Swiss Re

2012 Corporate Responsibility Report
Committed to sustainable value creation

SWISS RE
150
YEARS

Contents

The 2012 Corporate Responsibility Report sets out our commitment as a responsible company and describes in detail how we put this commitment into practice.

Cover
Natural catastrophes such as windstorms, floods and earthquakes can have serious consequences for communities and entire economies. Solutions that provide financial protection against these risks are a core element of re/insurance; they help communities strengthen their "risk resilience", or in other words, their ability to recover after a natural disaster. In 2012, for example, we renewed and expanded the MultiCat cat bond, which offers the Mexican government financial protection of up to USD 315 million against hurricanes and earthquakes. For this and further risk transfer solutions, see pages 14–20.

Executive statement

Dear stakeholders

We take pleasure in presenting to you the 2012 edition of our Corporate Responsibility Report. We have published such a public account of our performance as a responsible company since 1998. As our understanding of key sustainability issues and our commitment to action has matured, so has the content of our Corporate Responsibility Report. In this year's edition, we have made a number of significant improvements. They are all driven by our desire to offer you an honest and transparent representation of corporate responsibility at Swiss Re.

To begin with, we have extended independent assurance to three full chapters; previously this had been limited to the company's CO_2 emissions. Furthermore, we report for the first time against the Principles for Sustainable Insurance, which we helped develop in cooperation with the UNEP Finance Initiative and other partners. It complements our annual communication on how we implement the ten principles of the UN Global Compact, to which we remain committed. Finally, we have decided to talk more about some of the challenges inherent in implementing sustainability in our business. As deriving concrete measures from general sustainability principles is not always straightforward – and at times might even involve short-term dilemmas – we believe this can support the discussion on how to achieve sustainable progress.

As in previous years, our report covers all the areas of our business we regard as essential to addressing environmental and social issues. Here we would like to point out just some of last year's achievements:

In our core re/insurance business, we made a significant five-year commitment to the Grow Africa Partnership, which aims to improve food security in Sub-Saharan countries. Together with several partner organisations, we will work to implement index insurance solutions that offer rural communities protection against the consequences of adverse weather.
In Mexico we successfully renewed and expanded the MultiCat transaction. This cat bond provides the Mexican government with up to USD 315 million of financial protection against damage from hurricanes as well as earthquakes.

Within the Group's risk management, we have worked hard over the years to develop tools that enable us to address sustainability, emerging and political risks. These tools are now well-established: Based on the criteria defined in our Sustainability Risk Framework, a total of 170 transactions were referred to our Sensitive Business Risks process. In 23 cases, we decided to abstain from the transaction and in 18 cases we specified conditions that had to be met first. Meanwhile, our employees fed 136 risk notions into the SONAR process (SONAR = systematic observation of notions associated with risk), all of which were assessed for their potential impacts.

Dialogue with our stakeholders and partners remains an important element of our commitment to corporate responsibility. It works in both directions: we want to share our own knowledge

Walter B. Kielholz

Michel M. Liès

of risks that may affect our clients and society at large, while listening to other perspectives on the global risk landscape. In 2012, we reassessed our priorities and now focus on five Top Topics. Our Centre for Global Dialogue near Zurich supported knowledge sharing on these and other important issues by holding several large stakeholder conferences as well as smaller, more targeted events.

Reducing our own environmental footprint has long been a cornerstone of our efforts. Our Greenhouse Neutral Programme has now entered its tenth year: since its start in 2003, we have managed to reduce the Group's CO_2 emissions by 55.6% per employee and have compensated all remaining emissions. In the context of our internal sustainability efforts, an exciting project is Swiss Re Next, the new office building we are constructing at our headquarters in Zurich. This will set a leading example of what can be achieved today by applying principles of sustainable construction.

We consider our company to be part of wider society and want to contribute to it in a constructive manner. In doing so, we focus on two kinds of activities: On the one hand, we provide direct financial support to selected humanitarian and development projects around the world; the latter put a special focus on natural catastrophes, climate change and sustainable water management. On the other hand, we have Group-wide programmes that offer our employees opportunities to engage directly in charitable work in their communities. All our efforts as a good corporate citizen have now been put on an even stronger footing through the establishment of the Swiss Re Foundation.

Last but not least, we are keen to act as an attractive and responsible employer. In 2012, for example, we introduced two web-based tools that offer our employees further assistance in planning and pursuing fulfilling careers at Swiss Re. We would like to take this opportunity to thank our more than 11 000 employees around the world for their continued dedication and hard work. 2012 was a very successful year for Swiss Re, and our employees have played an essential part in this.

Zurich, May 2013

Walter B. Kielholz
Chairman of the Board of Directors

Michel M. Liès
Group CEO

Who we are and what we do

Our mission is clear and simple: to be the leading player in the wholesale re/insurance industry.

The Swiss Re Group consists of a holding company, Swiss Re Ltd, with three distinct Business Units:

- **Reinsurance**
- **Corporate Solutions**
- **Admin Re®**

Swiss Re at a glance

Swiss Re is a leader in wholesale reinsurance, insurance and risk transfer solutions. Our clients include insurance companies, mid-sized and multinational corporations and public-sector bodies. Our capital strength and knowledge enable the risk-taking on which economies depend.

Headquartered in Zurich, Switzerland, Swiss Re has operations around the globe. At the end of 2012, we had 67 offices in more than 20 countries. Based on "net premiums earned and fee income from policyholders" in 2012, our ten biggest markets are: the US, the UK, France, China, Australia, Canada, Germany, Japan, Ireland and the Netherlands. In the past year, they accounted for 82.4% of the Group's total business.

In 2011, we announced the reorganisation of our company into three Business Units: Reinsurance, Corporate Solutions and Admin Re®. The new structure has simplified performance assessment and, most importantly, positioned the Group to deliver shareholder value over the long term.

Swiss Re Ltd, the Group's holding company, is a joint stock company, listed on the SIX Swiss Exchange, domiciled in Zurich and organised under the laws of Switzerland. No further Group companies have shares listed.

Our global presence

	Americas
Net premiums earned and fee income in 2012 (USD billions)	9.5 (USD 9.3 billion in 2011)
Number of offices as of 31 December 2012	31 (33 in 2011)
Number of employees Regular staff as of 31 December 2012	2 845 (2 788 in 2011)

For more information on this subject, see **swissre.com/about_us/**

Europe (including Middle East and Africa)	Asia-Pacific	Total
10.7 (USD 8.6 billion in 2011)	5.2 (USD 4.3 billion in 2011)	25.4 (USD 22.2 billion in 2011)
25 (17 in 2011)	11 (11 in 2011)	67 (61 in 2011)
7 186 (6 973 in 2011)	1 162 (1 027 in 2011)	11 193 (10 788 in 2011)

One Group, three businesses
The three distinct Business Units of the Swiss Re Group correspond to Swiss Re's core activities in reinsurance, insurance and risk transfer solutions.

Reinsurance
Reinsurance is Swiss Re's largest business in income terms and the foundation of our strength, providing about 80% of gross premiums through two segments: Property & Casualty and Life & Health. The unit aims to extend Swiss Re's industry-leading position with disciplined underwriting, prudent portfolio management and diligent client service.

Corporate Solutions
Corporate Solutions offers innovative, high-quality insurance capacity to mid-sized and multinational corporations across the globe. Offerings range from standard risk transfer covers and multi-line programmes to highly customised solutions. Corporate Solutions serves customers from over 40 offices worldwide.

Admin Re®
Admin Re® provides risk and capital management solutions by which Swiss Re assumes closed books of in-force life and health insurance business, entire lines of business or the entire capital stock of life insurance companies. Admin Re® solutions help clients to divest non-core blocks of business, thus reducing administrative costs and freeing up capital.

Re/insurance protects society and enables progress.

How we operate
Re/insurance creates stability. By managing risks and covering losses, we protect investments and enable economic growth.

In simplified terms, our business model works as follows:

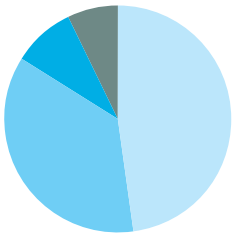
We provide **tailor-made solutions** through traditional reinsurance or insurance-based capital market instruments. At the core of our expertise is the **costing, pricing and diversification** of non-life and life risks.

Against **up-front premium payments,** our solutions enable our **clients** to reduce peak risks, reduce earnings volatility, free up capital and finance growth, and achieve capital management targets for solvency and ratings.

We **invest assets long-term until money is needed,** applying asset-liability matching techniques to align the duration and currency of invested assets to the duration and currency of our insurance liabilities, ensuring that we deliver on our promises to our clients.

We **compensate for our clients' losses,** using effective claims management procedures that are based on industry best practice, providing speed of payment when clients need us most.

Net premiums earned by Business Unit, 2012
(Total: USD 25.4 billion)



- 48% P&C Reinsurance
- 36% L&H Reinsurance
- 9% Corporate Solutions
- 7% Admin Re®

Key financial data

The table below provides a simplified overview of the Swiss Re Group's key financial data.

USD millions unless otherwise stated	2011	2012
Total assets	225 899	**215 785**
Total investments	162 224	**152 812**
Total liabilities	194 612	**181 759**
Total debt*	20 668	**19 898**
Shareholders' equity	29 590	**34 002**
Retained earnings	22 277	**26 322**
Total revenues	28 083	**33 624**
Premiums earned	21 300	**24 661**
Net investment income – non-participating**	4 626	**4 473**
Net investment result – unit-linked and with-profit	–403	**2 570**
Total expenses	25 208	**28 101**
Claims and claim adjustment expenses	8 810	**7 763**
Life and health benefits	8 414	**8 878**
Income tax expense	77	**1 125**
Current taxes	106	**472**
Deferred taxes	–29	**653**
Net income* **	2 626	**4 201**
Earnings per share in CHF	6.79	**11.13**
Dividends on common shares	1 035	**1 134**
Return on equity in %	9.6	**13.4**

* Total debt expressed as total carrying value
** Excluding unit-linked and with-profit business
*** Net income attributable to common shareholders

Group structure

Group Chief Executive Officer

Corporate Functions

- **Group Strategy**
- **Group Finance**
- **Group Risk Management**

Business Units

Reinsurance
- Americas
- Asia
- Europe, Middle East & Africa
- Globals
- Property & Specialty
- Casualty
- Life & Health
- Claims, Accounting & Liability Management

Corporate Solutions
- Regions & Specialty
- Products

Admin Re®
- Admin Re®

Global Partnerships

Enabling Units

- **Group Underwriting**
- **Group Asset Management**
  - CIO Office
  - Rates
- **Group Operations**
  - Human Resources
  - Legal & Compliance
  - Information Technology
  - Communications
  - Global Service Operations
  - Corporate Real Estate & Logistics

Our approach to corporate responsibility

We are committed to being a responsible company. Contributing to sustainable, long-term value creation serves as a guiding principle for our practical actions.

Our commitment to enabling sustainable progress underpins Swiss Re's values.

Swiss Re has a long-standing commitment to being a responsible company. A key element in our understanding of what this means is the desire to contribute to sustainable value creation, for the benefit of our clients and society at large.

This long-term view is embedded in Swiss Re's normative framework and governance (ie the Group Code of Conduct). It is one of the principles that form the foundation of our values:

- Being open, honest and transparent in everything we do;
- Treating everyone with respect;
- Taking the long-term view, playing our part in enabling sustainable progress;
- Creating an inclusive culture that encourages diversity of thought and opinion.

For more information on this subject, see **swissre.com/about_us/our_values/**

For more information on this subject, see **swissre.com/corporate_responsibility/**

Our understanding of materiality

A key question for any company that seeks to take a long-term view and promote sustainable progress is what this means in the context of its own business and industry: what activities and what topics are "material" to making a tangible contribution to sustainable progress?

We first began to address a specific sustainability issue more than 20 years ago when we drew attention to the potential risks created by climate change. Our first effort to disclose sustainability-related information dates back to 1999, when we published a "Corporate Environmental Report" covering the business year of 1998.

Reflecting this long-standing engagement for sustainable progress, our understanding of "materiality" has developed gradually over time. The key areas of our business which we currently consider "material" to enabling sustainable progress are expressed in our "Commitment to Corporate Responsibility". As such, this also describes how we seek to put our commitment as a responsible company into practice.

Swiss Re's Commitment to Corporate Responsibility

General commitment
"Corporate responsibility" expresses Swiss Re's commitment to being an open, honest and transparent organisation that treats all its stakeholders – employees, shareholders, clients, government regulators and the general public – with respect and integrity. In particular, we aim to take a long-term view, playing our part in enabling sustainable progress.

Sustainability as a guiding principle
Sustainable progress – or sustainability – can be described as development that meets the needs of the present without compromising the ability of future generations to meet their needs. To be sustainable, progress must improve economic efficiency, protect and restore ecological systems, and enhance social well-being. In all our main activities aimed at implementing corporate responsibility, the principle of sustainability is a key criterion:

- **Business solutions**
  Within our core business (re/insurance and asset management), we strive to develop innovative solutions that help tackle key environmental and social challenges. To this end, we actively work together with our clients and partners, both in the private and public sectors.
- **Risk intelligence**
  We develop and apply tailor-made tools to extend the scope of our risk management. In this way, we seek to identify and appropriately address sustainability-related and emerging risks in our core business.
- **Stakeholder dialogue**
  Through regular dialogue with our clients and other stakeholders, we help develop effective responses to sustainability and further key issues, by raising awareness of both the risks and the opportunities arising from them.
- **Our footprint**
  We apply best-practice standards of resource management to our properties and logistical operations as well as guidelines to our sourcing activities. In doing so, we continually reduce Swiss Re's direct environmental impact.
- **Corporate citizenship**
  Playing an active role in society beyond our core business is important to us. We support selected humanitarian and development aid projects across the world, while promoting volunteering and charitable work at our business locations.
- **Our employees**
  We want to provide our employees with a working environment conducive to their personal and professional development. We nurture a culture of diversity and inclusion across the company, offer excellent training possibilities, and provide a range of health and other benefits.

Our five Top Topics
With our Group Issue Management, we have a formal process in place to identify key topics that are strategically important to us, our clients and society at large. After an extensive review, we adopted a revised set of five Top Topics in 2012:

- Advancing sustainable energy solutions
- Funding longer lives
- Managing climate and natural disaster risk
- Partnering for food security
- Supporting financial stability

We believe these Top Topics are highly relevant in terms of sustainability. To varying degrees, we address them through our business solutions, risk intelligence, risk dialogue, footprint reduction and corporate citizenship activities. At the same time, we widen our focus to additional issues in each of these areas if warranted.

Climate change
Swiss Re was one of the first organisations to realise the potential impact of climate change. For more than two decades, we have been an acknowledged thought leader on the topic and have developed some path-breaking initiatives. With two of our Top Topics – "Advancing sustainable energy solutions" and "Managing climate and natural disaster risk" – focusing on different aspects of climate change, we continue to take this challenge very seriously. Mirroring this, we have a specific strategy for tackling climate change that rests on four pillars:

- **Advancing** our knowledge and understanding of climate change risks, quantifying and integrating them into our risk management and underwriting frameworks where relevant;
- **Developing** products and services to mitigate – or adapt to – climate risk;
- **Raising** awareness about climate change risks through dialogue with clients, employees and the public, and advocacy of a worldwide policy framework for climate change;
- **Tackling** our own carbon footprint and ensuring transparent, annual emissions reporting.

Governance and management responsibility

At Swiss Re's highest governance level, the task of overseeing implementation of our commitment to corporate responsibility has been assigned to a Committee of the Board of Directors: It is one of the responsibilities of the Chairman's and Governance Committee to periodically monitor the Group's sustainability and citizenship activities.

On an operational level, numerous units are involved in implementing Swiss Re's commitment to corporate responsibility in daily business. The Sustainability & Political Risk Management unit carries out certain coordination tasks and is responsible for producing the Group's Corporate Responsibility Report.

Disclosure and accountability

We have voluntarily reported on our performance as a responsible company since the business year of 1998. The range of topics covered in the yearly reports has gradually widened. While early editions had a strong focus on environmental concerns, later editions gradually extended their focus to social and governance issues. Since 2007, we have published a comprehensive Corporate Responsibility Report, guided by best practice in corporate responsibility reporting.

Content definition
The content and structure of the present report reflect the areas and activities of our business we consider material to enabling sustainable progress. Each of the six key areas described in our "Commitment to Corporate Responsibility" is covered by an individual chapter. Priorities within these six areas are described in the respective chapters. An additional chapter highlights some key features of Swiss Re's corporate governance regime, including the Group Code of Conduct:

- Creating solutions for sustainability
- Extending our risk intelligence
- Exploring and shaping the risk landscape
- Reducing our environmental footprint
- Being a good corporate citizen
- Being an employer of choice
- Ensuring good governance

In our 2011 Corporate Responsibility Report we first included two special sections in addition to these core chapters. Under the heading of "corporate responsibility in context", they are intended to provide some background information on important sustainability topics. In this year's edition we continue this feature, focusing on:

- Corporate responsibility in context: The Principles for Sustainable Insurance
- Corporate responsibility in context: funding longer lives

Challenges to implementing sustainability
Even if one understands which actions and issues are material to enabling sustainable progress, defining concrete measures is not always easy – and sometimes may involve short-term dilemmas. For this reason, we have decided to start talking a little more about the challenges posed by implementing sustainability principles in a private business. In this year's report, we have tried to present some of these arguments in the following sections:

- Natural catastrophes and climate change, pages 14–15
- Sustainability Risk Framework, page 23
- Managing emerging risks, page 27
- Business travel, page 40

Scope
Our Corporate Responsibility Report covers the whole Swiss Re Group, ie the listed holding company, its three Business Units and all subsidiaries. As in past years, the report's scope is limited to Swiss Re's own operations. While we do provide information on our sourcing and procurement policies, we do not report on the performance of our suppliers because the re/insurance business does not involve a proper supply chain.

Our 2012 Corporate Responsibility Report refers to three reporting frameworks:

- **The Global Reporting Initiative (GRI) provides a detailed voluntary framework for sustainability reporting; the corresponding content index is included on pages 74–76;**
- **The UN Global Compact is a voluntary commitment to ten principles; our Communication on Progress is incorporated into the GRI content index, pages 74–76;**
- **The Principles for Sustainable Insurance are a voluntary commitment for re/insurers; our public disclosure on the four principles is included on page 65.**

Reporting frameworks

As far as is sensible for, and applicable to, a business-to-business company in financial services, this report takes into account the G3.1 Sustainability Reporting Guidelines of the Global Reporting Initiative (www.globalreporting.org). We also indicate the application level that the report meets in our own assessment (ie "self-declared"). The detailed GRI content index is included in the report on pages 74–76.

The 2012 Corporate Responsibility Report also incorporates our "Communication on Progress" on 2012 for the UN Global Compact (www.unglobalcompact.org). In line with the United Nations' recommendations, references to the Compact's ten principles are incorporated into the GRI content index. In this year's report, we also report against the Principles for Sustainable Insurance, PSI (www.unepfi.org/psi) for the first time. The disclosure statement can be found on page 65.

The present report succeeds the 2011 edition and covers the calendar year of 2012. We plan to maintain our yearly publishing cycle and to present our next Corporate Responsibility Report in the second quarter of 2014, covering the year of 2013. It will again assess the progress made against our key goals stated on the next page.

Corporate responsibility goals

Each year, we publicly state our main corporate responsibility goals and then report on our progress made against them in the following year. Below is our progress report on the goals defined for 2012. The goals for 2013 are presented on the next page.

Report on our corporate responsibility goals for 2012

- Further strengthen cooperation with private- and public-sector partners to improve communities' risk resilience, with a particular focus on micro-insurance solutions.

→ **Developed, renewed or supported several innovative solutions that offer exposed communities insurance protection against a range of different risks.**
See pages 16–20.

- Explore further opportunities to help clients devise long-term adaptation strategies to climate change, based on the Economics of Climate Adaptation (ECA) methodology.

→ **Managed to secure major mandate for an ECA study, to be carried out in 2013.**

- Share results from our research on risks in the renewable energy sector with clients to advance effective climate mitigation strategies.

→ **Following launch of the Swiss Re sponsored report "Managing the risk in renewable energy" from the Economist Intelligence Unit, leveraged this with clients and the media.**
See page 32.

- Strengthen competency and accountability of business lines to address sustainability risks directly, and deepen dialogue on sensitive issues such as fossil fuel extraction.

→ **Created platform supporting our client-facing staff in implementing the Sustainability Risk Framework and established an internal "Champions Network" to strengthen client dialogue on energy, mining and food.**
See page 24.

- Maintain reduction in CO_2 emissions per employee by 50% and improvement in energy intensity by 38% against 2003 baselines, as the company pursues its growth strategy.

→ **Arrived at a reduction in CO_2 emissions per employee of 55.6% and an improvement of energy efficiency by 42.4% since 2003, despite strong increase in business travel.**
See pages 39–40.

- Extend the scope of our corporate citizenship activities to projects in the health sector including social entrepreneurship, thereby leveraging Swiss Re's expertise.

→ **Among a number of humanitarian and development projects, started a three-year partnership with Ashoka to promote innovation through social entrepreneurship in the Indian health sector.**
See page 48.

Corporate responsibility goals for 2013

These are our main corporate responsibility goals for 2013. We will report on our progress made against these goals in the next Corporate Responsibility Report.

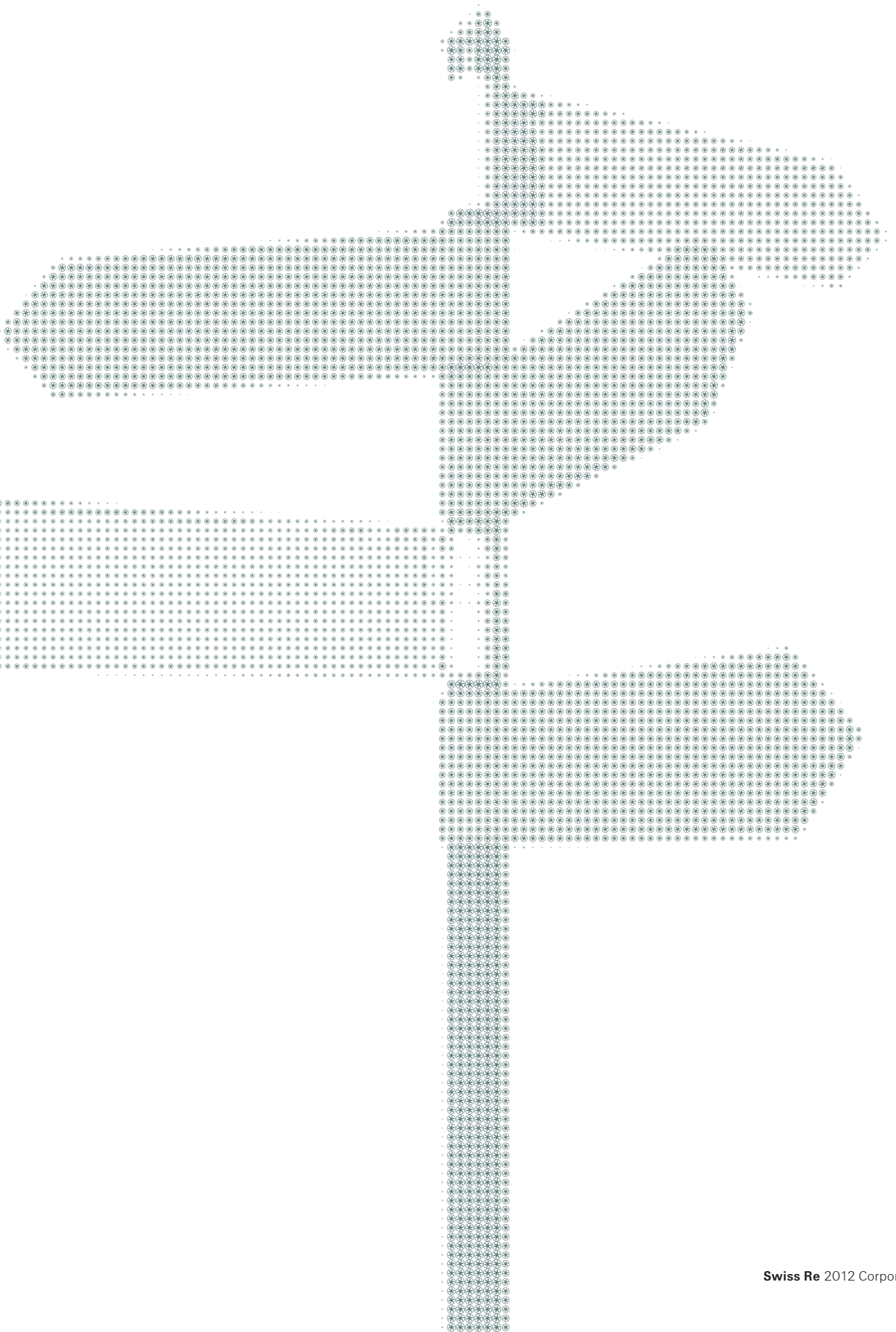
Help exposed communities get better insurance protection against a range of risks, by engaging in public-private partnerships and microinsurance schemes.

Through ongoing dialogue, assist clients in devising and implementing long-term adaptation strategies to climate change based on the Economics of Climate Adaptation methodology.

Further sharpen our positions on key sustainability risks and collaborate with partners to advance sustainable business practices in the re/insurance industry.

Maintain 50% reduction in CO_2 emissions per employee achieved since 2003 despite rise in business travel, and devise follow-up strategy until 2020 comprising carbon neutrality and extended scope.

Further enhance the effectiveness of our corporate citizenship activities by transferring them to the newly-established, independent Swiss Re Foundation.



Creating solutions for sustainability

With our re/insurance solutions we help address key environmental and social challenges. Focus areas are natural catastrophes and climate change, funding longer lives, and insurance cover in emerging countries.

While all our risk transfer solutions help create stability, we consider three risk areas to be of special relevance in terms of sustainable development: natural catastrophes and climate change, longevity, and insurance covers in emerging countries. We address these challenges within our established risk modelling and underwriting activities or through the development of specific, innovative solutions. In either case, we cooperate closely with our clients and partners.

Our solutions frequently include one or more of the following elements:

- Insurance-linked securities (ILS) or cat bonds: We are a leader in the development of these products, which enable large risks to be transferred to the capital markets.
- Index-based insurance products: We are a pioneer in creating innovative insurance solutions that use an index to determine payments.
- Public-sector partners: In addition to direct insurers and corporate clients, we seek to develop risk transfer solutions for, and in cooperation with, governments and various public-sector organisations.

In 2012, we were able to scale up or renew some solutions (MultiCat, Kilimo Salama). This is a crucial part of enabling sustainable progress. Renewals and scale-ups essentially validate the original product design and demonstrate that the product creates tangible benefits for clients at an appropriate price.

Natural catastrophes and climate change

Natural catastrophes constitute a key risk in our Property & Casualty (P&C) business. Losses from floods, storms, earthquakes and other natural catastrophes can affect millions of lives and the economies of entire countries. Providing effective re/insurance protection against natural catastrophes therefore has large social and economic benefits. In 2012, the total premium amount our clients were willing to pay to obtain financial protection against natural catastrophes was USD 2.53 billion, or 20.5% of our entire P&C business.

Globally, insured natural catastrophe losses are becoming more frequent and severe due to increasing insurance penetration and the concentration of insured assets in exposed areas. This development is likely to be further compounded by the effects of climate change. According to the Special Report on Extremes (SREX) published by the Intergovernmental Panel on Climate Change (IPCC), a changing climate gradually leads to shifts in the frequency, intensity, spatial extent, duration and timing of extreme weather events.

Understanding natural catastrophe risks and the impact of climate change is critical to assessing our P&C business accurately and to structuring sound risk transfer solutions. This is why we invest in proprietary, state-of-the-art natural catastrophe models and collaborate with universities and scientific institutions. This enables us to stay abreast of the latest knowledge on the economic impact of natural disasters, including the effects of climate change.

Our natural catastrophe premiums were USD 2.53 billion in 2012. We regularly review and adapt our models to account for all factors that may increase the loss potential of these covers.

While the impact of climate change will manifest itself over the coming decades, most of our business is renewed annually and our risk models are refined every few years. Risks are essentially covered for 12 months, for cat bonds up to five years. Thus, reinsurance premiums do not reflect expected loss trends over the next decades. Rather, for underwriting and risk management purposes, our models provide an estimate of today's risk. However, as natural catastrophe losses continue to rise as a result of the different factors described above, our models will gradually reflect this trend, as they are updated in regular intervals.

For more information on this subject, see **rethinking/climate_and_natural_disaster_risk/**

Complementing our reinsurance covers, we support our clients with strategic expertise and integral risk assessment of natural disasters and climate adaptation. These include our expertise publications, free access to Swiss Re's CatNet® and our Economics of Climate Adaptation (ECA) studies. With a time horizon of 2030, the ECA methodology enables decision-makers to understand the future economic impact of climate change – and to identify the most cost-effective actions to minimise that impact. This makes it possible to integrate adaptation to climate change with economic development and sustainable growth.

Life & Health insurance and longevity solutions

Life and health (L&H) insurance products play a crucial role in creating stability for individuals and society. They provide financial security in the event of death or illness, give access to medical treatment and offer dependable income in retirement. By providing reinsurance, we help primary L&H insurers and other clients – both from the private and the public sector – to manage such risks efficiently, thanks to our specialist knowledge of mortality, morbidity and longevity trends.

Longevity and health are two of our strategic priorities in the L&H business. The demand for longevity solutions is expected to grow further as demographics shift. Our substantial investment into research and development is aimed at continually improving our ability to predict mortality and longevity trends. In 2012, we completed two longevity insurance contracts with pension funds in the UK (see next page).

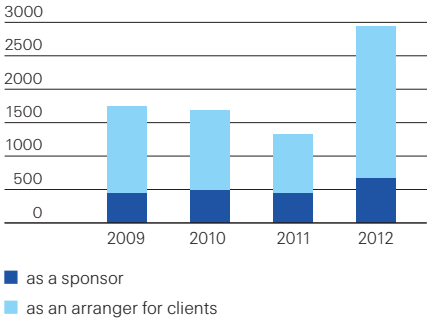
Demand for commercial health insurance solutions is also growing, driven by several major demographic and socioeconomic trends. These include: the greater health-care needs of ageing societies; rising healthcare expectations of the new middle class, especially in growth markets; and healthcare finance reform, particularly in mature markets. Swiss Re offers a variety of health reinsurance solutions to meet these needs, from short-term protection against the risk of volatility in medical expenses for insurers or employers, to very long-term protection against the financial impact of disability or critical illness.

Natural catastrophes such as floods, wind-storms and earthquakes can disrupt millions of lives. Offering financial protection against such risks forms an essential part of re/insurance and helps communities recover more quickly after a catastrophic event.

In 2012, we completed two transactions that help pension funds meet their obligations when clients live longer than expected.

Non-life ILS underwritten by Swiss Re

USD millions



For more information on this subject, see **Corporate responsibility in context: funding longer lives, on pages 66–67**

For more information on this subject, see **swissre.com/investors/ils/**

Two longevity solutions for pension funds

In 2012, we completed two transactions that help two private-sector clients manage their longevity risks: one covers GBP 1.4 billion (USD 2.2 billion) of liabilities and almost 17 000 members of one of AkzoNobel's UK pension funds; the other GBP 800 million (USD 1.3 billion) and more than 5 000 members of the pension fund of UK insurer LV=. The LV= transaction is unique in that it also includes insurance for members aged 55 and over who have not yet retired.

The two transactions show that pension funds are becoming more aware of longevity risk and more comfortable with insurance solutions to address the resulting exposures. In both transactions Swiss Re keeps the liabilities on its own balance sheet, bringing the total to over USD 12 billion. We are able to do this because we have the necessary capital strength and are seen as a trustworthy partner for the long-term contracts of longevity solutions.

Insurance-linked securities

Swiss Re is a leading player in the insurance-linked securities (ILS) sector. ILS are capital market instruments, typically in bond or derivative format, designed to meet the risk or capital management needs of a transaction "sponsor". In exchange for a coupon or premium payment, the sponsor receives single or multi-year collateralised protection for specified risk events. If such an event occurs, the sponsor receives all or part of the principal; otherwise this is paid back to the investors in full at maturity.

Insurance-linked securities are particularly well-suited to provide protection against peak risks – events that happen infrequently but tend to lead to high losses, for example earthquakes or windstorms. ILS are used for both risk and capital management purposes in the P&C and the L&H business. For reinsurers they are attractive because they free scarce capital; for insurers and corporate clients they provide multiyear collateralised protection; and for investors they offer attractive diversification possibilities, as they are relatively uncorrelated with other asset classes.

In 2012, new ILS totalling USD 6.3 billion were issued, the second highest amount ever after 2007. Moreover, new issuance exceeded the total amount of maturing bonds by USD 2.5 billion (taking into account both natural catastrophe and extreme mortality risks). This underlines the fact that ILS have developed beyond a niche product and now form an essential part of re/insurers' risk management strategies. Likewise, the investor base for ILS has grown and broadened.

Our registered broker-dealer subsidiaries underwrote and distributed to institutional investors non-life ILS worth USD 663 million on behalf of Swiss Re during 2012. They underwrote and distributed an additional USD 2.28 billion of non-life ILS for clients. The total of non-life and life ILS underwritten by Swiss Re in 2012 was USD 3.2 billion, or about half the volume of new issuance in the whole ILS market.

Renewal of MultiCat in Mexico

Swiss Re served as the co-lead manager in the renewal and expansion of the MultiCat cat bond, which provides the Mexican government with insurance protection from the capital markets against several kinds of natural catastrophes. It succeeds the first MultiCat programme launched in 2009 and is expected to mature in December 2015.

Like its predecessor, the renewed MultiCat programme covers two different natural perils – earthquakes and hurricanes – in different regions of the country. In total, it provides financial protection of up to USD 315 million and uses parametric triggers to determine payouts.

The MultiCat solution provides the Mexican government with financial protection of up to USD 315 million against damage from hurricanes and earthquakes.

We worked closely with the Mexican government and the World Bank both in developing the original MultiCat programme and in its renewal. Innovative risk transfer solutions such as this one help governments to financially prepare for natural disasters and ensure that rapid funding is available for relief efforts after a disaster. MultiCat is a key component in Mexico's strategy to deal with catastrophic risks, which has been carefully developed over the last decade.

We have made a five-year commitment to the Grow Africa Partnership to provide agricultural insurance for up to 1.4 million smallholder farmers.

Our commitment to the Grow Africa Partnership

Millions of people in Africa depend on agriculture for their livelihoods, but vulnerability to volatile weather and the ensuing swings in agricultural production pose a constant threat to their food security. As climate change leads to an increase in the frequency and intensity of natural hazards, these weather-related risks will also become more acute.

In view of this challenge, a number of organisations, including the African Union, the New Partnership for Africa's Development (NEPAD) and the World Economic Forum (WEF), launched the Grow Africa Partnership (www.growafrica.com) in 2011. Its chief objective is to promote public-private collaboration and investment in African agriculture. In its first year, seven African countries volunteered to participate in the partnership and to support its objectives.

The Group of Eight (G8) then decided to align its work with the Grow Africa Partnership and, at its 2012 summit, launched the New Alliance for Food and Nutrition Security, a commitment to lift 50 million people in Africa out of poverty over the next ten years.

As one of 45 companies, Swiss Re made a tangible commitment to the Alliance and thus to supporting Grow Africa. Over the next five years this commitment has the following three elements:

- Provide farmers in Sub-Saharan Africa with tools such as weather and yield index insurance products;
- Invest in resources equivalent to about USD 2 million per year to support the development of sustainable agricultural risk management markets;
- Provide agricultural insurance for up to 1.4 million smallholder farmers.

Our commitment is strongly grounded in our previous efforts to bring effective insurance protection to vulnerable communities. To fulfil our commitment in Africa, we work closely with several partner organisations, including Oxfam America, the World Food Programme, USAID and the Global Index Insurance Facility.

For the whole of 2012, we helped to bring weather insurance to 175 000 smallholder farmers through 19 programmes in 12 countries in Sub-Saharan Africa.

Partnering with the Global Index Insurance Facility

We first started to work with the Global Index Insurance Facility (GIIF) in 2011. Established by the International Finance Corporation, IFC (www.ifc.org) – the private-sector arm of the World Bank – and supported by the European Commission, GIIF is a platform designed to improve access to index-based insurance products in developing countries, especially for farmers and people in agrarian communities. Our cooperation with GIIF takes the form of a technical partnership, through which we contribute our long-standing know-how and expertise in developing index-based insurance products.

As weather extremes such as droughts, excessive rainfall, storms etc. can wipe out the livelihoods of entire families in an instant, well-designed and affordable insurance schemes not only help avoid these devastating consequences, they can set in motion a virtuous cycle of development and asset creation. Index insurance is particularly suited for this purpose because it is transparent, has low transaction costs and allows for rapid claims payment.

Example: the Kilimo Salama programme

One of the weather index insurance programmes supported by GIIF is "Kilimo Salama", which literally means "safe farming" in Kiswahili, the language spoken in much of northern Kenya (http://kilimosalama.wordpress.com). The programme is a partnership between the Syngenta Foundation for Sustainable Agriculture, local mobile phone operator Safaricom, local insurer UAP and Swiss Re Corporate Solutions. It insures the cost of inputs (seeds, fertilisers) and the expected value of farm harvests, covering yield shortfalls due to insufficient or excessive rain. Swiss Re Corporate Solutions reinsures the programme and provides actuarial support to price the insurance cover.

Since its launch as a pilot with 200 farmers in 2010, Kilimo Salama has seen strong growth: in 2012 it provided weather insurance protection to 53 000 farmers in Kenya and covered crops such as maize, wheat, beans and sorghum. An important reason for Kilimo Salama's success is that it uses mobile phone technology to speed up access and payouts to rural farmers, through Safaricom's well-established and trusted M-PESA mobile money transfer service.

In 2012, the programme was successfully expanded to Rwanda, where it covered 21 000 farmers by the end of the year. Due to adverse weather conditions, there were payouts in both countries in 2012: in Kenya 7 800 farmers received a total of USD 541 000, and in Rwanda 1 600 farmers were paid USD 10 300.

The Kilimo Salama programme offers smallholder farmers in Kenya and Rwanda insurance protection against harvest shortfalls. It is one of a number of initiatives through which we contribute to the Grow Africa Partnership.

The MiCRO programme provided vital financial assistance to micro-entrepreneurs in Haiti after both Tropical Storm Isaac and Hurricane Sandy.

The MiCRO programme in Haiti

The devastating earthquake that struck Haiti early in 2010 was one of the worst natural catastrophes in recent years, causing terrible human suffering and killing over 220 000 people. It also destroyed the livelihoods of numerous grassroots entrepreneurs, because they did not have any insurance protection against the consequences of such natural disasters.

In view of this situation, Swiss Re partnered with Fonkoze (www.fonkoze.org), Haiti's largest microfinance institution, and Mercy Corps (www.mercycorps.org), to develop the Microinsurance Catastrophe Risk Organisation, MiCRO (www.microrisk.org). MiCRO's first product (named Kore W which means "for you" in Haitian Creole) is specifically targeted at the informal sector in Haiti – Fonkoze's almost 60 000 female clients who have set up small businesses to provide for their families and improve their

economic situation. As Haiti is highly vulnerable to natural disasters, having access to insurance protection is vital for these micro-entrepreneurs to recover after a catastrophic event and to gradually build better, sustainable lives.

MiCRO's key innovation is that it combines a parametric cover with a basis risk cover, which enables it to closely mirror the actual damage on the ground. This means that MiCRO can offer effective, accurate protection to the insured micro-entrepreneurs and their families. At the same time, the solution allows Fonkoze to respond quickly to the problems faced by their clients and helps them remain solvent. The programme covers earthquakes, hurricanes and excess rainfall.

In Haiti, when the Kore W product is triggered, the insured micro-entrepreneurs benefit in three ways: they receive an emergency payout in cash (a fixed sum of 5 000 Haitian Gourdes, the equivalent of USD 125), their outstanding loan balance with Fonkoze is cancelled, and they receive a new loan under the same terms once they are ready to resume their commercial activities.

MiCRO proved its worth in 2012 when Tropical Storm Isaac and Hurricane Sandy brought destruction to Haiti yet again. Both storms caused substantial flooding and mudslides, and many micro-entrepreneurs lost their merchandise and/or their homes, especially in the country's south. Isaac and Sandy, together with smaller events in April and June, triggered payouts from MiCRO to Fonkoze. For the whole of 2012, MiCRO provided USD 4.7 million in cash payouts and loan cancellations to a total of 27 949 beneficiaries out of the 60 000 Fonkoze clients covered by Kore W. Thus, the average amount per case was USD 168 for the year 2012.

Kore W, MiCRO's first product, was launched in 2011. However, MiCRO has been designed as a "scalable" facility that can be extended to other catastrophic risks as well as further countries. MiCRO is currently developing programmes to expand its catastrophe risk solutions to Central America and the English-speaking Caribbean.

Bringing agricultural insurance to remote Indian farmers

Agriculture contributes 19% of GDP in India, the second highest ratio in the world. India's rural population is about 800 million, of which some 600 million are farmers. Since 2007, there has been strong government backing for agricultural insurance products, both weather- and yield- based. Swiss Re has supported these programmes from the

There are around 600 million farmers in India. Over the last decade, we have provided reinsurance and pricing support for several programmes covering smallholder farmers against agricultural risks. In 2012, we supported a pilot project that aims to bring insurance protection to more remote communities.

National e-Governance Plan (NeGP):
The NeGP is an ambitious programme by the Indian government to build rural infrastructure on an information and technology platform. It comprises four pillars: state-wide area networks, state date centres, state portal and service delivery gateways, and decentralised common service centres.
www.deity.gov.in/content/national-e-governance-plan

start by providing reinsurance as well as actuarial assistance to the insurers that implement them.

At present, agricultural insurance programmes still only reach 5% of farmers, though. While farmers who buy credit from banks (bancassurance) can often bundle this with insurance, the big challenge is to establish alternative distribution channels to reach the large number of farmers who do not take out loans. In light of this, the Indian government launched the National e-Governance Plan (NeGP), a nation-wide initiative to build rural infrastructure on an information and technology platform. One of NeGP's four pillars is the establishment of "Common Service Centres" (CSCs), which offer a multitude of different services to the rural population. Each CSC is intended to cater to roughly 10 000 villagers, which translates into a total of about 85 000 to reach India's entire rural population.

Srei Sahaj e-Village Limited (www.sahajcorporate.com) is one of the entities chosen by the Indian government to create this network of Common Service Centres. To date, Srei Sahaj has set up around 20 000 CSCs; it already offers life and non-life insurance (motor, personal accident, health) through its infrastructure.

In 2012, Srei Sahaj wanted to add weather index-based insurance to its product offerings so remote farmers could obtain financial protection against the consequences of adverse weather. We collaborated with Srei Sahaj and our insurance client HDFC Ergo to help this initiative, by providing product structuring and pricing.

A pilot was launched in the monsoon season of 2012 to sell weather index insurance in some districts of Uttar Pradesh and Bihar. We supported the pilot by structuring products for key crops like rice and maize. The pilot covered a few hundred farmers and provided valuable lessons for a scale-up planned in 2013.

Supporting the RSBY programme in India

Over the past three years, we have supported a private insurance company, Tata AIG General Insurance, in implementing Rashtriya Swasthya Bima Yojana, RSBY (www.rsby.gov.in) in India. Literally meaning "National Health Insurance Programme", RSBY is a government-sponsored scheme for low-income families. It covers inpatient hospitalisation expenses for up to INR 30 000 (approx. USD 530) per family per year, as well as pre- and post-hospitalisation expenses. Currently, over 34 million families are covered by RSBY across all Indian states.

Tata AIG General Insurance has implemented the scheme in 19 districts across three states, covering approximately 1.5 million families. We have supported implementation through scheme costing, formulating risk management guidelines and conducting field audits.

Extending our risk intelligence

Tailor-made tools enable us to tackle sustainability, emerging and political risks, both in our re/insurance business and investment activities.

Risk management is at the core of Swiss Re's business model. Controlled risk taking requires a strong and independent risk management organisation, as well as comprehensive risk management processes to identify, assess and control the Group's and the Business Units' risk exposures. The main categories of our risk landscape comprise core risks (insurance, financial market and credit) as well as operational and other risks that arise as a result of doing business: liquidity, regulatory, reputational and strategic (see 2012 Financial Report, pages 48–55).

Sound risk management is a key requirement for a responsible re/insurer as it allows us to act as a reliable partner to our clients when they suffer financial losses. In our understanding, however, there is an additional dimension to responsible risk management: we need to be constantly aware of further risks we may be exposed to, especially in the longer term.

Currently, we consider three types of risk particularly relevant in this respect: sustainability, emerging and political risks. For all three, we have developed specific tools and know-how that help us identify and assess them. This allows us to determine those risks we think should be avoided – because of their loss potential, for ethical reasons, or both.

Our extended risk management expertise is also key to managing our assets responsibly. The risk assessments and decisions we make through our Sustainability Risk Framework, in particular, flow directly into our asset management.

The defence industry is one of eight sectors and issues for which our Sustainability Risk Framework contains a specific policy. In 2012, we added an amendment to this policy that categorically bans any transactions involving cluster weapons.

Sustainability risks
We define sustainability risks as ethical concerns related to environmental and socio-economic impacts of our business transactions, and the reputation risks they may entail.

Swiss Re's Sustainability Risk Framework

There has been growing awareness recently among many stakeholders that economic activities, while creating tangible benefits on one side, may also damage the environment and have disruptive effects on social structures. If unmitigated, such environmental and social impacts may come to pose a threat to societies' long-term sustainable development.

For companies, this situation can cause dilemmas: a particular business transaction may be economically beneficial and perfectly fine from a legal point of view, yet it may have significant environmental and social downsides. At Swiss Re, we believe that addressing such dilemmas requires a well-defined approach and the willingness to make decisions based on ethical principles.

With our Sustainability Risk Framework we have an advanced risk management methodology in place which is specifically designed to identify and address such "sustainability risks" in our core business. The framework applies to all of Swiss Re's business transactions, ie re/insurance as well as investments, to the extent that we can influence its various elements.

Our Sustainability Risk Framework consists of the following elements:

- Eight policies on sensitive sectors or issues;
- The Sensitive Business Risks (SBR) process, a due diligence tool for case-by-case assessments;
- Company exclusions;
- Country exclusions beyond compliance with International Trade Controls.

Policies
At present, the framework comprises policies on eight sectors and issues we consider to be of particular relevance: the defence industry, oil and gas (including oil sands), mining, dams, animal testing, forestry and logging, nuclear weapons proliferation, plus an overarching human rights and environmental protection policy. As an important adjustment in 2012, we made an amendment to our policy for the defence industry that categorically bans any transactions involving cluster weapons. The key concerns addressed by the framework's eight policies are listed below.

Key concerns

Defence industry
- Particularly cruel weapons that inflict indiscriminate harm to humans and the environment, often after a conflict has ended;
- The provision of certain services by private security companies.

Oil and gas
- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted.

Mining
- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted;
- Poor occupational health & safety record and risk of increasing HIV penetration.

Dams
- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted;
- Non-involvement of relevant stakeholders;
- Non-involvement of affected neighbouring states.

Animal testing
- Unethical and inhumane treatment of animals.

Forestry and logging
- Illegal logging;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted.

Nuclear weapons proliferation
- Activities associated with nuclear energy or similar in countries that are outside the established framework and international regime of global non-proliferation efforts.

Human rights and environmental protection
- Human rights violations and abuses such as murder, torture, deprivation of liberty, forced labour or harmful child labour;
- Countries that lack an operational, effective and internationally recognised government;
- Companies that are causing ongoing, severe and unmitigated damage to the environment, flora and fauna of a particular place and biodiversity in general, especially in industries and activities that have had a problematic track record in this area in the past.

The Sensitive Business Risks process
Each of the eight policies contains predefined criteria and qualitative standards which define precisely when our underwriters and client managers need to refer a transaction to the Sensitive Business Risks (SBR) process. In such a case our sustainability and other experts carry out a due diligence assessment: they carefully analyse the benefits and downsides of the transaction at hand and decide whether it is acceptable on ethical grounds.

This decision takes the form of a recommendation either to go ahead with the transaction, to go ahead with certain conditions attached or to abstain from it. If there is disagreement about the recommendation, the case can be escalated to the next management level.

In 2012, the number of transactions referred to the SBR process rose to 170. We issued negative recommendations in 23 cases and positive recommendations with conditions in 18 cases; all these conditions were eventually met.

The decisions we take as part of the Sustainability Risk Framework are based on internationally recognised ethical principles. Swiss Re is a signatory to the UN Global Compact, which derives its human rights principles from the Universal Declaration of Human Rights, its labour principles from the ILO Declaration on Fundamental Principles and Rights at Work, its environment principles from the Rio Declaration on Environment and Development and its anti-corruption principles from the United Nations Convention against Corruption.

This web of ethical principles helps us take decisions that consider universal fundamental rights. However, this is not sufficient for taking decisions in a business context. What we also need to consider are the social and economic implications of our decisions in their respective cultural contexts. Last but not least, we need to take into account the implications for our business. Balancing these various aspects requires the careful and consistent assessment of a transaction and its local effects, often in collaboration and dialogue with external experts and local stakeholders.

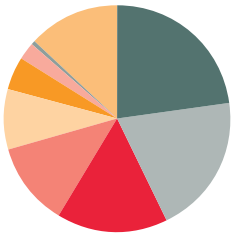
Thus our decisions are neither subjective nor entirely objective. In essence, they reflect our recognition of global fundamental rights, of human suffering and our commitment to limiting unwanted negative impacts of our business transactions.

For more information on this subject, see **swissre.com/corporate_responsibility/managing_env_risks.html**

170

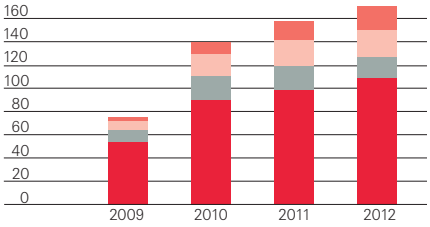
Total number of business transactions referred to the Sensitive Business Risks process in 2012

Sensitive Business Risk referrals 2012



- Defence
- Human rights and environmental protection
- Oil and gas
- Mining
- Dams
- Forestry and logging
- Animal testing
- Nuclear weapons proliferation
- Other issue/industry

Number of Sensitive Business Risk referrals



- Proceed
- Proceed with conditions
- Abstain
- Not materialised

We played an active role in developing the Principles for Sustainable Insurance. For more details and our first progress report, see pages 64–65.

Company exclusions
The policies of our Sustainability Risk Framework define certain criteria that may lead to the exclusion of a company from both our re/insurance transactions and investments, to the extent that such an exclusion is permissible (eg by virtue of mandatory law or internal policies) and possible (eg if existing documentation relating to such re/insurance transactions and investments provide for it). These activities include: the manufacturing of antipersonnel mines; verifiable complicity in systemic, repeated and severe human rights violations; infliction of repeated, severe and unmitigated damage to the environment; and proliferation of nuclear weapons.

Country exclusions
Swiss Re also excludes certain countries from its business, beyond compliance with International Trade Controls (ITCs). The criteria for these country exclusions are a particularly poor human rights record and no prospect of improvement. Our goal is to not directly underwrite risks or make investments into entities that are based in these countries. At the end of 2012, the countries excluded from our business for human rights reasons were North Korea, Somalia and Sudan.

Training
Over the years, we have made considerable efforts to ensure that our staff with client-facing and underwriting responsibilities know how to properly apply the Sustainability Risk Framework. Between 2011 and 2012, a total of 442 employees completed an eLearning course which we had specially designed for this purpose. For all newly joining employees with client-facing or underwriting functions, this training is mandatory.

In addition, we held workshops in five different locations, which were attended by 225 employees in total. Last but not least, three employees from business and other units joined the team responsible for managing the framework on job rotations, learning more about its details as well as helping with its implementation.

Client and industry interaction
We strongly believe that effective sustainability risk management ultimately equals sound business conduct and are keen to promote its further uptake in the re/insurance industry.

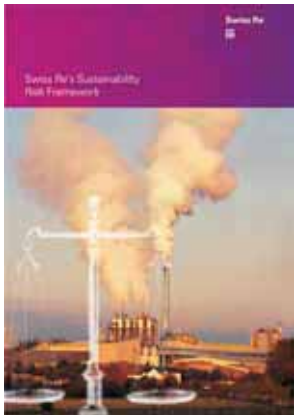
Recently, we have taken steps to involve our client managers and underwriters more strongly in implementing the policies of the framework. In 2012, we established a "Champions Network" focusing on the three topics of energy, mining and food. The role of these "champions" is to examine their client contacts and to explore where a closer dialogue with Swiss Re might help some clients to improve their sustainability performance.

Based on the experiences over the last few years we have also identified those of our client managers and underwriters for whose work the Sustainability Risk Framework has had the highest practical relevance. For this "core community" of client-facing staff, we have developed an interactive platform that will further assist them in pro-actively implementing the policies of our Sustainability Risk Framework.

For our clients and other interested parties, we produced an eight-page publication on the Sustainability Risk Framework in 2012. It offers further information on the context of the framework, the issues it strives to address and how it is managed in detail. (The brochure can be ordered at swissre.com/publications)

Going beyond risk management, we have been strongly involved in the development of the Principles for Sustainable Insurance (PSI) by the UN Environment Programme Finance Initiative, UNEP FI (www.unepfi.org/psi). Launched in 2012, these principles address environmental, social and governance issues in the re/insurance industry, spanning risk management, underwriting, product and service development, claims management, sales and marketing, and investment management. Currently, a Swiss Re representative has the co-chair of the UN PSI Board and is a member of the UNEP FI Global Steering Committee.

Swiss Re's Sustainability Risk Framework
This eight-page brochure provides further information on the context and details of our approach to managing sustainability risks.



136

Total of risk notions assessed as part of the SONAR process in 2012

With the SONAR process, we have an interactive tool in place to identify and assess emerging risks arising from the ever-shifting risk landscape.

Managing emerging risks

Reinsurers operate in a risk landscape that is changing faster today than ever before. Key drivers are new economic, technological, socio-political, regulatory and environmental developments. What is more, there are growing interdependencies between these developments, which can lead to accumulations of risk and create significant cascading effects. Important changes are also occurring in the business environment: liability and regulatory regimes continue to evolve, stakeholder expectations are strengthening and people's risk perceptions are shifting.

Taken together, these trends may give rise to so-called "emerging risks": newly developing or changing risks that are difficult to quantify and whose potential impact on our business is not yet sufficiently taken into account.

The pre-emptive identification and investigation of such risks forms an important element of Swiss Re's comprehensive approach to risk management. The key objectives are to reduce uncertainty and help prevent unforeseen losses while identifying new business opportunities and raising awareness – both within the Group and across the industry. Meeting these objectives requires a deeper understanding of changing conditions and an assessment of the risks' impacts as well as their interconnectedness.

Our SONAR framework

To address emerging risks effectively, Swiss Re operates a Group-wide risk management framework called SONAR ("systematic observation of notions associated with risk"). Firmly embedded in the Group's risk management organisation, SONAR allows us to identify and assess emerging risks in a timely manner and to incorporate the resulting insights into the relevant decision-making processes.

SONAR is based on an interactive, web 2.0-based platform which enables our employees to submit risk notions quickly and easily and to stay up-to-date on current developments. In 2012, a total of 136 risk notions were fed into the SONAR process, drawing on all main areas of the emerging risk landscape. While many of these early signals will never actually turn into emerging risks, others may well do so. As it is impossible to anticipate which signals will fall into which category, we believe that all of them warrant equally careful attention.

Thus, our emerging risk specialists have assessed all these risk notions for their potential impact on Swiss Re's business and have subsequently carried out more in-depth investigations of selected topics, for example shifts in the frequency of extreme weather events, changing regulatory requirements and 3D printing (see next page).

For more information on this subject, see **swissre.com/about_us/managing_risks/emerging_risks.html**

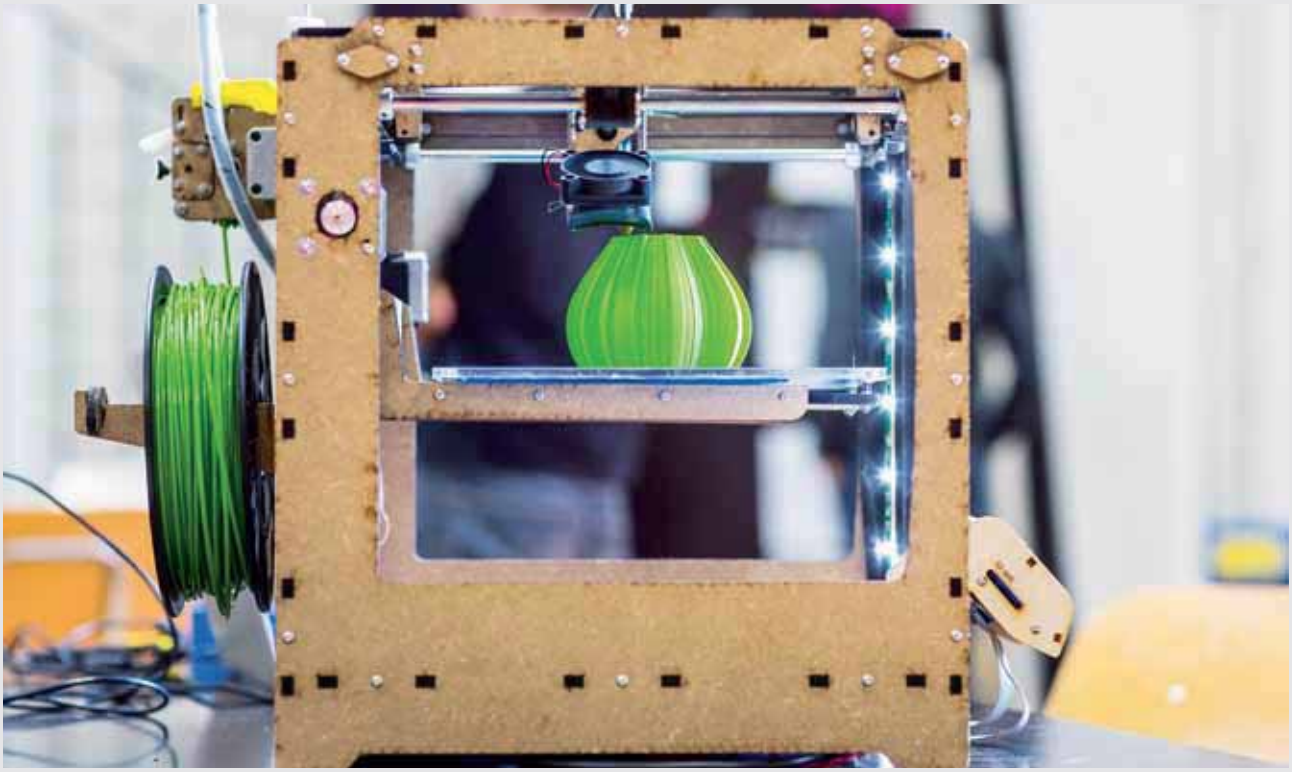
3D printing: a new emerging risk?

3D printing is a method for additive manufacturing of three-dimensional parts by using computer-controlled printers. Objects are created by means of an additive process where successive layers of material are laid down in different shapes. 3D printing is thus distinct from traditional machining techniques, which mostly rely on subtractive processes such as removing material by cutting or drilling.

As the technology matures, 3D printing delivers greater precision at ever lower cost. As a result, its application is spreading across various fields such as the automotive industry, aerospace, construction and medical prosthetics industries. Apart from improving research and development processes by allowing rapid prototyping, 3D printing also enables new forms of product design by overcoming the structural constraints associated with subtractive manufacturing processes.

Widespread use of 3D printers could have implications for various lines of the re/insurance business, such as product liability and recall, engineering covers or workers' compensation policies. It may also pose challenges for intellectual property covers and could eventually even affect the marine insurance market by reducing the need for transportation of products due to increased on-site production.

For now, 3D printing still faces certain constraints: firstly, most current-generation printers are limited to producing homogeneous objects made from one single material; secondly, printed objects are rarely as durable as traditionally manufactured products; and, thirdly, mass-produced objects are still substantially cheaper to manufacture. Nonetheless, from an emerging risk perspective, developments in 3D printing warrant a high level of attention and should be monitored closely.



3D printers create objects by means of an additive process laying down successive layers of material. Because of its potential implications for manufacturing practices, 3D printing may create emerging risks for the re/insurance industry.

Strategic risk initiatives
Identifying and addressing emerging risks can be challenging. The novelty and interconnectedness of such developments make it difficult to determine when a particular risk notion must be considered an emerging risk. The question of timing is thus of crucial importance: if measures to exclude a particular risk are taken too early, we can offer our clients less insurance protection. If measures are taken too late, we may end up with increased loss potential on our books.

Given these analytical challenges, we believe it is essential to foster risk dialogue with various partners. By continuously sharing perceptions and assessments, all parties involved can thus gain a better understanding of potential emerging risks. With this in mind, we actively contributed to four strategic initiatives involving emerging risks in 2012.

WEF Risk Response Network (RRN)
The RRN was launched in 2011 to provide private and public sector leadership with an independent platform to better map, monitor, manage and mitigate global risks.
www.weforum.org/community/risk-response-network

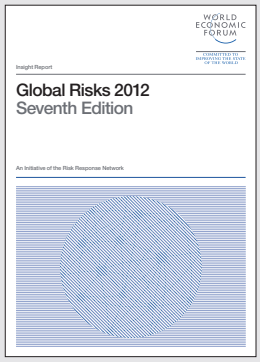
CRO Forum Emerging Risks Initiative (CRO ERI)
The CRO ERI was launched in 2005 to raise awareness of major emerging risks relevant to society and the re/insurance industry.
www.thecroforum.org/emerging-risk-initiative-2/

International Risk Governance Council (IRGC)
IRGC is an independent organisation whose purpose is to help the understanding and management of global risks that impact on human health and safety, the environment, the economy and society at large.
www.irgc.org/

iNTeg-Risk
iNTeg-Risk is a large-scale integrating project aimed at improving the management of emerging risks related to new materials and technologies in European industry.
www.integrisk.eu-vri.eu/

As a partner of these strategic risk initiatives, we contributed to two reports on relevant risk developments in 2012 (see below).

Publications with partner organisations

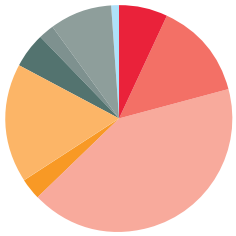


Global Risks 2012, Seventh Edition, provides a high-level overview of 50 selected global risks, based on a survey with 469 experts and industry leaders around the world. It aims to improve public and private sector efforts to map, monitor, manage and mitigate global risks and seeks to help decision-makers evaluate complex risk events and respond proactively in times of crisis.
www.weforum.org/reports/global-risks-2012-seventh-edition

The **CRO Forum's Position Paper on Endocrine Disruptors** deals with risks related to endocrine disrupting chemicals, substances which can interfere with the hormonal system of living organisms. It explores potential impacts on the environment and human health and highlights the implications for the re/insurance industry.
www.thecroforum.org/endocrine-disruptors/

A thorough understanding of political risks is key to enacting the policies of our Sustainability Risk Framework.

Investment mix
as of 31 December 2012
(Total: USD 137.4 bn; assets for own account only, excluding unit-linked and with-profits)



- 7% Cash and cash equivalents
- 14% Short-term investments
- 42% Government bonds incl. agency
- 3% Equities
- 17% Corporate bonds
- 5% Securitised products
- 2% Mortgages and other loans
- 9% Other – investment related
- 1% Other – insurance related

Accounting for political risks

In today's increasingly integrated world, political developments, actions and decisions that can have an adverse impact on our business are growing in significance. Within the Group's risk management organisation, we have established specific expertise to tackle a wide range of both commerce- and security-related political risks at global, country and business transaction levels.

The identification, assessment and ongoing monitoring of political risks are preconditions for controlling the resulting risk exposures and initiating risk mitigation measures. We focus in particular on key markets and sectors, current hotspots and emerging developments.

We also consider the ability to address political risks as an integral part of ensuring sustainable business operations in line with environmental, social and governance (ESG) principles: several of the sectors and issues covered by the eight policies of our Sustainability Risk Framework (see pages 22–24) have an important political dimension. Enacting these policies, both through Sensitive Business Risk assessments and exclusion policies, thus requires strong expertise and awareness of political risks. This is particularly true with regard to human rights violations, the proliferation of armaments into conflict areas or the identification of areas prone to civil unrest.

Responsible investment

Swiss Re follows a controlled and structured investment process which adheres to the principles of asset-liability management (ALM) and also reflects our commitment to corporate responsibility.

ALM is the cornerstone of our investment philosophy: premiums from our underwriting activities are invested in assets whose cash flows match the obligations from our re/insurance liabilities. This process favours higher-quality fixed income investments with stable long-term returns; with such investments accounting for 66% of our assets under management at the end of 2012 (excluding cash and short-term investments), our core focus on ALM is reflected in our portfolio mix, as illustrated in the chart on the left.

We integrate sustainability-related risk information consistently across our entire investment portfolio. We consider environmental, social and governance (ESG) factors as an integral part of our investment management activities and decisions – also in the belief that these factors can have an impact on the financial performance of the investment portfolio in the long run. To formally endorse our commitment, Swiss Re signed the Principles for Responsible Investment (PRI) in 2007 and the Principles for Sustainable Insurance (PSI) in 2012.

Governance
The governance for our investment management activities is defined in line with Swiss Re's Group and Business Units' governance. Our Responsible Investment Policy, issued by the Group Chief Investment Officer, is an internal document that outlines how we approach sustainability in the management of our investment assets.

The execution of our commitment to responsible investment is monitored in various ways. Overall responsibility lies with a senior committee within Asset Management, chaired by the Group Chief Investment Officer. An ESG Advisory Group connects our risk management, investment and sustainability experts. This provides a Group-wide platform for coordination and knowledge sharing and helps ensure that our approach to responsible investment remains closely integrated into day-to-day investment activities.

The company and country exclusions we determine through our Sustainability Risk Framework flow directly into our investment decisions.

ESG integration
Swiss Re is a long-term investor and therefore monitors the key risk factors which may adversely impact our investment portfolio over a long-term horizon. These risk factors include ESG considerations, which our Sustainability Risk Framework (see pages 22–24) helps to integrate into our investment management decisions.

Consisting of eight detailed policies dealing with sensitive sectors and issues, this framework provides a methodology for the identification and assessment of environmental, social and ethical risks. It outlines criteria for the exclusion of companies and countries from our business transactions (both re/insurance and investment transactions). The criteria – our first line of defence in mitigating ESG risks in our investment portfolio – are strictly applied to most of our investment assets, and applied whenever possible to certain specific asset classes, in particular for investments into comingled investment vehicles.

Focus areas
For key aspects of our investment activities, we have developed specific requirements to ensure ESG criteria are duly taken into consideration. These focus areas include sovereign fixed income investments, the engagement of external managers, the exercise of voting rights and direct real estate investments.

Sovereign fixed income investments
Sovereign fixed income products constitute the largest asset class in our investment portfolio with a holding of 42% at the end of 2012 (excluding cash and short-term investments). In order to guide investment decisions and monitor the quality of our sovereign fixed income portfolio, we apply Swiss Re's political risk and sustainability assessments at country level. These rating measures are used to define the investment mandates of the portfolio managers of sovereign fixed income investments. In addition, the portfolio is periodically reviewed and assessed against the screening criteria to reflect any change in the assessment of political and sustainability-related country risks.

Political Country Risk Rating
The Political Country Risk Rating comprehensively measures the political risk in a country, with political risk defined as events of a political, economic or social nature that harm business operations or adversely affect the business climate. Multiple external and internal data sets as well as Swiss Re's expert assessment lead to an overall country risk score.

Sustainability Rating
The Sustainability Rating, a derivative of the Political Country Risk Rating, measures the overall social, environmental and human rights situation in a country and supports Swiss Re's alignment with relevant United Nations principles.

Engagement of external investment managers
As of the end of 2012, around 25% of our investment portfolio was managed by external managers. We work closely with our external managers on the integration of ESG considerations into investment processes and decision-making. To the extent that some of our investment management activities are outsourced to external managers, Swiss Re relies on their resources for socially responsible investment analysis. These resources are assessed through a detailed due diligence process before external managers are selected and allocated investment mandates to manage for Swiss Re. All our external managers are required to report on their responsible investment activities regularly and their individual performance is monitored in line with our Responsible Investment Policy.

For several areas of our investment activities, we have defined specific requirements to ensure the integration of ESG criteria.

Eighty-five per cent of our externally managed assets are currently managed by entities that are PRI signatories themselves and are therefore committed to implementing its guiding principles. All of these have contractual provisions with Swiss Re specific to responsible investments.

Exercise of voting rights

We recognise the rights and responsibilities inherent in being an asset owner – and in particular in share ownership – as an integral part of our commitment to being a responsible investor. The Swiss Re Voting Policy lays down the guiding principles that form the basis of all our voting activities. We are committed to actively exercising those rights as an effective way of enhancing portfolio value, based on the conviction that the key drivers of value creation include ESG considerations and, in particular, good corporate governance and transparency towards shareholders.

For internally managed assets, we aim to use our influence as a responsible shareholder by directly exercising our voting rights. For portfolios outsourced to external investment managers, we delegate the exercise of proxy votes and related engagement activities to the portfolio managers and have defined a voting framework to ensure appropriate oversight over the exercise of its proxy votes. External managers' voting policies are reviewed as part of the due diligence process prior to their selection. In addition, external managers are required to report on a quarterly basis on the voting activities conducted on Swiss Re's behalf, including an explanation of the votes cast.

Direct real estate investments

Our investment portfolio includes direct investments in real estate, principally in our home market of Switzerland and in neighbouring Germany. Comprising buildings for both residential and commercial use, the total value of the portfolio was USD 2.53 billion at the end of 2012.

For these real estate investments we apply ambitious sustainability standards. For projects in Switzerland, the applicable criteria are defined in the Energy Mission Statement of Swiss Re, Zurich: This lays down that all new buildings need to conform to the MINERGIE® standard (www.minergie.ch), a Swiss quality label specifying high levels of energy efficiency and superior user comfort. Once an existing building in the portfolio is due for renovation, the standard is to be applied whenever this is feasible from an architectural, technical and financial point of view.

By the end of 2012, the combined value of our MINERGIE®-certified buildings had reached USD 363 million, or 17.1% of our Swiss portfolio of direct real estate investments. The total energy consumption surface in accordance with the MINERGIE® standard was 77 250 m² at the end of 2012, an increase of 29.2% from 2011. In addition, more than 56 000 m² had been successfully sold on to third parties in previous years.

Currently, we are developing a new building which applies the MINERGIE-ECO® standard: in addition to environmental specifications, this also includes health criteria and demands on building materials. The residential complex with 40 flats reached the construction phase in 2012.

Exploring and shaping the risk landscape

We regularly engage in dialogue with our stakeholders to advance our understanding of the changing risk landscape and to help society develop effective responses to key risks.

After an extensive review, we recently adopted five revised Top Topics to guide our stakeholder dialogue.

Re/insurance creates economic and social value by offering financial protection against major risks. Developing effective risk transfer solutions requires a sound understanding of the changing risk landscape. Swiss Re makes substantial efforts to explore developments that may impact the global risk landscape – including market, regulatory, technological, socio-economic and environmental trends. The insights we gain from regular dialogue with key stakeholders play an important role in this.

In turn, we are keen to play an active role in discussions on important risk topics and are valued for the quality of our contributions. Sharing our risk expertise with stakeholders allows us to help society and business form adequate responses and develop effective risk transfer instruments.

Group Issue Management

With Group Issue Management (GIM), we have a formal process to define and communicate on topics which are strategically important to us, our clients and society at large. These Top Topics are areas in which we seek to share our risk expertise and to shape public policy agendas.

The GIM process involves risk and product experts and other professionals from across the Swiss Re Group who share specialist knowledge and solutions with the outside world through our publications and dialogue. Our stakeholders range from clients, investors and policymakers to regulators, academics and civil society groups.

With our business evolving and global agendas shifting, we periodically review the Top Topics portfolio. Following an extensive review, approved by our Group Executive Committee, we adopted a revised set of five Top Topics in 2012 to guide our stakeholder dialogue:

- Advancing sustainable energy solutions
- Funding longer lives
- Managing climate and natural disaster risk
- Partnering for food security
- Supporting financial stability

Independently or in cooperation with our partners from the public and private sectors, we developed a number of new communication formats to share our expertise on each of these topics, including publications, new digital products and an award-winning app. The following is an introduction to the five Top Topics, what they mean for us, why we consider them to be important and what we have to offer.

Advancing sustainable energy solutions
Improving energy efficiency and deploying low-carbon technologies, including renewable energy, will be critical to reducing greenhouse gas emissions and supplying a growing and developing world with a more sustainable energy mix. But as sustainable energy projects increase in scale and complexity, so will the risks associated with them.

Innovative risk transfer solutions can help reduce these risks and drive investment in the sector. Swiss Re has a long-standing commitment to sustainability. We partner with clients to give them the security needed to realise their sustainable energy projects. In addition, we have intensified renewable energy research, using the results to help clients – and the global community – develop a secure energy supply for years to come.

Notable achievements in 2012:

- Following the launch of the Swiss Re sponsored report "Managing the risk in renewable energy" from the Economist Intelligence Unit, we leveraged the study with clients and the media;
- Launched and communicated Corporate Solutions' partnership with Solar Impulse (see below);
- Pioneered outreach on climate change and sustainable energy via new and social media channels, including the first-ever live Twitter session with Swiss Re experts.

Our partnership with Solar Impulse
Solar Impulse is the world's first solar-powered airplane able to fly day and night without fuel. It was designed by Swiss pioneers Bertrand Piccard and André Borschberg with the explicit goal of flying around the world using only solar energy. In 2012, Solar Impulse proved that this is no utopian dream: it travelled more than 6 000 kilometres and completed the world's first solar-powered intercontinental flight.

Through Corporate Solutions, we are proud to be the official insurance provider to Solar Impulse. The re/insurance industry can play an important role in managing the risks inherent in ambitious renewable energy projects; our partnership with Solar Impulse is a point in case.

Using solar energy only, Solar Impulse travelled more than 6 000 kilometres in 2012. We support this pioneering renewable energy project through Corporate Solutions.

For more information on this subject, see
swissre.com/rethinking/sustainable_energy/

"Partnering for food security" is one of our five Top Topics. In cooperation with our partners, we seek to help secure a sustainable food supply for the world's growing population.

Funding longer lives
We are living longer and there are proportionately fewer people of working age to support ageing populations. The costs of funding retirement income, healthcare and long-term care in old age will increase dramatically. This could have significant financial consequences for individuals, insurers, employer pension funds and society in general. Public-private partnerships are needed to meet this challenge.

As the world's largest life & health reinsurer, longevity and health risks associated with ageing societies are part of our core business. Our in-depth research and development combines medical, demographic, social and financial expertise to deliver critical insights into the implications of funding longer lives. Moreover, we have the financial strength to write risks across the entire lifespan.

For more information on this subject, see **swissre.com/rethinking/longer_lives/**

For more information on this subject, see **Corporate responsibility in context: funding longer lives, on pages 66–67**

Notable achievements in 2012:

- Published report on building a capital market for longevity risk, which received extensive global coverage;
- Held multi-stakeholder conferences at the Centre for Global Dialogue and, in cooperation with swissnex (www.swissnex.org), in Singapore and Boston (see pages 35–36);
- Made "funding longer lives" a major topic at several client events in Europe and North America.

Managing climate and natural disaster risks
Losses from natural disasters impact the economies of entire countries and are therefore a key driver for the re/insurance business. These losses are becoming more frequent and severe due to higher insurance penetration, the concentration of assets in exposed areas and the effects of climate change. This is why communities are increasingly interested in comprehensive risk management techniques and new solutions to finance disaster losses and to strengthen their resilience.

Swiss Re understands the relationship between climate and natural disaster risk and the societal impact of both. We have helped shape the global climate agenda through dialogue with our public- and private-sector partners and by providing cutting-edge research and innovative risk transfer solutions for over two decades.

For more information on this subject, see **swissre.com/rethinking/climate_and_natural_disaster_risk/**

Notable achievements in 2012:

- Launched new publication "Flood – an underestimated risk" and Swiss Re's Flood App for iPad®, a first in the industry;
- Shared our research and possible solutions with senior public-sector clients in a series of high-level meetings at NY Climate Week, the Annual Meeting of the Clinton Global Initiative, the UN COP18 Climate Change Conference and the Rio+20 Earth Summit;
- Launched our new Global Flood Zones™ in CatNet® and shared our natural disaster and climate change expertise in more than 70 client meetings.

Partnering for food security
The world's population is estimated to reach 9 billion people by 2050. Emerging markets will account for much of this expected increase – with Sub-Saharan Africa leading the way: its population is predicted to double from 770 million inhabitants in 2005 to 1.5 billion by 2050.

In light of this, securing a sustainable food supply for the growing population represents one of the biggest global challenges today, especially in the face of soaring food prices, climate change and water and energy constraints. Triggered by the food price crisis in 2008, food security has gained new public attention. It tops the list of issues being discussed by global opinion leaders at international conferences.

For more information on this subject, see **swissre.com/rethinking/food_security/**

Notable achievements in 2012:

- Participated in global multi-stakeholder platforms such as the WEF, B20, G20 and G8 to leverage the food security message, and made a five-year commitment to the Grow Africa Partnership (see pages 17–18);
- Focused on high-growth markets by delivering our key messages on food security through local teams;
- Continuously promoted exemplary solutions, eg from Vietnam, Kenya and Ethiopia/Senegal through multi-stakeholder events in East Africa and Latin America.

Supporting financial stability

Since the 2008/2009 financial crisis, the finance industry has been engaged in debate regarding financial stability and the regulations designed to enforce it. Many of these reforms are taking place in a very challenging and uncertain macro-economic environment, which increases the importance of considering the cumulative and cross-sectoral impact of new regulations. A crucial distinction that needs to be made in this context is the one between re/insurance and banking, and their specific risk profiles.

Swiss Re is a financially strong company with a large capital base and risk capacity. Our fundamental business model promotes financial and economic stability: In addition to providing risk and capital management solutions, our reinsurance activities stabilise and promote growth within the insurance industry. We invest funds into the economy, while our insurance and reinsurance solutions act as shock-absorbers, risk-removers and stabilisers.

For more information on this subject, see **swissre.com/rethinking/financial_stability/**

For more information on this subject, see **cgd.swissre.com/**

Notable achievements in 2012:

- Shared our messages through numerous strategic engagements and high-profile events for senior leadership, including co-hosting the IIF International Colloquium on "Financial Stability and Insurance";
- Gave input to numerous partner publications/papers and to industry reactions to regulatory developments;
- Published *sigma* studies "Understanding profitability in life insurance" (1/2012), "Facing the interest rate challenge" (4/2012) and "Insurance accounting reform: a glass half empty or half full?" (6/2012).

Our Centre for Global Dialogue

The Swiss Re Centre for Global Dialogue just outside of Zurich is our in-house conference centre and functions as a platform for dialogue between Swiss Re and external parties. In addition, it is a catalyst for strategic research in collaboration with third parties.

Events at the Centre are broken down into three categories. Expertise events aim to develop knowledge on important risk topics. They function along the knowledge chain, from small select and specialised meetings to large public stakeholder conferences on major issues of the day. The second category, marketing events, are targeted at Swiss Re clients, emphasising the key objective of translating expertise into tangible business solutions. The third category is termed networking events. These are held with senior Swiss Re representatives and external stakeholders, such as industry bodies, the research community, policymakers, non-governmental organisations and international institutions.

A key network is the Advisory Panel, which meets twice a year. The Panel is comprised of distinguished members from the realms of science, economics, politics, security, law and journalism, and serves as a forum to discuss long-term trends and strategies with Swiss Re's executive management. The following is a selection of three events we hosted at the Centre for Global Dialogue in 2012.

Risk Talk on food security in emerging markets

Food security is one of Swiss Re's Top Topics. This Risk Talk shed light on the underlying causes of food insecurity and some of the risk mitigation measures that could be taken, especially in emerging markets. Within our current food system there are many aspects that could be improved. For example, consumer food wastage in industrialised countries is around 222 million tonnes per year, while in Sub-Saharan Africa, total net food production is 230 million tonnes per year. There is an over-reliance on fossil fuels in production, scarce freshwater is being used inefficiently and soil is being degraded.

Addressing these challenges requires a systemic approach, the Risk Talk found. In developed countries less – yet more diverse – crops should be grown; in developing countries more – but also more diverse – crops should be grown. Green agriculture and the individual farmer are at the centre of sustainable solutions. Studies have shown that good organic production systems can substantially improve yields; moreover, organic crops also tend to be more resilient.

In emerging markets, an important means of increasing yields is to strengthen the position of the individual farmer. Insurance has its own role to play in this, as it offers greater security against key risks and enables investment into more effective production methods. Index-based covers are particularly suitable, as they are easy to understand, cheap and pay out quickly. Swiss Re has been at the forefront of developing innovative index-based insurance schemes in cooperation with various partners, thus helping to improve food security (see pages 17–20).

As our in-house conference facility, the Centre for Global Dialogue enables us to engage directly with our stakeholders.

Risk Talk on public-private partnerships to finance catastrophic risks in India, Vietnam, Mexico and the Caribbean
The costs of natural disasters, crop failures and health risks represent a growing burden for governments and societies, particularly in developing and emerging countries. Natural catastrophes are becoming more costly, due to accelerated development in exposed areas in combination with the effects of climate change. Insurance penetration, however, is much lower in emerging countries: as a result, the financial losses arising from such risks can have a substantial, and prolonged, impact on economic development.

As governments are increasingly concerned about these costs, they have started to look at new forms of risk financing. This Risk Talk focused on new insurance solutions that governments in India, Vietnam, Mexico and the Caribbean have recently implemented in collaboration with the private sector. These solutions work on both the macro and micro level as a means to protect public budgets and low-income households alike.

The Risk Talk concluded that, although the number of public-private partnerships has increased, the potential for further expansion remains considerable. Re/insurers not only bring capacity to the market; with their rich experience in risk assessment, loss adjustment and payout, they are ideally suited to complementing and strengthening traditional government and public-sector approaches.

A broad section of stakeholders met at our Centre for Global Dialogue near Zurich to discuss how the developments that lead to longer lives affect us as individuals (see next page).

To expand our own risk expertise, we engage in research projects with partners from the academic world.

The future of human longevity: focusing on you
Like food security, longevity is one of our Top Topics. Guided by the overarching question of how to fund longer lives, we started a conference series in 2011 at the Centre for Global Dialogue. Follow-up events in Boston and Singapore featured the latest knowledge on diseases, advances in treatment, and innovations in technology, medical care and public health. This latest conference at the Centre examined what these developments mean for the individual, by focusing on three areas: consumer behaviour, health policy and translational medicine.

Recent health research has illuminated how individual choices and behaviour shape health and longevity. However, it also shows that we are all influenced by society, peers, family and the media. Thus, improving human health will increasingly mean grappling with the complexities of human behaviour.

At the same time, it was emphasised at the conference that health policy still matters. The health policies of different countries diverge widely with regard to medical care, cost control and health insurance; these factors continue to have a strong influence on citizens' health and longevity.

With genetic sequencing and other innovations it is possible to tailor health interventions to an individual's unique biology. This has led to a renaissance of translational medicine, which turns scientific discoveries into new treatments and therapies. Discussing innovations such as smart monitoring devices, remote care delivery, stem cell therapies, nanomedicine and novel therapeutics, the conference asked which of them may have the biggest impact on future health and longevity.

Research partnerships

Adequately addressing key risks in our underwriting and risk management framework requires a thorough understanding of them. To advance our knowledge of specific risks, we often find it beneficial to complement our own expertise with external research. For this purpose, we engage in research projects with selected academic institutions and other partners.

We have maintained a number of research partnerships focusing on climate-related risks in recent years. These projects aim to quantify impacts on extreme weather events.

The first of the partnerships described below focuses on climate risks, the second on risks related to legal developments.

ProClim
ProClim – the Forum for Climate and Global Change – seeks to facilitate integrated research activities on the climate and the necessary interrelations among scientists, policymakers, business and the public. Swiss Re is a member of ProClim's steering committee. The partnership provides a valuable interface with an extensive network of scientists and the opportunity to exchange findings of the latest climate-related research. The IMILAST ("Intercomparison of mid-latitude storm diagnostics") project, for example, brought together many international storm researchers to generate insights of practical use for decision-makers in business and other sectors of society.
www.proclim.ch/imilast/

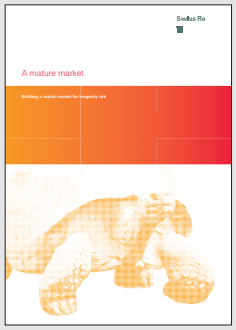
As a special service for Swiss Re, ProClim monitors the latest climate change-related research worldwide and reports the findings to us in quarterly meetings.

Cooperation with Oxford University for research into civil justice systems
Swiss Re closely monitors the spread of collective action instruments across Europe to continuously assess their impact for re/insurers. In 2012, we entered into a partnership with the Faculty of Law at Oxford University to support independent comparative research into civil justice systems across Europe. This "Research Programme in European and Comparative Civil Justice Systems", carried out by the Centre for Socio-Legal Studies, yields unique insights into the development of the liability landscape across Europe. It also enables stakeholder dialogue with policymakers, researchers, insurers and other industry sectors on the challenges related to the spread of collective action.
www.csls.ox.ac.uk/european_civil_justice_systems.php

Selected communication products of 2012

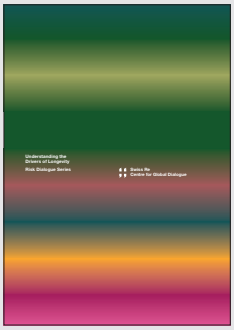
The publications and other media we produce in-house or in cooperation with our partners play an essential role in Swiss Re's efforts to help society form effective responses to important risks. Listed below are eight Swiss Re publications and one iPad® App we launched in 2012. Information on the topics they cover is provided in this chapter. More of our publications are displayed on pages 68–69.

Publications

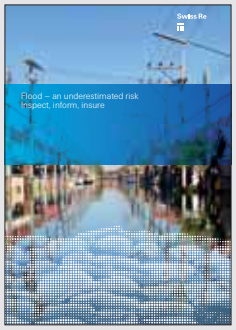


A mature market: Building a capital market for longevity risk

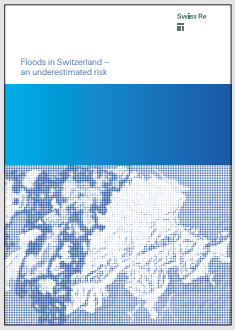
The future of human longevity: focusing on you (Conference report)



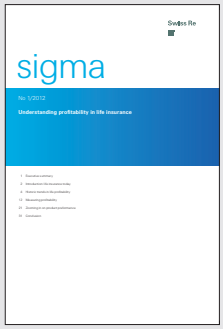
Understanding the Drivers of Longevity (Risk Dialogue Series)



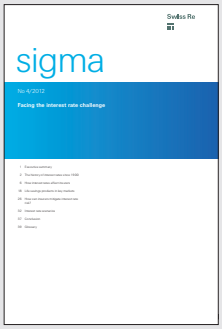
Flood – an underestimated risk: Inspect, inform, insure



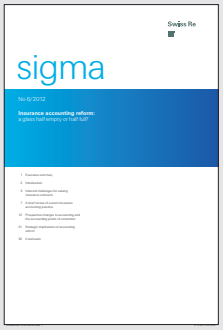
Floods in Switzerland – an underestimated risk



***sigma* 1/12**
Understanding profitability in life insurance



***sigma* 4/12**
Facing the interest rate challenge



***sigma* 6/12**
Insurance accounting reform: a glass half empty or half full?

Other media

Flood App for iPad®

Reducing our environmental footprint

We work to minimise the environmental impact of our operations. Cutting CO_2 emissions and reducing energy consumption are key targets across the Group.

As a provider of financial services, Swiss Re does not cause large environmental impacts through its own operations. Moreover, compared with industrial and manufacturing companies, our impacts are fewer in number. Nonetheless, minimising the key dimensions of our direct environmental footprint is an important part of our commitment as a responsible company.

In line with our long-standing strategic commitment to tackling climate change, our priorities are to reduce CO_2 emissions and energy consumption. Over the years, we have launched some pioneering initiatives, in particular the Greenhouse Neutral Programme and the CO_{You2} Reduce and Gain Programme. Further focal points are the use of sustainability guidelines for our sourcing activities and for our own office construction projects.

Management systems and certification

Environmental objectives are defined at the Group's headquarters and are then fully integrated into the global management system of our Corporate Real Estate & Logistics division. With the help of a Group-wide reporting process, we continuously monitor our environmental performance and implement appropriate prevention and improvement plans. Our environmental reporting operates on a state-of-the-art, web-based platform, which optimises the accessibility and reliability of key data.

Local responsibility for implementing environmental management lies with the Logistics departments of the respective locations; several of our largest locations have been certified according to the ISO 14001 Environmental Management Standard (www.iso.org). At the end of 2012, 45% of our employees were working at locations with an ISO 14001-certified Logistics department.

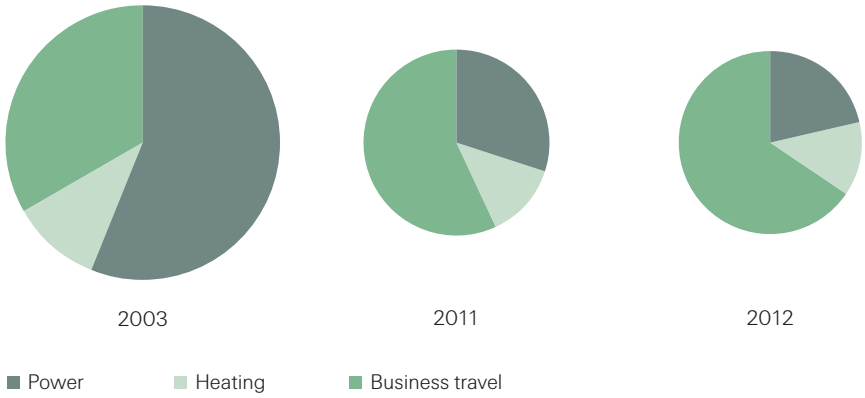
The Greenhouse Neutral Programme

Tackling climate change has been an environmental priority for Swiss Re for more than 20 years. One element of our four-pronged climate strategy (see page 10) is our pledge to reduce our own CO_2 emissions. Our principal initiative to achieve this goal is the Greenhouse Neutral Programme, which we launched in 2003. Originally, the programme combined two commitments: firstly, to reduce our CO_2 emissions by 15% per employee within ten years (ie by the end of 2013) and, secondly, to fully offset the remaining emissions by purchasing high-quality emissions reduction credits. To our knowledge, we were the first large financial services provider to make such commitments.

We consider the programme to have been a significant success. The original 15% per employee reduction target was met in 2007 – ie, five years ahead of schedule. Subsequently, we raised the reduction goal to 30% and, after this target had been met in 2009, to 45%. By the end of 2012, we had achieved a total reduction of Swiss Re's CO_2 emissions per employee by 55.6% since 2003.

For more information on this subject, see **swissre.com/corporate_responsibility/reducing_footprint.html**

For more information on this subject, see **swissre.com/corporate_responsibility/greenhouse_neutral.html**



CO_2 emissions per employee (full-time equivalent, FTE), Swiss Re Group

	2003	2011	**2012**	Change since base year 2003 in %
	kg/FTE	kg/FTE	**kg/FTE**	
Power	3 703	909	**634**	–82.9
Heating	706	395	**381**	–46.0
Business travel	2 190	[1] 1 723	**1 917**	–12.5
Total	6 599	3 027	**2 932**	–55.6

[1] The 2011 figure for business travel has been restated because of an internal reporting error concerning rental car use.

Underlying environmental data, Swiss Re Group

		2003	2011	**2012**	Change since base year 2003 in %
Power	kWh/FTE	8 801	5 532	**5 022**	–42.9
Heating	kWh/FTE	3 381	2 080	**1 997**	–40.9
Energy intensity (power & heating)	kWh/FTE	12 182	7 512	**7 018**	–42.4
Business travel	km/FTE	[1] 13 145	[1] 10 252	**11 244**	–14.5

[1] After reporting on air travel in the 2011 CR Report, we have reverted to reporting on total business travel (including ground travel). As a result, the figures for both 2003 and 2011 have been restated.

55.6%

Total reduction in CO_2 emissions per employee since 2003

Launched in 2003, our Greenhouse Neutral Programme is a voluntary commitment to reduce CO_2 emissions per employee and to offset the remainder.

This achievement has been reached through two principal measures: switching to renewable power at many of our locations and continuous improvements in energy efficiency.

Using renewable energy

Our drive to use electricity from renewable sources started in 2005 at four of our European locations. By the end of 2012, we had switched to using renewable power – fully or partially – at 21 locations in Asia, Europe, North America and Oceania. Swiss Re's goal is to use 100% renewable power wherever it is available in dependable quality by the end of 2013. At the end of 2012, the share of renewable power was 89% of the Group's total power consumption.

We want to ensure that the renewable power we use lives up to its name. In order to select suitable sources, we use a "minimum standard" that clearly lays down how we define "renewable energy" and what requirements it needs to meet. At our Zurich headquarters, for example, we only buy "naturmade star" electricity (www.naturmade.ch), which meets tough ecological quality criteria. In Munich, we purchase our electricity from NaturEnergie (www.naturenergie.de), one of Germany's premier suppliers of renewable energy.

42.4%

Reduction in energy intensity per employee since 2003

To offset those CO_2 emissions we cannot avoid, we only buy Voluntary Emissions Reductions (VERs) of a high environmental quality.

Reducing energy consumption
In addition to our policy of buying electricity from renewable sources, we have made efforts to bring down the actual amount of energy consumed per employee – or in other words, to reduce our energy intensity. For this, we also established a Group-wide goal: measured in kWh per employee (full-time equivalent or FTE), we pledged to reduce energy intensity by 20% in comparison with 2003 levels. By continuously taking measures to improve energy efficiency and by concentrating back-office tasks in fewer locations, we have met and exceeded this goal: At the end of 2012, energy intensity across the Group was 42.4% lower than in 2003 – and down by 6.6% from 2011. The improvement during 2012 was partly due to the fact that we were able to reap the full benefits of moving into our newly constructed, energy-efficient office building in Fort Wayne, but the mild winter in the Armonk region in the US also played a role.

Minimising business travel
Over the years we have taken a number of measures to curb business travel. Travel budgets are continuously monitored, while travel data are centrally collected and fed into our environmental reporting platform. We also built up a dense network of video-conferencing equipment, counting more than 100 facilities worldwide in 2012. Recently, we started to replace these through state-of-the-art Telepresence technology. Telepresence is the latest video collaboration technology, which creates a real-time, life-size virtual meeting experience in specially designed rooms. We made a further substantial investment in 2012, raising the total number of our Telepresence facilities to 55 globally.

At the end of 2012, the CO_2 emissions caused by business travel were 12.5% lower per employee than in 2003; in the first few years of the CO_2 Greenhouse Neutral Programme, we managed to gradually reduce business travel by a significant margin. But in both 2011 and 2012, the average amount of kilometres travelled by our employees and the resulting CO_2 emissions increased again. On the one hand, this was due to the general improvement in the business environment and, lately, to our strategy of generating new business in high-growth markets. On the other hand, Swiss Re's realignment into a holding company with three distinct business units has led to the creation of additional functions and, as a consequence, an increase in business travel required for management purposes. Furthermore, we have continued to embed our operational processes on a global basis; this, too, has increased travel activity.

Last year's financial results show that our strategic focus on high-growth markets and our new Group structure benefit our clients and shareholders. But it is equally clear that there has been a parallel increase in business travel. In essence, this reflects a dilemma between two objectives: that of creating economic value and that of reducing environmental impacts which, in this case, are difficult to reconcile. Nevertheless, we remain committed to curbing unnecessary business travel without jeopardising our business objectives.

Offsetting our remaining CO_2 emissions
The second commitment of our Greenhouse Neutral Programme is to compensate all CO_2 emissions that remain after our reduction measures. From 2003 to 2011 we bought and retired high-quality Voluntary Emissions Reductions (VERs) for a total of 426 000 tonnes of CO_{2e}. To offset the emissions we caused in 2012, we bought and retired VERs for a further 43 000 tonnes of CO_{2e}. This amount includes additional voluntary commitments to offset the CO_2 emissions caused by events such as Swiss Re's Annual General Meeting and those held at the Centre for Global Dialogue.

We are keen to ensure that the VERs we buy are of a high environmental standard. To achieve this, we have developed a set of criteria to select the projects that generate certificates. For instance, we do not take into consideration projects that support carbon sinks and we give priority to projects which come with strong social side-effects and benefit the poorest regions.

In 2012, for example, some of the VERs we bought and retired came from a waste-water treatment project at a starch plant in Thailand. Prior to the project, the large output of wastewater from the plant was treated through cascading open lagoons, with a retention time of more than a year. Besides causing water and air pollution, this process led to the steady generation and release of methane, a greenhouse gas 21 times stronger than CO_2. However, through the installation of a closed anaerobic wastewater treatment facility it became possible to capture the methane and then use it to produce clean energy directly on the plant site. This has had twin benefits: not only have CO_2 emissions been cut significantly, the plant found that it could purchase 80% less fossil fuels, thus further reducing emissions. Moreover, the resulting carbon revenues have helped to fund social and educational activities in the local community.

External verification of our CO_2 reporting

We have been communicating the progress of our Greenhouse Neutral Programme on a yearly basis by disclosing our CO_2 emissions, their principal sources and relative performance over time in our Corporate Responsibility Reports. The calculation of our emissions is based on the guidelines of the Greenhouse Gas Protocol, the most widely-used emissions accounting standard (www.ghgprotocol.org). Before our emission figures are published, PricewaterhouseCoopers perform an assurance engagement to verify our calculations. In this year's report, assurance has been extended to the full "Reducing our environmental footprint" chapter as well as two further chapters. The complete assurance report from PricewaterhouseCoopers is included on pages 70–71.

By installing a wastewater treatment facility, this starch plant in Thailand managed to substantially reduce its CO_2 emissions and to produce clean energy on-site at the same time. In offsetting our own CO_2 emissions we cannot avoid, we only buy high-quality Voluntary Emissions Reductions (VERs) as generated by this project.

Our Group Sourcing Policy stipulates that our suppliers need to adhere to the ten principles of the UN Global Compact.

Paper, water and waste

CO_2 emissions and energy consumption are our two environmental priorities. For these, we have set ambitious reduction targets – and exceeded them. For paper use, we have not set a quantitative target but have taken a number of measures over the last few years to reduce the amount used and to ensure we only purchase paper of a high ecological quality. Other environmental impacts are of less relevance to Swiss Re, not least because we cannot directly influence them at locations where we rent office space. However, for the office buildings we own ourselves we require appliances to meet high standards of water efficiency.

Paper use increased slightly in 2012 compared with 2011. Over the longer term, the trend has been positive though. Compared with 2003, we have reduced paper use per employee by more than 50%. Two important factors have been more frequent scanning of documents, at least partly as a result of our Document Induction Process, and encouraging our employees to use more double-sided printing.

Our Group sourcing guidelines and our "minimum standard for copy paper" set clear environmental requirements for the type of paper we use (see below). Consequently, we purchase a consistently high proportion of FSC-labelled paper and recycled paper.

In view of the moderate data quality for both water and waste, we do not regard the slight changes observed between 2011 and 2012 as statistically significant.

Group sourcing guidelines and minimum standards

As a provider of financial services, Swiss Re does not have an extended supply chain. Our core business does not require us to buy intermediate inputs like a manufacturing company. But to run our operations, we do require a range of goods and services.

For the procurement of these goods and services, we apply general and individual criteria. Our overarching Group Sourcing Policy, which is applicable to all our locations, contains criteria to select suppliers that offer best value for money, meet high quality standards and adhere to the UN Global Compact. As a signatory to the Compact, we are committed to honouring all its ten principles; amongst other things, these prohibit any sort of discrimination or the use of child or forced labour and require that the freedom of association and the right to collective bargaining be upheld.

Environmental criteria must be included in purchasing decisions with regard to materials and ingredients, production methods, recycling and waste. For some sourcing categories, we have developed minimum standards that further specify our requirements: besides electricity (see page 39) and paper, they cover office supplies, cleaning services and agents, furniture and building materials. Each standard lists objectives, ecological aspects, ecological minimum standards, exceptions, controlling and labels.

Paper use per employee (FTE), Swiss Re Group

		2003	[1]2011	**2012**	Change in % since 2011
Paper	kg/FTE	93	40	**41**	2.5
Recycled paper	%	14	74	**76**	2.7
FSC-labelled paper	%	n/a	94	**95**	1.1

[1] The data for 2011 have been restated due to the inclusion of additional data from two locations.

Water consumption and waste generation per employee (FTE), Swiss Re Group

		2003	2011	**2012**	Change in % since 2011
Water	m^3/FTE	25	18.3	**17.9**	–2.2
Waste	kg/FTE	286	211	**207**	–1.9

For more information on this subject, see **swissre.com/corporate_responsibility/procurement_guidelines.html**

Swiss Re Next, the replacement building at our Zurich headquarters, has been designed to set a prime example of sustainable construction.

In 2012, we erected a façade mock-up of Swiss Re Next on a public field adjacent to our Zurich headquarters. Showing a double-storey section of the southeast corner, the mock-up serves as a lab to test a number of the new building's characteristics.

MINERGIE-P-ECO®
The MINERGIE-P-ECO® construction standard combines requirements on health criteria and building materials ("ECO") and on maximum energy efficiency ("MINERGIE-P"); the use of "passive" heat sources such as solar radiation and waste heat, instead of traditional heating and cooling technology, make it possible to construct buildings with ultra-low energy consumption.

When we select new suppliers, we examine whether they comply with these requirements as part of the overall evaluation process. Existing strategic suppliers are re-examined in the periodical contract reviews, and individual suppliers are visited and inspected on-site.

Internally, we conduct regular awareness trainings with all our sourcing staff.

Sustainable construction and Swiss Re Next

Swiss Re has over 60 offices in more than 20 countries. For construction projects at these offices – new building or renovation work – we apply a number of principles. One of them is sustainability, which translates into criteria such as stringent construction standards, high-quality fittings and finishes, a comfortable ambient climate, environmentally sound, durable materials, low energy consumption and low maintenance and running costs. Constructing or renovating an office building in line with such sustainability criteria is the most effective way to minimise its environmental footprint.

For construction projects in Switzerland, the applicable criteria are defined in detail in the Energy Mission Statement of Swiss Re, Zurich: They stipulate that new buildings need to conform to the MINERGIE® standard (www.minergie.ch) – a Swiss quality label specifying high levels of energy efficiency and superior user comfort. When we renovate old buildings, the standard is to be applied if feasible from an architectural, technical and financial perspective. The same criteria are applied by our pension fund in Switzerland for all its direct investments into real estate projects.

The CO_{You2} Reduce and Gain Programme enables our employees to claim subsidies from Swiss Re for investments that help reduce their personal carbon footprint.

In practice we usually go beyond these requirements and use further standards such as MINERGIE-ECO®, which also includes health criteria and demands on building materials and, more recently, MINERGIE-P-ECO®, which specifies the characteristics of a "passive house" that consumes even less energy than a MINERGIE®-certified building.

Swiss Re Next

Our current flagship construction project is "Swiss Re Next", the replacement building at the Group's Zurich headquarters. From the start, sustainability was defined as a key feature of this project. We want Swiss Re Next to set a leading example of top-class sustainable construction.

In 2012, the building consent for Swiss Re Next was approved by the local authorities. We also received the preliminary MINERGIE-P-ECO® certificate. The old building was vacated and subsequently prepared for decontamination and demolition. Earlier in the year, we erected a façade mock-up of Swiss Re Next on a public field adjacent to our headquarters. It shows a double storey section of the southeast corner of the future building (see page 43). This mock-up is effectively a "lab" for testing a wide range of issues as part of a thorough quality assurance process. Based on the mock-up, the designers and Swiss Re can evaluate the design and optimise it before proceeding with commissioning and executing the building.

The CO_{You2} Reduce and Gain Programme

The commitment to cutting our own CO_2 emissions is one of four elements of our climate change strategy (see page 10). In 2007, we launched an initiative that gives our employees the opportunity to make a personal contribution to the Group's climate change efforts: the CO_{You2} Reduce and Gain Programme. It grants our employees subsidies for a range of investments through which they can reduce their own carbon footprints. To our knowledge, it was the first global corporate initiative of its kind when we launched it.

The investments eligible for subsidies are clearly specified in the programme. Some of them are supported at all our locations, others vary depending on the prevailing climatic and social conditions in order to maximise the programme's effectiveness. Our subsidies cover 50% of the investment sum up to a maximum of CHF 5 000 or an equivalent amount, adjusted to the local cost of living. The programme is open to all employees who have been with Swiss Re for a minimum period of time (currently one year).

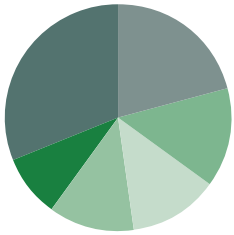
The first, five-year phase of the programme came to an end in 2011; in total, we had granted almost 4 000 subsidies worldwide by then. In view of this resounding success, we launched a new two-year cycle starting in 2012. The basic features of the programme have remained the same, but some of the locally available investment options have been reviewed to make the programme even more effective.

In 2012, a total of 1 750 employees were granted subsidies through the CO_{You2} Programme. The inclusion of conventional bicycles among the eligible investments proved a big success: with 357 uptakes, they were the most frequently used option, followed by public transport passes and energy-efficient refrigerators (see chart on next page). Over the whole programme, investments supporting sustainable mobility have been the most popular as well, accounting for almost half of all subsidies.

For more information on this subject, see **next.swissre.com/**

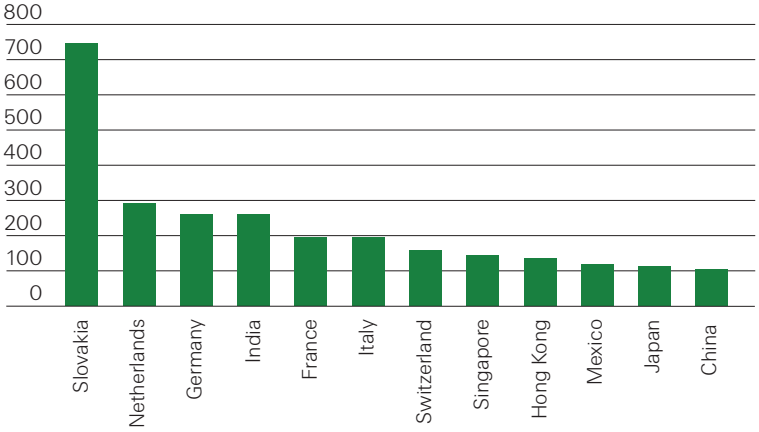
For more information on this subject, see **swissre.com/corporate_responsibility/coyou2_programme.html**

CO_{You2} payouts 2012, by type



- 21% Conventional bicycles
- 14% Public transport passes
- 13% Refrigerators
- 12% Washing machines
- 9% Windows/doors
- 31% Others

CO_{You2} payouts 2012, per 1000 employees[1]



[1] Only countries where Swiss Re has 30 or more employees are shown.

Relative to the number of employees who work at our different locations, the highest number of subsidies was granted in Bratislava, Slovakia (see chart above). As this location has been growing strongly, many new employees made use of the opportunity to claim subsidies in 2012.

Partner initiative: The Swiss Climate Foundation

In cooperation with a number of partner companies, we set up the Swiss Climate Foundation in 2008 in response to the introduction of the Swiss CO_2 law, which provides the basis for the CO_2 levy on heating fuels in Switzerland. This levy is not a proper tax but an environmental market mechanism: It imposes a charge on the use of heating fuels and then reimburses the money thus raised – to private companies proportionate to their total salary expenses.

For financial services providers, who use relatively small amounts of heating fuel but employ large workforces, this has resulted in a substantial "net reimbursement".

When setting up the Foundation, the partner organisations agreed to collect these funds and to use them to support various climate-friendly projects undertaken by small and medium-sized companies in Switzerland. Since becoming operational in 2009, the Foundation has provided support totalling CHF 6.28 million. In 2012, 82 climate-friendly projects were selected and supported with CHF 2.86 million. These projects are expected to help avoid 48 000 tonnes of CO_2 emissions over the next ten years. Around 80% of last year's funding went to projects that will increase energy efficiency; the remaining 20% support the development and marketing of innovative solutions for mitigating climate change. The potential of such solutions to reduce emissions is significantly higher than that of efficiency projects, but it is not as easy to verify.

In addition to paying in our net levy reimbursement, Swiss Re has been sponsoring the Foundation's managing director position since it was established in 2008.

For more information on this subject, see **swiss-climate-foundation.ch**

Being a good corporate citizen

We support development and humanitarian projects across the world, while enabling our employees to do volunteering and charitable work in their local communities.

Swiss Re Foundation
The Swiss Re Foundation is a non-profit organisation committed to social and environmental concerns. Launched in 2012, the Foundation aims to make people more resilient to natural hazards, climate change, population growth, water scarcity and pandemics, along with other challenges to society's security, health and prosperity. It also supports community projects and employee volunteering in the locations where Swiss Re has offices.
www.swissrefoundation.org

For more information on this subject, see **swissrefoundation.org/what_we_do/global_programmes/**

Our commitment to being a responsible company includes several important aspects of how we run our business. But beyond these efforts, we also see ourselves as part of wider society and seek to play an active role in it in the same way private citizens do. For these citizenship activities, we have set clear priorities. We share our knowledge, time and financial resources to help communities build capacity, focusing on three main categories: global humanitarian and development programmes, local charities and volunteering activities, and – mainly at the company headquarters in Zurich – sponsoring cultural institutions.

In our Corporate Responsibility Report we cover the first two of these categories; information on sponsoring culture can be found on our website at www.swissre.com/corporate_responsibility/corporate_citizenship/spons_culture.html.

Both our global and community programmes are now expertly devised and looked after by the Swiss Re Foundation, an independent organisation we recently set up specifically for this purpose (www.swissrefoundation.org).

Global humanitarian and development programmes

By offering reliable financial protection against major risks, our core re/insurance business helps create economic and social stability. Often, though, financial risk transfer is not enough to deal with major risks. Poorer communities, in particular, benefit strongly if they know how to better manage key risks. If a community is struck by a disaster, insurance provides valuable support for recovery and rebuilding, but rapid, hands-on assistance is essential.

These two objectives are central to Swiss Re's corporate citizenship strategy: firstly, we support development programmes that help communities reduce and better cope with risks; and, secondly, we provide humanitarian aid when required. Using the know-how from our core business, we focus on risks related to natural catastrophes, climate change and water.

In 2012, we supported the following humanitarian and development projects:

Overcoming poverty in northeastern Brazil
In the Goità Basin in northeastern Brazil, we partnered with Habitat for Humanity Brazil (www.habitat.org/where-we-build/brazil) in a project that aims to help poor women and their families build better lives. The women supported by the programme work in the local cassava flour factories, often under conditions of semi-slavery and earning less than half of the local minimum wage. As a result, they and their families live in extreme poverty, in homes that have no basic water or sewage facilities.

The project aims to integrate various development programmes in the region to break the cycle of poverty in which these families are trapped. It has three pillars: strengthening community development, encouraging the creation of alternative incomes such as cooperatives, and providing affordable housing.

Using the expertise from our core business, our global programmes aim to build capacity and improve risk preparedness for natural catastrophes, climate change and water.

Swiss Re makes a direct contribution to the housing part of the programme, complementing funds from government programmes. The beneficiaries are directly involved, not only as partners at the design stage, but by way of investing their own labour and paying small monthly mortgages. The money thus raised goes into a revolving fund, which is used to build more houses later. But just as importantly, having financial responsibilities gives the women a sense of dignity and helps them build the confidence that they can improve their families' lives.

Adapting agricultural practices in India to climate change

In many parts of India, arable land is rain-fed and ecologically fragile. In these regions land degradation, local climatic variations and frequent droughts, in combination with unsustainable utilisation practices, have led to a severe depletion of land, water and biomass resources. As a result, many rural households are forced to abandon their villages and to become "ecological migrants" in search of a living. The problem is further compounded by climate change, which affects temperature variations and monsoon patterns.

A group of villagers in Maharashtra create a three-dimensional model of their community. This highly participatory process forms part of a project by the Watershed Organisation Trust to tackle land degradation and to promote sustainable agricultural practices in 12 villages.

In 2012, Swiss Re began supporting a three-year project by the Watershed Organisation Trust, WOTR (www.wotr.org) in Maharashtra, where 15 million out of 16 million hectares of arable land are estimated to be degraded and in need of amelioration. Targeting 12 villages, the project aims to help vulnerable communities develop sustainable and climate-resilient agricultural practices. Based on a highly participatory process, the project focuses on improving soil and water conservation measures, introducing sustainable means of increasing productivity and empowering women in the villages, as they often bear the brunt of the effects of land degradation.

Promoting social entrepreneurship in the Indian health sector

Also in India, we started a three-year partnership with Ashoka (www.ashoka.org), a global association of the world's leading social entrepreneurs. Ashoka has been a pioneer in this field since 1980, investing in more than 2 500 social entrepreneurs in over 70 countries. Known as Ashoka Fellows, these practical visionaries work at a systemic level, in the process transforming the way children learn, for example, or how healthcare services are delivered.

Swiss Re's partnership with Ashoka focuses on the health sector in India. Specifically, we are helping Ashoka to find and engage new social entrepreneurs who have innovative ideas to address health-related challenges. At the same time, the partnership seeks to reinforce the impact of the Ashoka Fellows by creating a platform for collaboration. Finally, the resulting innovations and insights are spread through dialogue across different sectors to influence the Indian health industry.

Developing dog rescue teams in Japan

After the disastrous earthquake and ensuing tsunami that brought devastation to the northeastern coast of Japan's Honshu Island in March 2011, Swiss Re swiftly made donations to the Swiss Red Cross (www.redcross.ch) and Save the Children (www.savethechildren.net) to assist their emergency relief activities. At the time, we also pledged to support Japanese rescue organisations in their efforts to develop dog rescue teams which could be rapidly deployed in the aftermath of such disasters. As hours or even minutes often decide over life and death, this is of essential importance.

To enable this, we supported a joint project between the Swiss Disaster Dog Association, REDOG (www.redog.ch) – a Swiss Re partner for several years – and the Japanese Rescue Dog Association, JRDA (www.kinet.or.jp/kyujoken). The objective of this cooperative venture is to share know-how by involving REDOG in tailor-made training activities for the Japanese rescue dog teams. Specific goals of the training are, for example, to achieve more frequent and rapid deployment, increase the number of teams ready for deployment and improve coordination among the agencies involved.

Helping communities in Vietnam cope with disasters

Vietnam is one of Asia's most disaster-prone countries. Its vulnerability to various natural disasters is likely to be further compounded by the effects of climate change. Climate trends already felt today include a rise in average temperatures, lower annual precipitation but increased rainfall in summer, and more frequent weather extremes such as heat waves, cold spells and typhoons. In view of this situation, the Vietnamese government recently developed a strategic programme that aims to enhance "community-based disaster risk management" (CBDRM), particularly in the country's 6 000 most vulnerable communes.

The Vietnam Red Cross, VNRC (www.redcross.org.vn) plays a key role in implementing this programme, working together with several international Red Cross partners. Swiss Re decided to support a partnership between the VNRC and the Swiss Red Cross (www.redcross.ch) to bring the programme to seven strongly exposed communes in the Ca Mau province at the southern tip of the country.

Our International ReSource Award for Sustainable Watershed Management, worth USD 150 000, was conferred for the tenth time in 2012.

For more information on this subject, see **resourceaward.org**

Bottom-up approaches are considered essential to effective disaster risk management, because local communities have the best grasp of local conditions and are the first responders in the event of a disaster. Working both with the population and the authorities, the project in Ca Mau province will enable the seven communes involved to analyse their vulnerability to natural disasters, to assess their own capacities and, on this basis, to improve response mechanisms. Overall, the Ca Mau project is expected to benefit 84 000 people.

Aid efforts after Hurricane Sandy
In October 2012, Hurricane Sandy cut a 1 100 mile-wide swath along the Atlantic seaboard of the US. With tides of 10 to 14 feet, Sandy exceeded previous storm surge records. Many of our employees in the US immediately volunteered to personally help colleagues and communities, in many different ways. In the aftermath of the storm, our company donated CHF 200 000 to the American Red Cross (www.redcross.org), which acted as the lead organiser of relief efforts in the affected areas.

2012 International ReSource Award
Our International ReSource Award for Sustainable Watershed Management was presented for the tenth time in 2012. By recognising innovative approaches and workable solutions, the ReSource Award seeks to highlight the social, ecological and economic benefits of protecting vulnerable watersheds in emerging countries.

A gabion (a stone wall reinforced with wire mesh) is being built in an effort to reclaim polluted watersheds in Nairobi, Nigeria. This inexpensive but effective measure is part of the project that won our 2012 ReSource Award.

We offer our employees three Group-wide programmes to do volunteering work in their local communities:
- **Community Days**
- **Charity of the Year**
- **Dollars-4-Doers**

The tenth anniversary edition of the ReSource Award went to a project in Kibera, the largest slum area of Nairobi, Nigeria. Kibera sits on the tributaries of the Ngong River and Nairobi Dam, both of which are severely polluted and thus pose a substantial health hazard to the local communities. The winning project by the Kounkuey Design Initiative (www.kounkuey.org) comprises three phases in an innovative participatory process: understanding the watershed through broad cooperation, engaging the whole community and then reclaiming the river by creating three low-cost but high-impact "productive public spaces" (PPS). To achieve their objectives, the three PPS will combine river bolstering, environmental remediation, water supply and sanitation facilities, and community buildings.

Celebrating the tenth edition of the ReSource Award, we also offered a special prize for a project submitted by one of our employees. Almost 1 500 of them voted on a list of six finalists and selected a project designed to advance a tool that purifies up to 1 000 litres of water per hour through ultraviolet radiation and human kinetic force. The award will finance this project for one year in Burkina Faso.

Local volunteering and charity programmes

Swiss Re is a global company with business locations around the world. Besides our humanitarian and development programmes, we want to act as a responsible corporate citizen in these communities too. We do so mainly by supporting local charities and by providing opportunities for our employees to take part in volunteering activities. Over the last three years, we have established two Group-wide volunteering and charity programmes: Community Days and Charity of the Year (COTY).

Community Days give all our employees the opportunity to spend one working day per year engaging in volunteering activities that reflect Swiss Re's commitment to environmental and social sustainability.

Through the Charity of the Year programme, our employees can propose charities they would like Swiss Re to support, and then vote on the resulting shortlist. The selected charity receives financial support from Swiss Re and, in most cases, invites our employees to engage in volunteering and fundraising activities.

The Dollars-4-Doers programme enables our employees to seek financial support for charitable work they do in their own time. Swiss Re contributes up to CHF 3 000 or an equivalent amount to submitted projects, provided they meet a set of criteria.

Community Days: Japan...
In autumn 2012 one and a half years had passed since the massive earthquake and subsequent tsunami that brought devastation to the Tohoku region on the northeastern coast of Japan's Honshu Island. Yet, in some areas of Tohoku a lot of cleaning and reconstruction work still remained – and remains – to be done. While the larger cities were able to recover relatively quickly, smaller villages in particular lacked the necessary resources and continued to rely on volunteer work. Therefore, our employees in Tokyo decided to hold another Community Day in the region.

Some 30 volunteers from our Tokyo office took part in the Community Day, which represents two thirds of its total staff. Their destination was the small village of Minamisanriku. As the journey there takes about four hours from Tokyo, the party left on a Thursday evening so it could start working early on Friday morning. The task assigned to our employees was to clear debris that had accumulated in a residential area and needed to be sorted manually for correct disposal. Unfortunately, worsening rainfall made conditions increasingly dangerous, and the volunteer centre felt it had no choice but to stop work at lunchtime. Even so, the work accomplished was another small step towards ultimately reviving the whole area.

For more information on this subject, see **swissrefoundation.org/what_we_do/community_programmes/**

Despite having to cope with some bad weather, volunteers from our Tokyo office get ready to sort and clear debris left from the 2011 tsunami in a small village in the Tohoku region.

... Switzerland ...
In a hilly country like Switzerland, intact mountain forests have a vital role to play. They offer protection against avalanches, rockslides, erosion and flooding. This is why they are often referred to as "protective forests". Such forests need to be maintained, though, which is neither cheap nor easy. All too often, these days, only the most urgent tasks can be carried out.

At our headquarters in Zurich, we first chose to hold a Community Day doing maintenance work in a mountain forest in 2011. Based on the participants' positive feedback, it was then decided to designate a "Swiss Re protective forest", which our volunteers could help look after over an extended period of time. This forest is situated in the Tamina valley in eastern Switzerland and is managed in cooperation with the Stiftung Bergwaldprojekt (www.bergwaldprojekt.org).

The first priorities in 2012 focused on the upper part of the forest. On 14 project days, twelve teams with a total of 165 Swiss Re volunteers built or repaired a footpath of more than 500 metres, constructed wooden tripods acting as snow barriers, planted 580 wild tree seedlings among the tripods and thinned a patch of young forest, clearing out weaker trees. In doing so, they laid the foundation for a strip of protective forest that will still serve its purpose in 40 to 50 years.

... UK ...
In the UK, a number of our employees took part in a "team challenge" at Highbury Quadrant Primary School in Islington (www.highburyquadrant.islington.sch.uk). This London borough is home to many ethnic minorities, at least 35 of which are represented among the school's pupils. The school works hard to help the children from these different backgrounds to develop their full potential – efforts which were rewarded with an "outstanding" grade in a recent government inspection.

Swiss Re's employees helped develop the school's nature area that is used by the children. They created a new woodchip path across the site, constructed a number of small benches and built a dipping platform by the pond. In addition, the group donated a bird box fitted with a camera. After a satisfactory day's work, the members of the group thought that they had been able to both make a difference in the community and to interact with each other.

... and US
In the US, about 50 employees from our New York office as well as some colleagues from Armonk spent their Community Day creating a community garden in Brooklyn, East New York. A garden like this in an urban area is not only a fun place for the residents to enjoy, it also helps address a much deeper need: in areas like this one in Brooklyn, many children live so far away from any green space or available fresh produce that some of them do not know what vegetables look like.

The day's activities were arranged by GrowNYC (www.grownyc.org), an organisation which seeks to make New York a better place for everyone to live in. Our employees worked in small groups and had several different options to choose from. Some built a large shade structure for harvesting rainwater, others carried out work on the chicken coop and yet others built raised beds for the children to plant in. But, of course, completing the job also required our volunteers to do quite a bit of "grunt" work such as painting, clearing and dirt moving.

Charity of the Year: Thailand ...
Between October and December 2011, Thailand was hit by disastrous floods. Of the country's 77 provinces, 61 were declared flood disaster zones in what has been described as the "largest insured fresh water flood in global history". In response, our colleagues in Bangkok decided to devote their Charity of the Year to helping a local institution that had been badly affected by the flooding.

They chose the Banggruay Centre in the north of Bangkok, a government agency that provides basic, continuous and informal education to around 1 000 members of the local community for free. More than 80 employees gathered to help restore and improve the Centre by painting fences, landscaping, gardening and restoring a reading corner. The community programme was part of the Asia Strategy Days and involved several of our senior managers as well.

... and UK
Our employees in the UK chose the NSPCC, the National Society for the Prevention of Cruelty to Children (www.nspcc.org.uk) as their Charity of the Year for 2011 and 2012. After raising a total of GBP 240 000 in 2011 for the NSPCC's ChildLine and adult helpline (see 2011 CR Report, page 50), our staff again carried out a wide variety of activities and raised a further GBP 96 000 in 2012. A highlight was the production and sale of the "Swiss Re Cookbook for the NSPCC", a compilation of our employees' favourite recipes, including contributions from well-known British TV presenters Esther Rantzen, founder of ChildLine, and Fiona Bruce.

The book is illustrated with 82 colourful pictures of the "Gherkin", drawn by pupils at the William Davis Primary School in the borough of Tower Hamlets. The children were invited to visit Swiss Re's iconic office building in the City of London and, moreover, their pictures were shown at a public exhibition nearby. Swiss Re paid all the costs associated with producing the book, so the full proceeds go to the NSPCC. The book has been stocked by the local branch of a large bookstore chain and is also available through amazon.co.uk.

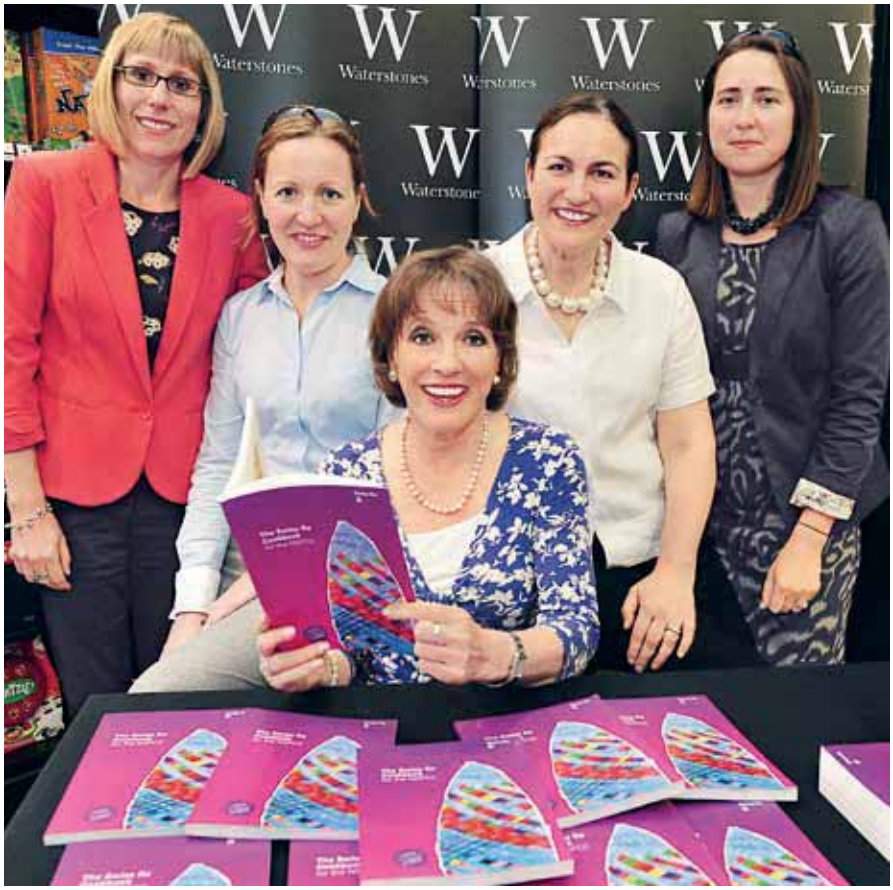
Dollars-4-Doers

One of our employees in Armonk in the US received support from the Dollars-4-Doers programme for the second time for his efforts to raise funds for Partners in Development, PID (pidonline.org). This charity helps the poorest communities in Haiti to build better lives through various self-sustaining programmes.

The Dollars-4-Doers contribution was used for the PID's Small Business and Housing programme. This offers adults who meet certain criteria funds to develop a business and purchase a home. Once the business is up and running, the beneficiaries pay back the debt so the funds can be used to help other families.

At Swiss Re's office in Schaumburg, our employees have for some time supported Glenkirk (www.glenkirk.org), a non-profit organisation that provides services to people with developmental disabilities to help them fully participate in community life. Our employees have taken part in several group service projects, completing work such as interior painting or brush and tree trimming.

The Dollars-4-Doers contribution enabled Glenkirk to build a garden that can be used both for therapy and teaching. Clients learn how to maintain the garden and grow vegetables themselves. The produce is then distributed to Glenkirk's residential sites and also sold at a local farmers' market, bringing clients in contact with the wider community.

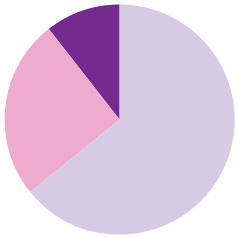


Well-known British TV presenter and ChildLine founder Esther Rantzen presents "The Swiss Re Cookbook for the NSPCC", which contains recipes from our UK employees as well as 82 pictures of our "Gherkin" building drawn by local primary school pupils.

Being an employer of choice

Our goal is to attract talented people from a broad range of disciplines and backgrounds. We offer them a culture of diversity and inclusion, excellent development opportunities, a supportive environment and attractive total rewards.

Employees by region
as of 31 December 2012



64.2% Europe (including Middle East and Africa)
25.4% Americas
10.4% Asia-Pacific

Swiss Re's mission is to be the leading player in the re/insurance industry. We want to be the preferred partner for our clients – earning their long-term trust and confidence, and delivering a service unmatched elsewhere in the market.

Our employees are the key to fulfilling this mission, through the skills, diversity and talent they bring to the company. Swiss Re's goal is to be seen as an employer of choice that can attract talents from around the world and offer them a place to succeed.

As a knowledge-based company, we consider four areas to be particularly important for this: we foster diversity and inclusion; we provide excellent development and training opportunities; we work to maintain favourable employee relations; and we offer competitive compensation and benefits.

Swiss Re is a global company with a presence in all major markets. As of 31 December 2012, we employed 11 193 people, hailing from 85 nations worldwide. Currently, 64.2% of our employees work in Europe (including Middle East and Africa), 25.4% in the Americas and 10.4% in the Asia-Pacific region.

Between 2011 and 2012, we created approximately 400 net new jobs. Many of these are located in Asia, reflecting Swiss Re's strategic goal to grow in these markets.

Employee data

	2010	2011	**2012**
Total headcount regular employees	10 362	10 788	**11 193**
Full-time	9 451	9 845	**10 237**
Part-time	911	943	**956**
Temporary employees	176	308	**373**
Turnover rate (incl. company sales)	13.6%	11.2%	**10.1%**
Voluntary	6.7%	6.3%	**5.0%**
Involuntary (incl. retirement)	6.9%	4.9%	**5.1%**

We further strengthen Swiss Re's culture of diversity and inclusion through a Group-wide strategy.

Diversity and inclusion

An inclusive corporate culture is a pre-requisite for a diverse workforce and the diversity of thought this helps create. It is motivating for employees, enables companies to attract fresh talent and is good for bottom-line results. There is strong evidence that diverse teams outperform non-diverse teams, produce a broader range of ideas and are more innovative and agile in the way they anticipate and respond to changes in the external environment. Furthermore, stronger representation of local talent is a prerequisite for developing new markets, a strategic priority for Swiss Re.

In essence, inclusion is about championing and respecting the uniqueness of every individual, about providing an atmosphere in which everyone feels valued and empowered to perform at a peak level. We want to achieve an inclusive culture and a leadership climate founded on fairness, openness and trust, which makes all employees feel they belong, are respected and heard – in short, a culture that fosters diversity of thought and opinion.

To achieve this inclusive culture, we have set up a comprehensive strategic framework to promote diversity and inclusion across the whole Group. With the support of the Group CEO and the Group Executive Committee, our Diversity & Inclusion (D&I) strategy is primarily being driven by a network of 35 D&I Champions from the various business units. Regionally-based D&I Champions and D&I Councils help ensure a "glocal" approach, which means that local differences with regard to diversity and inclusion are acknowledged and addressed under a global umbrella. Last but not least, grassroots mobilisation is driven by around 25 inclusive employee networks worldwide.

Our Group D&I strategy rests on three pillars:
The first pillar of our D&I strategy focuses on "Inclusive Leadership". We have developed an Inclusive Leader Competency Framework that describes exactly what we expect of our leaders and managers in terms of inclusion. It provides a clear vision of the behaviours that we want to see, and forms the basis of Inclusive Leadership training which is embedded in the Group's leadership development and manager training as well as stand-alone sessions for management teams.

As an important element of the Inclusive Leadership pillar, we also address "Unconscious Bias". Neuroscience research confirms that unconscious bias is universally wired into humans. Everyone has hidden biases which can adversely influence perceptions and decision-making. However, it is possible to overcome them. Rather than trying to deny unconscious biases, it is preferable to accept them and to do something about them. Through awareness events as well as face-to-face and web-based training, we provide our

Swiss Re – where talented people from many backgrounds meet and work together.

Women in management positions (in %)

	2010	2011	**2012**
Total workforce	47.5	47.7	**47.3**
Executive/senior management positions*	19.6	20.8	**21.7**
All management positions*	29.3	30.2	**30.7**

* We have simplified the way in which we report on the share of women in management, in an effort to disclose data that are easier to understand and more in line with other companies' reporting practices. "Executive/senior management positions" is comprised of the management levels of Director/Senior Vice President and upwards. (In last year's CR Report we referred to this as "all management levels.") "All management levels" now refers to Vice President and above.

employees with insights and tools on how to identify and address unconscious bias. Corresponding training has also been embedded into our leadership development and manager training.

"Own the Way You Work™: Living Team Spirit" forms the second pillar of our D&I strategy. It is a cultural change initiative which aims to increase our employees' autonomy to decide how, when and where they carry out their tasks, in the process motivating and engaging high-performing teams. Own the Way You Work™ is based on four building blocks:

1. One size does not fit all: Embrace flexibility and support non-traditional work models.
2. Work smarter not longer: YES to managing by results; NO to presenteeism.
3. Focus on the team rather than the individual: Discover how you and your team perform best.
4. Reinforce trust, respect and open dialogue: Between you, your manager and your team.

Under the sponsorship of our Chief Risk Officer, this initiative has been launched successfully at a number of our locations and is gradually being rolled out across the Group.

The third pillar addresses "Gender Balance". By gaining critical insights into how gender relationships unfold in the workplace, it is possible to improve our intelligence about gender dynamics, capitalise on the strengths of both genders and articulate differences between men and women in ways which increase transparency and understanding. Articulated "Gender Nudges" are a practical means of moving towards a better gender balance. They help change how people are hired and promoted, thus creating a more equal playing field for men and women.

As part of the Gender Balance pillar, we also run the "Women Leading Swiss Re Programme". It consists of three parts:

- Leadership Strategies: 12 women from Swiss Re's senior ranks are selected to participate in a programme centring on sponsorship, coaching, leadership development and peer networking;
- Today and Tomorrow: enables a group of around 35 of our female middle managers to benefit from external development opportunities;
- Women's Development Programme: an internally designed programme which takes the participants on a deep dive into their own personal development.

D&I is embedded in our core talent and human resources policies (eg recruitment, succession planning and talent management) and thus underlies the three strategic pillars.

In support of Swiss Re's policy of fostering diversity, we also have strong provisions in place to penalise any infringing behaviour. Our Group Code of Conduct clearly states that discrimination in the workplace against any employee or job applicant based on the person's age, (dis)ability, origin, gender, religion or sexual orientation (or any other characteristic protected by local law) is not tolerated under any circumstances. We encourage our employees to report violations of the Group Code of Conduct, laws, rules, or regulations, explicitly stating that reporting in good faith is treated with discretion.

For more information on this subject, see **swissre.com/about_us/diversity/**

Learning hours

	2010	2011	**2012**
Total learning hours recorded	139 014	168 011	**179 007**
Learning hours per trained employee	14.9	14.3	**16.7**

The recently launched Swiss Re Academy intranet site and Virtual Career Centre both make it easier for our employees to plan satisfying careers at Swiss Re.

Development and training

Developing our people, at every level and in all functions, remains a strong focus for Swiss Re. Offering our employees top-quality development and training opportunities has strong mutual benefits: for a knowledge company with a global presence, constantly adapting skills, behaviours and qualifications to changing market conditions is indispensable for retaining a competitive edge. It also helps create exciting and fulfilling career prospects for our employees.

Our approach

Personal and professional development at Swiss Re combines technical, professional and leadership skills training. Our training is designed internally or in collaboration with leading external partners, and is delivered through our long-established Swiss Re Academy. Currently, we offer more than 900 different training courses in various topic areas. Employees and line managers have the opportunity – and sometimes the obligation – to attend training in areas as diverse as underwriting, finance, sales and negotiations, leadership, diversity and inclusion, interpersonal skills, project management, office tools, language skills and compliance training.

The number of employees making use of our development and training opportunities has consistently risen over the last few years, culminating in more than 10 700 participants in 2012. In total, our employees completed 179 007 hours of training, an average of 16.7 hours each. More than 80% of this training was delivered through eLearning formats, thus reducing the need for our employees to travel and to spend days away from the office. This also supports our commitment to reduce our carbon footprint.

An important milestone in 2012 was the introduction of a new career development philosophy. At the core of this is our conviction that career development at Swiss Re is a shared responsibility between the employee, the line manager and the company. Employees are encouraged to think in terms of a multi-dimensional career lattice and not just a vertical career ladder. There is no single, pre-set career path at Swiss Re; rather, the paths are as diverse as the individuals working in our company.

The Swiss Re Academy intranet site and Virtual Career Centre offer our employees easy and quick access to the full range of Swiss Re's training and career possibilities.

A special feature of the Swiss Re Academy is that it also provides industry-leading technical and professional skills training to external clients. These training offerings are tailored to the different market and client needs: As defined in cooperation with our internal topic experts and client executives, we use a variety of delivery methods to maximise the learning potential for each client segment. Our clients expressed their satisfaction with the Academy's training by rating it with 4.52 out of a possible 5 points.

Employee support tools
In support of our flexible development and training philosophy, we launched the Swiss Re Academy intranet site early in 2012. It is designed to help all our employees easily find what they need from our extensive training offerings. Besides giving easy access to an extensive set of learning solutions, the site features a multimedia library with short five-minute learning sequences on selected competency areas as well as links to regional learning offerings and other development resources. Since its launch, the site has had an average of 3 000 visitors each month.

As a further support tool for our employees, we launched the Virtual Career Centre (VCC), a one-stop shop for all career development matters for both employees as well as managers. It encourages them to explore the variety of careers and development opportunities that exist at Swiss Re and provides easy access to "stretch assignments", job rotations and training opportunities.

Mentoring
Complementing the wide range of training courses offered by the Swiss Re Academy, we also offer our employees a mentoring programme. In a mentoring relationship, a person with less experience in whatever area of business or personal development (mentee) is matched with a more experienced person (mentor) who acts as a listener and guide. It is a confidential relationship outside the reporting line that helps individuals develop and make positive changes to their skills, knowledge and behaviours and to move successfully through times of change and transition. Our newly established Virtual Career Centre includes a special feature that helps our employees identify potential mentors.

Senior management development
Fulfilling top management roles at Swiss Re requires proven leadership and managerial skills as well as strong technical knowledge. We provide highly focused programmes to develop suitable candidates for positions at Director and Managing Director levels. Every year, we select a number of employees around the globe to take part in these Talent Pool programmes and expose them to structured and accelerated development offerings for more senior roles within Swiss Re. The selected employees undergo formal training, are stretched by challenging simulations, assignments and job rotations, and are given opportunities to engage in direct dialogue with Swiss Re's senior management.

Our "Early Joiners" programmes
Each year, the graduates@swissre programme provides entry positions for around 50 university graduates with little or no work experience. It offers an excellent opportunity for young talents to discover the world from Swiss Re's perspective.

Over a period of 18 months, the graduates receive on-the-job training in their respective functions. They also attend a significant number of classroom-based training sessions which are specially designed for the programme and focus on Swiss Re's core business areas. Currently, there are about 220 employees working at Swiss Re who have benefited from this programme since it was launched in 2007. They are employed across many different functions and regions.

In Zurich and Munich, Swiss Re also offers a Junior Power programme, which was first introduced in 1981. Nearly 100 apprentices and trainees aged between 15 and 25 participate in the programme each year and are trained in a broad range of occupations. In turn, they contribute new perspectives to Swiss Re and challenge existing practices. We offer training programmes in various areas such as businesswoman/-man, information and documentation specialist, computer specialist, building maintenance specialist, chef, qualified waitress/waiter, hotel housekeeper and media specialist. About 30% of all our former apprentices and trainees are still working at Swiss Re.

For more information on this subject, see **swissre.com/careers/recent_graduates/**

For more information on this subject, see **swissre.com/careers/Welcome_to_Junior_Power_en.html**

We are keen to maintain constructive relations with our employees, both present and past.

Employee relations

We place strong emphasis on having good overall relations with our employees. We know that if they feel engaged with the company, our employees can contribute much to Swiss Re's success beyond the immediate responsibilities of their jobs. This presupposes a culture of mutual respect and open communication. At the same time, it is a fact that today's workplace can be challenging at times. Through various programmes, we seek to assist our employees in dealing effectively with work-related pressures.

Assistance and prevention
Swiss Re sets high standards regarding its duty of care for employees and their well-being. When employees are affected by difficult personal or professional circumstances, our dedicated Employee Relations team strives to ease such situations by finding adequate solutions. Offering such counselling services not only helps preserve valuable skills and know-how, it also reduces the risk of reputational damage and lawsuits. We constantly review and continue to develop our prevention and support services with the aim of helping our employees combine health, performance, well-being, family and work.

In Zurich, for example, we offered training to line managers on how to manage teams in times of high pressure and held Lunch & Learn sessions on burn-out prevention, involving external physicians. Our offices in Munich and Bratislava both organised health days, which presented practical information on health prevention.

We also launched a new initiative in 2012, called Parents@Swiss Re. This aims to assist parents in finding the best way to combine career and family life. Apart from offering a broad choice of childcare services, this initiative focuses on offering parents valuable information through brochures and regular newsletters.

Employee engagement surveys
We aspire to communicate openly and transparently with our employees: an integral part of this is having a constructive debate on how we want to develop our corporate culture and to live our strategy. One of the ways in which we do this is through our regular employee engagement surveys. The results of the most recent survey in 2011, in which 71% of our employees took part, generated numerous ideas and activities in our company, eg a marked change in our approach to internal communication: it puts emphasis on raising the visibility of our senior managers, holding more frequent town-hall meetings

The Health Day held at our Bratislava office in 2012 offered practical advice on how to deal with work-related health challenges.

and increasing transparency regarding company goals and strategy.

We will continue to build on the insights gained from the surveys to further encourage and support our employees' engagement within Swiss Re. The next employee engagement survey will be carried out in 2013.

Employee groups
In several of our locations there are active employee groups. We believe that these employee representatives can play an important part in the company's success, by contributing valuable perspectives and by helping to identify employment-related challenges.

At our Zurich headquarters, the Personnel Committee (PECO) represents the interests of all Zurich employees. One of PECO's central goals is to create and preserve a positive working environment, with employees forming the focal point of its thoughts and actions.

PECO supports efforts to help staff put their knowledge, skills, expertise and networks to the best possible use. This includes offering them appropriate further education and training. The Committee also seeks to ensure the de-facto equality of men and women. While doing so, it places a special focus on the requirements of employees with family obligations, without, however, discriminating against single staff.

In the UK, Swiss Re has an Employee Liaison Group (ELG), consisting of elected representatives from across all functions. The ELG provides a forum for employee representatives and managers to discuss company policy and practices which affect all employees. These include:

- Employment policies and procedures
- General terms and conditions of employment
- Benefits
- Working conditions
- Training and development
- Any statutory matters (eg redundancies)
- Company performance

The ELG is legally recognised as the collective consultation body for redundancy purposes. When a business unit is likely to be affected by proposed collective redundancies, the respective employee representatives are consulted.

At our Munich office there is a Works Council, which has co-determination rights in the following matters:

- New entrants
- Transfer of employees
- Termination of employment contracts by the employer
- Working conditions
- Benefits
- Employment policies

The Works Council has the legal obligation to support topics like diversity, training and development, career opportunities and work-life balance. The eleven members of the Works Council are elected for four years by employees who hold a position in Corporate Bands D to F.

Networks
Our former employees remain important stakeholders for Swiss Re. They are the people who have helped make Swiss Re what it is today and form an essential part of our extended employee community. Furthermore, as many of our alumni work for our clients, they also help deepen our client relationships.

Through the Swiss Re Alumni Network, we offer our alumni the opportunity to continue sharing their knowledge and experience and to keep in contact with former colleagues. The network has continued to grow and currently counts more than 2 700 members.

The network also includes our retirees, many of which continue to take great interest in the company. Through extended access rights, we enable them to read news items and utilise resources that are normally available to employees only. The "Senior Consultants" pilot, which creates opportunities for our retirees to get involved in specific projects on a part-time basis, continued throughout 2012. Due to its success, it will now become an official programme. The initiative creates a beneficial situation for all involved, as Swiss Re gains access to people with extensive know-how of the company and the business, while the retirees can continue to do some work in a flexible way.

For more information on this subject, see **swissre.com/about_us/alumni/**

Additional employee data

Average tenure (all regular staff)

	2010	2011	**2012**
Years	9.3	9.1	**9.0**

Sick leave days (Switzerland regular staff)

	2010	2011	**2012**
Number of employees	2 938	3 042	**3 171**
Number of employees who have recorded absence due to illness	1 657	1 744	**1 918**
Average number of sick days	6.6	7.9	**6.9**

We complement our balanced compensation packages with competitive pension plans and other employee benefits as well as a first-class working environment.

Compensation and benefits

Swiss Re's compensation framework is designed to attract, motivate and retain the qualified talent that the Group needs to succeed globally, while creating a tangible link between pay and performance. The aim is to provide compensation that is competitive in local labour markets while ensuring that employees focus on delivering outstanding results without taking inappropriate risks.

A balanced compensation package is generally complemented by competitive pension plans and other employee benefits, and a first-class working environment.

For all eligible employees, the annual performance incentive is linked to both individual and company performance. In order to align employee and shareholder interests, we also encourage ownership of Swiss Re shares through the Global Share Participation Plan (GSPP) and the Incentive Share Plan.

Swiss Re has a range of incentive programmes that reflect the long-term nature of the business: both the Value Alignment Incentive Plan (the deferred part of the annual performance incentive) and the Leadership Performance Plan aim to reward sustained performance rather than short-term results. This helps to align shareholder and employee interests more closely.

At Swiss Re, we strive for a high performance culture in which our individual and team goals and behaviours – *what* we do and *how* we do it – are aligned to our firm's purpose and business strategy with challenging targets, and in which our rewards are aligned to our achievements and contributions. Dialogue and feedback are important aspects of our performance management cycle, which includes goal setting, interim feedback and performance reviews.

Performance reviews are considered an important basis for feedback as well as input into employees' compensation. Optional mid-year reviews are frequently used to check progress and to discuss career opportunities. In 2012, close to 100% of the Group's employees completed year-end performance reviews.

Health benefits and financial protection in case of ill-health are an important part of overall packages. We provide medical, life and disability insurance to supplement state provision in many of our locations. Additionally, we support employees in accumulating retirement benefits to supplement any state provisions.

In addition, the CO_{You2} Reduce and Gain Programme continues to offer our employees the opportunity to claim subsidies from the company for a range of emissions-cutting investments they want to make in their private lives (for details, see page 44).

Further information on Swiss Re's approach to compensation and benefits can be found in our 2012 Financial Report (pages 93–117).

Ensuring good governance

We consider good corporate governance the basis to ensure sustainability throughout all the company's activities.

Swiss Re has a dual Board structure: the Board of Directors is responsible for oversight, while the Group Executive Committee is responsible for managing operations.

Swiss Re considers good corporate governance indispensable to maintaining long-lasting, valuable relationships with its stakeholders. We recognise that transparent disclosure of our governance structure fosters assessment of the quality of our organisation and business conduct. Swiss Re's corporate governance adheres to the SIX Swiss Exchange's Directive on Information Relating to Corporate Governance, including its annex, as issued in 2002 and amended in 2009. It is also in line with the principles of the Swiss Code of Best Practice for Corporate Governance (Swiss Code) issued in 2002 by economiesuisse, the Swiss business federation. An additional appendix was issued in 2007 which deals with compensation principles. Swiss Re, moreover, conforms to the Swiss Financial Market Supervisory Authority (FINMA) provisions on corporate governance, risk management and internal control systems, which came into effect on 1 January 2009. Finally, Swiss Re's corporate governance complies with applicable local rules and regulations in all jurisdictions where it conducts business.

In our Corporate Responsibility Report, we highlight key elements of Swiss Re's corporate governance concerning the structure and independence of the Board of Directors, shareholder rights and the Group Code of Conduct. Comprehensive information following the structure of the SIX Directive is available in the 2012 Financial Report, pages 57–91.

Dual Board structure

Swiss Re has a dual Board structure: the Board of Directors is responsible for oversight, while the Group Executive Committee is responsible for managing operations. This structure maintains effective mutual checks and balances between the top corporate bodies.

Independence of the Board of Directors

Swiss Re's Group Bylaws stipulate that the Board of Directors consists of at least a majority of independent members. To be considered independent, a director may not be employed as an executive officer of the Group, or have been employed in such a function for the previous three years. Moreover, he or she must not have a material relationship with any part of the Group, directly or as a partner, director or shareholder of an organisation that has a material relationship with the Group. All directors of Swiss Re meet our independence criteria.

The members of the Board of Directors are also subject to procedures to avoid any conflict of interest.

The organisation of the Board of Directors is set forth in the Group Bylaws, which define the responsibilities of the Board of Directors, its committees and the Group Executive Committee, as well as the respective reporting procedures.

The Board has delegated certain responsibilities, including the preparation and execution of its resolutions, to five committees: the Chairman's and

For more information on this subject, see **swissre.com/about_us/corporate_governance/**

Governance Committee, the Audit Committee, the Compensation Committee, the Finance and Risk Committee, and the Investment Committee.

Audit Committee
All members of the Audit Committee are non-executive and independent. In addition to the independence criteria applicable to Board members for other committee memberships, members of the Audit Committee may not accept any consulting, advisory or other compensation fee from the Swiss Re Group, and will be required to possess such additional attributes as the Board may, from time to time, specify. Each member of the Audit Committee has to be financially literate.

The central task of the Audit Committee is to assist the Board of Directors in fulfilling its oversight responsibilities as they relate to the integrity of Swiss Re's and the Group's financial statements, the Swiss Re Group's compliance with legal and regulatory requirements, the external auditor's qualifications and independence, and the performance of the Swiss Re Group's internal audit function (GIA) and the Group's external auditor.

Shareholders' participation rights

Shares
All shares issued by Swiss Re Ltd are fully paid-in registered shares, each with a par value of CHF 0.10. Each share carries one vote. There are no categories of shares with a higher or limited voting power, privileged dividend entitlement or any other preferential rights, nor are there any other securities representing a part of the company's share capital. The company cannot exercise the voting rights of treasury shares.

Voting right restrictions, statutory group clauses and exception rules
There are no voting right restrictions and no statutory group clauses. Therefore, there are no procedures or conditions for cancelling restrictions and no rules on making exceptions to them. No such exceptions were made in 2012.

Statutory rules on participating in the General Meeting of shareholders
Any share whose owner, usufructuary or nominee is entered in the share register as having voting rights on a specific qualifying day (Record Date) determined by the Board of Directors entitles its holder to one vote at the General Meeting of shareholders.

Swiss Re's legal provisions allow any shareholder with voting rights to have his shares represented at any General Meeting of shareholders by another person authorised in writing, or by corporate bodies, independent proxies or proxies for deposited shares. Such representatives need not be shareholders.

Business firms, partnerships and corporate bodies may be represented by legal or authorised representatives or other proxies, married persons by their spouses, minors and wards by their guardians, even though such representatives are not shareholders.

Defence measures
Swiss Re has not put in place any specific measures to defend against potential unfriendly takeover attempts. The Board of Directors believes that the company's best protection is a fair valuation of its shares, and that the efficiency of a free market is preferable to artificial obstacles, which can have a negative impact on the share price in the long term.

Group Code of Conduct

The Group Code of Conduct (Code) is one in a series of documents governing the organisation and management of the company. It sets the framework and defines the basic legal and ethical compliance principles and policies we apply globally.

The Code also offers practical guidance and examples for deciding the appropriate course of action and solving ethical dilemmas. It further sets out how all employees should react when they observe a possible breach of the principles in the Code. All employees are obligated to uphold both the letter and spirit of the Code and the Group's corporate governance principles in their daily business activities, and to respect and obey applicable laws and regulations in all jurisdictions where we do business.

Our commitment to sustainability is integrated in the business ethics section of the Group Code of Conduct.

The Code is regularly reviewed and updated to reflect changes in regulations and principles.

Swiss Re's commitment to sustainability
Our commitment to sustainability is fully integrated in the Code's section on business ethics. It provides a guiding principle for Swiss Re's efforts to act as a responsible company.

Bribery and corruption
The Code's section on moral behaviour contains, among other things, Swiss Re's position on bribery and corruption. This clearly states that "Swiss Re prohibits all forms of bribery and corruption" and that "bribing governmental agents, regulators or other officials is a crime".

The Group Anti-Bribery and Corruption Policy was rolled out and Group-wide training delivered in 2012.

Employee training on the Group Code of Conduct
All new employees joining Swiss Re must undergo training on the Group Code of Conduct. Completion of the training is tracked, and instances of non-completion are escalated until resolution. To date, 99.5% of new hires in 2012 have completed their training. The remaining employees required training in other languages; these sessions are planned to be completed by the middle of 2013.

As part of Swiss Re's biannual process, all employees will be required to complete a Code of Conduct Acknowledgment in 2013.

Furthermore, training on specific compliance risks is delivered across the Group on a regular basis.

Corporate responsibility in context: The Principles for Sustainable Insurance

The Principles for Sustainable Insurance (PSI) were launched in Rio de Janeiro in 2012 at the UN Conference on Sustainable Development (Rio+20 Conference). Developed by the UN Environment Programme's Finance Initiative (UNEP FI) in collaboration with leading re/insurance companies, the PSI provide a framework for the global insurance industry to address environmental, social and governance risks and opportunities. They represent the result of six years of extensive research and consultation with UNEP FI member organisations and numerous other stakeholders.

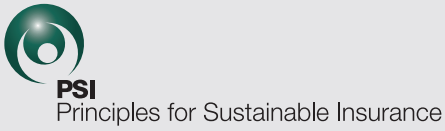
The PSI's aspiration

" Our world is facing increasing environmental, social and governance (ESG) challenges. This changing risk landscape is leading to diverse, interconnected and complex risks, and presents new opportunities. Accordingly, we believe it is prudent for the insurance industry to adjust the range of risk factors considered in managing its business. ESG issues are increasingly influencing traditional risk factors and can have a significant impact on the industry's viability. Therefore, a resilient insurance industry depends on holistic and far-sighted risk management in which ESG issues are considered.

As risk managers, risk carriers and investors, the insurance industry has a vital interest and plays an important role in fostering sustainable economic and social development. We believe that better management of ESG issues will strengthen the insurance industry's contribution to building a resilient, inclusive and sustainable society. However, many ESG issues are too big and complex and need widespread action across society, innovation and long-term solutions.

Therefore, it is our aspiration to build on the foundation the insurance industry has laid in supporting a sustainable society. The future we want is a society in which people are aligned and incentivised to adopt sustainable practices. To realise this aim, we will use our intellectual, operational and capital capacities to implement the Principles for Sustainable Insurance across our spheres of influence, subject to applicable laws, rules and regulations and duties owed to shareholders and policyholders. "

"Sustainable insurance": the PSI's definition
Sustainable insurance is a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability.



The four principles in detail

Principle 1
We will embed in our decision-making environmental, social and governance issues relevant to our insurance business.

Principle 2
We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions.

Principle 3
We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues.

Principle 4
We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the Principles.

How do the PSI work?

The Principles for Sustainable Insurance are not legally binding. Rather, they provide a voluntary and aspirational framework. Accordingly, signatory companies are free to decide what actions they deem appropriate to implement the Principles. This should be seen as a work in progress and a direction to head in, rather than a descriptive checklist with which to comply.

All signatories are required to participate in the annual public disclosure process, though. Transparency is an integral form of accountability to the public, particularly in a voluntary and aspirational framework. Public disclosure of progress is considered important to the credibility of an organisation that has publicly adopted the Principles, which are meant to be implemented.

Signatories are free to decide the content of their disclosure. They are, however, required to disclose annually their progress in implementing the Principles. Moreover, they need to make their disclosures public and allow them to be publicly available on the UNEP FI website.

The Principles for Sustainable Insurance – as well as Principles for Responsible Investment – are global frameworks within the financial sector. They are aligned with and complement the aims of the UN Global Compact Principles, which promote the adoption of sustainable business practices across all industry sectors. The ten principles of the UN Global Compact are derived from universally accepted principles in the areas of human rights, labour, environment and anti-corruption.

There is no obligation for signatories of the PSI to sign either the PRI or the UN Global Compact, and vice-versa.

Swiss Re and the PSI

We are keen to support the spread of sustainable business practices in the re/insurance industry. For this reason, we play an active role in supportive industry organisations and initiatives. Not only are we one of the original signatories to the Principles for Sustainable Insurance, we played an active role in their development. In 2011, for example, we hosted a meeting at our Centre for Global Dialogue near Zurich, where the results from the global consultation meetings were consolidated into the PSI's pre-final version.

Currently, a Swiss Re representative has the co-chair of the UN PSI Board and is a member of the UNEP FI Global Steering Committee.

We support the PSI's call for transparency and disclose our progress on implementing its principles as part of our Corporate Responsibility Report. The box on the right provides references to the relevant sections of the Report for each of the Principles.

For more information on this subject, see **www.unepfi.org/psi/**

Our disclosure of progress for 2012

Principle 1
We will embed in our decision-making environmental, social and governance issues relevant to our insurance business.

→ As expressed in our "Commitment to Corporate Responsibility", we seek to embed environmental, social and governance issues in both our business solutions and risk intelligence (see page 9).

→ We plan to achieve this by:
a) developing innovative risk transfer solutions (eg index insurance products and cat bonds) and by working closely with partners both in the private and public sectors;
b) using tailor-made tools in our risk management to address sustainability risks;
c) integrating ESG criteria in our asset management.

→ Key actions taken in 2012:
a) for business solutions, see achievements described on pages 14–20;
b) for risk management, see achievements described on pages 21–28;
c) for asset management, see achievements described on pages 28–30.

Principle 2
We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions.

→ As expressed in our "Commitment to Corporate Responsibility", we engage in regular dialogue with our clients and other stakeholders, and apply ESG guidelines in our sourcing activities (see page 9).

→ We plan to achieve this by:
a) interacting with clients and taking an active role in industry initiatives to advance sustainable business practices;
b) sharing and advancing our risk expertise with a special focus on five "Top Topics", supported by our own dialogue platform, the Centre for Global Dialogue;
c) applying overarching guidelines and specific "minimum standards" in our sourcing activities.

→ Key actions taken in 2012:
a) for client and industry cooperation, see achievements described on page 24;
b) for general risk dialogue, see achievements described on pages 31–36;
c) for sourcing guidelines, see achievements described on pages 42–43.

Principle 3
We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues.

→ As expressed in our "Commitment to Corporate Responsibility", we engage in regular dialogue with all our stakeholders (see page 9).

→ We plan to achieve this by:
sharing and advancing our risk expertise with a special focus on five "Top Topics", supported by our own dialogue platform, the Centre for Global Dialogue.

→ Key actions taken in 2012:
See stakeholder dialogue achievements on pages 31–36.

Principle 4
We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the Principles.

→ Beginning this year, we will disclose our progress in implementing the Principles on an annual basis as an integrated part of our Corporate Responsibility Report.

Corporate responsibility in context: funding longer lives

Longer lives: a good thing ...

Over recent years, people's life expectancy has risen substantially, driven by medical advances, improved lifestyles and other factors. Although there are some counter-acting trends such as the increased prevalence of obesity, the consensus is that life expectancy will continue to rise. At the same time, fertility rates are decreasing in many countries. The OECD predicts that, as a result, the world's proportion of people aged 65 and over will rise from 7.7% in 2010 to 16.2% by 2050, with many countries experiencing numbers of 30% or more.

... with financial consequences

The unprecedented increase in life expectancy is a great success story. It does, however, create massive financial challenges, primarily in connection with healthcare provision, long-term care and pension funding. In many countries, employers have traditionally offered defined-benefit pensions: these schemes promise to pay employees a certain income when they retire, typically at a level based on their length of service and salary, for the rest of their lives.

"Longevity risk"

The problem is that the resulting liabilities of these pension fund plans have been consistently underestimated, because reserving has long been based on outdated historical assumptions about life expectancy.
This "longevity risk" can be substantial: underestimating life expectancy by just one year can increase pension liabilities by up to 5%. In combination with the effects of the recent low interest rate environment, research carried out in 2011 concluded that the pension schemes of the Global 500 companies were underfunded by 24% on average.

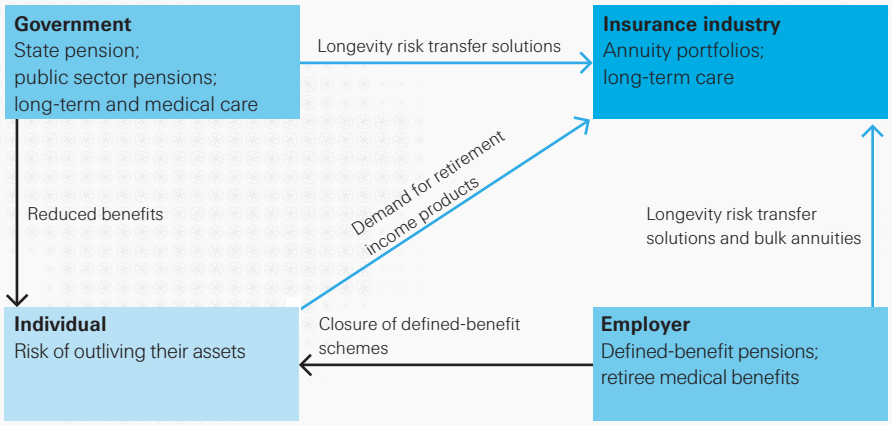
What the re/insurance industry can do

The risk associated with funding longer lives is spread among several stakeholders, principally governments, employers, individuals and re/insurers. Recently, governments and employers have started to shift longevity risk to individuals, eg by reducing benefits or switching to defined-contribution plans. As all three of these groups are increasingly looking for "de-risking" strategies, the re/insurance industry can offer a range of solutions that help them pass on some or all of their longevity risk (see illustration below). Re/insurers are well-placed to do so because they usually hold mortality risk – the risk that people will die sooner than expected – which allows them to balance two opposing risks.

Moving risk from individuals to insurers
Annuities are a well-established method of addressing longevity risk. In return for a lump-sum payment – often through assets built up while saving for retirement – people can purchase an income for life at retirement. Annuities take many forms, including joint-life annuities and index-linked annuities.

Moving risk from employer pension funds to re/insurers
Pension plans can pay a lump-sum, upfront premium for a bulk annuity, which pays the retirement income of a number of their members who have already retired. This removes the investment and inflation risk, as well as the longevity risk, from the fund's trustees. In return, the insurer receives a defined amount of assets.

Over recent years, re/insurers have developed so-called indemnity longevity risk transfer solutions – or indemnity longevity swaps – which transfer only the longevity risk liabilities from a pension plan to the insurer. The pension plan retains control of its investments and assets. These insurance-based swaps differ from bulk annuities in that they involve premium payments over a period of, say, 60 years, rather than an up-front payment.



Source: Swiss Re

Indemnity longevity swaps: how they work

Recently, there have been a number of significant longevity swap transactions, particularly in the UK. The insurance-based (or indemnity) solution allows pension funds and annuity providers to retain control of their assets, while removing their longevity exposure. These longevity risk transfer solutions may seem complex, but are effectively a straightforward "outsourcing" of a specific risk.

They are similar to bulk annuities, but regular premiums (the "fixed leg") are payable by the pension plan to the insurer over, say, a 60-year period instead of a single upfront payment. In return, the insurer covers annual pension payments until the last member dies – these are the claims (the "floating leg"). In practice, only the net difference is exchanged.

The transactions to date have all involved very large books of business, but as product design and innovation have evolved, solutions suitable for smaller pension funds and annuity books have become available.

Moving risk from insurers to reinsurers

Insurers have a finite capacity for taking on longevity risk. In order to free up their capital to offer further solutions for their customers, they can pass on some of their risk to a reinsurer. The reinsurer would offer a transaction similar to the longevity risk transfer solution mentioned above and enable the insurer to provide more annuities using the resulting freed-up capital. With regulations such as Solvency II in Europe, these solutions will become increasingly important over the next few years.

Moving risk to the capital markets

Although reinsurers can take on a great deal of longevity risk, they have insufficient capacity to take on all the risks that may ultimately be transferred, and would need to create additional capacity in the longer term. This could be done by encouraging capital market investors to assume longevity risk against a payment of a premium, or coupon.

Funding longer lives – the future

Until now, there has been limited demand for reinsurance of longevity risk, so the sector has sufficient capacity for the time being. But as price expectations between buyers and sellers of longevity risk are converging, demand for reinsurance solutions is expected to gradually increase.

For more information on this subject, see **swissre.com/rethinking/longer_lives/**

Over the long term, many believe creating additional capacity will require the development of a capital market for longevity risk (see above). Re/insurers have an important role to play in this: by working together with governments and industry bodies, they can help increase awareness, build confidence and create investor demand.

Transferring longevity risk allows governments and pension funds to plan with certainty, while access to the capital markets would help to keep prices at an affordable level. It is important to note, however, that such solutions will not eliminate current systems' lack of long-term sustainability. The scale of the challenge means that no party can provide a solution on its own.

To ensure that rising life expectancy remains a positive trend for society as opposed to becoming a financial burden, governments, employers and the re/insurance industry need to work closely together. In addition to encouraging a capital market for longevity risk, all parties involved have a responsibility to promote sufficient reserving, labour market reform, educate citizens and create structures and incentives to save.

Governments, specifically, need to choose among three potential interventions: reduce pension payouts, increase the younger generation's pension contributions and taxes, or increase the retirement age. The solution will probably be a combination of these, but the most reasonable seems to be aligning retirement ages with life expectancy.

Over time, this implies a fundamental change in attitudes towards retirement. Rather than an immediate end to a working life, retirement should be seen as a gradual process; labour market reforms such as incentives for part-time employment could help encourage this important cultural shift.

Swiss Re's contribution

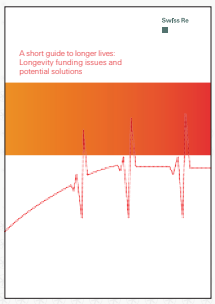
"Funding longer lives" is one of our Top Topics: We regularly engage in dialogue and share our risk expertise, for example through expertise publications and by organising stakeholder conferences (see pages 33–37). But we also offer clients solutions that enable them to transfer longevity risk. Recently, we have completed several such transactions with pension funds in the UK.

Pioneering Swiss Re longevity swap transactions:

- GBP 1 billion contract with the Royal County of Berkshire Pension Fund in 2009;
- GBP 1.4 billion contract with one of Akzo Nobel's UK pension funds in 2012 (see page 16);
- GBP 800 million contract with pension fund of UK insurer LV = in 2012, also covering members who have not retired yet (see page 16).

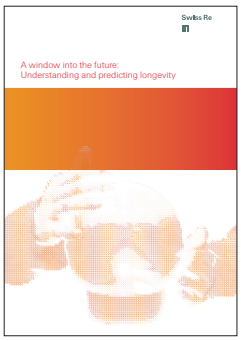
Sources:

- A short guide to longer lives: Longevity funding issues and potential solutions
- A mature market: Building a capital market for longevity risk

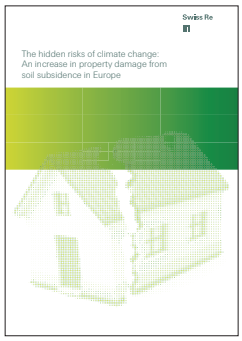


Other Swiss Re publications

Our publications provide the gateway to Swiss Re's broad knowledge base and expertise. They cover a wide range of topics: from technical reinsurance issues and emerging risks to natural perils, economic trends and strategic issues in our industry. This is a selection of recent publications, in addition to those featured on page 37.



A window into the future: Understanding and predicting longevity
Unprecedented increases in life expectancy experienced in recent decades have been consistently underestimated, causing funding difficulties for employers, insurers and governments. Forward-looking models will play a vital role in the overall solution.

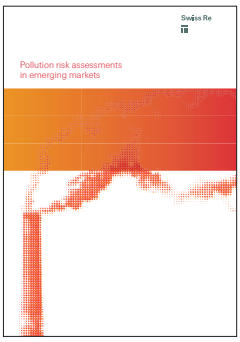


The hidden risks of climate change: An increase in property damage from soil subsidence in Europe
Property damage from drought-induced soil subsidence has risen dramatically across Europe. Climate change will further magnify the risks.

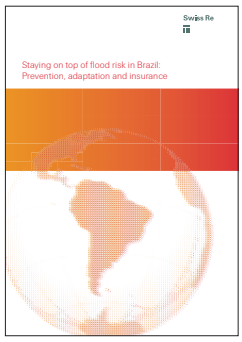
Closing the financial gap: New partnerships between the public and private sectors to finance disaster risks
This publication features some of our most innovative transactions and shows how governments in different regions have used risk transfer products to prepare for the economic consequences of catastrophic events and make their societies more resilient.

The future of human longevity: breaking the code (Conference report)
Societies are living much longer – but why? It is an exceedingly complex question, involving biology, medical trends, public health and lifestyle choices among others. It also influences how we cope with a rapidly ageing society.

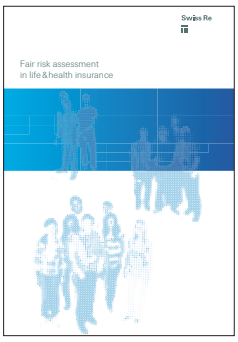
Our publications can be downloaded or ordered at www.swissre.com/library/



Pollution risk assessments in emerging markets
Governments expect companies to manage their environmental risks properly and pay for any damage caused through negligent management of these risks. Insurers consequently need to assess companies' risk management of environmental hazards, especially in emerging markets.



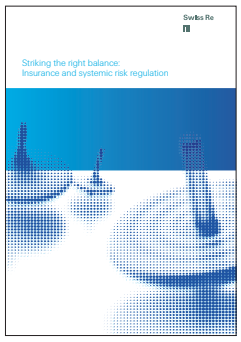
Staying on top of flood risk in Brazil: Prevention, adaptation and insurance
The population in Brazil exposed to flood risk is likely to surge from 33 million today to 43 million in 2030. The annual expected losses are estimated to rise from USD 1.4 billion to USD 4 billion. Prevention, adaptation and risk transfer measures could allow Brazil to avoid pitfalls in its socio-economic development.



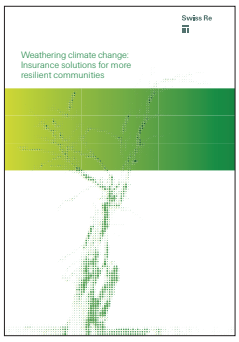
Fair risk assessment in life & health insurance
Private insurance relies upon the use of objective, relevant and reliable data for insurance pricing purposes. This enables insurers to consider differences between risks in a way that is fair to consumers and insurers.

The fundamentals of insurance-linked securities
Since its inception in 1996, the market for insurance-linked securities (ILS) has witnessed robust growth worldwide. Re/insurers, governments and corporations continue to access capital market solutions to finance growth, manage capital and transfer risk related to extreme events.

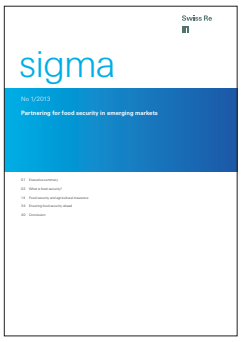
Country risk management: Making societies more resilient
Societies are becoming more vulnerable as the risks they face become more interconnected. Integrated risk management can help countries identify and prepare for risks. A country risk officer could act as a focal point in this process and help coordinate government and private sector action.



Striking the right balance: Insurance and systemic risk regulation
As a result of the recent financial crisis, systemic risk supervision is increasing globally. However, the business model of insurance, which weathered the crisis relatively well, differs fundamentally from that of the banking sector. Insurers and reinsurers, therefore, should not be subject to systemic risk supervision.



Weathering climate change: Insurance solutions for more resilient communities
More than 3.4 billion people worldwide are already threatened by natural hazards, most of them in the developing world. Climate change could make matters even worse. Innovative insurance solutions can help these large populations cope with the growing risks in a changing climate.



***sigma:* the series**
For more than three decades, the *sigma* series has been a trusted source of market information for managers and specialists in direct insurance companies worldwide. To ensure a truly global readership, sigma appears in six languages: English, German, French, Spanish, Japanese and Chinese.

Independent assurance report to the management of Swiss Re Ltd, Zurich ("Swiss Re")

Introduction
We have been engaged to perform a limited assurance engagement on the consolidated CO_2 emissions reporting and a selection of CR topics and sections disclosed with the 2012 Swiss Re Corporate Responsibility Report for the year ended December 31, 2012.

Scope and subject matter
Data and information disclosed with the Corporate Responsibility reporting of Swiss Re and its consolidated subsidiaries.

The scope of our work was limited to:
- the management and reporting processes with respect to the consolidated Corporate Responsibility ("CR") reporting as well as the control environment in relation to the aggregation of data and information;
- the consolidated data and information disclosed in the sections "Extending our risk intelligence" on pages 21 to 30, "Reducing our environmental footprint" on pages 38 to 45 and "Being an employer of choice" on pages 54 to 61;
- the consolidated CO_2 emissions 2012 (Scope 1, 2 and business travel-related Scope 3 in adherence with the Greenhouse Gas Protocol) of the table entitled "CO_2 emissions per employee (full-time equivalent, FTE), Swiss Re Group" on page 39 in the 2012 CR Report comprising power, heating and business travel for the period of October 1, 2011 till September 30, 2012;
- the retirement of 43 000 tones of CO_{2e} (CO_2 equivalents) described on page 40 of the 2012 CR Report; and
- the organizational measures and internal key controls in place at the corporate level regarding aggregation of information obtained from the subsidiaries and reporting functions.

Responsibilities of the management
Swiss Re's management is responsible for the selection and application of the reporting criteria detailed below:
- "Internal Environmental Performance Indicators for the Financial Industry" published by the Verein für Umweltmanagement in Banken, Sparkassen und Versicherungen e.V. (VfU) published in 1997;
- "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" published in 2001 by the World Resources Institute and the World Business Council for Sustainable Development;
- the framework document "Environmental Performance Indicators Reporting at Swiss Re", version 2012; and
- the defined internal guidelines, by which CR data and information are gathered, collated and aggregated internally.

The Swiss Re management is responsible for both the preparation and the presentation of the selected data and information disclosed with the CR reporting in accordance with the reporting criteria and such organizational measures and internal key controls as determined necessary to enable the preparation of the CR reporting to be fairly presented. This responsibility comprises the arrangement, implementation and maintenance of adequate records and internal controls that are designed to support the CR reporting processes.

Responsibility of PricewaterhouseCoopers
Our responsibility is to form an independent conclusion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the 2012 CR Report is not stated, in all material respects, in accordance with the reporting criteria.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3 000, "Assurance engagements other than audits or reviews of historical financial information", issued by the International Auditing and Assurance Standards Board. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance on the identified corporate responsibility information.

Summary of work performed
Our procedures included examination, on a test basis, of evidence relevant to the identified CR data and information. It also included an assessment of the significant estimates and judgments made by the management in the preparation of the identified CR data and information. The evidence-gathering procedures were more limited than they would be on a reasonable assurance engagement and, so, less assurance was obtained than would be on a reasonable assurance engagement.

In our engagement we performed the following procedures:
- evaluating the CR reporting and underlying performance indicators by performing analytical procedures and interviewing selected key contacts to assess whether the internal

Environmental Performance Indicators Reporting guidelines and CR guidance were consistently applied by the selected locations (Japan, China, Hong Kong, India, Italy, US, UK, Germany);

- reconciling the CO_2 emissions data for energy consumption and business travel and CR data and information to the data used for the internal CR emissions reporting of the selected locations;
- performing enquiries of personnel responsible for internal CR reporting and data collection at the Swiss Re corporate level to evaluate the reporting and aggregation process and to assess its appropriateness;
- assessing whether the methodology applied by Swiss Re is in line with the reporting criteria;
- performing tests on a sample basis of evidence supporting selected CR data and information (Sensitive Business Risk process, management of emerging and political risks, responsible investment, HR data and information, diversity & inclusion, development & training, compensation & benefits, energy consumption, business travel, other environmental data, Group sourcing, construction management) to assess their completeness, accuracy, adequacy and consistency;
- reviewing the relevant documentation on a sample basis, including Swiss Re's CR-related policies, the management of reporting structures, the documentation and systems used to collect, analyse and aggregate reported CR data and information;
- reviewing the appropriateness of the management and reporting processes for CR reporting; and assessing the processing and consolidation of data at Swiss Re's Group level; and
- reviewing the retirement of 43 000 tonnes CO_{2e} verified emission reductions (VER) according to the Voluntary Carbon Standard or Gold Standard.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Inherent limitations

The accuracy and completeness of CR data and information are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Our limited assurance report should therefore be read in connection with Swiss Re's internal guidelines, definitions and procedures on the reporting of its CR performance. Future orientated data and information were not part of our assurance scope. We do not provide any assurance on statements out of our scope.

Limited assurance conclusion

With reference to the identified subject matter information, and based on our work performed, nothing has come to our attention that causes us to believe that:

- the Swiss Re internal corporate responsibility reporting guidelines are not applied in all material respects, in accordance with the reporting criteria;
- the internal reporting processes to collect and aggregate CR data and information is not functioning as designed and does not provide an appropriate basis for the presentation of CR data and information, in all material respects;
- the CR data and information disclosed in the 2012 CR Report is not stated, in all material respects, in accordance with the reporting criteria; and
- the CO_2 emissions data and information disclosed in the 2012 CR Report is not stated, in all material respects, in accordance with the reporting criteria.

Zurich, 31 May 2013

PricewaterhouseCoopers AG

Marc Schmidli Stephan Hirschi

Memberships, awards and index listings

Listed here is a selection of Swiss Re's most important memberships, recent awards and index listings with regard to corporate responsibility.

Memberships

Carbon Disclosure Project
The Carbon Disclosure Project (CDP) is an independent not-for-profit organisation holding the largest database of primary corporate climate change information in the world. It acts on behalf of 551 institutional investors, holding USD 71 trillion in assets under management and some 60 purchasing organisations.
www.cdproject.net

Chief Risk Officer Forum
The Chief Risk Officer Forum is a professional risk management group that focuses on developing and promoting industry best practices in risk management. The forum was formed in 2004 to work on key relevant risk management issues within the insurance industry.
www.thecroforum.org

ClimateWise
ClimateWise is the collaborative insurance initiative through which members aim to work together to respond to the myriad risks and opportunities of climate change. A member of Swiss Re's Board of Directors currently acts as Chairman of ClimateWise.
www.climatewise.org.uk

Clinton Global Initiative
Established in 2005 by President Bill Clinton, the Clinton Global Initiative (CGI) convenes global leaders to devise and implement innovative solutions to some of the world's most pressing challenges.
www.clintonglobalinitiative.org

ICRC Corporate Support Group
The ICRC Corporate Support Group is an innovative and long-term partnership set up by the International Committee of the Red Cross (ICRC) and a group of selected Swiss companies. The members of the Corporate Support Group have committed themselves to supporting the ICRC's humanitarian work in the years ahead.
www.icrc.org

International Risk Governance Council
IRGC is an independent organisation whose purpose is to help the understanding and management of global risks that impact on human health and safety, the environment, the economy and society at large.
www.irgc.org

Klimastiftung Schweiz (Swiss Climate Foundation)
The Swiss Climate Foundation is a non-profit foundation that directly champions the cause of climate protection in Switzerland, helping to fund small and medium enterprises that are proactive in their approach to reducing CO_2 emissions. Swiss Re is one of the foundation's members and is sponsoring its managing director.
www.swiss-climate-foundation.ch

Öbu ("Ecologically conscious enterprises" network)
Öbu is a Swiss think tank for sustainability and management topics. It carries out projects focusing on corporate and economic policy, and promotes experience-sharing among its members.
www.oebu.ch

Principles for Responsible Insurance
Developed by the UN Environment Programme's Finance Initiative, the Principles for Sustainable Insurance (PSI) are a framework for the global insurance industry to address environmental, social and governance risks and opportunities. Currently, a Swiss Re representative has the co-chair of the UN PSI Board.
www.unepfi.org/psi

The Climate Group
The Climate Group is an independent, not-for-profit organisation working internationally with government and business leaders to advance smart policies and technologies to cut global emissions and accelerate a clean industrial revolution.
www.theclimategroup.org

The Geneva Association

The Geneva Association is a leading international insurance think tank for strategically important insurance and risk management issues. It identifies fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector.

www.genevaassociation.org

The Sustainability Forum Zürich

The Sustainability Forum Zürich (TSF) is an independent, non-profit, non-partisan association that was founded in Zurich by leading representatives from the fields of business, science and the public authorities. It focuses on sustainability topics relevant to the financial market.

www.sustainability-zurich.org

UNEP Finance Initiative

UNEP FI is a global partnership between UNEP and the financial sector. Over 190 institutions, including banks, insurers and fund managers, work with UNEP to understand the impacts of environmental and social considerations on financial performance.

www.unepfi.org

World Economic Forum Risk Response Network

The World Economic Forum's Risk Response Network (RRN) aims to address the new world of risk we live in. Uniquely placed to catalyse a response to this new landscape, the World Economic Forum's RRN provides a platform to better understand, manage and respond to complex, interdependent risk.

www.weforum.org

Recent awards

Ethisphere World's Most Ethical Companies in 2012

For the fourth consecutive year, Swiss Re has been recognised as one of the world's most ethical companies by Ethisphere, a leading international think tank.

ILS Advisor of the Year 2012

Our ILS team won Reactions Magazine's "ILS Advisor of the Year" award for a second consecutive year, due to a number of innovative deals and the high volume of issuances closed in 2012.

Global 100 Most Sustainable Companies 2011

Swiss Re was once again included in this data-driven corporate sustainability assessment by Corporate Knights Inc.

MiCRO named "Company Launch of the Year" in 2011 by the Review magazine

The Microinsurance Catastrophe Risk Organisation (MiCRO), of whom we are a founding partner, was called "the most significant new venture in an area of need".

Intelligent Insurer Magazine award for "Global Best ILS Advisor" in 2011

Based on the views of 13 000 readers, we won this award for our performance as the top service provider in the ILS market, alongside three awards in the main reinsurance category.

Selected index listings and ratings

Dow Jones Sustainability Indexes, insurance sector leader

ROBECOSAM Sustainability Award Sector Leader 2013

Ethibel Sustainability Index Excellence Global

included in ETHIBEL SUSTAINABILITY INDEX EXCELLENCE Global

FTSE4Good Index Series

FTSE4Good

oekom research, Prime investment status

Corporate Responsibility Prime rated by oekom research

THE GLOBAL COMPACT WE SUPPORT

GRI content index

with UN Global Compact "Communication on Progress" references

This content index refers to the Global Reporting Initiative (GRI) G3.1 Guidelines for Sustainability Reporting. The guidelines form a voluntary framework setting out principles and indicators that companies can use to measure and report their economic, environmental and social performance.

We have self-declared our reporting to be Application Level B.

References to the UN Global Compact principles addressed as part of our Communication on Progress (COP) are incorporated into the GRI content index, in line with UN recommendations.

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BR = 2012 Business Report; FR = 2012 Financial Report

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4.13	Memberships		72–73
4.14	List of stakeholder groups		9, 31
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Management approach and performance indicators

Product and service impact

Disclosure on management approach:

We provide comprehensive disclosure on our management approach to product and service impact in the two chapters "Creating solutions for sustainability" and "Extending our risk intelligence".

FS1	Environmental and social policies in business lines	1, 2, 7–9	9, 14, 21
FS2	Screening of environmental and social risks	1, 2 and 8	22–24, 28
FS4	Environmental and social training for staff	1, 2 and 8	24
FS5	Interactions with clients/investees/business partners	1 and 2	14, 24
FS7	Products with specific social benefit		14–20, 66–67
FS8	Products with specific environmental benefit	7 and 8	14–20
FS11	Environmental and social screening in asset management		28-30

Economic dimension

Disclosure on management approach:

Our management approach to the economic dimension is primarily disclosed in the 2012 Business Report. Specific aspects ("implications of climate change" and "indirect economic impacts") are disclosed in this report in the "Who we are and what we do", "Creating solutions for sustainability" and "Exploring and shaping the risk landscape" chapters.

EC1	Direct economic value generated		7, FR 120–126, 181
EC2	Implications of climate change	7	14–19, 32–33
EC3	Benefit plan obligations		FR 185–192
EC9	Indirect economic impacts		6, 14–20

Environmental dimension

Disclosure on management approach:

We provide comprehensive disclosure on our management approach to the environmental dimension in the chapter "Reducing our environmental footprint".

EN1	Materials used by weight or volume	8	42
EN2	Recycled materials used	8 and 9	42
EN4	Indirect energy consumption	8	39–40
EN5	Energy conservation and efficiency	8 and 9	40
EN6	Initiatives to use renewable energy	8 and 9	39
EN7	Initiatives to reduce indirect energy consumption	8 and 9	40, 43–44
EN8	Total water withdrawal	8	42
EN16	Greenhouse gas emissions	8	39
EN17	Indirect greenhouse gas emissions	8	39

FR = 2012 Financial Report

		UN Global Compact principle	Page
EN18	Initiatives to reduce greenhouse gas emissions	7, 8 and 9	38–41, 43–44
EN22	Total weight of waste	8	42
EN29	Environmental impact of transport	8	39–40

Labour practices and decent work

Disclosure on management approach:

Our management approach to labour practices and decent work is disclosed in the chapter "Being an employer of choice".

LA1	Breakdown of workforce		54–56
LA2	Employee turnover	6	54
LA7	Number of lost days		60
LA8	Training on serious diseases	1	59
LA12	Performance review		61
LA13	Workforce diversity	1 and 6	54–56

Human rights

Disclosure on management approach:

We address human rights aspects relevant to our business through our Sustainability Risk Framework and our sourcing guidelines. The corresponding management approaches are disclosed in the chapters "Extending our risk intelligence" and "Reducing our environmental footprint", respectively.

HR2	Supplier screening on human rights	1–6	42–43
HR6	Child labour	1, 2 and 5	22, 42
HR7	Forced or compulsory labour	1, 2 and 4	22, 42

Society

Disclosure on management approach:

We address society aspects relevant to our business through our business solutions, Group Code of Conduct and stakeholder dialogue. The corresponding management approaches are disclosed in the chapters "Creating solutions for sustainability", "Ensuring good governance" and "Exploring and shaping the risk landscape", respectively.

FS14	Access to financial services for disadvantaged people		14, 17–20
SO3	Anti-corruption training	10	63
SO5	Public policy positions		31

Product responsibility

We consider the definition of product responsibility in the GRI guidelines to be of little relevance for a company providing business-to-business services in the financial industry, and hence provide no information in this area.

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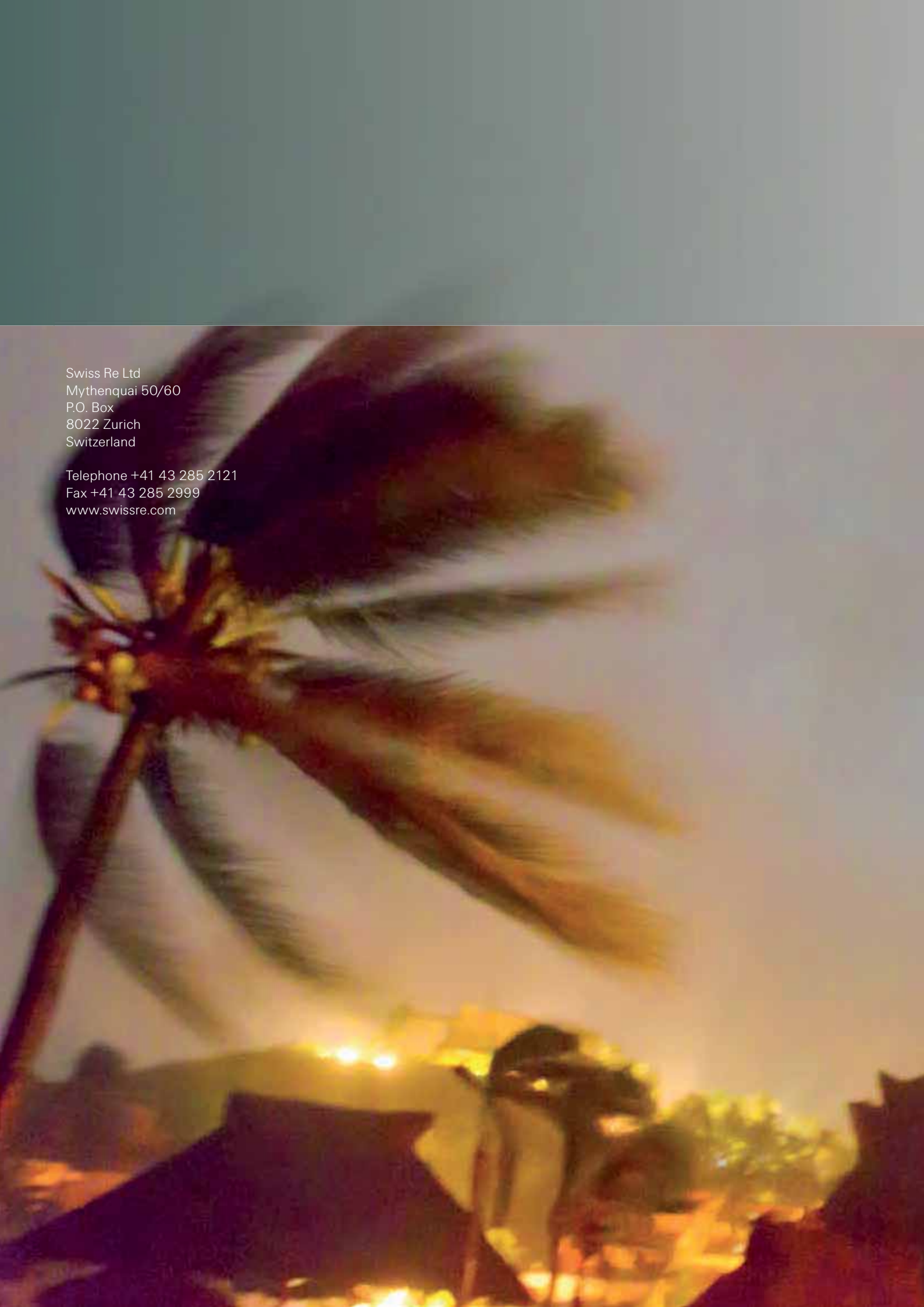

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