



## CLIMATEWISE

### Annual Reporting 2011

#### (1) Lead in risk analysis

At Swiss Re, climate change is an issue of Group-wide strategic importance, and understanding its implications is key to our company's long-term risk management strategy. We therefore actively promote research and analytical work on climate risks and incorporate key findings into our underwriting and risk assessment tools. This knowledge informs our business decisions and development of innovative solutions to cope with the uncertainties of climate change.

(1.1) Swiss Re partners with various public and private sector stakeholders, including leading universities and academic institutions, to advance knowledge on the risks of climate change. In 2010, we extended our collaborative research on climate adaptation to additional regions of the world, including the Caribbean and the US Gulf coast, and published the results in a series of new reports: *ECA Caribbean* (<http://media.swissre.com/documents/ECA+Brochure-Final.pdf>); *ECA US Gulf Coast* ([http://media.swissre.com/documents/Entergy\\_study\\_exec\\_report\\_20101014.pdf](http://media.swissre.com/documents/Entergy_study_exec_report_20101014.pdf)); and *Weathering Climate Change* ([http://www.swissre.com/rethinking/climate/Weathering\\_climate\\_change.html](http://www.swissre.com/rethinking/climate/Weathering_climate_change.html)). In 2010, a new Risk Chair for Integrative Risk Management, sponsored by Swiss Re, took up his position at ETH Zurich to head up research in this area. We are also involved in a number of other collaborative initiatives dedicated to the advancement of research and analytical approaches to global risks, including climate change: [http://www.swissre.com/rethinking/emerging\\_risks/strategic\\_risk\\_initiatives.html](http://www.swissre.com/rethinking/emerging_risks/strategic_risk_initiatives.html).

(1.2) Our methodology on the economics of climate adaptation (ECA) has a specific focus on the impact of climate change on local economies. A number of our climate-related publications have included region-specific data and assessments, such as the ones mentioned above. Since 2010, all ECA findings are also made available on a country-by-country basis on our website, in addition to our print publications, and we continue to update this as new findings become available: [http://www.swissre.com/rethinking/climate/Strengthening\\_climate\\_resilience.html](http://www.swissre.com/rethinking/climate/Strengthening_climate_resilience.html).

(1.3 and 1.4) Beyond advancing our knowledge and understanding of climate change risks, we quantify risks and integrate the data into our risk management and underwriting frameworks, as well as client tools. We use probabilistic loss models to assess loss expectations and determine the prices for insurance cover. For example, in 2010, we adapted rates for wind damage coverage in Europe to bring them in line with the changing storm risk and anticipated loss development: [http://www.swissre.com/rethinking/climate/the\\_effects\\_of\\_climate\\_change.html](http://www.swissre.com/rethinking/climate/the_effects_of_climate_change.html). We have developed a number of innovative transactions based on insurance and capital market instruments for climate-related risks, including insurance-linked securities for climate adaptation, agricultural and natural catastrophe risks: <http://www.swissre.com/rethinking/ils/>.

We also published a new report entitled *The hidden risks of climate change: an increase in property damage from soil subsidence in Europe*, which presents the findings of a newly developed loss model that is used to quantify and price soil subsidence risks in key reinsurance markets.

(1.5) We make all our publications and research findings available through our publicly accessible website, and we disseminate to our clients and general public through our engagements in international and national conferences:  
<http://www.swissre.com/publications/>. We also share our expertise through a number of other channels, including stakeholder conferences held at Swiss Re's Centre for Global Dialogue: <http://cgd.swissre.com/>. In 2010, we have held a series of conferences related to climate change and the broader issue of sustainability:  
[http://cgd.swissre.com/global\\_dialogue/topics/sustainability/](http://cgd.swissre.com/global_dialogue/topics/sustainability/).

## **(2) Inform public policy making**

**We are committed to taking a leading role in the climate debate and supporting public policymaking through our long-standing expertise in risk management. We actively foster a dialogue with all major stakeholders – clients, employees, policy makers and the public at large – to raise awareness about climate risks, share our specialist knowledge and inform sustainable policies that help societies effectively manage and adapt to climate risks.**

(2.1) We regularly engage with national and local authorities to demonstrate the value of risk transfer in climate adaptation. In 2010, we finalized and published eight new country case studies on the economics of climate adaptation in the Caribbean (including on Anguilla, Antigua and Barbuda, Barbados, Bermuda, the Cayman Islands, Dominica, Jamaica and St. Lucia): [http://www.swissre.com/rethinking/climate/Turbulent\\_tropics\\_securing\\_climate-resilient\\_development\\_in\\_the\\_Caribbean.html](http://www.swissre.com/rethinking/climate/Turbulent_tropics_securing_climate-resilient_development_in_the_Caribbean.html). The findings were presented and discussed with members of the Caribbean Catastrophe Risk Insurance Facility, which commissioned the analysis. Swiss Re acts as the CCRIF's lead reinsurer. In addition, we also conducted for the first time a corporate ECA study on climate risks faced by the energy sector along the US Gulf Coast:  
[http://www.swissre.com/rethinking/climate/Building\\_a\\_resilient\\_Energy\\_Gulf\\_Coast.html](http://www.swissre.com/rethinking/climate/Building_a_resilient_Energy_Gulf_Coast.html). The study was developed in close collaboration with Entergy Corporation and presented to the local authorities in the region.

(2.2) Swiss Re is actively engaged in a number of networks and collaborative forums engaged in the climate debate. Members of our senior management addressed various influential bodies on the issue of climate adaptation and shared Swiss Re's expertise in managing climate risks with a global audience at a number of high-profile events. We had a strong presence at the World Economic Forum Annual Meeting 2011 in Davos, with Swiss Re's CEO Stefan Lippe hosting a roundtable discussion on global risks related to food security, climate change and natural catastrophes:  
[http://www.swissre.com/rethinking/Swiss\\_Re\\_breakfast\\_in\\_Davos\\_on\\_Ageing\\_Food\\_Security\\_and\\_Natural\\_Catastrophes.html](http://www.swissre.com/rethinking/Swiss_Re_breakfast_in_Davos_on_Ageing_Food_Security_and_Natural_Catastrophes.html). We were also once again lead contributors to the WEF's Global Risk Report ([http://media.swissre.com/documents/Global\\_Risks\\_2011\\_LD\\_ExecSum.pdf](http://media.swissre.com/documents/Global_Risks_2011_LD_ExecSum.pdf)), which highlights the increasing complexity and interconnectedness of climate and other global risks. We continued our sponsorship of the Clinton Global Initiative (CGI) and submitted a joint

commitment with Oxfam America on an innovative weather insurance and climate adaptation project in Ethiopia:

[http://www.swissre.com/rethinking/climate/Innovative\\_weather\\_insurance\\_for\\_farmers\\_in\\_Ethiopia\\_is\\_gaining\\_momentum.html](http://www.swissre.com/rethinking/climate/Innovative_weather_insurance_for_farmers_in_Ethiopia_is_gaining_momentum.html). As part of our engagement in the Climate Group, Swiss Re sponsored Climate Week in New York City for the second year in a row in September 2010. Gathering hundreds of government and business leaders from around the world, this week-long series of high-level meetings, panel discussions, cultural events and public engagements provided a platform to urge action on climate change in the run-up to the UN Summit in Cancun:

[http://www.swissre.com/rethinking/climate/Turning\\_talk\\_into\\_action\\_Climate\\_Week\\_panel\\_highlights\\_ways\\_to\\_protect\\_vulnerable\\_people\\_and\\_economies.html](http://www.swissre.com/rethinking/climate/Turning_talk_into_action_Climate_Week_panel_highlights_ways_to_protect_vulnerable_people_and_economies.html). We also hosted a number of stakeholder events and meetings at Swiss Re's Centre for Global Dialogue to promote public debate and share our knowledge with public policymakers, such as our annual Ambassador Briefing: [http://www.swissre.com/about\\_us/global\\_engagements/Public-private\\_partnership-based\\_risk\\_transfer\\_solutions.html](http://www.swissre.com/about_us/global_engagements/Public-private_partnership-based_risk_transfer_solutions.html).

(2.3) For the second year in a row, Swiss Re participated in the UN Climate Summit as an official member of Switzerland's country delegation. In this role, we were actively involved in shaping Switzerland's climate position at the 2010 Cancun conference, promoting stringent national and global emissions reductions targets. We were strong advocates of a legally binding agreement and implementation of climate adaptation measures:

[http://www.swissre.com/rethinking/climate/Swiss\\_Re\\_pushes\\_for\\_more\\_concerted\\_action\\_on\\_climate\\_change\\_in\\_Cancun.html](http://www.swissre.com/rethinking/climate/Swiss_Re_pushes_for_more_concerted_action_on_climate_change_in_Cancun.html). As part of our advocacy on national emissions reductions targets, we have in place our own corporate program to meet internally agreed carbon-reducing measures (see below).

(2.4) See 2.1

(2.5) As a global reinsurer, we are not directly involved in emergency relief operations, but we are active in a number of philanthropic engagements (see Corporate Responsibility Report 2010, "Being a good corporate citizen":

[http://media.swissre.com/documents/Swiss\\_Re\\_2010\\_CR\\_Report.pdf](http://media.swissre.com/documents/Swiss_Re_2010_CR_Report.pdf)). In 2010, we launched a new disaster preparedness project in El Salvador's Bajo Lempa river delta, one of the poorest regions in Central America:

[http://www.swissre.com/corporate\\_responsibility/Securing\\_livelihoods\\_in\\_the\\_Bajo\\_Lempa\\_river\\_delta\\_of\\_El\\_Salvador.html](http://www.swissre.com/corporate_responsibility/Securing_livelihoods_in_the_Bajo_Lempa_river_delta_of_El_Salvador.html).

### **(3) Support climate awareness amongst our customers**

**We invest substantial resources to analyse climate-related risks and develop insurance solutions for our clients in the public and private sectors. Sharing our knowledge and insights with our customers is essential to raise awareness about the risks of climate change and help them make informed investment decisions about effective climate adaptation strategies.**

(3.1) Our core business is to provide financial protection against risk. A substantial number of our clients seeking insurance solutions to cope with the risks of climate change are governments and public sector entities, particularly – but not exclusively – in the developing world. The Economics of Climate Adaptation methodology was designed to help these

decision-makers devise cost-effective climate adaptation strategies. In 2010, we continued to expand our engagement in the Caribbean (<http://www.ccrif.org/main.php?main=16&id=54>), and we initiated discussions about climate adaptation and disaster preparedness with public sector clients in other parts of the world, such as Latin America ([http://www.swissre.com/about\\_us/global\\_engagements/working\\_together\\_to\\_transfer\\_catastrophe\\_risk.html](http://www.swissre.com/about_us/global_engagements/working_together_to_transfer_catastrophe_risk.html)). We have also been active in discussing the ECA findings and other climate-related research with corporate clients and consulting them on the relevance and applicability to their business. Many of our presentations and tools are available on our public website and client platforms ([http://www.swissre.com/clients/client\\_tools/about\\_catnet.html](http://www.swissre.com/clients/client_tools/about_catnet.html)). But our climate change experts also regularly participate in client events to discuss specific client needs ([http://www.swissre.com/rethinking/agricultural/african\\_clients\\_meeting.html](http://www.swissre.com/rethinking/agricultural/african_clients_meeting.html)). After formally adopting our new Group-wide Sustainability Risk Framework, Swiss Re continued to implement its principles throughout our business. In 2010, the number of submitted "Sensitive Business Risk" cases rose to 140, the highest ever. We issued negative recommendations in 19 cases, and conditional recommendations in 20 cases (CR Report 2010, "Extending our risk intelligence").

(3.2 and 3.4) Responding to the need for adaptation financing, we have put a special focus on devising innovative risk transfer solutions that extend cover to developing countries, which are particularly exposed to climate impacts. Over the last year, we concluded a number of new transactions and published a selection of innovative solutions in the publication "Closing the financial gap," launched at the World Economic Forum 2011 in Davos ([http://www.swissre.com/rethinking/crm/Closing\\_the\\_financial\\_gap.html](http://www.swissre.com/rethinking/crm/Closing_the_financial_gap.html)).

Many of our innovative solutions include one or more of the following arrangements: insurance linked securities or cat bonds, weather insurance products, public sector clients, emerging and developing countries, and climate change adaptation portfolio development (<http://www.swissre.com/rethinking/crm/>). In 2010, we started work with the International Finance Corporation (IFC), the World Bank's private-sector arm, to develop risk transfer solutions in Africa (<http://www.ifc.org/IFCExt/pressroom/IFCPressRoom.nsf/0/89FC4F72268F1D5F852578A2005D613C?OpenDocument>). In 2011, we also joined Oxfam America and the World Food Programme in an innovative initiative, dubbed the R4 Partnership, to strengthen rural resilience in Ethiopia and three other countries ([http://www.swissre.com/media/news\\_releases/pr\\_20110610\\_oxfam.html](http://www.swissre.com/media/news_releases/pr_20110610_oxfam.html)). Additional transactions included a loan insurance scheme against low-rice yields in Vietnam (CR Report p. 17 and [http://www.swissre.com/media/news\\_releases/Vietnams\\_rice\\_farmers\\_to\\_get\\_loss\\_protection.html](http://www.swissre.com/media/news_releases/Vietnams_rice_farmers_to_get_loss_protection.html)); a crop insurance programme in Kenya (CR Report p. 18); insurance schemes for smallholder farmers in India (CR Report p. 19); a microinsurance scheme in Haiti ([http://www.swissre.com/about\\_us/global\\_engagements/Swiss\\_Re\\_provides\\_Haitis\\_micro\\_entrepreneurs\\_with\\_insurance\\_proceeds.html](http://www.swissre.com/about_us/global_engagements/Swiss_Re_provides_Haitis_micro_entrepreneurs_with_insurance_proceeds.html)); and a parametric cover for the state of Alabama ([http://www.swissre.com/media/news\\_releases/alabama\\_state-insurance\\_fund\\_transaction.html](http://www.swissre.com/media/news_releases/alabama_state-insurance_fund_transaction.html)).

Besides designing innovative re/insurance solutions, we made a direct financial investment in the Brazilian company UBF Seguros, in partnership with the International Finance Corporation (IFC), to expand insurance protection in emerging countries ([http://www.swissre.com/clients/corporations\\_businesses/Swiss\\_Re\\_and\\_IFC\\_announce\\_investment\\_in\\_Brazils\\_UBF\\_Seguros\\_en.html](http://www.swissre.com/clients/corporations_businesses/Swiss_Re_and_IFC_announce_investment_in_Brazils_UBF_Seguros_en.html)).

(3.3) As a global reinsurer, Swiss Re is not involved in these processes.

#### **(4) Incorporate climate change into our investment strategies**

Our efforts to integrate climate change and other sustainability-related considerations in our daily business also apply to our asset management operations. We have formally adopted a corporate policy prescribing the use of environmental, social and governance criteria in our equity analysis and developed a set of practical guidelines to implement this approach across our business.

(4.1) As a signatory of the UN Principles for Responsible Investment (PRI), Swiss Re implemented the requisite criteria across its actively managed portfolio of listed equities. In our asset management operations, we manage a portfolio of assets in the area of innovative solutions for climate change mitigation and other sustainability challenges. Its focus areas are renewable energy, energy efficiency, water, waste management and agriculture. By the end of 2010, this sustainability portfolio had a total value of CHF 404 million (see CR Report 2010, "Creating sustainability solutions) Swiss Re was again recognised as insurance sector leader 2010/11 on the Dow Jones Sustainability Index: [www.sustainability-indexes.com](http://www.sustainability-indexes.com).

(4.2) Not applicable.

(4.3) Sustainability criteria, including energy efficiency targets, play an essential role in our portfolio of direct real-estate investments. This comprises residential and commercial buildings mainly in Switzerland and Germany with a total value of more than CHF 2.1 billion at the end of 2010. In addition, we own office buildings for our own use. The Energy Mission Statement of Swiss Re Zurich lays down strict sustainability guidelines for all real-estate projects in Switzerland. New buildings always need to conform to the MINERGIE standard ([www.minergie.ch](http://www.minergie.ch)), a Swiss quality label specifying high levels of energy efficiency and superior user comfort. By the end of 2010, we had developed buildings with a total floor space of more than 200,000 m<sup>2</sup> in accordance with the MINERGIE standard.

(4.4 and 4.5) No external review or consultation has been organised so far other than public availability.

#### **(5) Reduce the environmental impact of our business**

We closely monitor our environmental footprint and seek to minimise it through a range of Group-wide measures. Key priorities in this collective effort include reducing carbon emissions, optimising energy efficiency and adhering to environmentally and socially responsible purchasing policies.

(5.1) For our sourcing and procurement activities, we use Group-wide guidelines that apply globally. Environmental criteria must be considered in all purchasing decisions of materials and ingredients, production methods, recycling and waste. In addition, we give preference to suppliers that have an environmental policy or a certified environmental management system, such as ISO 14001 or EMAS.

[http://www.swissre.com/corporate\\_responsibility/procurement\\_guidelines.html](http://www.swissre.com/corporate_responsibility/procurement_guidelines.html).

Reducing the amount of paper used has been one of our priorities. In 2010, we achieved a reduction of 20% across the Group. Figures on the sustainability of our products and services are publicly available in our Corporate Responsibility report 2010 "Reducing our environmental footprint" (see links above)

(5.2) Reducing our own CO<sub>2</sub> emissions is a key element of our climate change strategy [http://www.swissre.com/corporate\\_responsibility/reducing\\_footprint.html](http://www.swissre.com/corporate_responsibility/reducing_footprint.html). In 2003, we launched our ambitious Greenhouse Neutral Programme, which aims to reduce our per-capita carbon emissions by 15 percent until 2013 and fully compensate the remaining emissions by purchasing high-quality emissions reduction credits. After meeting our original 15 percent reduction goal in 2007, we decided to double our reduction goal to 30 percent per employee and to 45% in 2009. By the end of 2010, the total reduction of Swiss Re's CO<sub>2</sub> emissions per employee achieved since 2003 amounted to 50.6% (see CR Report 2010, "Reducing our environmental footprint" and [http://www.swissre.com/corporate\\_responsibility/greenhouse\\_neutral.html](http://www.swissre.com/corporate_responsibility/greenhouse_neutral.html) for background on the programme).

The most important, and effective, measure we have taken to reduce our CO<sub>2</sub> emissions since 2003 is to use electricity from renewable energy sources. We started this drive in 2005 at four of our locations (Munich, Paris, Rome and Paris). By the end of 2010, a total of 20 locations in Asia, Europe, North America and Oceania had switched to using renewable energy, fully or partially (see table in CR Report p. 37). Our goal is to use 100% renewable energy at all locations where this is possible, by 2013 at the latest. In selecting power from renewable sources, we apply a minimum standard that clearly defines a number of requirements. At our Zurich headquarters, for example, we only buy "naturmade star" electricity, which meets tough ecological quality criteria. To cover our remaining CO<sub>2</sub> emissions in 2010, we bought and retired VERs for a further 39,300 tonnes of CO<sub>2</sub>. When buying voluntary emissions reduction certificates, we take care to ensure they are of a high quality.

Figures on the environmental impact of our operations and our GHG emission reduction measures are made publicly available in our Corporate Responsibility report (see links above).

(5.3) To ensure reliable reporting on the programme's progress, we calculate our emissions according to the guidelines of the Greenhouse Gas Protocol, the most widely-used emissions accounting tool ([www.ghgprotocol.org](http://www.ghgprotocol.org)). Assurance providers PricewaterhouseCoopers verify our calculations. We publish the verified CO<sub>2</sub> data on a yearly basis in our Corporate Responsibility report (see above).

(5.4) Our COyou2 Reduce and Gain Programme seeks to engage Swiss Re employees in our collective effort to cut greenhouse gas emissions. It gives 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: [http://www.swissre.com/corporate\\_responsibility/coyou2\\_programme.html](http://www.swissre.com/corporate_responsibility/coyou2_programme.html). Since the launch of the programme, uptakes among staff have increased steadily year after year to a total of close to 2,913 by the end of 2010 (with over 900 new grants in 2010). After an employee survey conducted in 2010, we announced an extension of the programme for another two years with further improvements and uptake options available. For more information, please see "Reducing our environmental footprint" in the Corporate Responsibility Report 2010 (see above).

In cooperation with a number of partner companies, we set up the Swiss Climate Foundation ([www.swiss-climate-foundation.ch](http://www.swiss-climate-foundation.ch)), which uses member contributions' funds to support climate-friendly projects undertaken by small and medium-sized companies in Switzerland. In 2010, 16 projects were selected for financial support totalling CHF 1.2 million. These projects will help avoid about 26,000 tonnes of CO2 emissions and save 14 GWh of power over their full life cycles (see CR Report 2010, p. 40).

## **(6) Report and be accountable**

We identified climate change as a major challenge almost two decades ago. Since then, we have treated the issue as a corporate priority. Overall responsibility for this topic is assigned to our Chief Risk Officer (CRO), a member of Swiss Re's Executive Committee. It is managed and steered by the Head of Sustainability and supported by units across our Group.

(6.1 and 6.2) Accountability is an integral part of being a responsible company, and our handling of climate change is no exception. Our corporate responsibility framework formally recognises this commitment, and it clearly defines our efforts to integrate sustainability concerns into our core business and operations. We have been publishing yearly Group-wide reports that provide a comprehensive account of our key activities and achievements, including reaching environmental and social objectives.

Swiss Re's **2010 Annual Report** (<http://www.swissre.com/annualreport/>; [http://media.swissre.com/documents/pub\\_business\\_report\\_2010.pdf](http://media.swissre.com/documents/pub_business_report_2010.pdf)) and our **2010 Corporate Responsibility Report** ([http://media.swissre.com/documents/Swiss\\_Re\\_2010\\_CR\\_Report.pdf](http://media.swissre.com/documents/Swiss_Re_2010_CR_Report.pdf)) capture the most recent developments on our company's climate change agenda.

Swiss Re is a leading and highly diversified global (re)insurance company. We deliver wholesale (re)insurance products, insurance-based capital market instruments and supplementary risk management services to Property & Casualty and Life & Health clients and brokers around the world. Swiss Reinsurance Company Ltd, the Group's parent company, is a joint stock company listed on the SIX Swiss Exchange and headquartered in Zurich, Switzerland. The other companies of the Group are not listed.