositioned the sustainability function within Global Compliance. In early 2016, we recruited a new Sustainability Director to lead the transformation of our sustainability approach across the business.

Over the past year, we have evolved and strengthened our approach. This includes broadening the role of the Sustainability Council to encompass more areas of the business, including the existing Safety, Health and Environment Council. The Sustainability Council is chaired by the Chief Compliance Officer.

**Sustainability framework**

A sustainability framework is embedded in the way we operate.

**Sustainability Advisory Board**

Established in 2015 and will meet twice annually to provide external insight, feedback and advice to help sharpen our understanding of, and responses to, established and emerging sustainability issues. The Advisory Board will also help identify opportunities for further innovation and collaboration.

**AstraZeneca Board**

Non-Executive Director, Geneviève Berger, oversees the implementation of the sustainability framework and reports to the Board.

**Senior Executive Team (SET)**

SET is responsible for the framework.

- Senior managers throughout the Group are accountable for operating in line with the sustainability commitments within their areas, taking into account national, functional and site issues and priorities
- Line managers are accountable for ensuring that their teams understand the requirements and that people are clear about what is expected of them as they work to achieve our business goals.

**Sustainability Council**

The Council is chaired by a SET member, currently Katarina Ageborg, our Chief Compliance Officer. Members comprise senior leaders from each relevant SET function. Its agenda will focus on driving long-term value creation by, among other things:

- Agreeing sustainability priorities for the Group in line with strategic business objectives
- Managing and monitoring the annual process of setting sustainability objectives and targets, as well as reviewing performance against key performance indicators
- Agreeing appropriate policy positions to support our objectives and reputation management.

**Sustainability Working Group**

The Working Group of SET function representatives supports the Council. The Working Group reviews issues with the potential to impact AstraZeneca's sustainability agenda. As appropriate, it prepares proposals for the Council's consideration.

**Stakeholders**

Regular engagement with stakeholders, which takes place with a range of socially responsible investors and other interest groups, provides the opportunity for sustainable issues or concerns to be raised and discussed.

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### Incorporating external perspectives

This year, we expanded the remit of our environment-focused external Sustainability Advisory Board (SAB) to cover the entire sustainability agenda. The purpose of the new SAB is to:

- Provide feedback, constructive challenges, and advice on the full range of issues relevant to AstraZeneca's sustainability agenda
- Provide an external perspective on our sustainability plans and targets, helping to improve and evolve our long-term sustainability strategy
- Forecast trends, emerging issues, challenges and opportunities in national and global contexts, and provide guidance on how to respond to them
- Help AstraZeneca to develop and maintain links with external industry experts.

The SAB includes five world-class thought leaders in their fields, including several who have been instrumental in integrating positive sustainability practices in large organisations. Current external members are:

#### **Pankaj Bhatia**

Deputy Director, World Resources Institute

#### **Polly Courtice**

Director of the University of Cambridge Institute for Sustainability Leadership

#### **José Lopez**

Former Executive Vice President of Operations, Nestlé SA

#### **Mary-Jane Morifi**

Global Capital Campaign Lead, Nelson Mandela Children's Hospital Trust

#### **Jorgen Randers**

Professor Emeritus, BI Norwegian Business School.

# Stakeholder engagement

We believe our long-term success lies in making better, deeper connections with our stakeholders, understanding their worlds and combining forces to achieve common goals. To earn society's trust, we must speak but also listen. The feedback we receive from stakeholders, through both the materiality process and ongoing stakeholder dialogue, informs our sustainability approach, commitments and actions.

We define a stakeholder as any individual or group who can affect, or is affected by, our business. The benefits of dialogue with our stakeholders include:

- Better healthcare solutions – deeper stakeholder relationships will help us come up with creative ways to tackle healthcare challenges
- Better informed stakeholders – information presented as part of a dialogue is more easily digested and understood, helping stakeholders to understand our business
- Better decision-making – listening to stakeholders will improve our knowledge of present and future threats and opportunities, helping us to make good business decisions
- Better reputation – responding appropriately to the changing expectations and concerns of our stakeholders will strengthen our reputation.

## Examples of our stakeholders

Our stakeholders include diverse groups with wide-ranging interests, from the patients who use our medicines to the academic institutions that collaborate with our scientists and the communities in which we operate.



## How we engage with stakeholders

We carry out regular formal and informal engagement with stakeholders through a wide range of channels – from digital to face-to-face dialogue – to understand their views and concerns.

Through a multi-stakeholder engagement approach, we identify systematic activities to create opportunities for interaction with groups of our stakeholders. We continue to use feedback from our various stakeholder dialogues to make sure that appropriate considerations are being included in our strategy development and risk management planning.

All our relationships and engagement, including with patient groups and other healthcare organisations, are based on transparent and shared objectives to improve the lives of patients.

Our global policy on [Ethical Interactions & Anti-Bribery/ Anti-Corruption Policy](#) underpins our approach to stakeholder engagement. You can read more about how we enable stakeholders to raise concerns with us in our [2015 ethical business practices](#) update.

**We are currently refreshing our Stakeholder Engagement Strategy as part of our future sustainability strategy and roadmap for 2016 and beyond. We will communicate this, along with details of our key stakeholder groups and engagements, in our 2016 sustainability report.**

### Our work with patient groups

Patient groups are independent organisations that provide advice and support to patients and their families and other caregivers. Staying in touch with their changing needs is vital to our aim of making the most meaningful difference we can to patient health. We continually talk to patient groups, organisations and physicians to understand what they need and want.

We support patient groups that address diseases and therapeutic areas in which AstraZeneca is active, but we never link financial support to the promotion of our medicines.

In Europe, the UK and Sweden, we make public all our relationships with patient groups. In the US, we publish our contributions to patient groups and other healthcare organisations, and our grants in support of independent medical education on our website. You can find out more [here](#).

### Responsible partnering

We partner with other organisations to promote access to the best science, and to stimulate innovation for the delivery of new, life-changing medicines. We are always looking for business development opportunities that support our vision and help deliver our business strategy. Our current focus is on:

- Increasing early-stage research and academic partnerships
- Exploring opportunities to create value for society with our peers
- Pursuing partnering, in-licensing and bolt-on acquisitions to strengthen our core therapy area portfolios.

Ensuring these partnerships are transparent and uphold our high ethical standards is vital to our reputation. When making new acquisitions and developing partnership opportunities, sustainability is integral to our due diligence process. We assess all projects against our 5Rs evaluation criteria: Right Target, Right Tissue or Exposure, Right Safety, Right Patients and Right Commercial. We also consider ethical conduct in sales and marketing, safety, environmental management and other sustainability issues – including the historical liabilities of potential partners and the practices they currently have in place. This way, we ensure that we only take forward the most attractive and sustainable opportunities.

# Global involvement

Our involvement with sustainability initiatives, benchmarking and indices on a global scale is integral to delivering our sustainable business commitments.

## Delivering the UN Sustainable Development Goals

Nothing is more important to AstraZeneca than contributing to a healthy society and a healthy planet. For that reason, we are committed to supporting the delivery of the new UN Sustainable Development Goals (SDGs). SDG Goal 3 to 'ensure healthy lives and promote well-being for all ages' is of particular importance and relevance to our core business.

While we are in the early stages of aligning the SDGs with our longer-term commitments, the outline below offers some examples of how the SDGs align with our current programmes.



The Young Health Programme is our global community investment initiative. It has a unique focus on young people and primary prevention of the most common non-communicable diseases (NCDs). We have engaged over 1.4 million young people through our Young Health Programme since 2010.

Healthy Heart Africa (HHA) is our flagship access to medicines programme. Through HHA we are helping to tackle a silent killer in parts of the world where access to healthcare is at its lowest. Over one million patients were screened for hypertension through Healthy Heart Africa in 2015.

We currently run affordability projects in countries across Latin America, the Middle East and Africa, Asia Pacific and the US. [Read more](#)



We are proud of our industry-leading work to understand, avoid and manage any risks associated with the presence of trace amounts of pharmaceuticals in waterways.

At the start of 2015, we initiated a €10 million partnership with the European Commission under the Innovative Medicines Initiative (IMI). This project – called Intelligent Assessment of Pharmaceuticals in the Environment (iPiE) – aims to develop screening tools for identifying the environmental risks both earlier on in drug development and for older medicines.

[Read more](#)



We take a whole life-cycle approach to minimising the environmental impacts of our products.

In 2015, we selected five products for full Life Cycle Analysis that we believe provide a useful representation of the breadth of our portfolio. We focused on five key impact areas – climate change, water depletion, ecotoxicity, ozone depletion and resource depletion. The results of these assessments are now informing where we should focus our efforts to have the biggest effect in reducing our environmental impact. [Read more](#)



In 2015, our Sweden operations completed an ambitious Air2Sea project, which saw sea freight established to 13 countries. Switching to the transport of goods by sea achieves a massive 97% CO<sub>2</sub> saving compared with air transport. This is just one example of how we are working to ensure we do our fair share to reduce and mitigate against the impacts of climate change. [Read more](#)



We believe partnership is essential in working towards a more sustainable world. We are members of the United Nations Global Compact. In setting our new carbon reduction targets, we followed the Science-Based Target Setting tool developed by the World Resources Institute (WRI), World Wildlife Fund (WWF) and Carbon Disclosure Project (CDP). [Read more](#)



## Benchmarking and reporting Dow Jones Sustainability Indexes

In 2015, we were once again listed in the Dow Jones Sustainability World Index, which lists the top 10% of the largest 2,500 companies based on economic, environmental and social criteria.

We were also one of only four pharmaceutical companies out of 14 assessed to retain our listing on the DJSI STOXX – European Index, placing us among the top 20% of the 600 largest European companies for the eighth year running.

Our total score of 84% (2014: 79%) compared with a sector-best score of 88% (2014: 87%), and we increased our individual scores for 14 out of 24 criteria in 2015. We lost ground in some areas and have commissioned an in-depth external benchmark survey to understand these lower scores and identify ways we can improve in these areas.

### Access to Medicine Index

Published every two years, the Access to Medicine Index independently ranks pharmaceutical companies' efforts to improve access to medicine in developing countries. In making its assessment, it analyses patient access programmes, research and development investment in relevant diseases, intellectual property, pricing, compliance and clinical trial transparency.

The latest Index was published in November 2014 and AstraZeneca was ranked 15 out of 20 companies assessed, up one place from in the previous Index in 2012.

We improved in several areas, including our commitment to equitable pricing and strong clinical trial codes of conduct. Management of access-related performance was identified as an improvement area.

We are currently reviewing our performance in this important Index to understand how we can improve through greater transparency and through specific initiatives to enhance affordability and access to AstraZeneca medicines.

“

**As one of the top-scoring companies in the pharmaceutical industry, AstraZeneca PLC has qualified for inclusion in the 2016 Sustainability Yearbook and has received the Silver Class distinction for its excellent sustainability performance.”**

Michael Baldinger, CEO of RobecoSAM

### RobecoSAM

We received a Silver Class distinction in the 2016 RobecoSAM indices, which are based on annual analysis of 2,900 listed companies.

### UN Global Compact

We are a member of the UN Global Compact, the world's largest corporate sustainability initiative that encourages companies to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals. As a member, we report our sustainability initiatives and progress annually to the Compact.

### Carbon Disclosure Project (CDP)

We disclose our carbon performance and targets to external indices, including the CDP. In the build-up to COP 21, the 2015 Paris Climate Conference, we signed up to the CDP commitments for science-based targets and public disclosure of information associated with climate change performance.

### Assurance

See page 234 of the AstraZeneca 2015 Annual Report and Form 20-F Information for Bureau Veritas's assurance statement. The full assurance statement, which includes Bureau Veritas's scope of work, methodology, overall opinion, and limitations and exclusions, is available on our website, [www.astrazeneca.com](http://www.astrazeneca.com).

**Access to healthcare**

Our approach

Sustainable access

Healthy Heart Africa

Strengthening healthcare capabilities

Intellectual property

Young Health Programme

# Access to healthcare

Providing access to healthcare for all those who need it is a significant and complex global challenge. We are making it easier for people to afford our medicines, especially in emerging markets. We focus, too, on strengthening healthcare capabilities, particularly in developing economies where the price of a medicine may not be the only barrier to healthcare.

We believe that we will be able to make the greatest contribution when our approach is commercially sustainable. It will also take a combined global effort involving all relevant stakeholders to drive sustainable progress worldwide. Many of our activities are, therefore, underpinned by collaboration with a wide range of partners.

As access to healthcare can also vary within a country, our activity is tailored locally to meet the needs of different patient populations.

## 2015 highlights



### 1 million\*

screenings for hypertension through Healthy Heart Africa  
\*2 million as at August 2016



### 3.5 million

patients in emerging markets served by patient access programmes



### 1.7 million

Brazilians using patient access cards through our Faz Bem programme

# Our approach

At AstraZeneca we research, create, manufacture and market medicines and treatments for the whole world. We believe that everyone should have access to those medicines, regardless of where they live or how much money they have. We work hard to improve access to medicines for all, particularly those who have traditionally been underserved by the industry.

We have made significant progress in broadening the access to our products by making medicines more affordable and we are working towards greatly increasing access, particularly in low-income countries, through our patient access programmes. Our efforts to improve affordability are particularly focused on the ability to pay based on disposable household income. We continue to grow our capabilities and build on the experience of wellbeing initiatives and patient access programmes, which provide discounts on our medicines and other patient services.

Our access to healthcare strategy combines these three strands to address affordability and other healthcare barriers, while ensuring we continue to provide high-quality medicines to those who need them.

## Our access to healthcare strategy:



## What we have achieved

Our aims	Goals	Progress highlights	Target progress
Increase access to healthcare for underserved patient populations	Expand sustainable patient access to our medicines to reach three million patients	3.5 million patients in emerging markets served by patient access programmes	↑
	Reach one million people through Young Health Programme by 2015	Over 1.4 million young people engaged since 2010	↑
	Reach 10 million patients across Sub-Saharan Africa with treatment for hypertension (abnormally high blood pressure) by 2025 through Healthy Heart Africa	Over one million patients screened in 2015, exceeding its year one target <b>UPDATE:</b> over two million patients screened by end August 2016	→
	Screen over 750,000 people in 2015 through Healthy Heart Africa		↑

### Key

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress



**There are many barriers for people seeking healthcare, especially in developing economies. These include:**



Lack of infrastructure



Availability of medicines and treatments



Local culture, beliefs and traditions



Cost



Lack of knowledge

In 2015, we expanded efforts in Africa to enable greater access to hypertension medication and other essential services for patients who are otherwise unable to access medication or other forms of treatment. Through our Healthy Heart Africa

programme, we have activated health facilities across Africa to provide training, education, screening, diagnosis and treatment for patients with hypertension. You can read more about our results on page 6.

# Sustainable access

We aim to meet patient needs across the world, ranging from those for whom healthcare is readily available and who can afford our medicines, to those in emerging markets who may need help to access our medicines and those in developing economies where barriers to healthcare are not always price related.

We rely on sales of medicines in our established markets to help us generate the revenue we need to provide our shareholders with a return, to invest in continued innovation and to expand the availability and affordability of our medicines.

## Pricing and access

We are working to make our medicines affordable to more people on a commercially and socially sustainable basis, based on an in-depth understanding of the economic conditions of the population in emerging countries and the economic burden placed on this population when it comes to health.

We do this through our mainstream operations, but also via patient programmes and a targeted pricing strategy that takes into account ability to pay, particularly in emerging and developing markets, where 45%<sup>1</sup> of funding for healthcare is paid by patients out of their own pocket.

Currently this strategy focuses on chronic conditions, such as respiratory and cardiovascular disease. It is aimed at markets where there is significant unmet patient need and reflects two of our core therapy areas. We have developed an ability to pay evaluation framework<sup>2</sup> to identify affordable price points for those who pay for their own healthcare, by assessing household budgets and the economic impact of medicines on a country-by-country basis, using World Health Organisation and other economic data sources.

We recently analysed our biggest-selling brands in emerging countries and the 13 biggest markets in our International Region. As a result, we calculated that by pricing our medicines at no more than 5% of national disposable household income we can make our current respiratory and cardiovascular portfolio affordable for around 70% of the population, specifically the median income groups for which this represents increased access to medicines, plus those already in a position to pay full price. We expect to expand this methodology significantly.

## Sustainable benefits

Wherever possible we integrate into our approach a wide range of localised support services for patients, ranging from disease education, health awareness and preventive measures, to discounted or free healthcare services, dietary advice and nurse counselling. We also partner directly with non-governmental organisations and governments to improve the underlying healthcare infrastructure and improve access to medical treatment.

Our medicines play an important role in treating unmet medical need and in doing so they also bring economic, as well as therapeutic benefits. Effective treatments can help lower healthcare costs by reducing the need for more expensive care, such as hospital stays or surgery, or through preventing patients from developing more serious or debilitating diseases. They also contribute to increased productivity by reducing or preventing the incidence of diseases that keep people away from work.

### This provides a systematic evaluation taking into account:



Target population



Funding issues



Level of current access



Level of discount



Patient access programme

<sup>1</sup> AstraZeneca's ability to pay evaluation framework and market assumptions were developed through primary research in collaboration with the University of Cape Town, Department of Public Health and the International Union Against Tuberculosis and Lung Disease.

<sup>2</sup> Ibid

Access to healthcare

Our approach

**Sustainable access**

Healthy Heart Africa

Strengthening healthcare capabilities

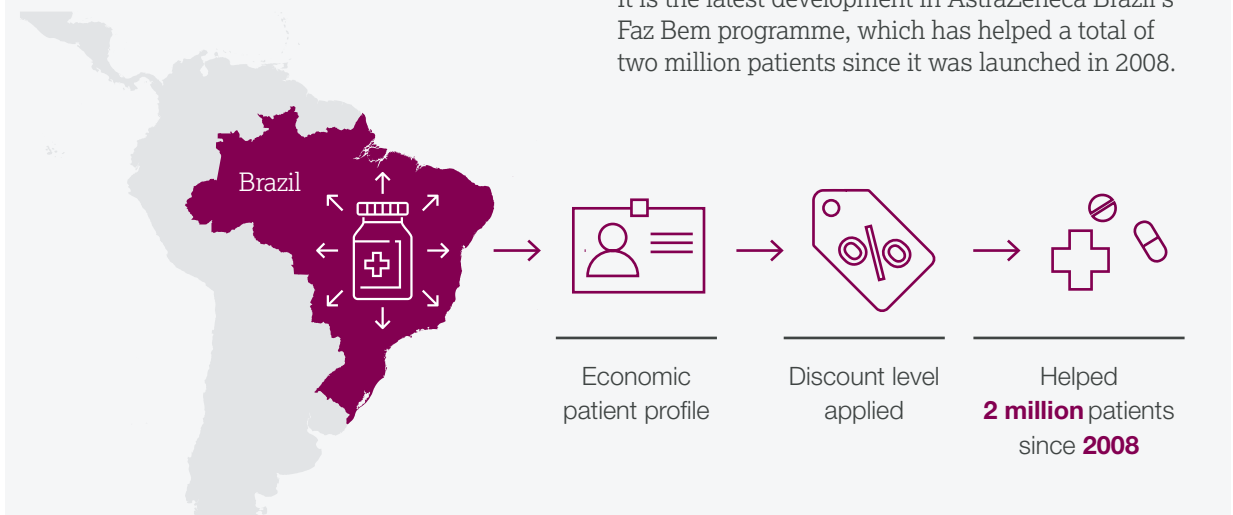
Intellectual property

Young Health Programme

**Case study: Brazilian Mosaic makes medicines affordable**

In many of the countries where we operate, there are tremendous differences in income between the most and least wealthy, which have an obvious impact on access to healthcare, even where there is a universal healthcare system. Brazil is one such country where there are huge socio-economic disparities within the population and, despite the universal healthcare system, the main source of funding for medicines remains the private sector. In addition, the relative investment in medicines is lower than in comparable countries and the percentage of private expenditure is on a par with economies without universal healthcare. This has an impact on household disposable income and the ease of access to medicines.

To address this disparity, AstraZeneca Brazil has tried to understand how to apply the right discount to the right population, as well as determining how to incentivise people to continue with the treatment they need. The company's innovative solution was to identify their economic patient profile, a unique and customised approach called Mosaic Segmentation. The starting point is using economic data supplied by data provider Experian to compile profiles across the population. These profiles incorporate the income segment linked to patients' national ID number. When a patient registers on the programme they are automatically assigned a discount level based on their ability to pay. This link between individual levels of affordability and access to medicines has helped more than 150,000 patients since February 2016. It is the latest development in AstraZeneca Brazil's Faz Bem programme, which has helped a total of two million patients since it was launched in 2008.



Further patient access programmes, which provide discounts on our medicines, and other patient services include Disfruto Mi Salud in Central America and the Caribbean, MAZ Salud in Mexico and Karta Zdorovia in Russia.

We have significantly expanded these initiatives across Latin America, the Middle East and Africa, and Asia Pacific, and the number of patient access programmes in emerging markets has more than doubled since 2013, reaching 3.5 million patients in total by the end of 2015.

In Central and Eastern Europe, we offer Patient Access Card programmes to provide discounts on some of our key medicines, along with educational materials that help people understand their disease and the importance of sticking to their treatment plans.

For example, in Romania, a Patient Access Card is distributed by doctors to appropriate patients to enable co-payment reductions. Typically, a separate card is required for each treatment, but we are simplifying the process by making a single card apply to reductions on a range of our key products, making it easier for patients to manage and reducing the administrative burden on pharmacists.

Patients in rural areas are also benefiting from a new dedicated call centre.

To date, we have reached an additional 30,000 cardiovascular patients through this single card programme.

# Healthy Heart Africa

Healthy Heart Africa (HHA) is our leading access to medicines programme. Through HHA we are helping to tackle a silent killer in parts of the world where access to healthcare is at its lowest.

The number of deaths attributable to cardiovascular disease (CVD) in Africa grew more significantly than any other condition from 2000 to 2012, and is currently the third leading killer in the region, closely behind HIV/AIDS and respiratory infections. Moreover, CVD is the leading cause of non-communicable disease (NCD)-related mortality in the Africa region, accounting for more than one-third of all NCD deaths.

High blood pressure, or hypertension, one of the main risk factors for CVD, is meanwhile estimated to affect nearly half of adults aged 25 years and older across the region, and its prevalence is expected to grow, affecting 150 million adults in Sub-Saharan Africa alone by 2025.

Yet it is estimated that less than 10% of people with hypertension have access to effective treatment in some African countries. By diagnosing and treating hypertension, we can prevent the development of more severe forms of cardiovascular disease, reducing the strain on developing healthcare systems and keeping people healthier for longer.

## Tackling the problem

We launched HHA in Kenya in 2014, as a first step towards our goal of treating 10 million people with hypertension in Africa over the following 10 years. Working with local partners, we set about providing training and establishing healthcare centres for screening and treating patients.

### In our first year we:



Conducted **1 million** hypertension screenings in Kenya



Activated over **250** health facilities



Trained over **2,600** healthcare workers across **21** counties



Diagnosed close to **150,000** patients with high blood pressure

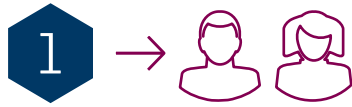


Started treatment for **25,000** patients

### UPDATE: as at August 2016

- Conducted **2 million** hypertension screenings
- Activated over **400** health facilities
- Trained over **3,000** healthcare workers across **31** counties
- Diagnosed over **300,000** patients with high blood pressure
- Started treatment for **80,000** patients

## Addressing the challenges



### Identifying the right patients

Healthcare facilities and household screening activities predominately reach women, with only 35% of those reached through the programme initially being men. In order to reach more males of working age in the area of Kibera (Kenya's largest slum), a new 'walkway' screening location was established to capture male commuters walking home from work. We integrated this into an existing local health facility but one which was not previously part of our original programme. The new Kibera facility is open additional hours in the evening in order to manage the additional footfall. Through this new screening location we have seen a drastic increase in the number of males being screened. In addition, linkage rates have improved between screening and diagnosis, due to evening clinic hours and increased opportunity to engage with patients on a regular basis during their daily routine.



### Leveraging large workplaces to bring treatment to the patient

Daily working hours can make it difficult for people to attend screening clinics. However, combining screening activities with outreach clinics at large workplaces ensures patients can not only get their blood pressure checked but also be treated at the same time by the attending health worker. This has worked well at both informal (e.g. factories and quarries) and formal workplaces (e.g. teacher meetings), and has resulted in an increased desire for companies to keep their workforce healthy and supported, with regular outreach clinics now visiting a number of large workplaces, ensuring continuity of care with limited impact on patients' commitment to work.



### Integrating NCD care into existing community-level care

Reaching rural patients can be challenging and linkage rates between community activities and attendance at health facilities were initially as low as 25% in some rural settings. Mobilising community health visitors (CHVs) to support their community and patients throughout the whole patient journey for multiple health conditions has helped to provide better patient care for both non-communicable and communicable diseases.



### Ensuring no missed opportunities

The first point of entry for patients seeking acute care in a large health facility is generally the outpatient department. The focus of these departments has typically been to address only acute conditions, with limited or no time taken to check the overall health of the patient. Patients are often not routinely checked for high blood pressure, losing the opportunity to provide preventative or chronic care services. However, within facilities that have been mobilised through HHA, when screenings did take place, a higher prevalence of hypertension was observed than in community settings. Instigating routine blood pressure screening processes within outpatient departments and improving links with medical departments equipped to deliver chronic care services have, therefore, ensured that sick patients receive, not just the acute care they need but also longer-term chronic care services.



### Reaching the faith-based community

Using religious services to help spread health messages is an important way to communicate to a large number of people and to bring information closer to patient populations. HHA has combined health talks with screenings and treatment outreach clinics at Kenyan churches to help diagnose and treat hypertension patients within their communities. Solely through this channel, HHA has screened over 120,000 people. This outreach is also reinforced by weekly visits to the church by community healthcare volunteers to ensure continuity of care for patients.

### Next steps

Mid-2016 is the end of our HHA demonstration period, throughout which we have been refining our approach and developing the model for the programme. This knowledge will help us to launch HHA more widely in Kenya and in other African countries, such as Ethiopia (implemented in 2016).

In 2016, we will also establish new partnerships to continue to test approaches in Kenya and other countries in the region. There will also be an independent impact evaluation of the programme available to provide further insight about how HHA can be expanded and scaled up to other countries.

### UPDATE

AstraZeneca launched a partnership with PEPFAR in September 2016 to jointly invest up to \$10 million over five years to integrate hypertension services into existing HIV platforms across Africa.



# Strengthening healthcare capabilities

**Access to healthcare depends on having a functional healthcare system and the right allocation of resources to make sure that medicines are used appropriately as part of overall health management.**

For people in communities with limited healthcare infrastructure, we partner with others to help strengthen healthcare frameworks and capabilities.

## Tackling breast cancer in Africa

Breast cancer is the most common cancer and greatest cause of cancer death among women in South Africa. Poor education and lack of awareness of breast health issues, cultural barriers and no access to healthcare facilities have hindered efforts by the government to combat the disease among low-income communities.

Phakamisa brings together different organisations to help raise breast cancer awareness, increase early diagnosis, and improve access to treatment and effective support networks. AstraZeneca is also working to ensure that our comprehensive range of hormonal treatments is made available to the health service in a cost-effective way.

In collaboration with South Africa's Foundation for Professional Development, we are providing accredited courses in cancer diagnosis, treatment and care to doctors, nurses and other healthcare professionals. And in partnership with the Cancer Association of South Africa and the Breast Health Foundation, we are training teams of volunteers and counsellors to go out into the community, raising awareness and supporting patients, as Phakamisa 'Navigators'.



Since the launch of Phakamisa in 2011, more than 600 healthcare professionals have been provided with courses and 400 people have been trained as Navigators. Continued education for the Navigators has also covered socially relevant issues such as cervical cancer, HIV, gender-based violence and child abuse.



**1,000**

600 healthcare professionals and 400 people trained as Navigators since 2011 to support patients.



**1,606,978**

women have been reached by Navigators across the country.

Phakamisa is in its fifth year of operation and, to date, 1,606,978 women have been reached by Navigators across the country. The primary objective of these Navigators is to support patients that are diagnosed with breast cancer in the public system. However, their interaction with people when raising awareness of breast health in their communities made it possible for close to 3,800 malignant lumps to be identified and referred for effective treatment, something which might not have been discovered if the services of the Phakamisa Navigators were not around. During the four years since the programme started, a monthly average of 2,501 patients have been supported by Phakamisa Navigators in the public health sector.



### Addressing prostate cancer

Prostate cancer affects one in six men in South Africa. Although it is not as widely addressed as breast cancer, the mortality of prostate cancer is much higher than that of breast cancer.

With this reality facing South African communities, Phakamisa embarked on another challenge during 2016 and started to implement the aspects of the breast cancer model so that prostate cancer patients can also be supported when diagnosed. Phakamisa Prostate is currently being rolled out in three of the country's nine provinces, with implementation in the rest of the country planned for 2017.

Phakamisa Prostate offers the same service as the breast cancer programme through the collaboration of non-governmental organisations and private entities that join Phakamisa in the worthy cause to change and impact the lives of cancer patients and their families in South Africa.

### Building on success

Building on the successful and ongoing Phakamisa collaboration in South Africa, in 2012 we set up a new partnership in Kenya, where breast cancer is a particular problem. During the year, we trained 150 healthcare practitioners and 60 volunteers through a series of workshops in four major Kenyan cities. The programme was successfully introduced to Ghana in 2013. Support to prostate cancer patients will also be given from 2016 in Kenya and Ghana. In 2016, AstraZeneca is extending the programme to more countries in sub-Saharan Africa such as Nigeria, Angola, and Ethiopia.



**200+**

trained 150 practitioners and 60 volunteers through a series of workshops in four major Kenyan cities.

# Intellectual property

Intellectual property (IP) rights are the lifeblood of the biopharmaceutical industry, providing the incentives required to conduct the research and development (R&D) that produces new medicines to treat patients and improve patients' lives. It takes approximately 10 to 15 years to develop a new medicine, and for every one medicine that reaches patients, there are thousands of drug candidates that fail. The ability to obtain patent protection for innovations in R&D, under a robust IP protection and enforcement framework, is one of the main incentives for innovation and provides a sustainable framework for the innovative, pharmaceutical R&D that produces life-saving medicines.



10 to 15 years  
to develop a new  
medicine



For every one medicine that reaches  
patients, there are thousands of drug  
candidates that fail

AstraZeneca seeks to protect innovations worldwide. However, we have a position of not filing patent applications in the countries listed in [Table 1](#). We have prioritised the countries where we seek patent protection for our products and accept that we cannot file patent applications in every country of the world. In Sub-Saharan Africa AstraZeneca does seek patents of invention for new chemical entities in Angola, Ethiopia, Gambia, Ghana, Kenya and Nigeria, and also seeks them for new chemical entities and other types of inventions in South Africa.

Unless constrained by contract, AstraZeneca proactively abandons all patent property that does not support a product, or an actual or potential pipeline asset, and is therefore of no use to it. This makes the innovations disclosed in that patent property available for all to use without the necessity of seeking a licence from AstraZeneca or anyone else.

AstraZeneca will license (i.e. not enforce) its patent rights in the neglected tropical disease (NTD) space regardless of country. AstraZeneca also has a position of accepting licence terms, i.e. not enforcing its patent property in any low-income countries (LICs) or least developed countries (LDCs). While we do currently seek to patent inventions directed to new chemical entities in Angola, Ethiopia and/or Gambia (which equates to about 6% of the total number of LICs and LDCs), we would not consider enforcing such rights unless the economy of a country improved to enable that country to cease to be classified as an LIC and/or LDC. There is precedent for such a transition as Botswana and Cape Verde moved out of LDC status in 1994 and 2008 respectively.

## Sub-Saharan Africa



We seek to improve the visibility of the existence of our patent rights covering products that may be used to treat Index Diseases and Index Countries both as defined by the Access to Medicine Index (listed on page 24 and 22 respectively in the [Access to Medicine Index – Methodology Report 2016](#)). It is not always straightforward to access information about the expiry of patent rights from publicly available sources. To help with this we include patent expiry information for China, the EU, Japan and the US for key products in our [Annual Report](#). [Table 2](#) provides details of the patent rights we have in Index Countries for medicines that are used to treat Index Diseases, together with an indication of the expiry of those rights.

We recognise the right of developing countries to use the flexibilities in the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), including the DOHA Declaration (14 November 2001) in certain circumstances, such as a public health emergency. This is enshrined in our [Public Policy Issue for Compulsory Licensing](#).

Licensing is an important way of allowing access to patent-protected inventions. Our [Non-Exclusive Voluntary Licence \(NEVL\) Public Policy Issue](#) sets out the criteria under which we would grant such a licence. We are flexible and will consider proposals concerning the geographic scope of any NEVL.

Also, AstraZeneca will license its patent rights in LICs, LDCs and LMICs for all Index Diseases (for all Index Diseases see page 22 of the [Access to Medicine Index – Methodology Report 2015](#)) except non-communicable disease uses. We reserve the right to enforce these patents in LMICs for all other uses.

AstraZeneca will license any patent rights covering medicines on the Essential Medicines List for supply of those Essential Medicines to LICs, LDCs and LMICs, and would also consider licensing any patent rights to third parties for supply in or to MHDCs.

AstraZeneca supports the Bolar research exemption (or safe harbour exemption) under which a third party may prepare for and obtain regulatory approval so that a generic product can be available on patent expiry; but this does not mean that the company interprets Bolar as extending to commercial manufacture, importation or stockpiling during the lifetime of a patent.

# Young Health Programme

The Young Health Programme (YHP) is our global community investment initiative. It has a unique focus on young people and primary prevention of the most common non-communicable diseases (NCDs), such as type 2 diabetes, cancer, and heart and respiratory disease. Significant global health issues that have human, social and economic consequences, NCDs have become the leading cause of death and disability worldwide and are responsible for an estimated 38 million deaths each year.

We work with over 30 expert organisations, combining on-the-ground programmes, research and advocacy to target the four most prevalent risk factors for NCDs: tobacco use, alcohol abuse, lack of exercise and unhealthy eating.

When we launched YHP in 2010, we committed to reach one million young people through the programme by the end of 2015. We have now reached over 1.4 million young people in more than 20 countries. Kenya was the latest addition in 2015.

Over 14,000 young people have now been trained to share health information with their peers and the community, and over 12,000 frontline health providers have been trained in adolescent health.

You can find stories of the young people helped by YHP at [www.yhpvoices.com](http://www.yhpvoices.com) and further information on the programme at [www.younghealthprogrammeyhp.com](http://www.younghealthprogrammeyhp.com).

## Case study: The Young Health Programme in India

In India, YHP is helping young people make sense of the physical, mental and social changes going on in their lives. Through community meetings and peer education, young people are able to get the information they need about their health and their bodies, instead of relying on misinformation shared by their friends. In many cases, young people are learning about health issues for the first time through YHP and are gaining increased awareness of how the body works, the impacts of smoking, substance abuse, diet and lack of exercise.



“

Before I got involved in YHP, I was in bad company. I had personal problems and no one to talk to about them. Sharing these problems with my friends was just sharing poor information. I didn't understand the importance of education. I initially joined YHP for access to the computers. YHP taught us about drugs and substance abuse, which is a huge problem. We also learned about reproductive health, which is related to many of our personal problems.

Through YHP I have participated in street plays, spoken in public and shared knowledge with the community at large. Being part of YHP renewed my interest in, and commitment to, education and now I'm in my final year of a BA degree at Delhi University. I'm also a YHP Ambassador, speaking up for the health needs of young people around the world.”

Suraj is 21 and has been involved with YHP in India for four years

**Environmental sustainability**

Our approach

Minimising impacts across the product life cycle

Reducing our carbon footprint

Reducing impacts on natural resources

A responsible approach to waste

Protecting biodiversity

Environmental product stewardship

# Environmental sustainability

Environmental sustainability is about operating our business in a manner that respects and protects our climate and natural resources. Our approach spans the entire product life-cycle and our science-based focus drives continuous improvement across our value chain.

## 2015 highlights



**21%**

carbon footprint reduction since 2010



**18%**

reduction in total waste since 2010



**14%**

reduction in water consumption since 2010

Environmental sustainability

**Our approach**

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# Our approach

We are committed to minimising the environmental impacts of our business and our products by reducing our carbon footprint, using resources efficiently and ensuring the environmental safety of our products as this is one of our key material issues. This year, we launched a new Safety, Health and Environment (SHE) Strategy, which will drive our continuous improvement up to 2025.





We face two key challenges when it comes to improving our environmental impact: firstly, the need to conserve natural resources and protect the environment as we develop, produce and transport our products, and, secondly, the need to ensure our products are safe for the environment at all stages in their life cycle.

As we develop more innovative medicines and technologies, we constantly face new challenges and opportunities. We take a pragmatic approach, balancing the benefits we can deliver for patients with the need to protect the environment, conserve natural resources and create shareholder value.

## Reaching the end of our 2011–15 commitments

In 2015, we came to the end of our 2011–15 commitments on environmental sustainability. Our performance is summarised in the table below:

### What we have achieved

Our aims	Goals	Progress highlights	Target Progress
Enhancing our competitiveness through resource conservation and efficiency across our business and supply chain	By 2015, reduce operational greenhouse gas footprint (excluding emissions from patients' use of inhaler therapies) by 20% from 2010 levels	Achieved a 21.2% cut in our greenhouse gas footprint from 2010 levels	
	By 2015, reduce hazardous waste by 15% indexed to sales and reduce non-hazardous waste by 15% indexed to the number of employees	Hazardous waste generation indexed to sales increased 5% against the 2010 baseline, while non-hazardous waste indexed to employees increased 11%	
	By 2015, reduce water use by 25% against 2010 levels	Despite indexed waste reduction targets not being met, we reduced our total waste by 18% from 2010	
		Water use was 3.9 million m <sup>3</sup> . Though we were not able to achieve our ambitious target, we made substantial progress with a reduction of 14% against our 2010 baseline	

**Key**

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress



## Environmental sustainability

**Our approach**

Minimising impacts across the product life cycle

Reducing our carbon footprint

Reducing impacts on natural resources

A responsible approach to waste

Protecting biodiversity

Environmental product stewardship

**Case study: Striving for BREEAM 'excellent' at our new UK headquarters**

Cambridge City Council granted planning permission for our new purpose-built facility on the Cambridge Biomedical Campus, which homes our UK-based global research and development centre and corporate headquarters, along with 2,000 employees. We are working closely with our construction partners to achieve Building Research Establishment Environmental Assessment Methodology (BREEAM) 'excellent' ratings for sustainability performance.

Steps we are taking include:

- Using optimal heat differentials in cooling technology to minimise energy consumption
- Optimising the use of natural light in place of artificial light
- Installing a combined heat and power station to meet our energy needs on site
- Installing rainwater recovery systems throughout the site.

**Setting targets for 2025**

In 2015, we finalised our new Safety, Health and Environment (SHE) Strategy. It will drive our continued improvement and commitment up to 2025. You can read more about our SHE Strategy in [Sustainability at AstraZeneca](#).

In setting our new carbon reduction target in 2015, we followed the Science-Based Target Setting

methodology developed by the World Resources Institute (WRI), World Wildlife Fund (WWF) and Carbon Disclosure Project (CDP). The initiative promotes science-based emission-reduction targets that are founded not only on the carbon reduction projects in a company's pipeline, but also on the fair, sector-specific contribution it can make to help avoid the worst impacts of climate change.

**Our new environmental impact strategy and commitments****Commitments:****Carbon**

Limit 2025 extended operational footprint<sup>1</sup> to 2015 level and reduce overall value chain carbon intensity<sup>2</sup> by 30% against a 2015 baseline

**Carbon sub-targets:**

- Reduce absolute Scope 1 and Scope 2 non-electricity emissions 20% by 2025<sup>3</sup>, excluding patients' use of inhalers
- Source 100% of renewable power by 2025, reducing imported electricity emissions to zero
- Reduce absolute Scope 3 emissions from all sources within extended operational footprint by 2025<sup>4</sup>, excluding patients' use of inhalers
- Improve primary data collection within Scope 3 value chain greenhouse gas accounting to cover vast majority of impacts by 2020

**Waste**

10% absolute reduction against a 2015 baseline

**Water**

Maintain usage at 2015 level as our business grows

**Resource efficiency**

90% of small molecule active pharmaceutical ingredients (API) syntheses meet resource efficiency targets at launch

Establish equivalent resource efficiency targets for biologics (drugs that are manufactured in a living system, such as plant or animal cells, as opposed to chemical synthesis)

**Commitment:**

Ensure effective environmental management of our products from pre-launch through to product end-of-life

Note: For scope and boundaries of our carbon monitoring and reporting see footnotes.

Over the coming year, we will use the outcomes of our refreshed materiality assessment as we continue to develop and deliver our environmental sustainability approach and commitments. The current list of 27 material issues, which is now undergoing validation with stakeholders, includes: climate change; resource efficiency; biodiversity; and pharmaceuticals in the environment.

<sup>1</sup> Extended operational footprint includes: Scope 1, Scope 2 and some material Scope 3 emissions. It covers energy use, road fleet, process emissions, waste incineration, business air travel, primary distribution (freight and logistics), first tier outsourced supply of API and formulation and packing (90% spend, 2014 data, energy emissions only), and patient use of pressurised metered dose inhalers (pMDIs), measured in tonnes carbon dioxide equivalent (tCO<sub>2</sub>e).

<sup>2</sup> Overall value chain footprint includes all sources of emissions: Scope 1, Scope 2 and all 15 Scope 3 value chain categories as defined by the Greenhouse Gas Protocol, measured in tonnes carbon dioxide equivalent per million USD of sales (tCO<sub>2</sub>e/\$m).

<sup>3</sup> Direct emissions from on-site energy, process emissions, AstraZeneca road fleet, and imported energy excluding imported electricity, which is captured through the renewable power commitment.

<sup>4</sup> Ibid footnote 1



## Environmental sustainability

**Our approach**

Minimising impacts across the product life cycle

Reducing our carbon footprint

Reducing impacts on natural resources

A responsible approach to waste

Protecting biodiversity

Environmental product stewardship

**Incorporating external perspectives**

Our aim is to remain at the forefront of our sector for environmental performance, so we involve and take the advice of renowned external sustainability experts. In 2014, we established an Environmental Sustainability Advisory Board, which is made up of four leading global experts on sustainability to advise us on all aspects of our environmental strategy. The Advisory Board actively championed ‘fair share’ principles as we worked with them throughout 2015 to identify our new strategy and commitments. Members were also pivotal in encouraging us to expand the remit and membership of the Advisory Board to incorporate a broader sustainability agenda in 2016.

You can find out more about the new Sustainability Advisory Board's role and membership in [Sustainability at AstraZeneca](#).



**We are pleased to see AstraZeneca pursuing development of science-based greenhouse gas targets and applying it to guide its strategy. This is a key step in AstraZeneca demonstrating its leadership on climate change and how it is doing its part to keep global warming below the dangerous threshold of 2 degrees Celsius.”**

Pankaj Bhatia,  
Deputy Director,  
World Resources  
Institute, and member  
of the AstraZeneca  
Sustainability  
Advisory Board

**What we include in environmental sustainability reporting**

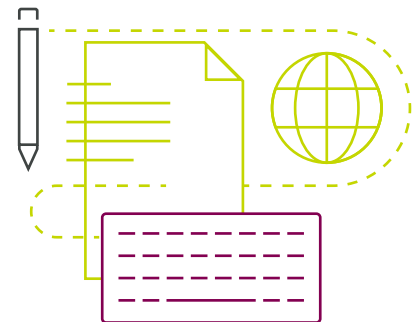
Our Global SHE department receives SHE data from all across the organisation every quarter. Each facility is required to report its performance against a set of criteria, as defined in our global reporting procedure.

Unless otherwise stated, we include data from recent acquisitions in our reporting. For the purposes of this report:

- Data from Ardea is included from first quarter of 2013
- Amylin (former BMS sites) data is included from the date they joined the company
- Pearl and Almirall data is included from the first quarter of 2015
- Sites and businesses divested from the company are included up to the date of divestment.

We regularly review data to ensure accuracy and consistency. This has led to slight changes in the figures produced for previous years. The figures quoted in this report are generated from the revised data, but none of these changes are statistically significant.

We treat baseline, target and reported data in accordance with Greenhouse Gas Protocol guidance (WRI/WBCSD, 2004 Revised Edition, Chapter 5 – Tracking Emissions Over Time).

**Measuring the impacts of outsourced manufacturing**

Because we outsource a significant proportion of our manufacturing, some of our impacts arise through the activities of third parties. Measuring and reporting on these impacts are key priorities as we strive to improve transparency and take full responsibility for our environmental performance.

We work with suppliers to set appropriate environmental standards and targets, and to collect environmental performance data. We have now captured environmental performance data for over 90% (based on spend) of our global outsourced manufacturing of active pharmaceutical ingredients (APIs) and formulation and packaging (F&P) suppliers across our established brands. Data currently collected covers CO<sub>2</sub> emissions from energy use only, waste generated and water use. Understanding and managing our external supplier environmental footprint will continue to be a major focus of our SHE improvement efforts.

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# Minimising impacts across the product life cycle

We take a whole life-cycle approach to minimising the environmental impacts of our products, working with all those involved in the lifespan of a product – from discovery and development through to patient use and end-of-life disposal.

Our approach to environmental stewardship involves a wide range of activities, including:

- Life Cycle Analysis of key products to understand impacts and opportunities
- Developing environmental risk management plans for all new products
- Applying sustainable chemistry principles to our manufacturing processes
- Continual improvement of environmentally sustainable packaging
- Ongoing commitment to the safety of medicines in the environment.

Once our medicines are on the market, we provide healthcare professionals with clear information on their appropriate use. We also work with authorities and industry partners to guide patients on how to safely dispose of unused medicines.

## Understanding the life-cycle impacts of a medicine

It is vital we understand the environmental impacts of our products across the entire range of our activities – from cradle to grave and including external outsourced activities.

### What we consider: the different stages of the product life cycle

1

#### Discovery and early development

Ensuring studies are completed in a timely way before regulatory submission, while at the same time avoiding unnecessary animal testing

2

#### Green chemistry

Environmental impact at this stage relates directly to our consumption of natural resources. If we develop effective manufacturing processes, we will use fewer chemicals and fewer natural resources

3

#### Emissions during manufacturing

At this stage, the environmental impact is potentially harmful to the local aquatic life if not properly controlled

4

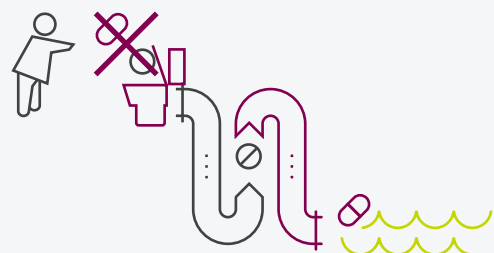
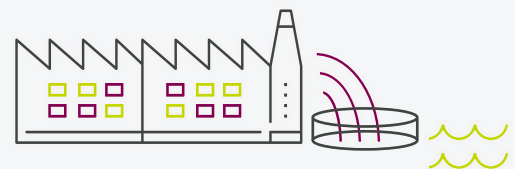
#### Emissions from patient use

We undertake environmental risk assessments as part of product approval to assess if environmental impacts occur due to continuous low-level exposure. We also conduct product-focused environmental research and we ensure that our risk assessments are updated in light of the latest scientific findings

5

#### Unused medicines

Improper disposal adds unnecessarily to the environmental exposure to pharmaceuticals

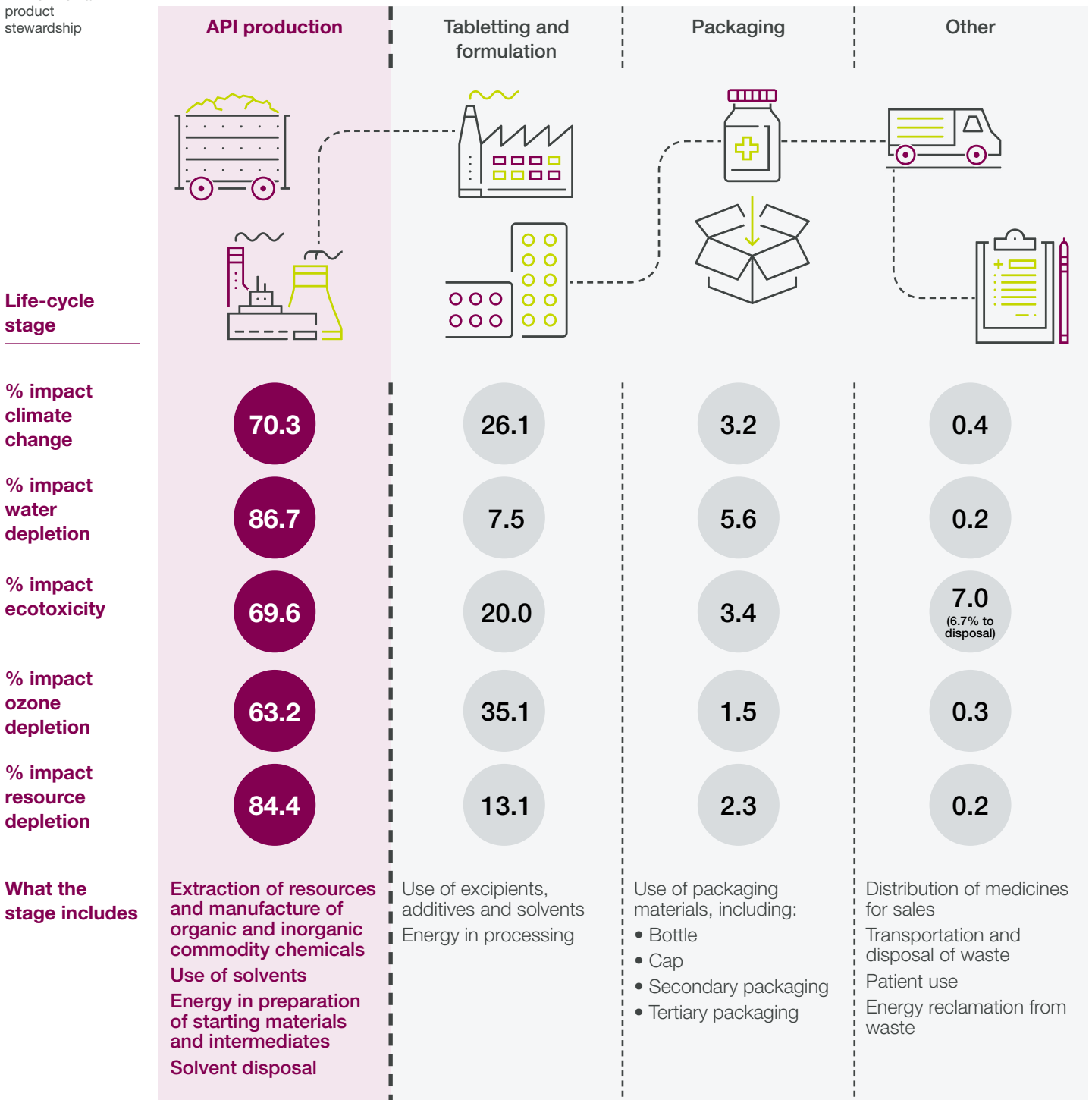


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**Life Cycle Analysis in action**

In 2015, we selected five products for full Life Cycle Analysis that we believe provide a useful representation of the breadth of our portfolio. We focused on five key impact areas – climate change, water depletion, ecotoxicity, ozone depletion and resource depletion. The results of these assessments are now informing where we should focus our efforts to have the biggest effect in reducing our environmental impact.

**Assessing the environmental impact of Crestor, our prescription drug for lowering cholesterol**



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# Reducing our carbon footprint

Climate change has important consequences for the health of society and for the pharmaceutical industry. We believe that the only effective response can be through a united global effort that involves business, governments, non-governmental organisations (NGOs) and communities working together and doing their fair share to tackle the problem.

As a business built on cutting-edge science, we make it a priority to ensure our environmental commitments, targets and monitoring are based on sound science and represent our fair share of the collective effort needed by industry to protect the environment.

We disclose our carbon performance and targets to external indices, including the CDP. In the build-up to COP 21, the 2015 Paris Climate Conference, we

signed up to the CDP commitments for science-based targets and public disclosure of information associated with climate change performance. As climate-related science and public policy develops, we will continue to be flexible in adjusting our commitments and our approach appropriately. We have since committed to the RE100 campaign and set a target to achieve 100% renewable power use globally by 2025.

## Our progress

### What we set out to achieve

Our aim by 2015 was to:

- Reduce our operational greenhouse gas footprint by 20% against 2010 levels (excluding emissions from patients' use of inhaler therapy products)

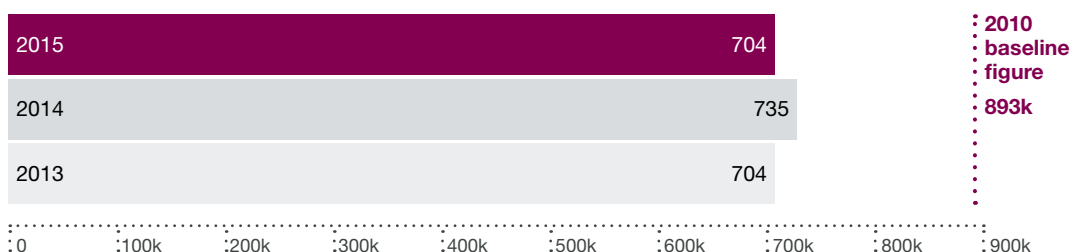
### Our approach

- Energy efficiency improvements
- Pursuing lower-carbon alternatives to fossil fuels and procuring green energy
- Improving the fuel efficiency of our sales and marketing vehicle fleet
- Moving our global freight transport from air to sea
- Managing our business air travel
- Absorb some major acquisitions in 2014/15 into target without re-baselining

### What we achieved

- 21.2% carbon reduction against the 2010 baseline
- Energy-related emissions down 28% from 2010 baseline
- Air-to-sea conversion of 54%, by tonne per km moved
- Road travel emissions down 16% from 2010 baseline, an efficiency improvement of 15% (grams CO<sub>2</sub> per kilometre)
- Business air travel emissions reduced by 12% since 2010
- 6.1% of total energy consumption from certified renewable sources in 2015, achieving our ambition to increase supply by 50% from the 2010 baseline
- CDP overall score of 97B

## Operational greenhouse gas emissions (thousand tonnes CO<sub>2</sub> (tCO<sub>2</sub>))



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**Understanding our carbon impacts**

Our main operational greenhouse gas (GHG) emissions arise from the energy we use, travel and transport, process emissions at our facilities and, indirectly, through the activities of our first tier suppliers. However, the greatest single source of GHG emissions that we currently monitor comes during patient use of our pMDI inhaler therapy products,

which rely on hydrofluoroalkane (HFA) propellants, see page 33.

New guidance released by the Greenhouse Gas Protocol requires dual reporting of emissions associated with electricity consumption. This has been calculated for 2015 consumption as follows:

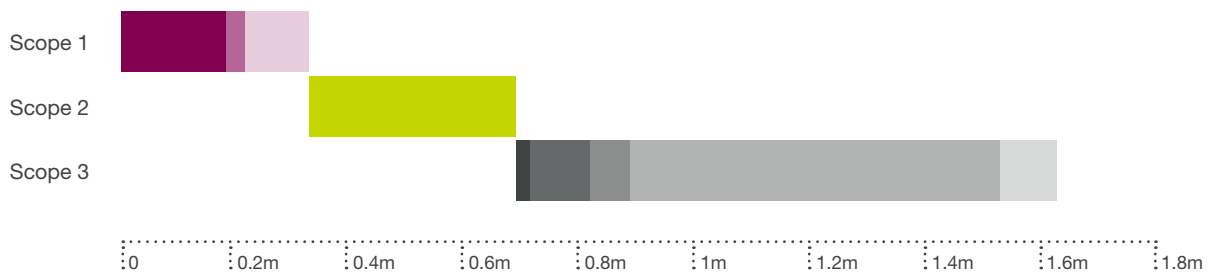
**Location-based emissions from electricity (tCO<sub>2</sub>)<sup>5</sup>**

277,270

**Market-based emissions from electricity, including market instruments (tCO<sub>2</sub>)<sup>6</sup>**

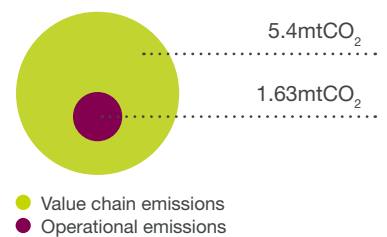
325,679

**Breakdown of our carbon emissions: greenhouse gas emissions by source 2015: 1,632ktCO<sub>2</sub>e (scope: 2016–25 Strategy)**



- Key
- Direct energy (on-site production)
  - Processes and engineering
  - Business road travel (AstraZeneca fleet)
  - Indirect energy (off-site production)
  - Waste incineration
  - Business air travel
  - Primary distribution (goods transport)
  - Use of inhalation medicine products (pMDIs)
  - First tier API, F&P supplier energy (90% spend, 2014)

**Carbon emissions across our value chain**



We recognise, through life-cycle investigations and quantification of our entire value chain GHG emissions, that our wider footprint is significantly greater than the boundary of our operational carbon target. While we seek to reduce emissions from sources for which we have a degree of control, we also continue to improve our understanding of our value chain and product life-cycle impacts. In 2015, we undertook further work to quantify AstraZeneca’s full value chain GHG impact, which, for 2014, amounted to 4.8 million tonnes CO<sub>2</sub>e.

**Carbon emissions from outsourced manufacturing**

Carbon emissions from outsourced manufacturing of APIs, and formulation and packing activity amounted to 98,000 tonnes in 2014. We continue to work with our suppliers to encourage the setting of appropriate environmental improvement targets, particularly in the area of energy use. We have included this portion of our carbon footprint within the scope of the new commitments and strategy period of 2016–25.

5 Location-based factors sourced from US Environmental Protection Agency eGrid (sub-regions) for US sites and International Energy Agency (IEA) for all other sites.

6 Market-based factors sourced from multiple sources as follows: Sweden – billing data; rest of EU – REDISS II report 2015; US – billing data or where not available from 2015 Green-e Energy Residual Mix Emissions Rates; rest of world – location-based factors used.

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**2014 CO<sub>2</sub> from outsourced manufacturing (thousand metric tonnes)**

	2012	2013	2014
AstraZeneca sites	431	417	408
API category	70	57	31
F&P category	25	32	67

Note: Outsourced manufacturing data is collected after the year end, so data presented here is for 2014. 2015 data will be available towards the end of 2016.

**Case study: From air to sea transport**

The emissions produced by transporting our products around the world account for almost 5% of AstraZeneca's total operational greenhouse gas footprint (9% of the 2011–15 Strategy scope). This provides a clear opportunity to improve the carbon efficiency of our business.

In 2015, our Sweden operations completed an ambitious Air2Sea project that saw sea freight established to 13 countries. Switching to the transport of goods by sea achieves a massive 97% CO<sub>2</sub> saving compared with air transport. The project, which accounted for 80% of local exports, supported our overall goods transport emissions reduction of 7% in 2015 (-17% from our 2010 baseline) and delivered wider business benefits, including improved product security and temperature regulation, and cost savings of around \$9 million.

**Towards lower impact respiratory therapies**

The propellants released when our pressurised metered-dose inhalers (pMDIs) are used represent 40% of our operational carbon footprint. Typically used in the treatment of respiratory conditions such as asthma, pMDIs rely on hydrofluoroalkane (HFA) propellants to deliver the medicine to a patient's airways. While HFAs (often referred to as HFCs) have no ozone depletion potential and a third or less of the global warming potential of the chlorofluorocarbons (CFCs) they replace, they are still potent greenhouse gases and are a major contributor to our carbon footprint.

In 2015, our Life Cycle Analysis work investigated pMDIs and confirmed our expectation that the vast majority of life-cycle GHG emissions are associated with the HFC propellants discharged during use and released after disposal.

Finding suitable alternatives is challenging as any device must use a propellant that is safe, inert, non-toxic, non-flammable, tasteless and odourless. It must also possess the right aerosol characteristics to make it effective. In 2014, AstraZeneca acquired two companies, Almirall and Pearl, both of which have technologies that could potentially lower the impact of our own inhaler technologies. Research is ongoing to assess the feasibility of utilising these technologies with our existing therapies.

In 2016, we included emissions from patients' use of pMDI inhaler therapy products in our carbon commitments as we believe we should account for these emissions and find innovative ways to minimise and mitigate them (see page 32).

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# Reducing impacts on natural resources

## Responsible use of water

By 2050, at least one in four people is likely to live in a country affected by chronic or recurring shortages of fresh water. We recognise the need to use water responsibly and we are working to minimise water use across our operations and ensure the water we do use is treated to the highest standards before it is returned to the natural environment.

While all our facilities use water, our sites with the largest water footprints are located in the UK, Sweden and the US. Some of our sites are situated in water-stressed areas, such as our site in San Diego, US, where the vast majority of our water use on site is either recycled or reclaimed. We are working to ensure all sites in water-stressed areas are taking extra steps to mitigate their water risk and will report on this in more detail in 2016.

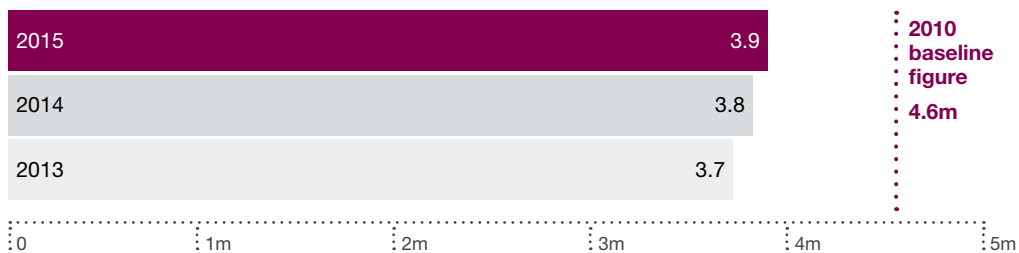
### Our progress

Our company-wide target for 2015 was to reduce absolute water use by 25% compared with 2010 levels.

To achieve it, we initiated water conservation plans at our largest manufacturing, and research and development sites, with a particular focus on those using significant quantities of water or located in a water-stressed area.

In 2015, our water use was 3.9 million m<sup>3</sup>, a reduction of 14% from our 2010 baseline. This was a 4% increase on 2014, largely due to integration of newly acquired sites. When indexed to revenue, our water use was 159m<sup>3</sup>/\$million, up 16% since 2010 due to falling revenues over the target period.

### Water used (million m<sup>3</sup>)



Note: Significant site purchases in 2014 and 2015 have been absorbed into the annual data without historical rebasing of data.

### 2014 water use from outsourced manufacturing

The water used in our outsourced manufacturing is much less than that used in our own activities; some 55% of water used on AstraZeneca's own sites. In 2014, we saw an increase in our outsourced water

footprint due to AstraZeneca's diabetes portfolio acquisition from Bristol-Myers Squibb and the increase in manufacture of one of our key growth platforms, Brilinta.

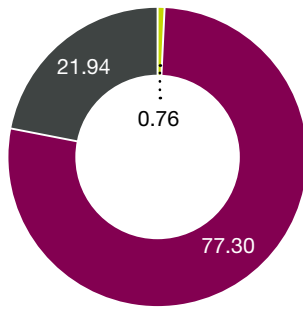
### Water used (million m<sup>3</sup>)

	2012	2013	2014
AstraZeneca sites	3.6	3.7	3.8
API category	0.2	0.6	1.2
F&P category	0.4	0.6	0.9

Note: Outsourced manufacturing data is collected after the year end, so data presented here is for 2014. 2015 data will be available towards the end of 2016.

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### Wastewater treatment/discharge (%)



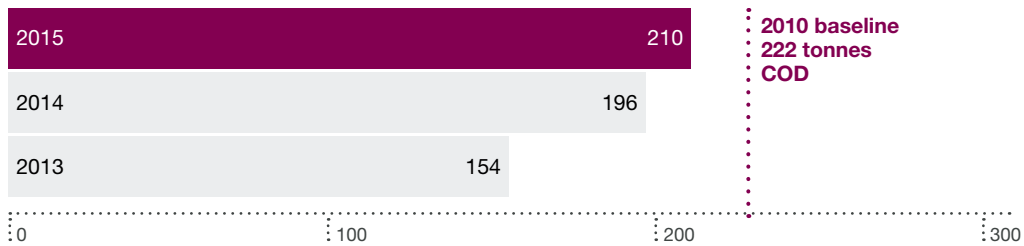
- Key
- Direct to surface water
  - Off-site wastewater treatment
  - On-site wastewater treatment

### Chemical oxygen demand of discharged water

We track and report our total effluent emissions using the standard chemical oxygen demand (COD) parameter. This figure represents the COD of wastewater as it leaves our sites. A number of our sites have their own on-site wastewater treatment

facilities, while the majority work with downstream municipal wastewater treatment plants, both of which are designed to remove most of the COD before the wastewater is discharged to the environment.

(tonnes COD)



### Safe discharges of active pharmaceutical ingredients (APIs)

Since 2006, it has been a regulatory requirement to complete a comprehensive environmental risk assessment (ERA) prior to the launch of any new drug. As well as implementing this requirement, we have introduced Environmental Reference Concentrations (ERCs) and Maximum Tolerable Concentrations (MTCs), which must not be exceeded for our manufacturing discharges to the aquatic environment.

We have shared our ERC and MTC methodology with key relevant suppliers so they can risk assess and manage emissions associated with the APIs they manufacture or formulate on our behalf. In 2015, we completed 98 ERC assessments with our suppliers (2014: 72). We run annual training for suppliers to explain our approach and methodology.

We have now established ERCs and MTCs for 45 of our APIs (2014: 42) and we have a rolling programme to confirm compliance. In 2015, all our worldwide manufacturing sites met our ERC and MTC criteria for these products.





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# A responsible approach to waste

Waste management is central to our SHE Strategy. We characterise waste as either hazardous<sup>7</sup> (such as chemical waste) or non-hazardous waste. The majority of our hazardous waste consists of solvent and aqueous streams from our manufacturing activities. Non-hazardous waste includes general waste, such as paper and plastics from our facilities around the world.

Waste prevention is our primary goal. Where this is not practical, we concentrate on waste minimisation followed by appropriate treatment or disposal to maximise reuse and recycling, and reduce disposal to landfill.

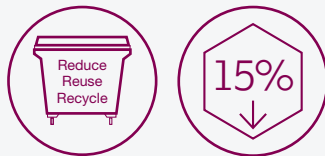
We aim to reduce the amount of waste we produce during our production processes, as well as integrating waste-minimisation considerations into purchasing decisions and engaging our employees to reduce waste.

## Our progress

### What we set out to achieve

Our aim by 2015 was to:

- Reduce hazardous and non-hazardous waste by 15% from 2010 levels indexed against revenue and number of employees



### Our approach

- Waste audits and employee engagement at sites worldwide
- Investing in the reuse and recycling of solvent wastes
- Promoting responsible end-of-use disposal of our medicines



### What we achieved

- We achieved a 22% reduction in hazardous waste against the 2010 baseline
- When indexed against revenue, hazardous waste increased 5%, missing our 2015 target
- We reduced non-hazardous waste by 14% against the 2010 baseline
- Indexed against staff numbers, volumes of non-hazardous waste increased 11%
- In 2015, our total waste was 38,452 metric tonnes with a tonnes/\$m index of 1.56

## Reducing hazardous waste through solvent recovery

Our Avlon site near Bristol in the UK is the manufacturing home of the active pharmaceutical ingredients (APIs) for two of our key medicines. In 2012, we embarked on a £4.7 million investment in a major new facility for the recovery of solvents used in the production process of one of these APIs. Solvents are a significant hazardous waste stream of the API manufacturing process.

Now, three years on, we are reaping the benefits. The recovery unit processed 480,000 litres of solvent waste in 2015 and generated savings of

£437,000. During 2015, it contributed a 3.4% reduction in our total hazardous waste generation, and, for the drug in question, a 4.5% reduction in production costs by avoiding 85% of previous virgin solvent use. The project has also significantly reduced road haulage for the transport of virgin and waste solvents, and generated significant CO<sub>2</sub> benefits. Savings are projected to increase to £695,000 in 2016, with payback of the original capital investment expected after seven years.

<sup>7</sup> As defined by national legislation in each country.

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### Sustainable packaging

Packaging plays a critical role in protecting our products as they transit through the supply chain – improving product security and avoiding unnecessary waste. We are constantly looking at ways to improve the sustainability of our packaging, reducing resource consumption and waste, and improving the efficiency of transporting our products.

We focus on:

- Minimising the amount of material used
- Using materials from recycled or renewable sources
- Using materials that can be recycled.

Our SHE Triggers model ensures we consider environmental considerations at the earliest possible stage of packaging and device development. We also continuously review our packaging requirements and identify improvements for existing products.

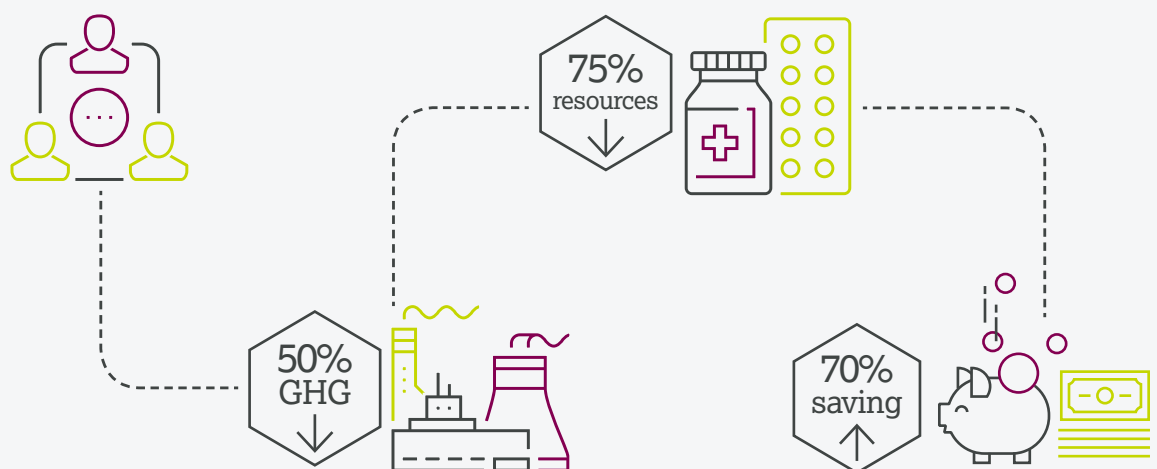
In 2015, we updated our global Packing Strategy to include new and improved standards. By the end of the year, 90% of sites were aligned to the new global Pack Standards. We also consolidated our packaging solutions across the business to reduce and simplify our standard packaging sizes.

### Case study: Optimising blister packs in Japan

In 2010, our Japan operation responded to patient feedback and competition with generics by launching an investigation into the optimum size, barrier material and packing line processes for tablet blisters produced for the Japanese market.

As a result, this year sees the launch of new packaging that delivers significant environmental

benefits – including 50% reduced GHG emissions and 75% reduced resource use. As well as delivering packing line efficiencies. The new packaging also offers a 70% financial saving and is predicted to save \$21 million in packaging material costs in its first six years.



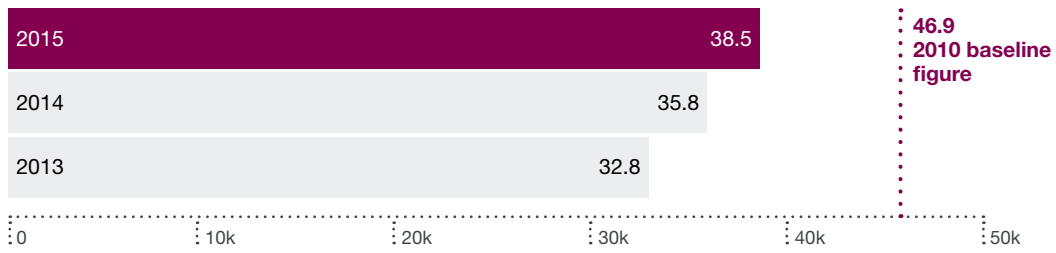
### Responsible disposal of medicines

We work with authorities and industry partners to raise public awareness of the safe disposal of medicines. In 2015, we supported a new social media campaign, [medsdisposal](#), a joint initiative involving European healthcare, industry and student organisations designed to raise awareness of how to dispose of unused or expired medicines across European countries.

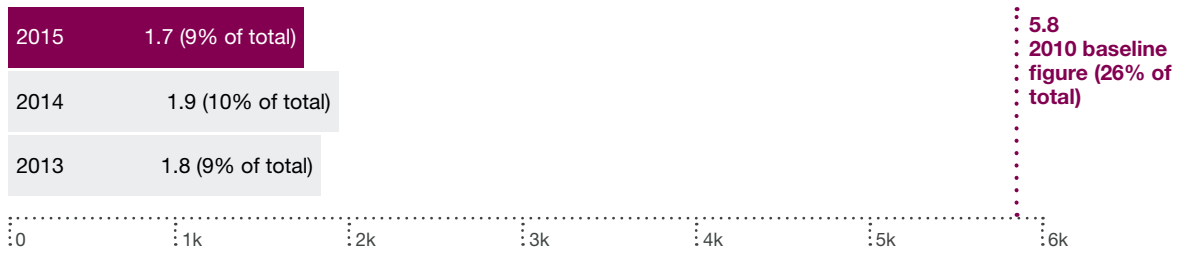


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### Total waste (thousand tonnes)

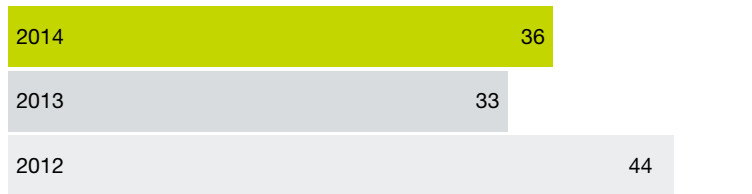


### Non-hazardous waste sent to landfill (thousand tonnes)

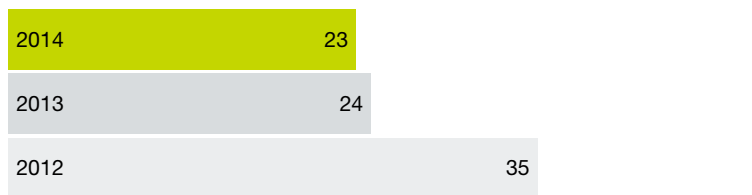


### Waste from outsourced manufacturing (thousand tonnes)

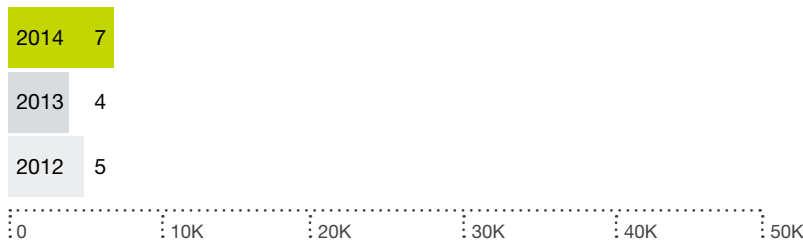
#### AstraZeneca sites



#### API (active pharmaceutical ingredients) category



#### F&P (formulation and packing) category



Note: Outsourced manufacturing data is collected after the year end, so data presented here is for 2014. 2015 data will be available towards the end of 2016.

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# Protecting biodiversity

**We are committed to managing our impact on biodiversity – both on our own sites and when we use natural biological resources in our product development.**

## **Protecting biodiversity on our sites**

We actively support the principles of the Convention on Biological Diversity and we continue to apply best practice on our sites through the development and implementation of local biodiversity action plans.

These plans set out locally specific actions to conserve and enhance native habitats on our sites, create and maintain refuges for flora and fauna, and preserve links with the surrounding environment via green corridors of uninterrupted habitat.

We have now assessed our potential local biodiversity impacts at 38 of our major sites. As a result, 25 sites are implementing bespoke biodiversity action plans (BAPs), including all major fully operating sites of over five hectares.



## **Nagoya Protocol and use of resources in product research**

We believe in fair and equitable sharing of the benefits arising from the use of biological resources and associated traditional knowledge. This benefit sharing helps ensure a more measured and transparent approach to the use of natural resources and protects the biological diversity that society and our business depends on.

Where we use natural biological resources (such as plant or fish extracts), we acknowledge our responsibilities under the Nagoya Protocol, an international treaty which aims to ensure fair reward is given to the country that originally supplied the biological material.

We are currently developing a governance structure, toolkit and standards to assist researchers across the company when using certain biological resources around the world. These processes are designed to ensure we carry out due diligence during the sourcing of all biological materials that fall under the scope of the Protocol, and that any required consents or agreements are in place to enable the fair sharing of access and benefits associated with their use.



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# Environmental product stewardship

Improving the environmental performance of our product pipeline involves a delicate balance between meeting patient needs, while reducing environmental impacts and other sustainability considerations. Drug design is extremely complex and the needs of the patient will always come first. But we are committed to the proactive development of more environmentally friendly drugs – an area with significant opportunities to develop our understanding and reduce our environmental impact.

## Sustainable chemistry

One of the areas we continue to invest considerable effort towards is sustainable chemistry. Our SHE Triggers model is designed to promote the sustainability of our design and manufacturing processes – including active pharmaceutical ingredients (APIs), products, devices and packaging. It flags potential safety, health and environmental issues at the earliest possible stage in development, allowing them to be investigated and, where possible, designed out of the process. The model incorporates an environmental risk assessment tool that enables our scientists to assess environmental risks and challenges in the products they are developing.

For over 10 years, our Green Chemistry Network has helped AstraZeneca's environmental specialists link up with pharmaceutical and medical chemists and chemical engineers to build shared understanding. Scientists in our Global Pharmaceutical Development function also have the opportunity to attend training courses on how they can minimise the environmental impact of manufacturing processes, including the application of green chemistry tools.

In 2015, we completed 14 environmental risk assessments covering hundreds of chemical transformations. The environmental risk assessment process highlights the use of Substances of Very High Concern and targets them for elimination or substitution aligned to green chemistry principles and as required by multiple legislations, including REACH.

## Process Mass Intensity

We aim to achieve the highest levels of efficiency when it comes to developing manufacturing processes for new products – helping us to reduce the raw materials we use, the waste we generate and the financial costs incurred, as well as delivering other business benefits across the lifetime of a medicine.

Developed by the American Chemical Society Green Chemistry Institute Pharmaceutical Roundtable (ACS GCIPR) for the pharmaceutical industry, Process Mass Intensity (PMI) is a smart measure of the total quantity of raw material used in a product, against the quantity of product made. The aim is to strive for the lowest possible PMI in every development project in order to drive the right behaviours towards improved sustainability and efficiency.

In 2015, we achieved a 28% reduction on the PMI baseline from the start of the year, representing 35,964 tonnes of waste avoided at peak-year sales (2014: 22%).



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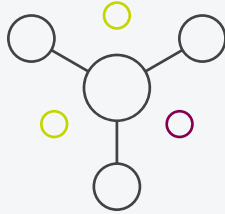
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### Case study: Reducing the environmental impact of Avibactam

Over the past four years, our scientists have worked with our partners at Forest Laboratories in the US (now a subsidiary of Allergan plc) to significantly improve the processes involved in the manufacturing of Avibactam, a new

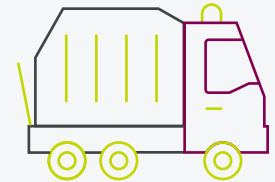
medicine used for treating complicated urinary tract and abdominal infections. Their work achieved considerable positive impact upon the environmental footprint of the drug, including:



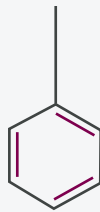
A reduced PMI from **6,480** to **526**



**92%** increase in materials efficiency



A predicted annual waste reduction of **89,310 tonnes**



Use of organic solvents reduced from **3,229kg** to **160kg** per kg of API



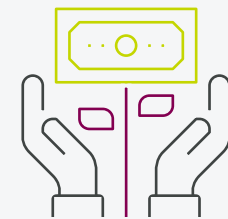
**Avoidance** of a number of hazardous chemicals



Water consumption reduced from **2,290kg** to **61kg** per kg of API



**\$1.65 million** in savings during development and \$8 million during the establishment and validation phase of the project



Estimated savings of **\$1 billion** over the product lifetime

### Ensuring efficient product use

One of the most important things we can work on with our stakeholders is ensuring patients use our medicines effectively, efficiently, and avoid unnecessary waste. This is an increasing focus for our researchers

as we aim to develop a range of innovative solutions that will benefit both our environmental performance and the patients who use our medicines, as well as creating added value for health service providers.

## Pharmaceuticals in the environment

Drugs taken by humans can eventually find their way into the environment – including rivers, lakes and even drinking water. The majority of pharmaceuticals get into the environment through patient excretion, but they can also enter the system during manufacture or through inappropriate disposal or discharge of wastewater effluent.

We aim to lead our industry in understanding and mitigating the effects of pharmaceuticals in the environment (PIE). We are investing significant financial resources and effort into understanding the fate and effects of our medicines in the environment so that we can identify risks and manage them effectively, while balancing these effects against the benefits our medicines bring for patients.

Our proactive environmental research programme involves collaboration with leading universities and academic scientists. At any one time, we co-sponsor over 20 PIE-related research projects that support around 14 PhD students and four post-doctoral scientists across a wide range of cutting-edge projects.

Together, we aim to:

- Identify the risks associated with the presence of PIE and potential mitigation
- Understand whether the therapeutic targets of our medicines are present in wildlife, and the potential impacts
- Reduce PIE-related uncertainties within our environmental risk assessments
- Address the global environmental risks posed by PIE, especially in emerging markets where there are different standards of water management and novel exposure scenarios
- Understand the relationship between the environmental dimension of antimicrobial resistance (AMR) and resistance in the clinic.

To maximise the benefits of our research, we publish around 10 peer-reviewed scientific manuscripts every year and provide numerous external scientific presentations.

For example, recognising the risks that AMR poses to society, and that the current environmental risk assessment frameworks do not consider AMR, we co-sponsored an expert workshop to address the environmental dimension of AMR. This workshop resulted in a series of strategic publications and recommendations that addressed issues including the environmental management of AMR and the development of appropriate environmental and human health protection goals. We are currently co-funding research aiming to develop and validate new regulatory protection goals for AMR development in the environment.

In 2015, we also hosted a PIE Symposium, which brought together external stakeholders and key opinion formers together with the students, post-doctoral scientists and academic supervisors involved in our environmental research programme. The Symposium was an opportunity to discuss key scientific concerns and uncertainties associated with PIE and identify research gaps and areas of consensus where further action is needed.



## Intelligent Assessment of Pharmaceuticals in the Environment

At the start of 2015, we initiated a €10 million partnership with the European Commission under the Innovative Medicines Initiative (IMI). This project – called Intelligent Assessment of Pharmaceuticals in the Environment (iPiE) – aims to develop screening tools for identifying environmental risks both earlier on in drug development and for older medicines.



**Great place to work**

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# Great place to work

Medicine is a fast-moving industry, with frequently changing priorities and challenges. To keep pace with those challenges, AstraZeneca works hard to attract and retain the most skilled and talented individuals all over the world to help us develop new treatments and medicines faster, and create breakthrough drugs that can transform lives.

We have a global workforce of around 61,500 people in more than 100 countries. We are dedicated to building an inclusive, open and trusting organisation that embraces the skills, knowledge and unique abilities of our employees. Being a great place to work is one of our strategic priorities.

To achieve it, we continuously invest in our workforce, and in the recruitment and retention of excellent individuals. We do this by providing development opportunities to enhance their careers and knowledge; and by working to be a responsible business that our employees can be proud to work for.

## 2015 highlights



### 46%

reduction in illness and injury rates across AstraZeneca and a 55% reduction in collisions



### 79%

of employees feel that the availability of opportunities for development and growth has improved at AstraZeneca



### 42%

of our senior leaders are women



Great place to work

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# Our approach

**As a major global employer and a world leader in the pharmaceutical industry, we have the opportunity to improve the working lives of tens of thousands of people, while transforming the lives and health of everyone. We are investing in our people leaders to ensure we get the most out of every individual employee. We prioritise diversity and human rights, and ensure everyone who works for us has the opportunity to work in a healthy and safe environment. Our employees are proud to support and invest in the communities in which we operate.**

We are focused on developing a talented, science-led and patient-focused workforce that is committed to the pursuit of our purpose and values, and that is agile and high-performing.

Our vision of a great place to work is one in which all our employees are engaged and inspired by a clear shared purpose and a compelling strategy; where they are encouraged to perform and develop to their full potential; and where they are supported by the right organisation design, culture, technology and processes.

Our commitment to embedding international human rights in our operations and our sphere of influence is reinforced in our global Code of Conduct, which employees individually commit to annually. We support the principles set out in the UN Universal Declaration of Human Rights (UDHR) and the International Labour Organization's (ILO) standards, and we are signatories to the UN Global Compact Principles on Human Rights.













Great place to work

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## What we have achieved

Our aims	Goals	Progress highlights	Target progress
Build an inclusive, open and trusting organisation that embraces the skills, knowledge and unique ability of our employees	Increase female representation at Global Career Level F and above from 38% (2010) to 41% by 2015	Increased the number of senior managers who are women to 42%	
	Increase female representation in the global talent pool from 33% (2010) to 38% by 2015	We changed our focus from a global talent pool to a succession pool approach  Representation is currently at 39%	
Promote a safe and healthy work environment and embed international human rights in our operations and our sphere of influence	More than 80% of sites offering six essential health programmes or services by 2015	60% of sites offer six programmes, 84% offer five or more	
	Accidents and illness – 25% reduction in lost time injury/illness rate per million hours worked from 2010 baseline by 2015	46% reduction achieved	
	Driver safety – 40% reduction in collisions per million kilometres driven from 2008 baseline by 2015	55% reduction achieved	
Make AstraZeneca a great place to work	Achieve target 83% employee survey score for AstraZeneca as a great place to work by 2015	Q4 Pulse survey found 83% of employees identified AstraZeneca as a great place to work	
	Improve employee perception of the opportunities for personal development and growth in AstraZeneca to 73% by 2015	Q4 Pulse survey found 79% of employees saw opportunities for growth	
	Deliver further organisational simplification (target: relevant Pulse survey score to be over 60%) by 2015	Q4 Pulse survey found 67% of employees recognised that the organisation has been simplified	
Provide employees with opportunities to develop their skills and careers to create a professional, motivated workforce	All employees have a development plan in place by end Q3 (2015 target was over 95%)	Q3 Pulse survey score showed 87% of employees have had a development discussion	
	All employees to have had at least one quality development discussion with their line manager by the end of Q3 (2015 target was over 70%)	82% of colleagues reported in the Q3 Pulse survey, rising to 87% by the end of the year, that they had had at least one quality development discussion with their line manager	

## Key

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress



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# Talent management

**In order to continue to be a high-performing organisation, we need to attract the best people in our industry and, once they are here, we need to make AstraZeneca a company that talented people want to keep working for. To achieve this, we invest in our workforce through the identification of individuals with the required capabilities to achieve our bold ambitions and work collectively in purposely accelerating their development.**

**We measure employee engagement through regular staff surveys to identify areas in which we need to do more.**

Good leadership plays a critical role in stimulating high levels of performance and engagement. In the past, we have used a number of tools globally to identify and develop talent, and as a way of rewarding and recognising the efforts of our employees. In 2016, we will roll out our new Hi-Potential Strategy. It recognises the unique contributions of individuals with particular skills and capabilities against newly defined business critical roles to help us achieve both our short and our long-term aims. The new programme puts the primary emphasis on identifying credible successors, from 'Ready Now' to as far as 'Early' (5+ years' horizon), for our roles that are currently deemed most critical to achieving our bold ambitions.

Over the last two years, we have provided tailored leadership programmes with Harvard Business School and the Massachusetts Institute of Technology to approximately 700 people across the organisation to support the development of their leadership skills, help them enable others to live our values and behaviours, and foster an environment of openness, inclusivity and innovation.



## Employee engagement

In 2015, we held three brief Pulse surveys across a sample of the organisation, together with a final survey in January 2016, which we used to measure our overall 2015 performance. We found that 83% would recommend AstraZeneca as a great place to work, an increase of 1% on 2014. The Pulse surveys generated just over 39,000 responses during the 2015 cycle.

We are using 2012 results as a baseline and are making steady progress against those results. In our last full FOCUS survey in 2014, we found that scores in the 'understanding and belief in our direction and priorities' category had risen from 68% in our 2012 baseline survey to 86%. This question was not included in our 2015 Pulse survey.

Based on the FOCUS 2014 results, we identified two specific areas for improvement. One relates to further simplifying the business and eliminating obstacles to efficiency. The second relates to developing our people, where the survey results showed that employee belief in the existence of opportunities for career development and personal growth is two percentage points below the high-performing benchmark.

Results from the last Pulse survey show that we made good progress against these goals. The survey item related to eliminating obstacles to efficiency improved from a score of 59% to 67%, the result of organisation-wide initiatives to simplify the business. The survey item related to opportunities for development and growth improved from 72% to 79%. Again the result of a range of initiatives to encourage and support greater personal development across the business.

## Staff survey results

	2012 baseline (FOCUS)	2014 (FOCUS)	2015 (Pulse)
Would recommend AstraZeneca as a great place to work	77%	82%	83%
I believe strongly in AstraZeneca's future direction and key priorities	68%	86%	(not asked)



**AstraZeneca was ranked second in Bloomberg's inaugural 'Best Place to Work in Corporate Britain' survey in 2015.**

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**Relocation**

In 2013, we announced plans to invest in three strategic research and development centres, which affected employees in the US and the UK. The most significant part of the plan will be the relocation of our UK-based global research and development centre and corporate headquarters to a new, purpose-built facility at the Cambridge Biomedical Campus.

**Case study: Cambridge Biomedical Campus**

The new 2,000-person site at the Cambridge Biomedical Campus will be our new UK corporate headquarters and our global research and development centre. It will be ready at the end of 2016 and will host the majority of the staff currently located in three existing UK sites in Cheshire, London and Cambridge.

We now have 1,600 employees working in Cambridge. We encouraged and supported employees to relocate, and now have 500 people at Cambridge who have relocated from other AstraZeneca UK sites. We recruited 410 new employees to Cambridge and aim to hire a further 600 over the coming two years.

For employees who do not accept offers to relocate to Cambridge, we provide career and outplacement support. Similar relocation initiatives are under way elsewhere in our organisation, including in the US, where almost 300 employees have accepted offers to relocate to Gaithersburg, Maryland.



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**Diversity**

We believe in having a diverse workforce that accurately represents the communities in which we work. We try hard to ensure our Board and leadership teams are diverse in terms of gender, ethnicity and culture.

To ensure our senior leadership reflects our diverse geographic footprint, we track the country of origin of senior leaders and reflect this in our diversity targets. In 2015, 15.6% of leadership roles that report to our senior leadership team have a country of origin that is an emerging market or Japan (an increase from 5% in 2012), which exceeded our Scorecard target of 13% for this measure.

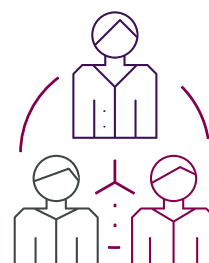
Women comprise 49.8% of our global workforce, 33.0% of our Board, 42.0% of our senior managers and 29.0% of our most senior leaders.

Our efforts on gender diversity received external recognition in 2015, when the National Association for Female Executives ranked us as one of its 50 leading companies for the seventh year running. We also featured among *Working Mother* magazine's 100 Best Companies.

Female representation in the Senior Executive Team (SET) succession pool is at 39%. Our target is to increase that to mirror the same level as the number of female senior managers, i.e. currently 42%, by the end of 2020.

**Gender diversity at AstraZeneca**

	Number (2014)	Number (2015)	Male 2014	Male 2015	Female 2014	Female 2015
Board of Directors of the company	13	12	69%	67%	31%	33%
SET	13	13	77%	69%	23%	31%
Directors of the company's subsidiaries	332	360	74%	72%	27%	28%
AstraZeneca employees	57,473	61,500	50%	50%	50%	50%



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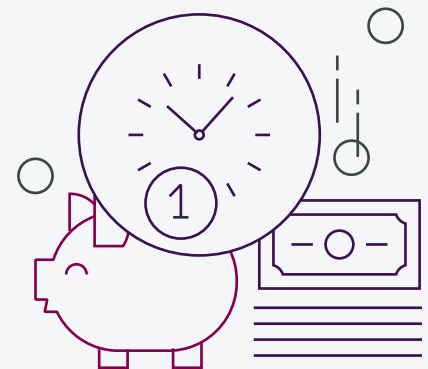
Community investment

# Human rights

**In 2015, we concluded our second human rights employment matters review in all countries where we have a presence. The review focused on ILO core themes, including freedom of association and collective bargaining, child labour, discrimination, working hours and wages. In this second survey we added questions on the Living Wage, data management and recruitment, and the results have remained very positive.**

## Case study: Paying the Living Wage

We have assessed Living Wage progress internally and globally, and are satisfied that we meet/beat any of the local recognised bodies' definition of a Living Wage. In addition, we conducted an independent external review so that we could assess developments in this area to inform our approach better from a global perspective. As a first step we are in the process of seeking accreditation from the Living Wage Foundation in the UK and will treat this as an experience to be evaluated alongside all other associated evidence in respect of seeking a global solution, for example monitoring the impact on our cost base.



# Safety, health and wellbeing

**The welfare of all our employees is of critical importance. It is our responsibility as an employer to ensure every person who comes to work can do so in a safe environment, where the risk of accidents is carefully managed, and health and wellbeing are prioritised. Our long-term ambition is to eliminate workplace accidents and illnesses.**

**There are safety and health risks inherent in pharmaceutical research, manufacturing and sales activities, and we have stringent policies and procedures in place to protect our employees.**

**In addition to managing workplace safety and health by, for example, improving ergonomics and controlling occupational exposure, we have worked hard to increase employee access to activities and resources that improve their wellbeing, including fitness opportunities and stress management training.**

Our global Safety, Health and Environment (SHE) Policy outlines the principles for each employee to contribute to our commitment to maintaining a safe and healthy workplace for all our people, and operating in an environmentally responsible and sustainable manner. Detailed global standards and procedures establish specific minimum requirements in key risk areas.

Our SHE performance is regularly monitored and managed through a range of comprehensive assurance programmes. We use a global SHE reporting system to record accidents, incidents, occupational illness and environmental data, and to report progress against our global performance metrics.

As part of our SHE Strategy, our current targets were set in 2010 for the years up to and including 2015. During 2015, we have established new targets that will take us up to 2025.

We achieved our 2015 lost time injury/illness rate target two years early and achieved further reductions in 2014 and 2015. The lost time injury/illness rate reduced by 17% from 2014, which equates to a 46% overall reduction from the 2010 baseline.

## Driver safety

In 2015, we ran a successful safety campaign focusing on The Road Safety Top 10, a collection of simple tips on road safety that could save lives. A light-hearted video animation was used to launch the campaign, along with a variety of leaflets, posters, checklists and team discussion guides. A competition inviting teams to make their own video based on The Road Safety Top 10 was won by the Malaysian team. Their winning entry was entertaining, while portraying the key messages of the campaign, as well as supporting the company value of 'We do the right thing'.

Driving is our highest-risk area for serious injury and fatality. This is why improving driver safety is our highest priority, particularly among our sales forces, which form the largest group of employees driving

## Case study: Asia area awarded a coveted SHE Excellence Award for their campaign

Utilising the Global SHE Road Safety Top 10 Campaign for International Markets in June, the Asia Area Road Safety team did a superb job organising, promoting and engaging leaders from across the business to deliver an outstanding awareness campaign to the nearly 3,000 employees in the Asia area. This reinforces road safety awareness to our employees.

on AstraZeneca business. Our focus is on promoting driver safety through awareness and training programmes among our sales force.

We monitor performance centrally to assess progress and identify areas for attention. In 2015, we exceeded our five-year target for reducing collisions per million kilometres driven, achieving a 55% reduction from our 2010 baseline. We regret, however, that in 2015 an employee was killed in a traffic accident while driving on AstraZeneca business. We carried out a detailed investigation into this accident and developed an action plan to address the findings. Learning from the incident has been shared widely across the business. The main contributory factors were found to be speed, fatigue and distracted driving.

Training workshops for all employees who drive for work in the international function area are being rolled out early in 2016. Our global procedure on the use of electronic devices while driving has been reviewed and a supporting communication campaign will be rolled out this year.





## Health and wellbeing

Our Essential Health Activities framework consists of six global programmes and services that are being promoted and tailored to suit local cultures and risk profiles. These are physical fitness, healthy business travel, workplace pressure management, tobacco use cessation, healthy eating and general health promotion. We developed standards and guidelines to support the implementation of programmes in these six areas and set an ambitious target for more than 80% of sites or marketing companies to have all six in place by 2015.

While we did not achieve this target, we now have 60% of sites offering six Essential Health Activities and 84% offering at least five activities, compared to only 28% in 2011. Going forward, we will focus on more active promotion in four key areas: physical fitness, healthy eating and drinking, workplace pressure management and tobacco cessation. In this way, we aim to reduce the health risks associated with chronic diseases, such as diabetes, heart disease and cancer, and to enhance the psychological wellbeing of our employees.

## Safety, health and wellbeing targets

	2010 baseline	2015 target	2015 actual
Fatalities – zero tolerance	5	0	1
Lost time injury/illness rate per million hours worked – 25% reduction from the 2010 baseline	2.55	1.91	1.37 (-46% from baseline)
Vehicle collisions per million kilometres driven – 40% reduction from 2008 baseline	9.22	5.60	4.15 (-55% from baseline)
Sites and marketing companies offer six Essential Health Activities	70% offer at least 1 activity	>80% offer 6 activities	60% offer 6 activities (84% offer 5 or more)

In 2015, we finalised our new Safety, Health and Environment (SHE) Strategy. It will drive our continued improvement and commitment up to 2025. You can read more about our SHE Strategy in [Sustainability at AstraZeneca](#).

During 2015, we continued our rolling risk-based programme of internal SHE compliance audits. Coordinated by Internal Audit Services (IAS), and conducted by auditors from within the company and external organisations, the schedule reflects the individual risk profile of particular facilities and functions, management changes, timing and other considerations. Twenty-two audits were conducted in 2015 (18 in 2014) and 154 findings were identified.

Our audit results confirmed that our local operations are effectively managing SHE and maintaining compliance with internal and external requirements. They also highlighted areas for attention and continued improvement, including the management of change and SHE training.

# Community investment

**Wherever AstraZeneca is located worldwide, we aim to make a positive contribution to local communities through sponsorships, partnerships, charitable donations and other activities that improve health and promote science education.**

**As well as benefiting the local communities in which we work, our community investment activities give employees another reason to feel proud to work for AstraZeneca and offer further career development opportunities.**

## Our approach

We target our global community investment towards promoting healthcare in the community and supporting science-based education and careers.

Our global approach includes flagship community investment programmes, such as our Young Health Programme, patient assistance programmes and support for global disaster relief. We allow our markets to address relevant local issues aligned to our Global Focus Areas through their own community investment programmes, encouraging employee-led programmes and engagement.

To ensure a consistent, transparent and ethical approach to community investment and charitable contributions, we provide guidance via our Community Investment Contributions Standard. This Standard represents the minimum requirements for contributions to third-party projects in all markets. It also provides guidance on how to define which contributions may be classified as community investment to ensure they are aligned with our core business strategy.

In 2015, we spent a total of approximately \$680 million (2014: approximately \$880 million) on community investment sponsorships, partnerships and charitable donations worldwide, including our product donation and patient assistance programmes, which make our medicines available free of charge or at reduced prices.

## Case study: Young Health Programme

The Young Health Programme is our global community investment initiative. It has a unique focus on young people and primary prevention of the most common non-communicable diseases (NCDs), such as type 2 diabetes, cancer, and heart and respiratory disease. Significant global health issues that have human, social and economic consequences, NCDs have become the leading cause of death and disability worldwide and are responsible for an estimated 38 million deaths each year.

We work with over 30 expert organisations, combining on-the-ground programmes, research and advocacy to target the four most prevalent risk factors for NCDs: tobacco use, alcohol abuse, lack of exercise and unhealthy eating.

When we launched the programme in 2010, we committed to reach one million young people through the Young Health Programme by the end of 2015. We have now reached over 1.4 million young people in more than 20 countries. Kenya was the latest addition in 2015.

Over 14,000 young people have now been trained to share health information with their peers and the community, and more than 12,000 frontline health providers have been trained in adolescent health.

You can find stories of the young people helped by the programme at [www.yhvoices.com](http://www.yhvoices.com) and further information at [www.younghealthprogrammeyhp.com](http://www.younghealthprogrammeyhp.com).



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**Community investment****Case study: Investing in the next generation of scientists**

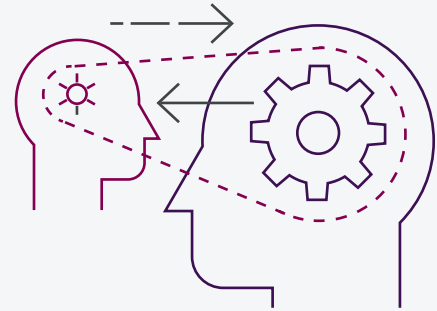
Our company is built on the scientific talent and expertise of its people. That is why we support science, technology, engineering and maths (STEM) education.

In 2014, we signed a new three-year agreement with Career Ready, a UK youth employment charity, to encourage more young people in the UK to study STEM subjects and to pursue STEM-related careers. Our support is helping to establish new STEM hubs in areas with strong employer support and where students are under-represented in STEM careers. We also provide internships and employee mentoring.

Key highlights include:

- 47 STEM Career Ready centres in place, 30% of the total
- A record 12 STEM small and medium enterprise internship bursaries provided for students in 2015
- Continued growth in STEM activities in Scotland
- Seven paid internships provided at Alderley Park and Macclesfield in 2015
- New AstraZeneca STEM Student of the Year Awards, a major success in 2015
- AstraZeneca Cambridge Career Ready STEM Pathfinder project launched, with 50 students participating.

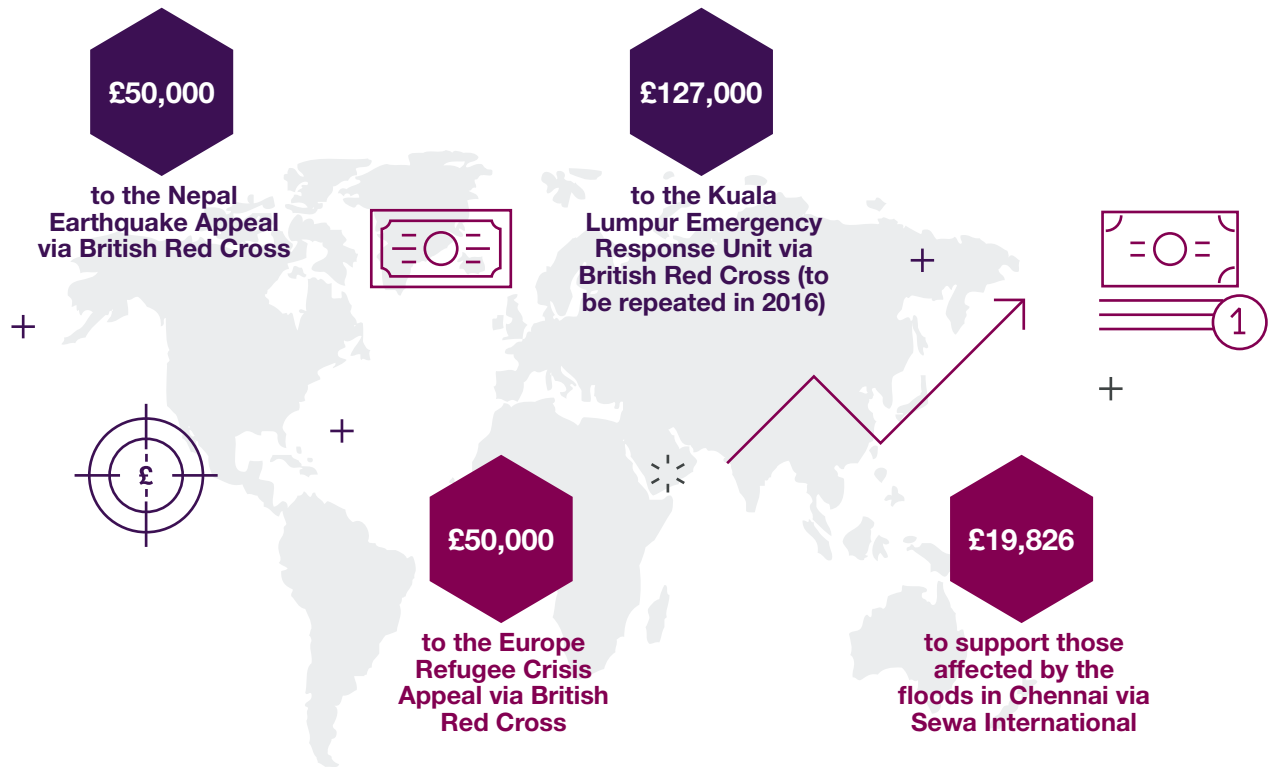
By supporting STEM education we are investing in a healthy pipeline of future talent and helping to ensure the ongoing successes of research at AstraZeneca.



### Supporting disaster relief worldwide

We partner with the British Red Cross to support global disaster relief and help vulnerable people in the UK and abroad prepare for emergencies in their own communities.

#### In 2015, we donated:



In addition to financial contributions to disaster relief, AstraZeneca also donates medicines where they are most needed. In 2015, we donated medicines in 70 countries and across all AstraZeneca therapy areas: cardiovascular disease and diabetes, oncology, infection, respiratory and inflammation, neuroscience and gastrointestinal medicines.

### Employee-supported volunteering programmes

Our employee-led programmes are an opportunity for our people to support their local community, while developing their skills and experience. Examples of employee-led programmes in 2015 include the following.

In the US in October 2015, MedImmune employees and senior leaders assembled and delivered care packages to nearly 250 children receiving treatment at Children's National Medical Center in Washington DC.

In the UK, AstraZeneca and MedImmune employees teamed up with artists to lead a summer outreach programme for over 400 students in Cambridge. Students aged 7 to 17 took part in workshops designed to provide insight into the science behind new medicines. Following the workshops, they created pictures to capture what science means to them, which are now displayed on hoardings around the construction site of the new research and development centre and corporate headquarters in Cambridge.

In Russia, employees led a marathon of health as part of the Young Health Programme. 142 young people took part in sports workshops, attended doctors' lectures and entered 'Say "No" to bad habits' creative contests. The best six participants were selected for a three-day visit to Moscow as part of International Children's Day, including a visit to our Moscow office, and another 16 participants won a stay at a sports camp in the Altaisk region.

In China, 1,032 employees have helped to inspire 4,652 young people through our Young Health Programme since November 2013. In 2015, they established a social media account to provide details of events to promote a monthly star volunteer. The employee volunteer network in China now covers over 25 sales teams and two operational sites.

**Responsible research**

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Patient safety and product security

Clinical trials

Research with animals

Human biological samples

The Nagoya Protocol

Addressing antibiotic resistance

# Responsible research

Society depends on us to conduct effective, ethical and thorough research in the development of medicines and treatments that save and improve lives. Patients who take our medicines have a right to safety. In order to meet those expectations, we set ourselves high standards of ethical practice across all aspects of our research activity worldwide, from clinical trials to our research with animals.

We believe society expects us to take every safety precaution and responsible decision that is required of us by regulators, as well as those that are ethically sound. We also work to ensure that we are aware of any risks to patient safety such as side effects or cases of product counterfeiting, which is a serious global problem that, if left unchecked, can cause severe health problems for its victims.

## 2015 highlights



### \$17.3 million

worth of AstraZeneca counterfeit medicines seized through operations led by our Global Security team



### Contributed

to the first Concordat on Openness on Animal Research Annual Report



### Created

a dedicated Clinical Trial Transparency team

Responsible research

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# Our approach

We want to be recognised for our high-quality science and for the impact we can make on serious disease – and to be trusted for the way in which we do that. This means setting and living up to high standards of ethical practice across all aspects of our research activity worldwide, including clinical trials and research with animals.

Our [Code of Conduct](#) requires that our research be conducted in accordance with all relevant external laws and regulations. It also requires compliance with our [Bioethics Policy](#), which describes our commitment beyond legal compliance and defines the ethical standards, principles and behaviours governing all our research and development (R&D) activity worldwide. In addition, our Global Standard Expectations of Third Parties sets out the standards to which we hold external partners.

Our Code of Conduct also requires all AstraZeneca employees to report any possible adverse effects relating to our medicines within 24 hours through our established procedures. Our safety standards are global and apply in all countries where we operate. We audit our patient safety systems regularly to make sure our policies and standards are being implemented.

We are constantly reviewing laws, regulations and best practice to ensure we abide by the very highest standards, wherever we operate around the world.



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# Patient safety and product security

**Developing a new medicine carries inherent risk, and ensuring patient safety is our top priority. It is our responsibility to eliminate all risk where possible, and to minimise it where it is not possible to eliminate it completely.**

During the development phase, extensive and rigorous pre-clinical and clinical testing is done to establish a potential new medicine's safety and efficacy. Once we establish an acceptable benefit and risk profile, we submit comprehensive information, including clinical trial data, to the regulatory authorities responsible for approving medicines in each country or region in which we want to launch the product.

While enormously helpful in defining how patients will broadly respond to a medicine, clinical trials cannot replicate the complete range of patient circumstances that exist among larger and more diverse patient populations. Rare side effects can often be identified only after a medicine has been launched and used in far greater numbers and over longer periods of time. Information is provided from many sources, among others including reports on suspected adverse drug reactions from healthcare providers and patients, as well as from reviews of the scientific literature. Our Global Patient Safety Database is the central source of information for patient safety across our organisation and for reporting to regulatory authorities.

We develop patient risk management plans for all our medicines. These help us identify, further evaluate and reduce risks to patients and, where appropriate, we provide the plans to the regulatory authorities. We review plans regularly and update them with new safety information as our knowledge of the medicine's safety profile evolves.

Pharmacovigilance is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problems. It is our responsibility to our patients, and we take it very seriously.



## Patient communication

As we develop each medicine, we work with regulators to develop prescribing information that provides healthcare professionals with the information they need to promote patient safety, including indications for use, dosing recommendations, warnings and contraindications, as well as what side effects might occur.

In addition, where it is appropriate, we make information available directly to patients about our medicines and how they should be taken.

We have comprehensive and rigorous systems in place for detecting and rapidly evaluating adverse effects, including mechanisms for highlighting those that require immediate attention. We provide any new safety data to regulators, doctors, other healthcare professionals and, where appropriate, patients.

## Fighting illegal trade, protecting our patients

Key for Product Security is protecting our patients from the dangers of illegally traded (including counterfeits or stolen) medicines. Counterfeits, for example, often fail to provide effective treatment and sometimes cause direct harm to patients. It is impossible to estimate on a global scale how common is the illegal trade in medicines.

Although the scale, complexity and covert nature means it is impossible to prevent illegal trade entirely, we aim to protect patients by disrupting networks and operations, and making it as difficult as possible for people to carry out these illegal activities.

We require our employees to report suspicions of possible illegal trade of medicines that come to their attention. We also find illegally traded medicines through the work of our Global Security investigators, Customs, other law enforcement agencies, regulatory authorities, healthcare professionals, patients and others. Our Global Security investigators gather the evidence needed (according to globally acceptable standards) for a prosecution and pass this to, for example, relevant local law enforcement agencies. We analyse samples that are suspicious and have a global team to coordinate our response, such as reporting cases to health authorities, alerting doctors, pharmacists or wholesalers. We rely on their cooperation and the local health authority to stop such medicines from reaching patients.

Responsible research

Our approach

**Patient safety and product security**

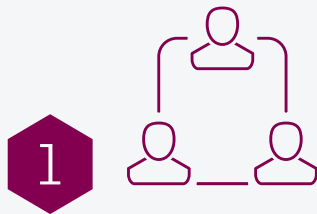
Clinical trials

Research with animals

Human biological samples

The Nagoya Protocol

Addressing antibiotic resistance

**Our Global Product Security strategy focuses on three key areas:**

**1 Building strong, collaborative partnerships –** to strengthen enforcement, raise awareness and provide advocacy to increase the likelihood of regulation in this area being effective and efficient



**2 Working in enforcement –** to combat illegal activity through reporting and professional investigation of suspicions



**3 Securing our products –** through the introduction of pack features and enhanced integrity of the end-to-end supply chain

**Our Global Product Security strategy**

The illegal trade of medicines is not a problem AstraZeneca can tackle alone. We work closely with other pharmaceutical companies through, for example, industry trade associations (IFPMA, EFPIA, PhRMA) and coalitions ([EAASM](#) (European Alliance for Access to Safe Medicines) and [ASOP EU](#) (Alliance for Safe Online Pharmacy – Europe)), to raise awareness of the threat of counterfeit medicines, for example.

One such initiative to help raise awareness among patients, healthcare professionals and regulators is the IFPMA [Fight the Fakes](#) campaign and their False Friends video.

Our Global Security investigators are responsible for the enforcement activities for AstraZeneca and work closely with law enforcement agencies, Interpol and Customs, to dismantle illegal trade operations/networks. In addition, Global Security works closely with other pharmaceutical companies through the [Pharmaceutical Security Institute](#), a not-for-profit organisation, to identify cases of illegal trade and coordinate investigations.

As there is no global law enforcement agency or regulator, pharmaceutical companies like AstraZeneca can often act as an interface between authorities in different countries. In 2015, investigations conducted by Global Security led to the seizure of \$17.3 million worth of AstraZeneca counterfeit medicines, and disrupted counterfeiting operations that had netted in excess of \$100 million, leading to over 140 arrests.

**What to do if you are concerned about receiving an illegally traded medicine or you have a suspicion about your medicine**

AstraZeneca urges patients and healthcare professionals to be alert to the possibility of illegally traded medicines. Anyone who is concerned that their AstraZeneca medicine may not be genuine can contact their doctor (physician), pharmacist (or other healthcare professional) or health authority. You can also contact AstraZeneca through this [website](#) or in the country where you are based.

Patients can protect themselves from illegally traded medicines by obtaining their medicines only from licensed and regulated outlets, and avoiding unregulated sources on the internet. Patients should be vigilant when examining their medicines, paying attention to altered or unsealed packaging or changes in the product packaging.



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**Security along our supply chain**

We include security features on our packs to enable us to distinguish legitimate products from counterfeits.

We also work to improve security in our supply chains for our investigational and commercialised products (bespoke product security audits, collaborating with others to share best practice and supply chain integrity principles for supply chain design) to inhibit the entry of illegally traded medicines.

**This includes:**

- Strengthening our due diligence processes for third parties and adding product security clauses in our contracts with supply chain partners
- Training our third parties to report any suspicions and to maintain secure distribution channels
- Using seals and/or unique identification numbers (a serial number) on some packs to make it more difficult and expensive for counterfeiters to copy our packaging, and help identify packs that have been tampered with. Applying serial numbers to packs is now becoming a legislative requirement in some markets as governments recognise this as part of their anti-counterfeiting strategy.

**Driving greater protection**

As the illegal trade in medicines is an illegal activity and therefore hard to measure, we do not publish performance targets around our work. However, we continue to make positive progress on all three areas of our strategy.

As an industry, there has been a lot of progress in terms of raising awareness of the dangers of counterfeit medicines, including the dangers of buying medicines online, but there is more work still to be done. While the counterfeiting of any product is illegal, we need to ensure that patients recognise the potentially life-threatening risks specifically associated with counterfeit medicines.

We are also encouraging regulators to address this issue of illegal trade by enacting legislation that will better protect patient safety and by ensuring that the sentencing of those convicted of producing and distributing counterfeit medicines, for example, reflects the seriousness of the crime.



# Clinical trials

We study the effects of potential new medicines in humans using clinical trials. The clinical trial phase is essential in the development of new medicines. At any one time, AstraZeneca may have hundreds of clinical trials under way in different locations around the world. We take very seriously our commitment to delivering consistently high standards of ethical practice and scientific conduct in all our trials, wherever they take place.

A potential new medicine is tested in humans only after rigorous and extensive pre-clinical research has confirmed its potential efficacy and safety. Trial medicines go through three phases of testing before they are submitted to regulatory authorities for an approval to market. All medicines have side effects that may affect some people, so the safety of any medicine needs to be assessed in terms of its benefit and risk profile.

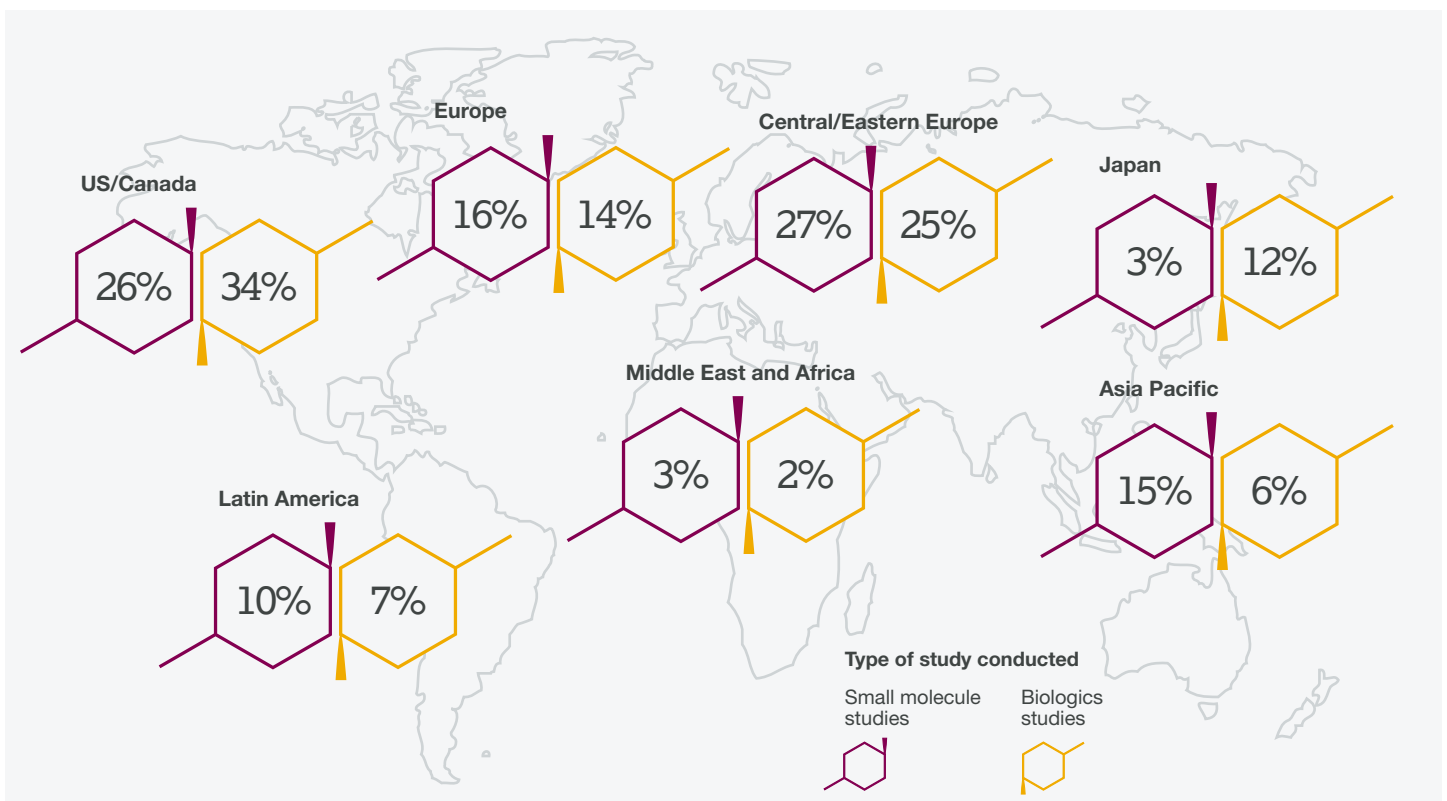
We cannot eliminate all the risks to clinical trial participants, but we aim to minimise risks as much as possible. Our top priority is to make sure that those taking part in our studies are not exposed to any unnecessary risks and that, before they give their consent, they fully understand what taking part in a trial means.

Our informed consent process ensures that patients participating in any and every trial understand the benefits and risks, the purpose of the trial and how it will be conducted. We explain that they could receive a comparator drug or placebo and that they can pull out of the trial at any time, with or without giving a reason.

To ensure patients understand all the information that is being given to them, we provide it written in a language they understand or, if literacy is an issue, we provide the information verbally. We use independent witnesses to ensure patient safety. These witnesses are responsible for confirming that a participant has received and understood all the information they need to be able to give their informed consent.

All our clinical studies are designed and finally interpreted in-house, but some are conducted by contract research organisations (CROs) on our behalf. In 2015, approximately 36% of patients in our small molecule studies and 56% of patients in our biologics studies were monitored by CROs. We require these organisations to comply with our global standards and we conduct risk-based audits to monitor compliance.

## Clinical trials around the world in 2015



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### Implementing the highest standards

Our standards are global and apply to all AstraZeneca clinical trials, in all locations, whether they are being conducted by us or on our behalf by external CROs. If our policies differ from local regulations, we adopt whichever standard is higher.

Our Standard Operating Procedures and Policies require that all staff involved in clinical trials and all investigators are trained in ICH (the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use) guidelines and local Good Clinical Practice regulations. Our standards apply to all AstraZeneca-sponsored clinical trials, in all locations, but the conduct of our trials in emerging countries is a specific focus for our compliance monitoring and assurance activities.

### Clinical trial transparency

In 2015, we created a dedicated Clinical Trial Transparency team whose primary task is to ensure our compliance with clinical trial policies and governance. We have committed to allowing external parties to request patient-level data as part of our commitment to the Principles for Responsible Clinical Trial Data Sharing. Sharing more data in this way will help the industry as a whole develop new products and treatments, improve existing ones, and will save money by avoiding duplication of research.

### The commitment to responsible data sharing is a voluntary, industry-wide scheme designed to improve transparency across the pharmaceutical industry.

In order to communicate better with clinical trial patients, AstraZeneca has developed a suite of 95 different patient engagements. For example, our lay-language summaries explain research findings in a way that patients and the general public can understand.

In 2016, we will be preparing to meet the Redacted Clinical Report Package of the European Medicines Agency (EMA) Publication of Clinical Data Policy. The Policy is designed to further improve transparency and access to research information. Throughout 2015, we have taken significant steps to make increasing amounts of data available to those who request it. Our challenge is to protect patients' personal information and company confidential information, while still achieving the highest levels of transparency.



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# Research with animals

We are committed to helping the public understand our use of animals in research and our methods for Replacing, Reducing and Refining the study of animals in research (the 3Rs). We understand that the use of animals in research is still a difficult issue for many people, but animal studies remain a critical stage in the development of new life-saving and life-improving medicines and treatments.

Our commitment to the 3Rs and high standards of animal welfare begins in the Code of Conduct, and is reflected in our global [Bioethics Policy](#). In addition, we practise high standards of animal welfare. This year, we submitted our progress for inclusion in the first [Concordat on Openness on Animal Research Annual Report](#).

Rapid advances in technology in recent years have led to the increasing availability and use of alternatives to animal research. But these alternatives cannot yet provide all the essential information needed about how a potential new medicine works on a disease and the living body, and what the possible side effects might be.

Animal studies continue to play a vital role in the search for new and improved medicines. All medicines we have available today have involved some animal research, and animal studies are required by regulators before they approve a new medicine to be tested in humans during clinical trials.

While we will always focus on replacing animal studies with better, more accurate models, we know that in the interim it is essential to provide the best possible care and the highest welfare standards available, while using the minimum number required to achieve the benefits.

Our Bioethics Policy states that all research involving animals must be carefully considered and justified, that the principles of the 3Rs be applied and that the welfare of the animals we use is a top priority. Our requirements apply globally across all our internal animal research, to third parties who conduct research on our behalf, and to the breeders and suppliers of animals for use in such studies.

Our consistent global standard for animal welfare is compliance with relevant external laws and regulations, and consistency with the principles of the Guide for the Care and Use of Laboratory Animals ('the Guide') – the internationally respected good-practice guideline for this area. Wherever possible we prefer to use facilities accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC International). AAALAC International accreditation serves as an independent quality mark, validating that the standards of the Guide are being met.

## Openness in animal research

AstraZeneca is committed to being transparent about our use of animals in research and, as such, we became a signatory of the Concordat on Openness on Animal Research in 2014. In 2015, we compiled our first progress update for inclusion in the Concordat's [Annual Report](#).



© Understanding Animal Research

## The Concordat on Openness on Animal Research

We signed up to all four of the Concordat's commitments in 2014:

- Being clear about when, how and why we use animals in research
- Enhancing our communications with the media and the public about our research using animals
- Being proactive in providing opportunities for the public to find out about our research using animals
- Reporting annually on our progress.

We welcome and engage in open and constructive dialogue with stakeholders who have a legitimate interest in our use of animals in research. As well as supporting organisations and working groups that educate the public about the use of animals in research, we have conducted over 30 facility tours to staff and external representatives from UK universities and animal welfare organisations to showcase our unique facilities. Additionally, we offer opportunities for open Animal Welfare Ethical Review Body (AWERB) meetings, where we discuss past, present and future animal work to ensure appropriate ethical review.



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## Animal welfare

The welfare of the animals we use in research is a top priority. It is the right thing to do ethically, but it is also essential for reliable research outcomes. Stress can cause different responses in different animals. Ensuring animals are fit and well, and that their behavioural needs are met reduces stress and variation, and produces better quality data from fewer animals. Read more about our collaboration with the University of Stirling on improvements in laboratory dog standards [here](#).

To reduce stress in the animals we use, and to work to the highest standards of animal welfare, we provide mandatory training, ongoing competency assessments and continual professional development opportunities, such as certifications and ratifications for employees involved in our animal research. All AstraZeneca employees involved in research with animals work to consistent standards and in accordance with the Guide for the Care and Use of Laboratory Animals – the internationally respected good-practice guide.

**All employees involved in our animal research programme undertake mandatory training, and are assessed on their technical competency before being allowed to work with animals.**

We used 182,055 animals in-house and a further 33,220 animals at external CROs in 2015. The majority of the animals used are rodents and many are undergoing mild procedures, such as oral dosing, blood sampling or a simple injection under the skin.

The total number of animals we use will continue to vary because use depends on a number of factors, including the amount of pre-clinical research we are doing, the complexity of the diseases under investigation and regulatory requirements. We believe that without our active commitment to the 3Rs, our animal use would be much greater.

Our priorities are to ensure we are using the right number of animals needed to deliver a statistically reliable result, and to avoid repeating studies unnecessarily. We are also committed to ensuring the welfare of the animals we use.

### Number of animals used in research

	2013	2014	2015
In-house	260,930	194,162	182,055
External contract research	19,676	15,634	33,220
<b>Total</b>	<b>280,606</b>	<b>209,796</b>	<b>215,275</b>

## Implementing and sharing the highest standards

Having a single council responsible for all aspects of animal care and welfare ensures that we have one consistent global standard for all work involving animals, and one consistent approach to animal welfare and compliance. Our Council for Science and Animal Welfare (C-SAW) is the expert decision-making group accountable for animal welfare and compliance across the AstraZeneca Group of companies. Chaired by AstraZeneca's Chief Veterinary Officer, the C-SAW is responsible for developing and implementing policies and standards, and provides the highest level of governance for animal welfare across the organisation.

The C-SAW includes representative members, who are its eyes and ears in each region, as well as experts in specific areas, such as the 3Rs, statistical practice and regulatory compliance. Through the representative members and their networks, C-SAW is able to receive feedback from stakeholders, as well as ensuring that important communications and messages reach the necessary people.

To recognise efforts to Reduce, Refine and Replace the use of animals in research, we developed the C-SAW Global 3Rs Awards. The 2015 C-SAW Awards were announced in December 2015. Entries were judged by an internal and external panel of experts in the

field, including a representative from the UK's National Centre for the 3Rs (NC3Rs). The committee received 32 submissions, including several from our third-party collaborators and CROs. Once again, there were three categories, including Scientific/Technical Advancement; Laboratory Animal Management; and Collaborator of the Year.



**We are a company focused on science and innovation and committed to our value of doing the right thing. As such, we are continuously looking for ways to support the 3Rs agenda to Reduce, Refine and Replace the use of animals in research. This is a vital part of getting medicines to patients, driving scientific discovery and helping us to challenge prevailing assumptions about the best research models. Science, animal welfare and ethical practice come together in the way we undertake animal research, and the 3Rs Awards showcase our leadership in those areas."**

Pascal Soriot, Chief Executive Officer



### Scientific advancement winner of the 2015 C-SAW Awards

A recent focus of AstraZeneca's anti-cancer research has been on the development of Antibody Drug Conjugates (ADCs). ADCs are targeted antibodies that are connected to a very potent chemotherapeutic drug. This allows the highly potent drug to be delivered directly to the site where the tumour is.

ADCs are challenging to develop as they are highly complex in structure. One of the leading causes of failure with ADCs has been unexpected non-specific side effects. This occurs when the ADC enters healthy tissue instead of just the tumour.

Typically, ADC research requires the use of non-human primates, because these specific interactions do not occur in other species. In this case, the research team was looking to evaluate the non-specific side effects and were able to conduct an innovative study using rats to successfully do so.

Using rats instead of non-human primates is a significant refinement and a great contribution to reducing the number of these higher animals used in research.

The use of rats allowed the selection of ADC properties that result in the fewest non-specific side effects, maximising the chances of clinical success in cancer patients.

### The use of animals in research is a complex topic. For more information visit:

Understanding Animal Research:  
[www.understandinganimalresearch.org.uk](http://www.understandinganimalresearch.org.uk)

Foundation for Biomedical Research:  
[www.fbresearch.org](http://www.fbresearch.org)

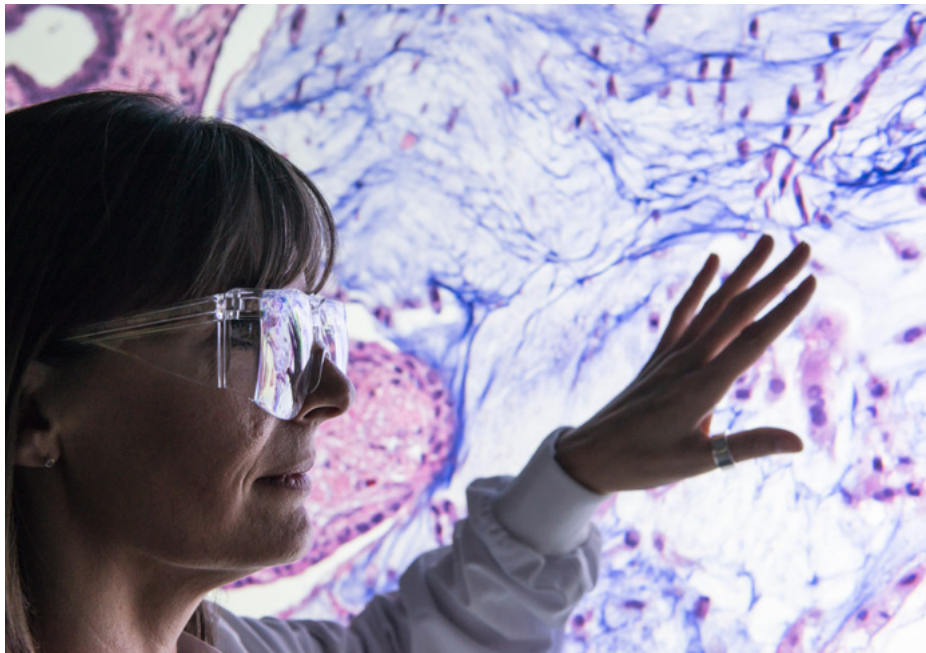
The National Centre for the Replacement, Refinement & Reduction of Animals in Research:  
[www.nc3rs.org.uk](http://www.nc3rs.org.uk)

# Human biological samples

The use of human biological samples (HBS), such as solid tissue and biofluids, plays a vital role in developing a deeper understanding of human diseases and how they work, which helps us develop effective, new and personalised medicines. In carrying out this important area of research, we maintain policies and processes to ensure that we both comply with the law and meet regulatory concerns. This includes approval of HBS sources, which support our scientists, and third parties working on our behalf, in being compliant with the ethical principles relating to HBS in our policies and standards.

## Protecting the rights of donors and their families

AstraZeneca greatly appreciates the generosity of those donating HBS for research. We place an emphasis on informed consent that protects the rights and expectations of donors and families throughout the process of acquisition, use, storage and disposal of the samples. Maintaining the anonymity of the donor is of the utmost importance, and a key part of our process includes the coding of biological samples and associated data, including genetic data, to help achieve this.



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### Stem cell research

Stem cell technology may offer new opportunities to develop innovative and safer medicines, and would help ensure better treatments for patients. There are two main forms of stem cell research, human-induced pluripotent stem cells, or hiPSC, which can be taken safely from adult volunteers, or human embryonic stem cells (hESC). The majority of our stem cell work uses hiPSC, which is a less ethically sensitive alternative to using human embryos. We are actively evaluating both technologies.

We use hESC when there is no alternative technology that would provide the scientific information required to increase our knowledge of a serious disease. We are interested in the potential of stem cells to differentiate into mature human cells, allowing more accurate prediction of drug metabolism and certain safety and toxicity outcomes in people.

Another area of interest for AstraZeneca where stem cells may prove valuable is for the development of more biologically relevant in vitro models for disease modelling and drug target efficacy evaluation. This would represent a significant step forward in increasing the human relevance of early drug development studies, and help us overcome current limitations that a restricted supply of normal cells presents, as well as potentially reducing animal testing.

In rare circumstances, AstraZeneca may use human foetal tissue. In these circumstances, we will conduct an internal review of the scientific validity of the research proposal. We will only give permission to use the tissue when no other scientifically reasonable alternative is available. We are committed to minimising the use of foetal tissue by exploring technological alternatives.

We use extremely rigorous assessments and have high quality and ethical expectations of our tissue suppliers.

**AstraZeneca is not involved in any research on human reproductive cloning, for which there is a UNESCO international ban and country-level legislative bans.**

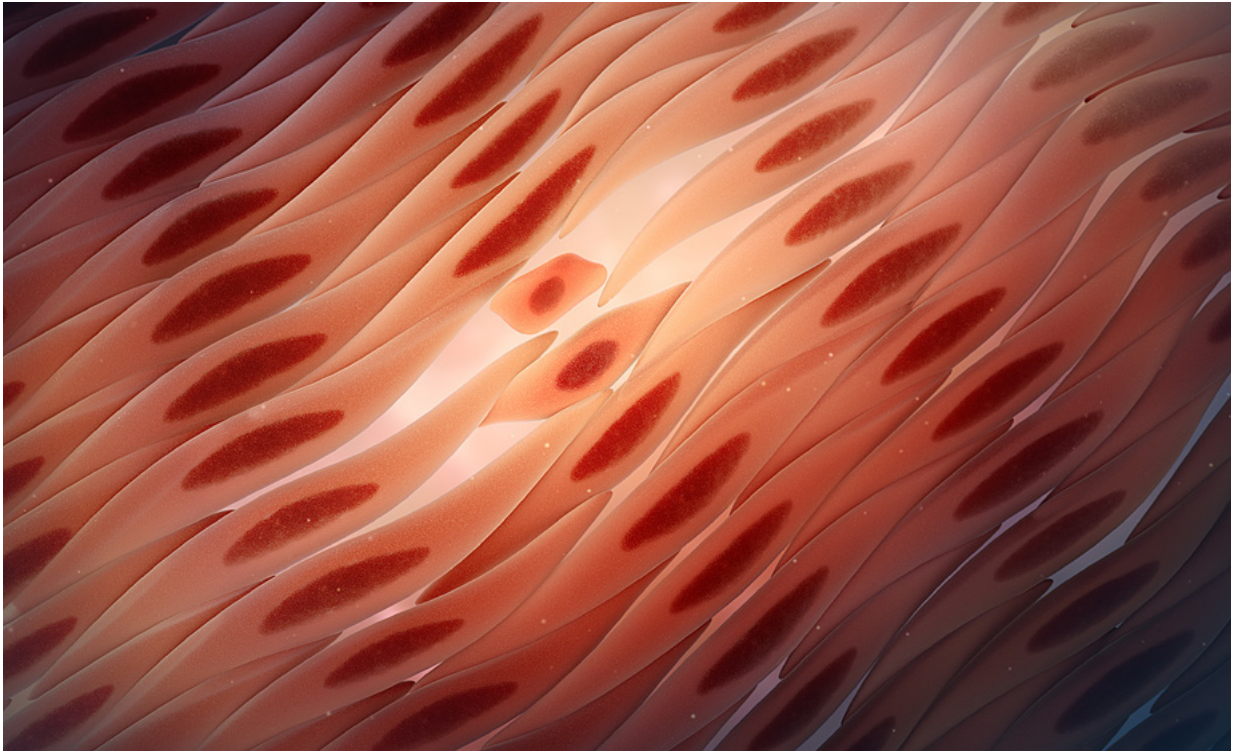


# The Nagoya Protocol

**AstraZeneca is a signatory of the Nagoya Protocol, an international agreement to protect the benefits enjoyed by the country of origin of natural biological resources used in research.**

The pharmaceutical industry sometimes uses natural biological resources (such as plant or fish extracts) that might be modified to support its R&D programmes on the path to finding a new medicine. The Nagoya Protocol is an international treaty that helps to ensure fair reward is given to the country that originally supplies the biological material. In accordance with the Protocol, users of biological resources have to record their access and use of the material and keep a record

of this for 20 years ('due diligence'). They also have to set 'mutually agreed terms' – a contract that legally defines the conditions of the deal and the benefit that will be received by the country of origin if a new drug is produced. This sharing of benefit helps to ensure a more measured and transparent approach to the use of natural resources, and supports the sustainability of our planet's biological diversity.



# Addressing antibiotic resistance

The increasing resistance of infectious diseases to antibiotics is a global issue on which AstraZeneca is taking a lead. We have invested in research and development in infection and are calling on our colleagues across the industry, health leaders, patients, physicians and governments around the world to come together with a multi-stakeholder approach to tackle the hurdles that prevent new antibiotics coming to the market.

We believe the fight against antibiotic resistance requires three key developments:

**1. Stronger antibiotic stewardship** – appropriate selection, dosing, route and duration of antimicrobial therapy, along with proper manufacturing controls and environmental management, are necessary to help address the threat posed by antibiotic resistance.

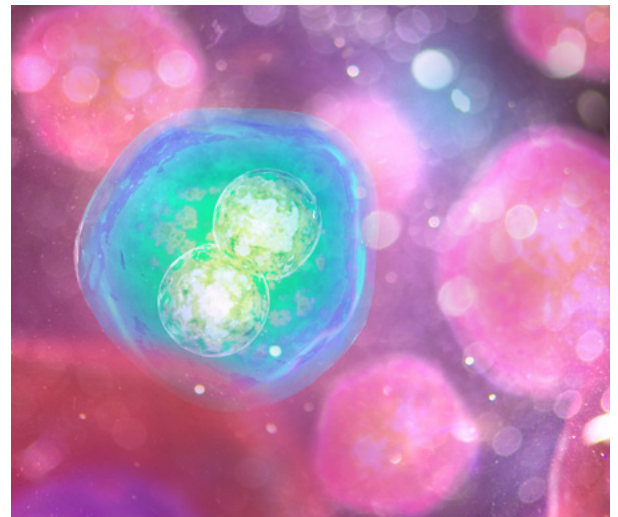
There is an urgent need for global collaboration to develop or update a locally relevant framework of stewardship practices, which delineate responsible surveillance, prescribing practices and antibiotic use to address current trends in increasing antimicrobial resistance (AMR).

**2. Innovative regulatory pathways** – new antimicrobial drugs are needed urgently, but the current drug pipeline is alarmingly thin, with many companies moving away from antibiotic development. Innovative regulatory approaches that balance the data needed for registration with the unmet medical need would encourage further drug development.

Positive steps have been taken by leading regulatory authorities. These new approaches to regulatory pathways will facilitate the development of new drugs to combat emerging, rare pathogens, especially those that are resistant to multiple antibiotics. It will be important to see these new ideas implemented globally.

**3. Commercial models** – current private/public models are not conducive to bringing antibiotics to market. The pipeline is virtually dry, especially in gram-negative bacteria; an area which particularly needs new antibiotics.

Antibiotics need to be viewed as a public good, similar to the firefighting system in place in all communities, and will require a reimbursement strategy that recognises the reality of the insurance value of antibiotics.



**Ethical business practices**

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# Ethical business practices

We want to be valued for the medicines we provide and trusted for the way we work. That means leading our industry in demonstrating ethical business practices and high levels of integrity in everything we do. It is why human rights, safety and health, environmental protection, preventing bribery and corruption, and business ethics are core to AstraZeneca's approach to sustainability.

## 2015 highlights



# 100%

of employees completed our Code of Conduct training



# 100

sector-best score for Codes of Business Conduct category in the Dow Jones Sustainability Index



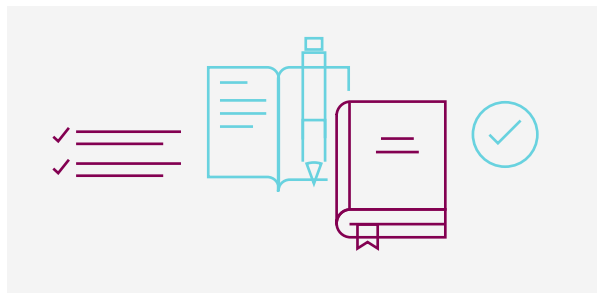
# 13,845

active supplier assessments completed using our third-party due diligence process

# Our approach

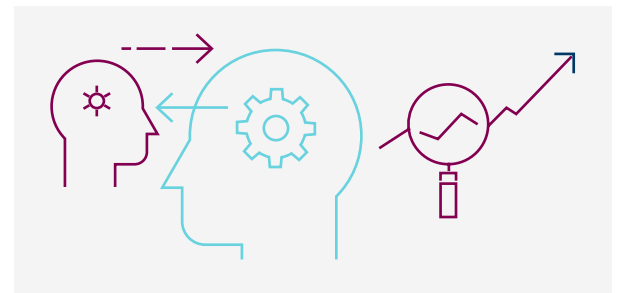
Our [Code of Conduct](#) sets out the commitments and ethical standards we expect of everyone who works at AstraZeneca. It provides high-level guidance on how these commitments and standards are to be translated into consistent actions worldwide. The Code is supported by a wide range of global policies, including our global policy on [Ethical Interactions & Anti-Bribery/Anti-Corruption](#). In addition, our Global Standard Expectations of Third Parties sets out the ethical standards expected of third parties who work for, or on, AstraZeneca's behalf.

**We focus on two key areas to drive our ethical business practices:**



## Compliance

**Driving and embedding a culture of ethics and integrity throughout the organisation.**



## Working with suppliers

**Only working with third parties that embrace standards of ethical behaviour that are consistent with our own.**

## What we have achieved

Our aims	Goals	Progress highlights	Target progress
Ensure ethical business practices and integrity underpin everything we do	All employees to be trained on our Code of Conduct by the end of 2015	100% of employees trained	
	Communicate clear policies to employees	Updated our <a href="#">Ethical Interactions &amp; Anti-Bribery/Anti-Corruption Policy</a> to provide greater clarity and simplicity for the business	
	Ensure employees and other stakeholders can raise concerns and that they are properly addressed	326 reports of alleged compliance breaches or other ethical concerns made through the Code of Conduct helpline in 2015	
	Meet high ethical standards across all our procurement activities and decisions worldwide	Conducted 61 supplier audits in 2015	

### Key

Target exceeded



Full target achieved



Ongoing progress



Target not achieved, some progress



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# Compliance

We expect everyone at AstraZeneca to observe the highest standards of integrity and honesty, and to act with care, diligence and fairness in all they do. We are committed to delivering consistently high standards of sales and marketing practices worldwide, and we only work with those third parties who embrace high standards of ethical behaviour that are consistent with our own.

## Building a culture of compliance

Our Global Compliance function exists to drive and embed a culture of ethics and integrity throughout our organisation. We require all our employees to take personal accountability for their actions and to demonstrate individual behaviour that is in line with our

values. That means engaging them and supporting them to ensure they understand and follow our standards, and feel comfortable asking questions or reporting incidents of non-compliance.

## We focus our efforts on:



Communicating clear policies to employees



Ensuring employees and the public can raise concerns, and that those concerns are properly addressed



Providing key stakeholders with assurance and effective reporting on key issues



Monitoring compliance



Risk management relating to third parties working for, or on, our behalf



Supporting ethical behaviour through effective advice, training and support



Fair and objective investigations of possible policy breaches

Global Compliance also works closely with Internal Audit Services (IAS) to provide assurance reporting to the Audit Committee.

## Mandatory ethics training for all

Our Code of Conduct – which is translated into 40 languages – states our core commitments and the high ethical standards expected of everyone at AstraZeneca. Our [Ethical Interactions & Anti-Bribery/Anti-Corruption Policy](#) reinforces our zero tolerance for bribery and corruption, and also focuses on the appropriate promotion of our products.

Every new starter receives mandatory training on the Code of Conduct. We then require all employees to complete an annual course covering the Code of Conduct and [Ethical Interactions & Anti-Bribery/Anti-Corruption Policy](#).

## Simplifying compliance

We want to make it as easy as possible for our employees to do the right thing. That is why simplifying our organisation and processes is central to our commitment to being a great place to work. Our aim is to be an industry leader in our approach to global policies, training and communications.

In 2015, we updated our [Ethical Interactions & Anti-Bribery/Anti-Corruption Policy](#) to provide greater clarity and simplicity for the business. The improved policy moves towards a more principles-based approach and uses more straightforward language that is easier to understand. We base our training on real-life scenarios, tailored to specific business units and roles to help put these principles into practice.

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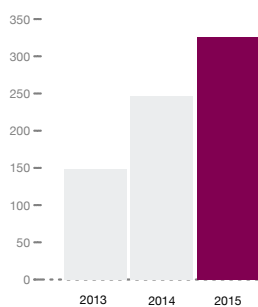
Working with suppliers

### Reporting breaches and concerns

AstraZeneca's Code of Conduct requires employees to report any concern they may have about a possible breach of the Code or its supporting policies. Employees are advised to consult with their line manager or their Human Resources, Legal or Compliance Departments. The Code provides additional contact channels for AstraZeneca's Helpline, which includes the AZethics telephone lines, the AZethics website, and email and postal addresses for the Global Compliance Department. These channels are also available to the general public for reporting concerns. Our online global reporting system is available in 40 languages and we make it clear that anyone who raises a possible breach in good faith is fully supported by management and will not be subject to retaliation. The fact that the majority of cases come to our attention either through the line management route or self-reporting can be seen as a good indication that employees feel comfortable raising concerns, as recommended in the Code and reinforced in the annual Code of Conduct training.

In 2015, 326 reports of alleged compliance breaches or other ethical concerns were made through the helpline, including reports made by any other anonymous route that could be considered whistle-blowing (2014: 247 reports). We take all alleged compliance breaches and concerns extremely seriously, and investigate them and report the outcome of such investigations to the Audit Committee, as appropriate.

### Reports of alleged compliance breaches via the Helpline



### Sales and marketing practices

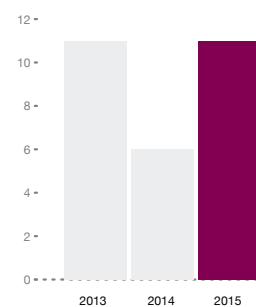
It is very important to our long-term success that the public has confidence in our sales and marketing practices. Our global policy on [Ethical Interactions & Anti-Bribery/Anti-Corruption Policy](#) sets out what we require of all employees to meet our commitment to operate ethically and with integrity – including our zero tolerance position on bribery and corruption. It includes guidance on appropriate product promotion to ensure we provide healthcare professionals with evidence-based, reliable information about our medicines in the best interests of patient care.

We have a network of nominated signatories who review our promotional materials against applicable requirements. IAS audit professionals also conduct compliance audits on selected marketing companies and third parties.

When we work with suppliers, distributors and partners on the sales and marketing of our products, we do appropriate risk assessments and due diligence to ensure we are using reputable third parties. We also actively engage with these organisations and maintain continued oversight of their activities to make sure that they are operating to standards of ethical practice that are consistent with our own.

We identified 11 confirmed breaches of external sales and marketing regulations or codes in 2015.

### Confirmed breaches of external sales and marketing regulations or codes



Ethical business practices

Our approach

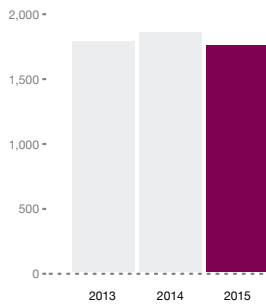
**Compliance**

Working with suppliers

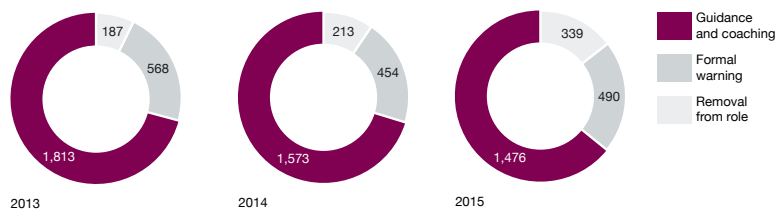
There were 1,749 instances, most of them minor, of non-compliance with our Code of Conduct, global policies or related control standards in our Commercial Regions, including instances by AstraZeneca employees, as well as by contract staff and other third parties. We removed 339 individuals from their roles as a result of these breaches (a single breach may involve more than one person). We also formally warned 490 others and provided further guidance or coaching on our policies to 1,476 more. These figures include AstraZeneca employees, as well as contractors and other third parties. The most serious breaches were raised with the Audit Committee.

We continue to focus on management oversight, and strengthening employee awareness and adoption of our ethical standards into their daily work. Selection and oversight of third party engagements to ensure our third parties continue to operate with high ethical standards of sales and marketing practice consistent with our own are also ongoing priorities.

### Instances of non-compliance with Code of Conduct, global policies or related standards in our Commercial Regions (including contract staff and other third parties)



### Corrective actions taken in our Commercial Regions



# Working with suppliers

## Building a responsible supply chain

Our future success depends on building and maintaining a strong and sustainable supply chain that supports our research and development of new medicines, and upholds our high ethical standards. Monitoring and improving performance across the suppliers we use around the world protects our business and, more importantly, the patients who use our medicines.

We are committed to meeting high ethical standards across all our procurement activities and decisions worldwide. We expect our third parties to meet these strict standards, as set out in our [Global Standard Expectations of Third Parties](#). Our Global Standard incorporates our Code of Conduct and key international standards, such as those published by the International Labour Organization (ILO).

Every employee who sources goods and services on behalf of AstraZeneca is expected to follow responsible business processes, which are embedded into our procurement procedures. All our procurement professionals receive detailed training on responsible procurement.

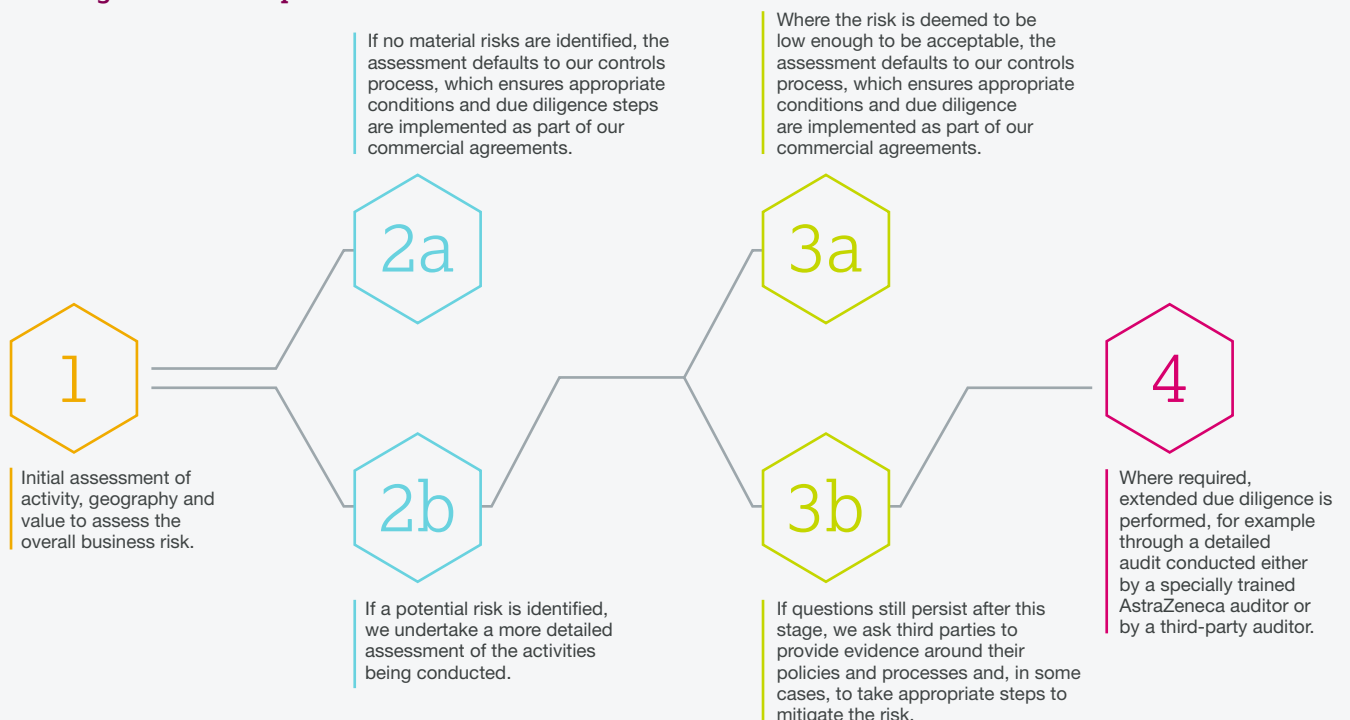
In 2015, we focused on increasing our coverage of third-party activities, providing greater senior leader insight and ensuring quality and depth of compliance assessments.

## Our approach to supplier risk management

Our Procurement organisation works to assess and monitor risks within our global supply chain, including suppliers, downstream supply chain partners and local business development partners.

We apply a globally consistent approach to assessing risk, which allows us to focus our efforts on high-risk relationships, and to ensure suppliers understand and are able to meet our expectations.

## Our four-stage assessment process





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**Working with suppliers**

### A collaborative approach

We support our suppliers to address risks and implement the improvements we require. Most cases have a positive outcome but, when a supplier is unable to meet our expectations in a timely way, we exit the relationship. In 2015, 65 potential suppliers failed to meet our required standards and we discontinued the relationship.

Our regions develop and implement their own supplier engagement programmes to reflect geographical risk areas and gaps in third-party understanding. For example, in Turkey our procurement specialists work with suppliers to identify risk and to adapt AstraZeneca policies to mitigate specific risks. Higher-risk suppliers undergo a comprehensive training programme. In 2015, 204 completed this training. Around 150 suppliers also worked with us to adapt their policies to mitigate specific risks, while the remainder already had appropriate policies in place.

### Complying with the Modern Slavery Act

The Modern Slavery Act will be in force in the UK from April 2016. We will fully comply with the Act, which supports those subjected to human trafficking and slavery, and will seek to ensure that the Act is complied with along the entire length of our supply chain. We will report on our progress in this area in 2017.

**In 2015:**



**61**  
supplier audits  
were conducted



**35%**  
of these suppliers met  
our expectations

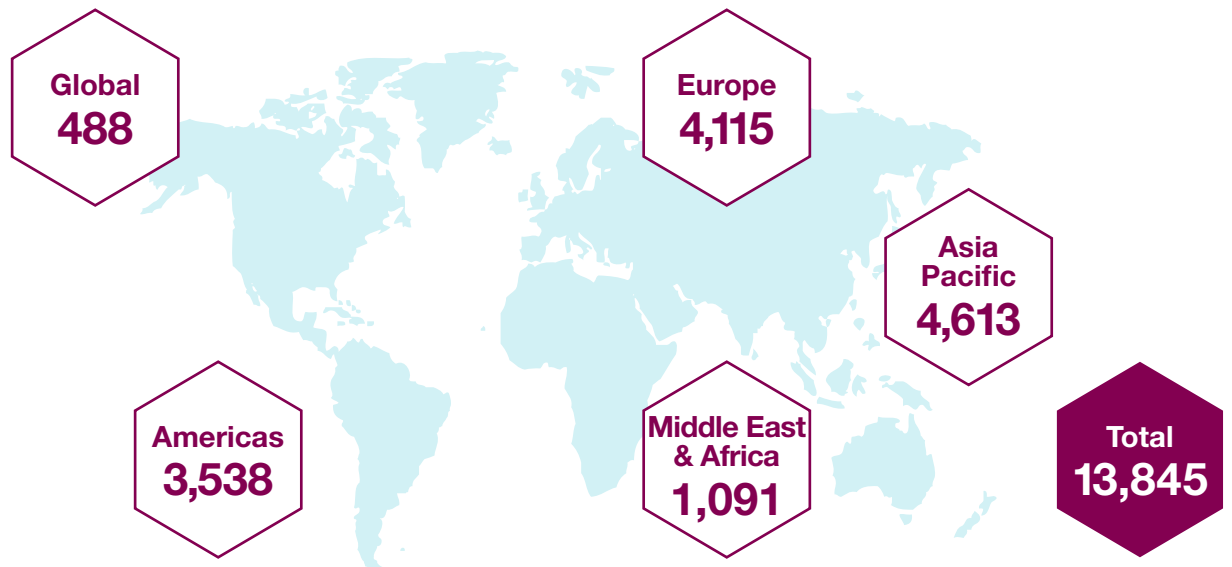


and the remaining  
**65%**  
are developing and implementing  
action plans to ensure they meet  
our expectations

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**Working with suppliers****2015 assessments by region****Encouraging supplier diversity**

In recent years, our strategy to become more science-led and innovative has driven a shift towards smaller companies who tend to be more flexible, responsive and creative. We value this diversity in our supply chain. While all our suppliers must meet the same global quality and ethical standards, our supplier diversity programme helps small businesses understand our requirements and strengthens their ability to win work with us.

**Fair and fast payments to suppliers**

AstraZeneca operates to a principle of paying suppliers on time and is a signatory of the Prompt Payment Code.

In order to ensure we are able to pay suppliers on time, we have certain requirements in relation to invoice submission:

- All invoices should clearly state the purchase order (PO) number received from AstraZeneca, and the currency of the invoice must be the same as that specified on the PO. If not, the invoice will be sent back to the supplier for correction.
- Our standard payment terms operate from the invoice receipt date (the date we receive the invoice). Where constrained by legal requirements within countries, the payment term will be aligned to meet those requirements. Full details of our payment terms can be found at [www.astrazeneca.com/terms-and-conditions](http://www.astrazeneca.com/terms-and-conditions).
- All invoices should be submitted electronically unless constrained by country requirements or facilities.
- The invoice should be addressed to the correct company entity and clearly state a unique invoice number.

**Invoice submission****1. Ariba Network invoices**

Suppliers who are set up on the Ariba Network (AN) should submit their invoices through this system. Once submitted via AN, they should not be submitted by any other means (e.g. emailing copies in) unless requested.

**2. Invoices via email (electronic)**

PDF copies should be sent to the correct email account for the country, i.e. for the UK only, this is [p2pinvoice@astrazeneca.com](mailto:p2pinvoice@astrazeneca.com).

**3. Legal requirements for paper invoices**

Where paper invoices are required, the necessary helpdesk should be contacted for details on invoice submission.

**Questions/support**

- All questions should be addressed to the Finance Direct Helpdesk for the relevant country:
  - For the UK: [FinanceDirect.English@astrazeneca.com](mailto:FinanceDirect.English@astrazeneca.com)  
+44 1625 231406/Mon–Fri 8am–4pm
  - For the US: [Helpdesk.USPTP@astrazeneca.com](mailto:Helpdesk.USPTP@astrazeneca.com)  
+1 800 773 7119/Mon–Fri 8am–5pm EST.