Climate Change
Part of our A–Z Sustainability Journey

Allianz Group
From
Alternative Energy to
Zero Emissions
Climate change poses a major threat to the world economy and has a direct impact on our business. We are working to reduce our own carbon footprint, identify new investment opportunities contributing to a low-carbon economy and develop products to solve our customers’ challenges.
Global issues

Join us on our A–Z Sustainability Journey

As a financial services provider operating in over 70 markets, the success of our business is heavily affected by a variety of global, long-term issues. To ensure sustainable and profitable growth we place a high priority on monitoring, analyzing and responding to the challenges and opportunities these issues present, today and tomorrow. We are working towards a low-carbon economy, where our customers are well prepared for their retirement, and where more people are financially literate and have access to financial services. Join us on our sustainability journey.

Climate Change
From Alternative Energy to Zero Emissions

Climate change poses a major risk to the global economy and, for a global financial services company like Allianz, climate change could have a severe impact on our business. As a result, we have been implementing a Group-wide strategy covering climate-related risks and opportunities, both for our business and our customers. We finance and insure low-carbon energy projects, such as wind farms and solar parks; offer customers green products and services such as providing advice on weather-related risk reduction; as well as incorporate sustainability factors into our third-party asset management fund range; and reduce and offset our own carbon emissions.

Access to Finance
From Financial Literacy to Microinsurance

With a third of the world’s population living on between 1.25 and 4 U.S. Dollars a day, we focus on providing low-income people with access to finance. From life and health to crop insurance, our growing microinsurance portfolio is helping more than 24 million people in developing countries to protect themselves against and better manage the risks in life to build a more secure future. And since financial inclusion is not simply a matter of providing access to banking services or insurance schemes, we are committed to supporting improved financial literacy through financial education in all age groups in the markets we serve.

Demographic Change
From Changing Populations to Old Age Provision

Demographic change is creating both opportunities and challenges for financial services providers. While the urban populations of Asia and Africa are expanding and their middle classes growing, western nations’ populations are aging and their workforces are shrinking. With more over-60s than ever before, and declining birth rates, social security systems in the West are under pressure and the need for additional pension provision is increasing. In developing countries, the need for formal social security systems is growing due to the weakening of traditional family ties. We are responding to these trends with integrated asset management and insurance solutions. And since the profile of our workforce is changing as well, we use dynamic forecasts from our Strategic Workforce Planning to support Human Resources decision-making.
Climate change is a fact. It is also fairly certain that it is accelerated by human activity and that we will have to adapt to its consequences in the long term. The debt crisis has pushed climate change to the sidelines of the political and public agenda over the past few years. Yet time is running out and it is precisely now that we would be well advised to launch solutions for a low-carbon future. In both industrialized countries and emerging markets, these solutions include the establishment and expansion of a modern infrastructure and a stable supply of renewable energy. At a time of scarce public funds, the necessary expansion of infrastructure, particularly that of the electricity grid, is only possible with private investment.

**Germany has already achieved a great deal**

Take Germany, for example. The country has assumed a leading position in climate protection and has already achieved a great deal. The energy transition has begun and is irreversible. The share of renewable energy in electricity production has doubled to over 20% since 2006 – a development no one would have dared to predict ten years ago. However, it is disappointing that CO2 emissions from electricity generation have increased over the past two years. The reason is that we are using considerably more coal than previously, because it continues to be a cheaper means of generating electricity than gas. The price of CO2 certificates in EU emissions trading has dropped. Conversely, the inefficiency of the grid expansion and slow expansion of storage technologies to date have led to an unnecessary rise in electricity prices.

**Need for reforms**

The political sphere also needs to relinquish responsibility; it must open itself up to partnerships. Governments can continue to set the requirements, but private investors are bearing the costs and project risks and should therefore be responsible for the planning. In many cases, however, the political sphere is not yet ready to delegate tasks and relinquish responsibility. In other countries, this practice has been established for many years, and private investors often kick-start public investments. A clear procurement process makes it easier for investors and, logically, increases reliability.

There is also currently a need for reform at a European level. This is related to ‘unbundling’, or more specifically, the EU directive on separate ownership of electricity production and networks. What was once intended to combat the monopolizing tendencies of electricity producers is now also hindering investors. Anyone investing in wind power plants must also be able to arrange for the electricity to be transported or stored.

**Linking climate change to demographic change**

Both in Germany and in other countries, the advantages of partnerships between the public sector and investors like Allianz are obvious. The costs of our aging society are likely to add to the high debt levels of countries in the foreseeable future, and both will result in a further drop in public investment. One solution is to link the challenges of demographic change with urgent infrastructure investment. In short, pension investments finance infrastructure, and infrastructure yields finance retirement. It seems likely that the need for long-term opportunities to invest retirement provisions profitably is rising as the percentage of older people in the population increases. At the same time, the capital requirement for the energy turnaround is high and also long term. If the two are linked, the climate and societies could benefit to an equal extent.

And there is also another reason for joining forces: experience. We at Allianz also had to initially acquire the necessary expertise. We now have teams of experts for infrastructure investments. A team of a dozen specialists based in London deals with wind and solar investments. So far our focus has been on the euro zone, especially because of currency risks. In future, however, we want to diversify more internationally. We plan to invest around 400 million Euros in renewable energy every year. The total investment reached over 1.7 billion Euros in 2013.

**Taking innovative approaches**

We have already achieved the climate protection objectives that we set ourselves. The Allianz Group is carbon-neutral. Of course, it is easier for us to achieve this than it is for a steel company but, from another perspective, our opportunities for carbon reduction are more limited, because as a service provider we have less leverage potential. We are therefore especially pleased to have reduced our emissions from business travel as well as our paper and electricity use by more than 37.2% since 2006. We offset our remaining carbon emissions with the help of carbon certificates, which we obtain by investing in forest and climate protection projects in Kenya, India and Indonesia.

Allianz also provides its customers with the opportunity to participate actively in climate protection. We offer over 150 green solutions, but the green label alone is not enough. Simply insuring electric cars is not a green service; it is only the special tariff that adds the environmental aspect. Customers expect to benefit on the price and service level because they are buying an environmentally-friendly product with special insurance cover. However, for many insurance products, this connection is more complicated and harder to communicate to the client. For example, a life insurance client will not necessarily appreciate that the return for their savings contract might fall by 0.2 percentage points simply because the insurer is investing in renewable energy. This means that even if we take innovative, climate-protecting approaches, we remain committed to our three traditional investment principles: return, security and diversification.

“Our A–Z Sustainability Journey”

Statement by Maximilian Zimmerer

**Investing in climate protection**

MAXIMILIAN ZIMMERER
MEMBER OF THE BOARD OF MANAGEMENT, ALLIANZ SE

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Climate change strategy: Company

Carbon neutral since 2012

From Green Buildings to Hybrid Fleets

We are on a journey to continually reduce the carbon footprint of our operations and have been a carbon neutral business since 2012. Our overall emissions reduction since 2006 now stands at 37.2% per employee. To further shrink our footprint we continue to avoid and reduce emissions, and seek lower-carbon alternatives that we can substitute within our business.

OVER 100 HYBRID COMPANY CARS are used by loss adjusters in Switzerland to visit our customers.

500 COLLEAGUES in Singapore work in new green offices. Built from 30% recycled materials, the building harvests water from the air-conditioning system for irrigation.

We are focusing our carbon reduction efforts in the areas of energy consumption, business travel and paper use. We tackle these three areas through a strategic approach and by our established Group-wide standards, including a green IT hardware purchasing policy, a global travel regulation and a global print policy.

The green IT policy ensures that we purchase energy-efficient devices. An additional focus in recent years has been consolidating our server infrastructure to deliver energy-efficiency gains. We also audit the energy performance of Allianz buildings to determine their energy-efficiency and potential for carbon reductions.

Our global travel regulation sets minimum standards for employee business travel to help reduce unnecessary travel and promote lower-carbon modes of transport.

We promote videoconferencing and rail travel as alternatives to air travel in order to reduce emissions, cut costs and improve the work-life balance of our employees.

Our global print policy cuts overall paper consumption and reduces costs, in part by stipulating double-sided printing as the default. About one quarter of the paper we are using is from recycled sources.

Finally, we offset our remaining emissions through direct investment in carbon projects, including energy efficiency and REDD (Reducing Emissions from Deforestation and forest Degradation) projects (see page 14).

The scope of our carbon footprint includes energy used to operate our buildings and IT equipment; business travel by air, car and train; paper used and waste generated from our day-to-day operations; and water used in our buildings.

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Climate change strategy: Company

Delivering improvements – locally

To drive continual improvement in our environmental performance we have set up a Group-wide environmental management system which covers more than 85% of our employee base. A network of over 50 local environment officers in Allianz companies across the globe play a key role in coordinating and delivering environmental improvements at the local level. As part of their role, they systematically collect environmental data to improve the understanding and transparency of our impact across the Group.

Dean Selna
Corporate Real Estate and Facilities Director
Allianz entity: Fireman’s Fund, United States
Fireman’s Fund is an Allianz company in the United States and I have served as the Local Environmental Officer since 2008. I am also responsible for facilities management operations across 21 locations across the United States.

What we are doing to improve our footprint
By installing six fuel cells on our Novato campus in California, Fireman’s Fund has taken a major step in reducing its carbon footprint. These high-tech devices convert fuel into electricity through a clean electro-chemical process and allow us to generate 66% of the campus’ energy needs. Together they have reduced the carbon footprint of Novato campus by 37% and have contributed to an overall 15% carbon reduction across the whole Fireman’s Fund real estate portfolio. The average CO2 emissions from the vehicles in our fleet is 107 g/km. The challenge we face is the difficulty in reducing kilometers travelled because face-to-face meetings are essential for core business. So we are working to set up eco-driver training and to install on-board telematics equipment to monitor fuel consumption.

“These fuel cells are a further demonstration of our commitment to walking the talk when it comes to reducing our carbon footprint. What we are doing is not just good for the environment and for future generations, it makes economic sense today.”

Hugues Thoré
Environmental Manager
Allianz entity: Allianz France
I am responsible for environmental issues at Allianz France. It’s a very enjoyable job because I get to work with many departments on lots of different subjects, like facilities management and real estate for green buildings, IT for green hardware and procurement for lots of different items.

What we are doing to improve our footprint
A major source of CO2 in Allianz France is business travel. We have a car fleet of 4,378 vehicles, which are mainly for sales activity and visiting customers. For many years we have chosen car models with lower CO2 emissions and our fleet now includes 197 hybrid cars and one fully electric van. The average CO2 emissions from the vehicles in our fleet is 107 g/km. The challenge we face is the difficulty in reducing kilometers travelled because face-to-face meetings are essential for core business. So we are working to set up eco-driver training and to install on-board telematics equipment to monitor fuel consumption.

“There is a real commitment within Allianz France, and from its top management, to support substantial changes that will help to reduce our carbon footprint.”

Elisabet Alié
Operations Process Manager
Allianz entity: Allianz Seguros, Spain
I have worked in the purchasing unit of our Operations Division since mid-2011 and I became a Local Environmental Officer in December 2011. Within the Operations Division I am also responsible for analyzing client demands, improving working processes and following key performance indicators.

What we are doing to improve our footprint
We began our paperless initiative in 2012 to support our Group Digital Initiative and to tackle CO2 emissions. Through this initiative we aim to reduce CO2 emissions from paper use, improve communication with customers, and reduce costs. In 2013 we sent out almost 60,000 insurance policies by email, saving more than half a million sheets of paper. Including other types of documentation, in total in 2013 we avoided using 3.5 million sheets of paper and 400,000 envelopes, saving the equivalent of 215 trees. For 2014, we are aiming for paper savings equivalent to a further 350 trees.

“The paperless initiative requires collaboration from many departments including marketing, IT and our operations division. This can be a challenge but it helps that top management strongly believe in it.”
MEGA WATTS
From Solar parks near Rome to Wind farms powering Google

As large institutional investors, insurance companies like Allianz are important players in financing the journey to a low-carbon economy. Climate-related investments such as renewable energy and power infrastructure are attractive investments, providing portfolio diversification which spreads risk, and stable long-term returns. Because of these benefits, we are one of the world’s largest investors in renewable energy projects, helping provide the investment needed to move to a low-carbon economy.

Allianz’s commitment to the European renewable energy sector now exceeds 1.7 billion Euros across some 40 wind farms and seven solar parks located in France, Germany, Italy, and most recently, Sweden. Together, these assets generate sufficient renewable energy to supply over 500,000 households.

One of our latest investments is a wind farm in Maevaara in Sweden, which will provide energy via a 10-year power purchase agreement with Google to power its data center in neighboring Finland with renewable energy. Agreements of this kind increase the attractiveness of renewable energy investments.

In the coming years, we plan to further expand the size and geographic scope of our renewable energy investments in Europe.

Selected renewable energy projects across Europe

**MAEVAARA, SWEDEN**

**WIND FARM (72MW)**

**YEAR OF INVESTMENT: 2013**

Once constructed, will power Google’s data center in Finland

**FREYENSTEIN-HALENBECK, GERMANY**

**WIND FARM (34MW)**

**YEAR OF INVESTMENT: 2006**

Allianz’s first operational renewable energy investment

**DAHME, GERMANY**

**WIND FARM (76.5MW)**

**YEAR OF INVESTMENT: 2006**

Allianz’s largest wind farm

**HAUT CHEMIN, FRANCE**

**WIND FARM (20MW)**

**YEAR OF INVESTMENT: 2013**

Investment took Allianz’s renewable energy capacity past the 1,000MW milestone

**POFI, ITALY**

**SOLAR PARK (5.9MW)**

**YEAR OF INVESTMENT: 2011**

The smallest solar park in Allianz’s investment portfolio

**SOLARE ROMA, ITALY**

**SOLAR PARK (15MW)**

**YEAR OF INVESTMENT: 2010**

The largest solar park in Allianz’s investment portfolio

CITIES OF 500,000 HOUSEHOLDS

The cities of Cologne and Brussels could be powered by our investment in solar and wind parks, which provide over 1,000MW of energy.

€1.7bn INVESTED

by Allianz in renewable energy projects.
Climate change strategy: Investor

Investing in the future

Our experts have a wealth of knowledge about renewable energy. They know how to manage a large renewables portfolio, they offer their expertise to other investors and banks, and they identify technological risks to help protect manufacturers, operators and investors from financial losses. Here, three of our experts explain what you need to know about the ‘Energiewende’ – the transition to renewable energy. Asked about the challenges in the coming years, their answers are surprisingly similar: the cost of technology needs to be lower, infrastructure needs to be adjusted, and regulation needs to evolve to minimize risks and incentivize change.

**ALLIANZ CAPITAL PARTNERS**

David Jones
Head of Renewable Energy

From your perspective, what will it take to successfully achieve the transition to renewable energy on a global scale?

It will take many decades and will require both technological and regulatory advances. The technologies that produce renewable energy must become significantly cheaper to narrow the price gap with hydrocarbon-based power so that it becomes more affordable. The challenge of intermittent supply with renewable energy must also be addressed with substantially reinforced grid networks and, eventually, economic storage solutions. Regulation needs to evolve as the transition progresses to ensure that sufficient incentives exist to maintain the momentum of change. At the same time, to keep the lights on we need to ensure flexible back-up generating capacity remains viable. Balancing these goals while ensuring that electricity remains affordable will be the main regulatory challenge until renewables become the lowest cost option and the transition is complete.

How are you contributing to the transition in your daily work?

I contribute by directly investing in renewable energy assets for Allianz Capital Partners. Currently, our renewables portfolio comprises some 40 wind and solar farms in France, Germany, Italy and Sweden. Together, the facilities represent more than 1,000 Megawatts of capacity and can generate enough electricity for a city the size of Brussels, making Allianz one of the world’s largest financial investors in renewable energy. With operating lives of 20 years or more, these assets fit perfectly with our long-term investment horizons. Life insurance policies that are signed today usually don’t come due for many years or even decades, and so to fulfill these obligations insurers like Allianz need stable investments and long-term yields. This is exactly what wind and solar farms have to offer. Right now we’re looking at returns of between 6 and 8% – much higher than many other asset classes – and they’re totally uncorrelated with the ups and downs of the financial markets.

**ALLIANZ CLIMATE SOLUTIONS**

Henriette Schweizerhof
Analyst

From your perspective, what will it take to successfully achieve the transition to renewable energy on a global scale?

In my opinion, the global energy transition will only succeed if it generates economic benefits and achieves climate objectives at the same time. Policymakers have to guarantee there will be a competitive and fair environment for renewable energy. In order to make renewables the most competitive source of energy, the costs associated with the technology need to be lowered and the risks minimized. The energy infrastructure also has to be adjusted. Crucial aspects in this context are storage, grid expansion and flexibility on the demand side.

How are you contributing to this transition in your daily work?

Here in the Risk Advisory & Services at Allianz Climate Solutions, we have a comprehensive understanding of the risks associated with renewable energy projects. One of our key areas of consulting expertise is quality assurance for project financing. We help investors and banks to identify whether a wind or solar project will be able to yield the desired returns. A project can only be classed as successful if the individual technical components used are of high quality, the relevant norms have been met, and the guarantees conform to the standard market conditions. When it comes to financing, we make sure that the money loaned to the project can be paid back, even if (using a wind project as an example) the wind does not blow strongly for prolonged periods of time. Our contribution to the energy transition is that we apply our expertise to ensure that more high-quality projects can be implemented. These projects ultimately bring about the economic benefits necessary for the global energy transition to be successful.

**ALLIANZ CENTER FOR TECHNOLOGY**

Andreas Bemm
Senior Engineer and Risk Consultant

From your perspective, what will it take to successfully achieve the transition to renewable energy on a global scale?

The energy transition represents a paradigm shift in the structure of energy supply. This means our centralized supply system needs to be decentralized and split up into lots of small and medium-sized power generating plants. To guarantee the stability of this supply, we not only need new storage technologies but also an overarching information and communication technology structure to gather performance data of energy suppliers and users. Smart grids and smart metering are a couple of the key words used here. Any solutions considered must guarantee availability, uninterrupted service, information and data security, cut CO2 emissions, create a positive energy footprint and be cost-effective. Failure to satisfy any one of these aspects could doom the energy transition to fail.

How are you contributing to this transition in your daily work?

At the Allianz Risk Consulting/Allianz Center for Technology, our core tasks are loss analysis and risk consulting with the aim of helping to reduce technical risks. We look at proven technologies as well as new technologies. Among these new technologies are renewable energy – such as wind power, photovoltaic panels, solar-thermal energy, biomass and storage technologies. Our goal is to identify threats and minimize risks – with a view to protecting manufacturers, operators and investors of these plants from financial losses. Our expertise is the product of our day-to-day experience of analyzing the causes of loss. We exchange insights with other experts in specialist committees and cooperate with partners from industry, universities and research institutes.
Investing in forest protection

Carbon projects make it possible to finance climate protection, help us offset our emissions and benefit local communities.

For climate protection, the value of a forest lies in its capacity to store carbon. Forest protection is therefore an important part of tackling climate change. By placing a financial value on undisturbed forests, a market incentive for their protection can be created. This is what REDD (Reducing Emissions from Deforestation and forest Degradation) projects achieve. Through forest protection, they generate tradable carbon certificates which have a value in carbon markets. REDD+ projects also involve local communities and ensure that the income generated by a project is invested locally.

INVESTING TO BENEFIT LOCAL COMMUNITIES

Back in 2011, we became involved in a forest protection project in the Kasigau Corridor in Kenya – the first project in the world to be given REDD (Reducing Emissions from Deforestation and Degradation) status. The 200,000 hectares of forest protected is home to endangered cheetahs, lions, and over 2,000 African elephants. The project will generate an average of 1.2 million tons of carbon certificates per year over the 30-year life of the project.

In 2013, we made a further investment in ‘Rimba Raya’ (translated ‘infinite forest’) in southern Borneo, Indonesia. This investment will protect 64,000 hectares of rainforest (an area twice the size of Munich) from deforestation and also provide a shelter zone for an established orangutan orphanage.

Our investments provide us with carbon certificates that we use to offset our own emissions, enabling us to be a carbon-neutral company.

But since REDD+ is not only about carbon offsetting, forest and wildlife protection, we work closely with local partners to involve the communities. Some of the revenue generated by the carbon certificates from the REDD+ projects is earmarked for initiatives to improve, for example, water treatment, healthcare, education, and establish ecotourism. In the Kasigau Corridor, for example, more than 100,000 people in surrounding communities benefit directly from carbon financing through projects coordinated by our partner organization Wildlife Works.

See how REDD+ works in the Kasigau district, Kenya visit www.reddtalks.com

“Women are supported by the REDD+ project, and this is particularly important as women are the ambassadors of change. When you train a woman you have trained the whole community. We are focusing on literacy, water, education, job creation, and sustainability. Now that there are jobs, there is hope for a better future.”

MAMA MERCY NGARIYIA
CHAIR OF THE TUMAINI WOMEN’S GROUP,
KASIGAU DISTRICT, COAST PROVINCE OF KENYA

“The concept of REDD is: You let a tree stand and you are paid for that, you plant more trees and you get more money. At first the people thought this is madness, how can someone pay for a tree that he has not seen grow? But then that concept has really inspired the people. REDD+ brings a positive change to our region with real and direct solutions for poverty alleviation that will uplift our community. This is not charity. Carbon money helps us meet basic needs and improve our lifestyle. The money is earned through conservation activities that afford us the ability to protect our environment.”

CHIEF PASCAL KIZAKA
CHIEF OF KASIGAU DISTRICT,
COAST PROVINCE OF KENYA

For a full picture, see our REDD+ infographic at www.allianz.com/sustainability/redd

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See how REDD+ works in the Kasigau district, Kenya visit www.reddtalks.com

MORE THAN 100,000 PEOPLE

in communities in the Kasigau Corridor benefit directly from projects coordinated by our partner organization, Wildlife Works.
Greening tomorrow’s cities

Bridging the urban investment gap

Cities account for 70% of global greenhouse gas emissions, and this share will rise in the coming decades as millions more move to urban areas. We estimate that cities could need investment of as much as 2 trillion U.S. Dollars a year over the next 20 years to upgrade their infrastructure and make them more climate friendly.

CITIES ACCOUNT FOR 70% OF GLOBAL GREENHOUSE GAS EMISSIONS

Climate Change and urbanization will shape the global economy over the coming decades. They are inextricably linked and present humankind with a dilemma.

Half of the world’s population already lives in cities, and every year 60 million more join them. By the middle of the century, there could be as many people living in cities as are alive today.

Cities are a great source of dynamism and wealth. The world’s top 600 cities alone generate over half of global GDP. The future of our economies will increasingly rely on what happens in metropolitan areas, in particular in China, India, Brazil and other emerging countries.

Urbanization has a profound impact on the world’s climate. Already, cities produce around 70% of global emissions, and this share will grow as more people live, work, and move around in cities. The dilemma is how to support the wealth-creating effects of urbanization without damaging the world’s climate.

Cities can no longer wait for a global climate agreement. They need to act now. Most large cities already have their own environmental targets. But most fall woefully short of them.

If cities are to become leaders in the fight against climate change, the prime focus must be on infrastructure. The vast majority of harmful emissions come from power stations, cars and buildings — or more specifically the energy that is used in them. Enormous investments are required to shift urban power generation from coal and oil to renewable and other low-carbon sources of energy; to encourage people to use public transport or electric cars; and to renovate buildings to make them more efficient. Based on various studies, we estimate that global investment of 2 trillion U.S. Dollars will be needed for the next 20 years to upgrade urban infrastructure and make it climate neutral.

Governments do not have this kind of money, particularly at a time when many are forced to cut their budgets.

Insurance companies and pension funds are moving into the area of sustainable infrastructure, but only slowly. Although infrastructure investments are often complex and their risks are hard to assess, many investors would like to get more engaged if the political and market conditions were right. We therefore hope to support a dialogue between policymakers, experts and investors on what can be done to bridge the urban investment gap.

In many countries, policies need to change to encourage private long-term investment. New financial market regulations sometimes penalize banks and institutional investors for financing infrastructure. This needs to be looked at. Also, there is simply no easily accessible market for infrastructure: Most institutional investors do not have the resources to search for suitable investment opportunities on the one hand, and on the other, many city officials have very little experience in working with private investors. Therefore, we encourage governments and investors to work together to establish a green-cities-platform, where sustainable urban infrastructure projects can be aggregated, assessed and then sold to institutional investors. Such a platform could be a crucial first step towards addressing one of society’s dilemmas of the 21st century.

“Without massive investment to make cities greener, the battle against climate change will be lost. Insurers, pension funds and other institutional investors can help to bridge the investment gap, especially at a time when banks and governments are constrained.”

KATINKA BARYSCH
ALLIANZ GROUP PUBLIC POLICY AND ECONOMIC RESEARCH
Climate change strategy: Financial services provider

Providing Green Solutions

From Electric car tariffs to Weather risk protection

We offer a growing number of green products, services and processes that help to reduce the negative physical or economic effects of climate change, or take its environmental impact into account. They are an increasingly important part of our product strategy at a retail and commercial level, from special tariffs for electric cars to index-based insurance for crops.

Great opportunities

The widespread hope to put a stop to climate change by means of global agreements has yielded few tangible results so far. So how do we move forward if we don’t manage to conclude agreements to reduce carbon emissions and to slow down climate change? There are few options. We need to get used to this new extreme situation. Every one of us, as individuals, needs to review our lifestyle and consumption habits, and together we need to take pragmatic precautions against climate impacts at a local level.

In our role as an insurer, we are supporting this process by gradually shaking-up our insurance and investment portfolio, so that customers have the option of purchasing a green alternative. We are drawing on many years of experience as an insurer and risk manager to develop financial products that enable us to take an active role in climate protection.

Green Solutions not only offer a great opportunity to broaden our product offering, they help consumers to manage arising risks and seize new opportunities while at the same time contribute to environmental solutions. Sometimes this will mean a differentiation in prices. For example, taking an ecological approach to repairing a damaged building is generally more expensive than using traditional building materials and technologies. But while making a building green may be expensive, green buildings tend to experience fewer incidents of loss. So ‘green’ alternatives can also be more expensive and less expensive at the same time. Solutions that incentivize our customers to behave in an environmentally-friendly way often reduce risks and therefore allow for a lower premium. As another example, car insurance policies can incentivize customers to drive less if this is reflected in their pricing. Over the past few years, while working with Green Solutions, we have learned that they reduce our short-term risks while contributing to long-term emissions reduction.

CLEMENT B. BOOTH
MEMBER OF THE BOARD OF MANAGEMENT, ALLIANZ SE

The practical side

As the scale of wind and solar parks grows, the risks associated with them do too. Allianz was one of the first global insurers to react to these challenges with tailor-made insurance products for the renewable energy sector. For offshore wind farm projects, for example, Allianz Global Corporate & Specialty (AGCS) insures every phase, from turbine production to operation. Offshore wind has a 40% higher energy output than onshore wind. What it also has, however, are more challenging conditions. Strong, gusty winds, waves and very salty water can all cause significant wear and tear on the equipment.

Before AGCS provides insurance coverage to large-scale renewable energy projects, a team of six engineering specialists closely examines the technology being employed. We do not just want to evaluate the risks from the confines of our own offices. We prefer to take a look at them directly for ourselves as the practical side always looks different from the theoretical side. I have already completed specialist engineering training – from a helicopter hoist course to survival training. It is unusual for insurers to acquire these skills, but necessary if Allianz intends to work successfully and profitably in this growing area.

MAXIMILIAN MOCK
RISK CONSULTANT, ALLIANZ GLOBAL CORPORATE AND SPECIALTY

Listen to advice from one of our renewable energy insurance customers at www.agcs.allianz.com/insights/videos/bard-photoshooting/
One way to address food crises is to improve smallholder farmers’ resilience to the risks associated with weather extremes that can lead to crop failure.

We have been providing crop microinsurance to farmers since 2011 through two pilot projects in Burkina Faso and Mali. In the event of serious crop failure, the insurance covers the loans farmers take out each year to buy seeds for the growing season. In essence, it is a rain deficit insurance, whereby satellite imaging technology is used to monitor crop growth in insured areas. When evapotranspiration rates fall below the level that indicates crop failure, insured farmers receive an automatic payment to cover their seed loans.

Initially the response to the insurance was muted with only 361 farmers taking out the insurance in 2011. Following a severe drought during the growing season, which triggered a payout for crop failure, the response has picked up dramatically. In 2013, over 15,000 farmers in Burkina Faso and Mali took out crop failure policies with Allianz Africa.

As with most microinsurance products, customer education is essential to generate an understanding of the concept and benefits of insurance. Therefore, employees of Planet Guarantee, which is our main partner for microinsurance in Africa, engage in educating the farmers to better manage their risks. In broad terms, the insurance allows smallholder farmers to take greater risks, leading to higher revenues in the long run. It helps to strengthen local food supplies, reducing dependency on aid delivery that can weaken the production efforts of local farmers.

“I was reluctant at first, but now I appreciate crop insurance. When the rains failed I was really surprised when the insurance company came the long way to my village to bring me the news that I receive an insurance payment for my seed loan. I wish that the crop insurance will become a great success because it is a good product for us, the farmers.’’

BARTHÉLÉMY KOHOUN
A FARMER FROM POUNDOU,
A VILLAGE OF 4,000 PEOPLE IN BURKINA FASO
Our opinion is that climate change will have a considerable impact over the long-term and lead to major shifts in risk landscapes worldwide. Most studies suggest that climate change will cause more frequent and severe weather events even when it comes to heatwaves, windstorms and heavy precipitation in the future. In turn, these changes are increasing the frequency and severity of phenomena such as droughts, wildfires and floods. Climate change also causes long-term changes to our environment, such as desertification, ocean warming and rising sea levels.

**NATURAL CATASTROPHE RISK ON THE RISE**
Over the past 40 years, climate and weather-related insurance claims have increased dramatically. Average insured claims per year have risen from less than 15 billion U.S. Dollars during the 1980s, to around 70 billion U.S. Dollars per year over the last three years.1

**IS CLIMATE CHANGE TO BLAME?**
Our opinion is that climate change will have a considerable impact over the long-term and lead to major shifts in risk landscapes worldwide. Most studies suggest that climate change will cause more frequent and severe weather events even when it comes to heatwaves, windstorms and heavy precipitation in the future. In turn, these changes are increasing the frequency and severity of phenomena such as droughts, wildfires and floods. Climate change also causes long-term changes to our environment, such as desertification, ocean warming and rising sea levels.

**BEYOND CLIMATE CHANGE**
However, currently the main factor behind increasing insured losses is very simply economic growth. More and more people are moving to high-risk areas which is concentrating values insured. It is difficult to separate the purely physical factors – such as increasing rainfall – from the socio-economic factors. For example, settlement in coastal areas and other regions at risk of flooding is still on the increase. Many of the world’s million-strong cities are not sufficiently equipped to cope with storms, as the impact of hurricane Sandy on New York in 2012 has shown. The United States is at risk of even worse devastation from natural disasters resulting from climate change-linked sea level rise in combination with increased urbanization.2

**CALCULATING THE UNFORESEEABLE**
As an insurer we need to continually improve our understanding of damages related to natural catastrophes. In reality, we need to calculate the unforeseeable. Allianz has mathematicians, meteorologists and risk analysts working in the fields of risk management, catastrophe modeling and loss research. As a result, in the last decade we have considerably enhanced our risk models and simulations. In the past, potential losses were simply calculated by actuaries on the basis of historical loss statistics. Today, Allianz uses sophisticated computer models. Our task is to find the right data of the right quality to input into these models. We have to precisely record local infrastructure – that is the design, size and age of a building – and link this information with local weather and geographic data, as well as with climate forecasts. Lessons we have learned from the past are key. Retrospectively, we can see where we recognized trends too late, overlooked customer needs, or underestimated interdependencies and exposure developments. For example, business disruptions after the floods in Thailand and the earthquake in Japan in 2011 made it clear that companies and their insurance partners did not have enough data about the actual risks inherent in global supply chains. Based on 2013 data, business interruption and supply chain losses account for around 50-70% of all insured property losses, up to as much as 26 billion U.S. Dollars a year. These risks represent the number one concern for businesses around the globe.3

**PARTNERING UP FOR BETTER RISK MANAGEMENT**
Not only do we need to understand our own risks but we also need to help our customers to manage theirs. As an insurer we provide risk information to our customers and provide recommendations on how to reduce these risks (e.g. this is the role of our risk consultants). We also work together with partners from academia to understand trends and impacts, and publish the conclusions in order to trigger constructive dialogues (e.g. the Climate study of the German Insurance Association).

**PASSING ON THE RISKS**
Finally, as an insurer we need to manage our own risk in order to stay solvent and be able to pay claims during crisis events. After hurricane Sandy, private insurance companies received 1.5 million claims accounting for 18.75 billion U.S. Dollars of insured losses.4 At Allianz we have integrated risk management to take advantage of our global presence and leverage diversification. As a last step we also pass part of our risks on to other parties in order to reduce our own losses. Traditionally we purchase catastrophe reinsurance and since 2007 we also issue NatCat bonds, which transfer the risk to investors on the capital markets.

**WORK TO BE DONE**
Pricing insurance premiums and NatCat bonds accurately in the future will depend on the ability of the models underlying them to reflect the changing reality. When hurricane Katrina struck in 2005, its unexpected ferocity caused many modelers to reassess the likelihood of such an extreme event occurring to be twice as likely as previously thought, causing turmoil in the market. Even though in the case of Katrina the man-made component was the dominant factor in the losses, it is a reminder of the inherent difficulties involved in predicting extreme events. Global weather phenomena are incredibly interdependent, and it would be unwise to assume we have mastered them fully. There is always work to be done on the models. With climate change, the world itself is changing and reacting.
An insurer’s perspective on climate change

Supporting our customers in catastrophic times

Extreme events like major natural catastrophes illustrate the value and importance of insurance to society. In such events, the most important thing is to help those affected quickly, unbureaucratically and with a lot of empathy.

USA: REACHING OUT TO CUSTOMERS AFTER SANDY

Hurricane Sandy created havoc along the American east coast in 2012. Fireman’s Fund tracked the storm and had claims adjusters on standby to move quickly into affected areas when the hurricane hit. Customers were kept informed through text messages, emails and Facebook that the team was deployed and ready to respond, and how they could make a claim. When disaster struck, Allianz was on the ground and able to quickly respond. Reaching customers initially was a challenge due to widespread power outages, lack of cellphone service and road closures. However, through persistence, determination and a dose of creativity we met our promise of being there for our customers in their time of need. Claimants were relieved Allianz reached them so quickly and were reassured by the team’s daily presence – especially when climbing through rubble, into attics and inspecting damaged properties.

USA: SAVING THE GUITARS OF NASHVILLE ARTISTS

Nashville, home to America’s music industry and therefore known as ‘music city’, experienced heavy floods in May 2010. Fireman’s Fund, an Allianz company, immediately dispatched a team to the region to assess the damage. They found that flooding, strong winds, power outages, and fire from lightning strikes were the main issues. Apart from personal property claims, there were claims from the entertainment area with local musicians who approached the team and asked if Allianz could help. In response, the team brought in additional expertise helping the artists save their guitars and enabling the show to go in Nashville.

INDIA: CYCLONE NISHA BRINGS HOME THE VALUE OF INSURANCE

In 2010, the Indian state of Tamil Nadu was ravaged by cyclone Nisha. Among the few groups who responded was a team of five Bajaj-Allianz insurance specialists who went to the flooded region to help low income microinsurance holders settle their claims so they could start to rebuild their lives. With 16,000 claims in 44 villages within a matter of days, the scale of destruction from Nisha required a pooling of resources with community and humanitarian partners to speed up claims settlement. For many local people it made them realize the value of insurance – they saw others wading through the water carrying what few possessions had not been destroyed along with their insurance policy wrapped in cellophane to prevent it from getting wet. Interest in microinsurance policies has subsequently grown in the area.


THAILAND: CROCODILES AND CORROSION – ON SITE AFTER THE FLOOD

In 2011, Joachim Hufenreuter, an Allianz expert on damage to industrial facilities, was sent to Thailand to inspect factories flooded for six weeks by up to two meters of water. In the wrecked industrial parks he found waterlogged walls and mold, rusted machinery, spoiled food and fire damage. It was the first time in his life that he was warned about crocodiles. They had escaped from breeding farms and were roaming the flooded areas. Luckily he had no such frightening encounter. The floods impacted more than 14,800 businesses in the northern and central regions of Thailand, causing disruptions along global supply chains. The catastrophe cost the insurance industry an estimated 20 billion U.S. Dollars, which made the disaster one of the top five most expensive natural catastrophe events in modern history. While Joachim Hufenreuter’s job is to assess losses, for him the most important thing is to get businesses up and running again as soon as possible. Giving customers clarity and security is what he considers to be his main task.

CZECH REPUBLIC AND SLOVAKIA: TWO COUNTRIES, TWO COMPANIES, ONE ALLIANZ RESPONSE

The floods that hit the Czech Republic in the summer of 2013 resulted in an overwhelming number of claims, mostly from private households and small businesses. To respond quickly to the 3,000 customers with claims, Allianz Czech Republic turned to its neighbor, Allianz Slovakia (formerly part of the same company when Slovakia and the Czech Republic were the same country) for assistance. While claimants were surprised to be greeted in Slovak, they reacted very positively and with good humor when, for example, the word for roof tile was lost in translation.

AUSTRALIA: SHIPS IN DISTRESS

Many parts of Queensland were already flooded from extraordinary amounts of rainfall when the Brisbane river began to swell in January 2011. Before the river burst its banks, experts from Allianz’s subsidiary Club Marine, Australia’s largest pleasure craft insurer, were down at the marina helping to bring the boats to safety. Unfortunately, they couldn’t save them all, but they formed a joint search and rescue team with the coastguard – and were the only boat insurer to do so. Together they retrieved 45 of the 50 missing boats.
An insurer’s perspective on climate change

Flood protection: Learning from nature

Although we see evidence that climate change is occurring, it is humanity that is the key risk factor in many cases. Risk management should therefore be applied as part of prevention measures. As we know, it is often the paths less travelled that lead to success – for example, working in partnership with nature.

Markus Aichinger knows what nature is like. As a meteorologist who works for Allianz, he believes that torrential rains, summer floods and heatwaves are the current climatic trend. The record-breaking European floods in the summer of 2013, for example, were signs of this ‘New Normal’.

Markus works on Allianz Group’s strategy for cases in which one single event, like a major flood, leads to a large number of claims – known in the business as ‘accumulation risk management’. He says: “It is our challenge to be able to provide insurance within current accumulation risk management. He says: “It is our challenge to be able to provide insurance within current accumulation risk management.”

“Flood prevention: this is where the greatest potential lies.

On a social level, prevention and protection means not only implementing warning and emergency measures, but also taking a responsible approach to town planning. Sealed surfaces and concreted ground cannot absorb water. Locating industrial sites on floodplains and in coastal areas increases the risk of flooding, and dams alone simply move the problem downstream. The objective of flood protection is no longer simply to combat flood water using engineering methods. It is far more important and effective to leave nature intact.

For example, floodplains can act like a sponge and retain water, and mangrove forests work as natural coastal protection from storm surges.

The Allianz Environmental Foundation also emphasizes the importance of working together with nature. “It is important to control damage in an emergency, as well as to prevent the occurrence of emergencies as much as possible through long-term prevention concepts and applied research,” says Lutz Spandau, Chairman of the Foundation. “We must leave the floodplains and recreate more space for nature,” urges Spandau, stressing one of the lessons learnt in the latest flooding disaster in early summer 2013, when parts of Germany, Austria and the Czech Republic found themselves under water.

His call has led to action. Since the summer of 2013, the Allianz Environmental Foundation has been supporting a project in the Riverlandscape Elbe biosphere reserve near Magdeburg in Germany. The objective of the 30 or so construction measures is to significantly improve water retention in the area by 2016. Many similar projects have been implemented since the Foundation was established in 1990, and these show how flooding can be successfully managed in partnership with nature.

“We have to learn how to respond to freak events of nature.”

MARKUS AICHINGER
METEOROLOGIST FOR ALLIANZ SE

“We need to get off floodplains and give back more space to nature.”

LUTZ SPANDAU
DIRECTOR OF THE ALLIANZ ENVIRONMENTAL FOUNDATION

A COMMITTED CORPORATE CITIZEN
We take our responsibility to society very seriously. By offering skills, time and money, we strive to advance social wellbeing in our local communities and help to resolve societal challenges, including those of climate change. Read more online about the commitment of Allianz companies to help communities to reduce and adapt to climate change. Examples include Allianz companies supporting flood survival training, becoming the first corporate partner of a solar village in the Andes, biological surveying activities, and tree planting.

How we are doing

The following is a selection of our key performance data for 2013.

- **37.2%** CO₂ reduction per employee since 2006

- **41.7%** share of renewable energy

- **73** is the score of the Employee Engagement Index which measures satisfaction and loyalty

- **€18.6mn** donated to local communities

- **Over 24mn** people protected by our microinsurance products

- **Over 147,627** employees

- **2.35t** CO₂ emissions per employee

- **18.1%** reduction in energy use per employee since 2010

- **€1.7bn** invested in renewable energy projects

- **€1.1bn** revenues from our Green Solutions

- **€95.7bn** in sustainable and responsible investments

- **35.5%** of management positions held by women

**EXTERNAL RECOGNITION**

- **Dow Jones Sustainability Index**
  Allianz is the Insurance Industry Group Leader in the Dow Jones Sustainability Index 2013. We were awarded the RobecoSAM Gold Class.

- **Carbon Disclosure Project**
  Allianz is the leading insurance company globally and is included in the global Carbon Disclosure Leadership Index in 2013.

- **FTSE4Good**
  Included since 2001, Allianz is one of the long-standing members of the FTSE4Good Index series.

- **oekom**
  Allianz is again awarded Prime status, ranking us among the world’s best companies.

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8. Allianz and WWF, 2009, ‘Major Tipping Points’
We would like to thank all of our colleagues and partners who have helped us to create this Factbook.

Further information on Sustainable Development at Allianz can be found at www.allianz.com/sustainability

Cautionary note regarding forward-looking statements
The statements contained herein may include statements of future expectations and other forward-looking statements that are based on management’s current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. The company assumes no obligation to update any forward-looking statement.

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