

# Carbon Disclosure Project CDP6 Greenhouse Gas Emissions Questionnaire



Responding corporation: Allianz SE

## General Information

Allianz Group believes it is crucial to monitor and address emerging risks such as those driven by technological developments, growing environmental problems, climate change or social injustices. Allianz Group is very attentive to these issues as they pose potential threats and opportunities to our businesses and society. Since 2002, a Trend Assessment Committee associated with the holding company has been regularly reporting to the Board of Management on future trends, emerging risks and opportunities associated with such issues. The Allianz Group Risk Policy, updated in 2005, also places emphasis on emerging risks, and is binding for all business units worldwide. Newly identified risks are communicated openly and proactively to Risk Controlling. The issue of climate change has received particular attention from the Board, resulting first in the adoption of a climate strategy including a detailed 80 point action plan in the formation of a group climate strategy unit, called Allianz Climate Solutions GmbH. A partnership with the environmental group WWF drives the internal process of examining the impacts of climate change on investment processes and examining the business opportunities to incentivise climate-friendly customer behaviours.

In order to better assess risks and opportunities, and because Allianz is convinced that transparency benefits its customers in this regard, Allianz urges disclosure of climate-related risks. Allianz is a founding signatory of the Carbon Disclosure Project ([www.cdproject.net](http://www.cdproject.net)) and participates in the Enhanced Analytics Initiative ([www.enhancedanalytics.com](http://www.enhancedanalytics.com)) because, as a responsible investor, Allianz must take into account risks not apparent in standard financial reporting but nonetheless of financial relevance. Allianz's involvement in climate issues takes various forms: Allianz takes part in several initiatives geared to improve information basis on climate change and its impacts (e.g. Finanzforum Klimawandel: <http://www.bmbf.de/de/8186.php>) as well as to support governmental action for climate change (e.g. Global Roundtable on Climate Change, the Tokyo Declaration, 2° - German Businesses for Climate Protection, US based coalition of large corporates on climate change). Allianz Austria has joined the WWF Climate Group; Allianz Insurance (UK) signed the initiative "ClimateWise"; in Australia, Allianz sponsors a project to save rainforest species, and in Italy Allianz opened a WWF-affiliated oasis in Tuscany.

Company Turnover (also known as sales) in millions of US\$

142745

ISIN number

DE 000 840 400 5

CUSIP number

This number is for us not applicable: The acronym CUSIP typically refers to both the Committee on Uniform Security Identification Procedures and the 9-character alphanumeric security identifiers that they distribute for all North American for the purposes of facilitating clearing and settlement of trades.

SEDOL number

This number is not applicable for us: SEDOL stands for Stock Exchange Daily Official List, a list of security identifiers used in the United Kingdom and Ireland for clearing purposes.

## 1 – Risks and Opportunities

### Question 1(a)(i) Regulatory Risks

How is your company exposed to regulatory risks related to climate change?

Climate policy/regulation affects Allianz almost immediately through the risks we accept for our businesses and our customers across the insurance, banking and asset management business lines, as well as the risks Allianz faces as an investor through the company's holdings.

National legislation on CO<sub>2</sub> emission limits, be it through the European Emission Trading Scheme or through other forms of national regulation, will have repercussions on companies operating in those countries. As a large investor, Allianz is investigating the impact that such regulation might have on a stock value on an individual basis for those industry sectors most exposed to climate change regulation.

From a bank's perspective, the new liabilities for its clients resulting from legal obligations like the EU ETS are credit risks challenging the bank's investment and credit policies. The Kyoto Protocol and the EU ETS in particular impose direct compliance costs on the utility sector and energy intensive industries, but retail clients are also affected due to higher costs for energy and electricity. These additional costs are business risks for the bank which might reduce the competitiveness of a bank's GHG-intensive business clients due to higher mitigation costs. In addition, diverging climate policies with different compliance costs in different countries might pose problems for globally acting companies, with implications for their competitiveness.

The key impact areas in asset management are in tradable corporate shares (equities) and property. For equities, climate change is an issue that has to be considered at the company level, based on

weather impacts, regulation and reputation. For insurance, the incorporation of new climate change related regulations such as the EU Flood Directive poses potential repercussions that must be studied in the context of Allianz risk management

In experts' discussions, climate change is also considered to be a threat to casualty insurance through litigation cases that may arise for insurance clients whose products have caused high greenhouse gas emissions (analogous to the cases occurring in the tobacco industry). This issue is also under review by Allianz legal and insurance experts.

Non-compliance to the Emission Trading Scheme can be a risk for our insurance clients. For companies that have reduced their CO<sub>2</sub> emissions and are able to sell their emissions certificates our French group company AGF offers insurance coverage in the event that damage or loss occurs which prevents the ability to sell their CO<sub>2</sub> pollution certificates as planned. AGF is among the very first insurers to become active in this new and innovative market. Other Allianz operating entities will follow by offering similar products.

Since climate regulation is a serious topic for a financial services provider, Allianz has conducted several studies on the effect of climate regulation on the economy in general as well as onto Allianz. They are mentioned in the following list:

- Dresdner Kleinwort Equity Research 'Automotives' launched a research paper on CO<sub>2</sub> penalty scenarios for the auto industry in February 2007. The paper puts the additional cost for European carmakers between €1.4 bn and €3.3
- October 4, 2007: the Allianz Dresdner Economic Research group released a new study on the 'third industrial revolution' in October 2007, examining the changes towards more energy and resource efficiency and assessing the long-term effects of enhanced climate protection on the German economy. It identifies which sectors will be amongst the winners and losers of enhanced climate protection on basis of mitigation pressure on the one hand and growth potentials on the other hand.
- A Dresdner Kleinwort Investment Banking report from January 2008 analyses the ETS framework for the next trading periods and finds that higher auctioning of CO<sub>2</sub> allowances will be negative for the European generators (especially carbon intensive ones) under a potentially amended EU Emission Trading Directive 2013 - 2020.
- An Allianz/WWF piece of research to be published in July analyses G8 countries' climate change policies.

Thus, current and future climate regulation is a crucial consideration for Allianz businesses. The Kyoto-based emission trading regime is a major factor that we will have to account for through at least 2012, and probably longer assuming further international agreement. That is why Allianz has actively called for clarity on a post-2012 international climate policy, so we can continue to proactively manage the risks and opportunities of climate change and associated regulation for Allianz as an investor, for our businesses, and for our customers and society.

## Question 1(a)(ii) Physical Risks

How is your company exposed to physical risks from climate change?

### **Direct impact of physical risks:**

The number of natural catastrophes is already clearly trending upwards. The vast majority of these are weather related. This suggests there is a connection with the slow but constant increase in global temperatures resulting from climate change. Allianz sees a connection between climate change and frequency of extreme weather, with significant implications for insurers. Climate change presents far-reaching risks for businesses and investors through:

- Weather Changes: Hurricanes, typhoons and windstorms
- Heat-waves and droughts
- Sea level rise
- Hydrological Change - Flooding and rainfall and also...
- Macro Economic: Equity markets may fall due to weakened investor confidence, and economic slowdown may cause interest rates to fall.

Allianz has little direct exposure to physical risks as the company does not have complex manufacturing facilities that face physical climate risks.

In general physical damage due to climate change could and does impact the Allianz Group in a few other ways:

- Physical damage to corporate property due to more frequent extreme weather events
- Direct losses due to drought, precipitation, soil erosion, flood
- Damages of the IT infrastructure
- Loss of working hours through employees not being able to commute or being absent due to climate change induced illnesses. For example, in the past, damage only occurred during the Kyrill windstorm when some Allianz companies send their workforce home to avoid employees being injured by debris or trees. Similar small-scale business interruptions also took place in other parts of the world, mainly in Asia.
- Additional costs (e.g. energy prices) due to changes of weather patterns e.g. in the utilities sector.

Allianz is preparing for eventualities that may threaten its operational business units through Allianz Group Business Continuity Management, which was set up in 2003. In case of weather disruptions, pandemics, etc., this management system guarantees the possibility to fall on back-up IT infrastructure and data systems as well as alternative buildings or teleworking.

A special crisis committee has also been put in place. The crisis committee monitors and responds to emergencies. It is a mechanism for uninterrupted and expedient board level decisions in the event of scenarios like an Influenza pandemic. Crisis management falls under the responsibility of the Head of Group Communications Emilio Galli Zugaro, one level below the Board of Management.

## Question 1(a)(iii) General Risks

How is your company exposed to general risks as a result of climate change?

### **Indirect impact of physical risks, general risks, scenarios and timescales:**

The impact of climate change related physical risks creates significant costs for Allianz through the risks it accepts from its clients.

Banks are affected for example by the difficulty in judging a company's ability to repay a long-term loan and for asset managers climate change may impact their client's investments.

However, physical risks due to climate change will mostly hit Allianz as an insurer. Once, insurers relied on their past experience to determine projected loss levels. Yet, there has been a fifteen-fold increase in weather-related insurance claims over last 30 years. In Allianz's global industrial insurance business, 40% of damages are due to storms and floods. Between 2010-2019, Allianz estimates average losses for the insurance industry could grow to US\$41 billion per annum.

"Hedging climate change" is the latest Allianz study that focuses on the effects of the predicted insurances losses due to natural catastrophes. Urbanization along floodplains and in coastal regions is identified as one major cause of the increase of insurance claims. The study tries to identify possible effects of this development and discusses approaches to deal with them.

According to research, there are several uncertainties insurance industry will have to face.

- Increased underwriting risk
- Increased macroeconomic risk
- Increased capital risk
- Using the capital markets to protect against extreme events

Over the past years, work on catastrophe models has intensified, which can be used to simulate the damage that could be caused by potential catastrophes. While catastrophe models can reduce uncertainty, diversification is still required. However, there are questions about whether traditional reinsurance can provide adequate levels of inter-temporal diversification to cover the major risks caused by natural forces, particularly in the context of climate change.

A way to expand insurability is to diversify risk in the capital markets. So far, Allianz has launched two catastrophe bond (cat bond) programs (for more information, see answer to question number 1 b ii). According to the Allianz report, one way to improve the insurability of catastrophes is to develop risk partnerships between private insurers and governments. A few examples of insurer-government risk partnerships already exist, such as flood coverage in the UK or government reinsurance schemes in Australia.

Yet, a large share of catastrophe risks still remain uninsured. In the biggest individual case of financial loss to date, Hurricane Katrina caused 144 billion dollars in total losses in the southern United States, only 49 billion of which were insured.

The rift between total losses and insured losses is greatest in developing countries, where insurance markets are still rudimentary. The floods that struck China in 1996, for example, caused around 24 billion dollars in damages, of which less than 500 million were covered by insurance. According to Munich Re statistics, Asia was hit by the most natural disasters (4500) during 1980 to 2005, which together killed over 800,000 people. Although these disasters also included non-weather catastrophes like earthquakes, most damages and fatalities were caused by storms and flooding.

## Question 1(a)(iv) Risk Management

Has your company taken or planned action to manage the general and regulatory risks and/or adapt to the physical risks you have identified?

Allianz has set up a climate strategy based on an agenda for action that emerged from its first climate change report in co-operation with WWF. The study was conducted in 2005 to evaluate the implications of climate change on Allianz's businesses and the financial sector.

In January 2006, Allianz adopted the climate strategy applicable to the whole Group which included three major objectives:

1. We wish to improve our identification of climate related risks in the insurance, banking and asset management lines of business and to quantify them as precisely as possible. This will be achieved by the end of 2007. We will be guided by sustainability criteria throughout this process.
2. We are working on tapping into new business opportunities resulting from climate change (for example, investment in renewable energy or in trading emissions rights).
3. We sponsor cooperation with scientific institutes with an acknowledged involvement in these areas.

Further information on the climate strategy is available on our website at [www.allianz.com/sustainability](http://www.allianz.com/sustainability) and [www.allianz.com/climate](http://www.allianz.com/climate).

The climate strategy was to prioritize and focus developing Group responses to climate risks and opportunities. An Allianz climate core group has been set in place at Allianz comprising experts from insurance, banking, asset management and risk management in order to coordinate emerging climate activities. This group has developed the "Climate Action Plan 2006-2007" with concrete objectives and responsibilities. The climate action plan included 17 objectives and 80 measures for each of the business areas as well as for in-house ecology and communication. The action plan also assigned responsibilities and timeframes for the implementation of the strategy.

In May 2007, the Allianz Executive Board decided to establish "Allianz Climate Solutions" as a 100 percent subsidiary of Allianz SE. Board Member Joachim Faber explained that, "As professional risk managers, we want to bundle our international know-how from the fields of insurance, banking and asset management in 'Allianz Climate Solutions' and offer customers tailor-made solutions based on green products and services."

### **Action taken on physical risks of Allianz insurance clients:**

The insurance sector is changing its risk assessment from one based on historical data to now include future weather related risks. The effect on insurance could include:

- Increases in premiums in areas of higher weather related risks
- Higher demand for climate change related products that mitigate related risks and reward environmentally responsible behaviour.

Allianz insurance and reinsurance are approaching this challenge with the following action:

- Participation in climate change related research to allow us to better predict and underwrite climate-associated risks.
- Working with industrial clients to develop climate change risk management expertise and related insurance products in line with low-carbon technologies.
- Upgrading risk assessment methodologies, such as the identification of potential liabilities from carbon emissions, and adapting 'due diligence' processes.

- Co-operation with Risk Management Services for a better evaluation of natural catastrophes
- Allianz Global Corporate and Specialties has developed a program for analyzing risk scenarios and has implemented an innovative IT-supported program that makes it easier to give an estimate of the risks posed by cases involving catastrophes. Initially, all available CAT scenarios (catastrophe scenarios) are played through for each individual potential insurance case and the level of premium is then defined. The CAT insurance premium arising from the simulation procedure is then binding
- Allianz reinsurance has a dedicated team of 16 natural catastrophes experts working on the assessment of the exposure due to climate change. They are internally providing expertise and support to the different business units.
- Incorporation of new climate change related regulations in Allianz risk management (e.g. EU Flood Directive)
- Enhanced fire / machinery breakdown approach in Loss Control Engineering to capture objective risk assessment and grading criteria for natural hazards
- Development of dynamic accumulation tools and models establishing expertise for natural catastrophes across the group
- The Zürs Flood System enables to refine the tariff system on the basis of a sophisticated flood zoning in Germany. It is a control of exposure to natural catastrophes and other climate-related risks by an adequate risk assessment tools such as flood zoning.
- In 2007, Allianz has issued two cat bonds covering flood and windstorm risk in different parts of the world.
- Today, insurers are underwriting more prudently in vulnerable regions and avoid excessive risk accumulation, with both increased deductibles and rates. The industry has also created incentives for home buyers and developers to promote disaster-resistant building structures.

### **Action taken by the Bank:**

Along with insurers, banks are also affected – for example by the increased difficulty in judging a company’s ability to repay a long-term loan – as are asset managers, because of course the stock markets can react very sharply to natural disasters.

Dresdner Bank has taken the role of a leading player in the emission trading market.

In early June 2006, the Dresdner Bank management board decided to commence specialised renewable energy project financing.

The effect of climate change on the banking industry includes factoring climate change issues into a company’s repayment risk profile as well to determining stock market reactions to natural disasters. Specific steps are being taken by Dresdner Bank to deal with the challenges of climate change:

1. Development of assessment tools to be applied to carbon risks and carbon risk reduction strategies.
2. Defining carbon reduction risk requirements and market strategies for clients.
3. Facilitating finance for public programmes that foster low-carbon technologies.

### **Investment Banking and Asset Management:**

The European Carbon Investors and Services (ECIS) was founded with Dresdner Kleinwort as one of the founding members. 18 carbon market leaders comprising 13 investment banking groups, three Kyoto project developers, an exchange and an international law firm have joined forces in the ECIS to represent the market perspective on emissions trading and climate investments to policymakers world-wide. As one of its first activities, ECIS asked the EU Commission for stringent allocations in the second phase of the EU ETS.

DKIB has also issued a climate awareness bond.

Understanding how, and to what extent, climate change will impact or enhance the value of an investment is crucial to protecting and developing our relationship with shareholders. For equities, climate change is an issue that is rooted in weather impacts, regulation and reputation and must be examined on a company by company basis.

Methodology:

1. By engaging with company management to understand how their business is affected by climate change.
2. By evaluating client portfolios and potential changes in policy and legislation related to climate change.
3. By seeking research that can be integrated into mainstream analysis and investment decisions.
4. By trading emissions

For asset managers it is a duty to look at all risks, including climate change that may be impacting their client's investments. In the end, carbon risk will be a market risk. Thus, Allianz must balance the short term with the long term risks. A dedicated SRI Research Team within AGI/RCM is focusing on the risks associated with climate change.

### **Risks associated with renewable energy:**

The application of renewable energy in form of wind energy, biomass, or even large hydropower plants is not free of problems, technical complications or environmental consequences. The example of wind energy installations alone has revealed that the distribution into the market through the political promotion of renewable energy can have consequences. The technological development cycles in wind especially were shortened with the consequence of an enormous increase of damages due to several reasons (e.g. technical problems, lack of standardised maintenance etc.). Insurance enabled the market to grow despite these problems and thus took over the risks in the early phases of the market and the technological development. The Allianz Center for Technology was involved in the dialogue with producers of wind turbines and certifiers, and recommended a condition monitoring system as a basis for the risk assessment and underwriting of wind turbines. Lessons learned from this example are helpful for the future risk assessment of renewable energy technologies, and has shown that research needs to be conducted on both the opportunity and the risk side of renewable energy. In October 2006, Allianz Economic Research launched a report on the biomass and bioenergy sector in Germany. Accompanied by a comprehensive Working-Paper, the sector report shall support Allianz's and Dresdner's client relationship managers in their activities with clients from the bioenergy sector. A further sector report on photovoltaics was set for 2007.

Apart from the above mentioned risk management actions, Allianz has partnered with one of the world's largest and most experienced independent conservation organizations, WWF, with a global network working with politics, businesses, consumers, and conservationists, to find solutions to climate change and to demonstrate a leadership financial sector response.

Over the three years the two partners will cooperate in the following areas:

1. Credible Leadership:
  - Comprehensive, integrated approach to reducing carbon footprint, from operations to investments
  - Climate-conscious decision making from management to employees.
2. Research for Solutions
  - Going where the green growth is - from renewable energy and energy efficiency, to eco-friendly investments and to carbon trading.



## Question 1(a)(v) Financial and Business implications

How do you assess the current and/or future financial effects of the risks you have identified and how those risks might affect your business?

The acceptance and active management of risk are core competencies of a financial services provider. The issue is often not about the avoidance or minimization of risks, but much more about using the business opportunities that result from professional risk management.

Our risk governance structure is underpinned by our Group Risk Policy that was adopted in 2003 and that has continuously adapted to meet our business needs. Among others, "Emerging" and "Reputational Risks" have become central to our risk management philosophy and demonstrate that we are continually responding to new challenges. 'Emerging Risks' may result from technological developments, environmental risks or social inequalities that could endanger future business success.

### **Procedures and processes:**

Every Allianz company is provided with adequate shareholder equity as protection against unfavorable developments. In order to assess our risks, we:

- investigate capital requirements imposed by a country's regulatory authorities or applied by rating agencies for credit ratings; for this purpose, we run scenario analyses to understand the 'stress' our company's capital structure could be subjected to
- use a common model for calculating economic risk capital consistently across companies; this model quantifies major risks such as asset liability mismatch, capital market, credit, and actuarial and operational risks
- conduct comprehensive qualitative risk assessments also covering emerging, reputational and strategic risks.

### **Early warning system**

Since 2002, our Trend Assessment Committee (TAC) has been identifying and evaluating risks and opportunities that result from future trends, such as climate change

To address risks we have developed a number of products while incorporating environmental and social aspects into the underwriting process. We use risk mapping to visualise the results of a strategic evaluation of risks and opportunities emerging from trends and geopolitical events; it also shows the potential impact of the trend or event and the time horizon in which the events are likely to be felt. In addition, stakeholder dialogue and expert opinion are a key part of our risk identification and monitoring process.

Although market regulation issues posed by climate change vary by line of business, solvency related risks remain central to all insurers and all business lines. Therefore, the threat that weather-related risks pose to insurer solvency is of universal concern for insurance. The increasing trend of natural disasters is recognised within Allianz Group Risk and is already incorporated in the capital risk models.

When we refer to scenarios, using relatively conservative total loss to insured loss ratios of 2:1 and 3:1, the projected average annual total damages due to weather related insurance claims in the period 2010 to 2019 can be in the region of \$US80 – US\$120 bn. However, annual losses can vary considerably above and below the average. For example, in 2005, insured losses were more than three times trend average, and have reached nearly four times trend on another occasion. On this basis, annual total losses of up to US\$400 billion are not merely possible but probable.

Regulatory risks can also affect our business due to e.g. liability in the case of carbon trading. If a client is not able to pay for carbon emissions or is not delivering carbon credits, we as an insurer would be liable to pay for it. However, this applies only in the case if we offered carbon credit guarantees to a larger extent which is not the case today.

## Question 1(b)(i) Regulatory Opportunities

How do current or anticipated regulatory requirements on climate change offer opportunities for your company?

Regulatory changes to combat climate change are providing a huge portfolio of opportunities. They arise in their majority from instruments of climate change mitigation such as the Kyoto mechanisms (emission trading, clean development mechanism and joint implementation) or on the level of national policies such as subsidies for renewable energy (e.g. Energy feed-in law in Germany).

In co-operation and partnership with Non-Governmental Organizations Allianz will further investigate how investment decisions should account for climate change and climate policy.

Some examples of how Allianz is using regulatory requirements and converts them into opportunities are shown below:

- Allianz is a leading insurer in Germany and Brazil for renewable energy solutions
- Allianz Global Investor's "Ecotrends Fund" invests in eco-friendly sectors including renewable energy in Europe, US and Asia
- Allianz Capital Partners is investing a proportion of life insurance premiums into wind farms across Europe (€ 500 M by 2010).
- Allianz's banking arm, Dresdner Bank, is the leading service provider for the rapidly growing European emissions trading market.
- Customers increasingly demand "green" products that not only cover their risks but also reward their environmental behaviour. Therefore, Allianz has and continues to introduce green product and service offerings in several countries.
- In April 2008, Allianz Engineering launched a suite of new products in line with the new EU Energy Performance of Buildings Directive (EPBD). The suite includes Energy Certification for Buildings which offers energy efficiency certificates for commercial buildings and buildings occupied by public authorities. Another product is an Energy Certification for Heating & Cooling Systems which offers inspections of air conditioning systems. A similar product is being offered in Germany.

## Question 1(b)(ii) Physical Opportunities

How do current or anticipated physical changes resulting from climate change present opportunities for your company?

Capital markets have a role to play in the diversification of natural catastrophe risks, because the potential damage in relation to market capitalisation is relatively small. For example, the value of the average fluctuation of all the net assets traded daily in the US alone amounts to \$US133 billion. Thus, larger insurers (and investment bankers) have developed a number of capital market instruments, in particular, catastrophe bonds. Cat bonds have proven popular among investors. The volume of bond

issuances in 2007 has about tripled compared to 2005. Cat bonds offer protection for catastrophe risk and provide access to non-traditional retrocession capacity on a multi-year basis and with minimal credit exposure.

In 2007 Allianz has launched two cat bonds, one to transfer the risks of severe floods in Britain and earthquakes in most parts of North America (except California), and the other to transfer risks of windstorms in seven European countries. Allianz sponsored 200 million euros of windstorm cat bond. The cat bond on windstorms was issued by Blue Fin Ltd, a Cayman Island special purpose entity, and has an aggregate volume of 200 million euros. It is the first series under a program with an initial maximum size of one billion euros. To date it is the largest single placement of European windstorm risk in the market for insurances-linked securitization. This insurance-linked security transfers the risk of windstorms to investors and uses an index based on wind speeds. The flood and earthquake bond has raised around 150 million dollars (more than 100 million euros) with a maturity period of six years. Both programs have a maximum size of one billion euros and dollars respectively.

These risks were chosen because they are high risks that are insufficiently covered by existing reinsurance. The market response was positive and the bond was several times oversubscribed. Allianz will continue to explore the potential of the capital market to absorb natural catastrophe risks.

## Question 1(b)(iii) General Opportunities

How does climate change present general opportunities for your company?

In May 2007, Allianz formed the Allianz Climate Solutions Group to focus on developing tailor made climate change related products for our customers across all our service offerings. In addition, we are continuously researching and developing new service offerings and working with our clients to help address their climate change challenges through our core services – insurance, asset management and banking.

This new business unit also focuses on the growing market for renewable energies, clean technologies and carbon related services. ACS will act as a source for investment opportunities related to renewable energies and as a think tank for future investment trends of the Allianz Group.

Allianz Global Investors' RCM (signatory to the UN Principles for Responsible Investment) EcoTrends fund invests in companies offering products and services in renewable energy, environmental protection (environmental quality, waste disposal, recycling) and water enhancement projects. The fund has collected 1.96 billion euros until Dec 2007 since its launch in May 2006.

Allianz is member of the United Nations Environment Programme Insurance Working Group (UNEP FI IWG) which is, under the frame of the Project "Principles for Sustainable Insurance", investigating new insurance schemes to address key sustainability challenges such as climate change in developing countries, particularly those prone and vulnerable to natural hazards. Microinsurance in combination with risk finance can help low-income populations in high-risk areas to overcome averse weather risks. Please find also more information under [www.allianz.com/sustainability](http://www.allianz.com/sustainability) > challenges >> climate change.

## Question 1(b)(iv) Maximizing Opportunities

Do you invest in, or have plans to invest in products and services that are designed to minimize or adapt to the effects of climate change?

Climate change has led to investment or planned investment in order to maximise climate change opportunities.

Allianz is through its Climate Change Strategy maximising its opportunities in the area of mitigation of and adaptation to climate change. A thorough list of products and services as well as investments is attached. Please find also more information under [www.allianz.com/sustainability](http://www.allianz.com/sustainability) > challenges >> climate change.

## Question 1(b)(v) Financial and Business Implications

How do you assess the current and/or future financial effects of the opportunities you have identified and how those opportunities might affect your business?

Allianz Climate Solutions GmbH (ACS) is a dedicated business unit for the analysis and assessment of business solutions to combat climate change. Since ACS has been set up as a profit centre, the assessment of financial and business implications in this area are central to this unit!

## 2 – Greenhouse Gas (GHG) Emissions Accounting

### Question 2(a)(i) Reporting Boundary

Please indicate the category that best describes the company, entities or group for which your response is prepared:

Companies over which financial control is exercised – per consolidated audited Financial Statements.

Would you like to provide any additional information relating to this question that you have not provided elsewhere?

In 2007 the environmental management system of Allianz covers 112.000 employees world wide which constitutes ca. 70 % of employees on a global basis. In April 2008 a Board decision has been taken to increase the coverage to 80 % of employees in autumn 2008.

On that basis we are extrapolating the greenhouse gas emission data to 100 % of employees of fully consolidated companies in which environmental strategy can be fully applied.

Out of scope: Companies where Allianz is not the main shareholder were not included in the reported data. Consolidated companies from Allianz Capital Partners were excluded from the figures as they are pure investments unaffected by Allianz Group operational strategies.

Currently we are covering the following 23 group companies in the EMS (Environmental Management System).

- Allianz (Group Center / Holding)
- Allianz Deutschland AG (Allianz Germany)
- Dresdner Bank (Germany)
- Euler Hermes (Germany)
- AGF Group France
- Allianz spa (formerly RAS Group Italy)
- Allianz UK
- Fireman's Fund Insurance Company (FFIC)
- Allianz Shared Infrastructure Services GmbH
- Allianz Australia
- AGI Germany
- Allianz Elementar Austria
- Allianz Slovenska
- Allianz Suisse
- Allianz Spain
- Allianz Netherlands
- Allianz Belgium
- Allianz Malaysia
- Mondial Assistance (F, UK, E, US, Br)
- Allianz Life (USA)
- Allianz Hungary
- Oldenburgische Landesbank AG

## Question 2(a)(ii) Reporting Year

Please explicitly state the dates of the accounting year or period for which GHG emissions are reported.

Start date: 01 January 2007

End date: 31 December 2007

Financial accounting year: 01 January 2007

Please note: The environmental data of Allianz Group are extrapolated to 100 % of employees of fully consolidated companies in which the environmental strategy can be fully applied.

## Question 2(a)(iii) Methodology

Please specify the methodology used by your company to calculate GHG emissions.

The systematic of the calculation of GHG emissions base on VfU indicators (VfU= Association of Environmental Management of Banks, Saving Banks and Insurance companies) which is an international standard especially for the finance sector elaborated by a group of financial services providers having convened in 2005. Apart from that Allianz Group is using the conversion factors of GHG protocol solely for the CO<sub>2</sub> emissions deriving from road and air travel due to the possibility of larger intra-sectorial comparison with our peers.

Please note:

The calculation of GHG emissions base on the systematic of VfU indicators 2005 and GRI-G3 (indicators EN16 and EN17). So the direct GHG emission (Scope 1) covers the emission of direct energy use and the indirect GHG emission (Scope 2) covers the emissions by generation of our electricity consumption and use of district heating. Other indirect GHG emissions (Scope 3) cover the emission by use of paper and water and waste disposal and business travel (incl. total travel by road)

## Question 2(b) Scope 1 and Scope 2 of GHG Protocol

Are you able to provide a breakdown of your direct and indirect emissions under Scopes 1 and 2 of the GHG Protocol and to analyse your electricity consumption?

Please note:

The calculation of GHG emissions base on the systematic of VfU indicators 2005 and GRI-G3 (indicators EN16 and EN17). So the direct GHG emission (Scope 1) covers the emission of direct energy use and the indirect GHG emission (Scope 2) covers the emissions by generation of our electricity consumption and use of district heating. Other indirect GHG emissions (Scope 3) cover the emission by use of paper and water and waste disposal and business travel (incl. total travel by road)

Our environmental management system is currently covering countries mentioned under Annex B apart from Malaysia. Our Group company in Malaysia has around 1500 employees. Due to the small size of this subsidiary and thus, due to practical reasons we are not singling out this country in our list.

The environmental data of Allianz Group are extrapolated to 100 % of employee of fully consolidated companies in which the environmental strategy can be fully applied.

Please enter the accounting year used to report GHG emissions details below.

Start date: 01 January 2007

Scope 1 Direct GHG Emissions: Please provide:

a. Total global Scope 1 activity in Metric Tonnes CO<sub>2</sub>-e emitted.

73175 CO<sub>2</sub>e metric tonnes.

b. Total Scope 1 activity in Metric Tonnes CO<sub>2</sub>-e emitted for Annex B countries.

Not answered.

Scope 2 – Indirect GHG emissions: Please provide:

c. Total global Scope 2 activity in metric tonnes CO<sub>2</sub>-e emitted

415102 CO<sub>2</sub>e metric tonnes.

d. Total Scope 2 activity in metric tonnes CO<sub>2</sub>-e emitted for Annex B countries

Our environmental management system is currently covering countries mentioned under Annex B apart from Malaysia. Our Group company in Malaysia has around 1500 employees. Due to the small size of this subsidiary and thus, due to practical reasons we are not singling out this country in our list.

Electricity consumption

e. Total global MWh of purchased electricity

944855 MWh.

f. Total MWh of purchased electricity for Annex B countries

Not answered.

g. Total global MWh of purchased electricity from renewable sources

54462 MWh.

Would you like to provide any additional information relating to this question that you have not provided elsewhere?

Please note:

The calculation of GHG emissions base on the systematic of VfU indicators 2005 and GRI-G3 (indicators EN16 and EN17). So the direct GHG emission (Scope 1) covers the emission of direct energy use and the indirect GHG emission (Scope 2) covers the emissions by generation of our electricity consumption and use of district heating. Other indirect GHG emissions (Scope 3) cover the emission by use of paper and water and waste disposal and business travel (incl. total travel by road)

Our environmental management system is currently covering countries mentioned under Annex B apart from Malaysia. Our Group company in Malaysia has around 1500 employees. Due to the small size of this subsidiary and thus, due to practical reasons we are not singling out this country in our list.

The environmental data of Allianz Group are extrapolated to 100 % of employee of fully consolidated companies in which environmental strategy can be fully applied.

## Question 2(c)(i) Other Emissions – Scope 3 of GHG Protocol

How do you identify and/or measure Scope 3 emissions?

The systematic of the calculation of GHG emissions base on VfU indicators (VfU= Association of Environmental Management of Banks, Saving Banks and Insurance companies) which is an international standard elaborated by a group of financial services providers having convened in 2005. According to this standard other indirect GHG emissions (Scope 3) are calculated from the internal consumption of fossil fuels (e.g. transport) and business travel ( by rail and by road and by air) as well as paper consumption, water use and water output.

Apart from that Allianz Group is using the conversion factor of GHG protocol solely for the CO<sub>2</sub> emissions deriving from road and air travel due to the possibility of larger intra-sectorial comparison with our peers.

Please provide where possible:

a. Details of the most significant Scope 3 sources for your company.

According to this standard other indirect GHG emissions (Scope 3) are calculated from the internal consumption of fossil fuels (e.g. transport) and business travel (by rail and by road and by air) as well as paper consumption, water use and water output.

Numbers of 2007 in detail:

Total other indirect GHG emissions (Scope 3) = 220728 metric tons

from business travel = 170138 metric tons

from use of paper = 27991 metric tons

from use of fossil fuels = 15382 metric tons

from waste output = 6274 metric tons

from use of water = 944 metric tons

Footnote: These numbers are extrapolated to 100% of employees of fully consolidated companies in which environmental strategy can be fully applied.

b. Details in metric tonnes CO<sub>2</sub>-e of GHG emissions in the following categories:

i Employee business travel.

170138 CO<sub>2</sub>e metric tonnes

ii External distribution/logistics

Not answered

iii Use/disposal of company's products and services.

Not answered



#### iv Company supply chain.

50590 CO<sub>2</sub>e metric tonnes

#### c. Details of the methodology you use to quantify or estimate Scope 3 emissions.

We use the following conversion factors:

- Fossil fuels = VfU calculation
- Business Travel = in general GHG Protocol - only for specific transport types we use specific conversion factors (e.g. hybrid cars)
- Paper = VfU calculation
- Water = VfU calculation
- Waste = VfU calculation

#### Question 2(d) External Verification

(i) Has the information reported in response to Questions 2(b)- (c) been externally verified or audited or do you plan to have the information verified or audited?

Yes.

(ii) If your answer to question 2d(i) is Yes, please provide or attach a copy of the audit or verification statement or state your plans for verification.

Under the frame of our cooperation contract with WWF we are currently planning to have our environmental data reporting externally verified. For steering the verification process we have a dedicated international environmental core team. We are also tightly working together with WWF as external coach for this process. The external process has started in May 21st 2008 and is foreseen to be finalised beginning of July 2008 with an external assurance document published in the sustainability status report (PDF file on the webpages).

(iii) Please specify the standard or protocol against which the information has been audited or verified.

The verifying company is using the VfU standard and the GRI methodology and criteria.

## Question 2(e) Data Accuracy

Does your company have a system in place to assess the accuracy of GHG emissions inventory calculation methods, data processes and other systems relating to GHG measurement? If so, please provide details. If not, please explain how data accuracy is managed.

Yes, we do have a system. Data quality is checked according to VfU indicators standard (2005).

Providing details of data quality is important in the interest of open and transparent communication. It also highlights the efforts made in the area of data collection and is thus an important internal and external information for the improvement of the environmental management system.

Would you like to provide any additional information relating to this question that you have not provided elsewhere?

Within Allianz an assessment of absolute figures is made based on the following parameterisation of data quality:

Description of data quality:

- 3 = data based on exact measurement, such as supplier invoice, meter
- 2 = data based on calculation / detailed estimate
- 1 = data based on rough estimate
- 0 = data not reported

The determination of data quality on a corporate level covering a number of locations with different levels of data quality (e.g. some buildings have measured energy data, others have calculated data), follows this procedure:

1. multiply the data quality of location A by the number of employees at A
2. do the same for locations B and C, etc.
3. add the totals from each location and divide by the overall number of employees within the system
4. the resulting figure is the corporate average data quality for a certain indicator

You will find the quality of data 2007 in the attached environmental balance 2007 of Allianz Group

Footnote: The numbers in this file are extrapolated to 100% of employees of fully consolidated companies in which environmental strategy can be fully applied.

## Question 2(f) Emissions History

Do the emissions reported for your last accounting year vary significantly compared to previous years? If so, please explain reasons for the variations.

No, they do not vary significantly.

## Question 2(g) Emissions Trading

i) Does your company have facilities covered by the EU Emissions Trading Scheme?

No, we do not. (Please go to question 2(g)(ii) below)

ii) What is your company's strategy for trading or participating in regional and/or international trading schemes (eg: EU ETS, RGGI, CCX) and Kyoto mechanisms such as CDM and JI projects? Explain your involvement for each of the following:

EU ETS

Emissions Trading scheme is not applicable for Allianz.

CDM/JI

CDM scheme is not applicable for Allianz.

Would you like to provide any additional information relating to this question that you have not provided elsewhere?

Allianz as a financial services provider is not included in the emission trading scheme. However, from a point of view of business opportunities we consider the Kyoto mechanisms as very relevant for our company and thus, we are providing products and services around this scheme. For more information, please consult our webpages: [www.allianz.com/sustainability](http://www.allianz.com/sustainability).

## Question 2(h) Energy Costs

i) Please identify the total costs in US \$ of your energy consumption eg from fossil fuels and electric power. If you want to enter a number less than 1, please ensure you use a decimal point (e.g. 0.3) and NOT a comma (e.g. 0,3)

192402125 US\$

ii) What percentage of your total operating costs does this represent?

1 %

iii) What percentage of energy costs are incurred on energy from renewable sources?

4.82 %

## More details

i) District heating, renewable heating, fossil fuels and electricity energy costs are included into the total energy costs.

Footnote: This number is extrapolated to 100% of employees of fully consolidated companies in which the environmental strategy can be fully applied.

ii) These costs refer to administrative expenses (see Group Annual Report, page 218 ff., footnote 37).

## 3 – Performance

### Question 3(a) Reduction Plans

i) Does your company have a GHG emissions reduction plan in place? If so, please provide details along with the information requested below. If there is currently no plan in place, please explain why.

Yes, we have a reduction plan in place.

ii) What is the baseline year for the emissions reduction plan?

2006

If you want to give further information or describe a rolling target, please do so here.

We have set our baseline to 2006.

iii) What are the emissions reduction targets and over what period do those targets extend?

Allianz has committed itself to a CO<sub>2</sub> emission reduction target of 20 % on a global basis until 2012!

iv) What activities are you undertaking to reduce your emissions eg: renewable energy, energy efficiency, process modifications, offsets, sequestration etc? What targets have you set for each and over what timescales do they extend?

We have developed a CO<sub>2</sub> concept that focuses on the three major emittents: energy (about 70 % of Allianz CO<sub>2</sub> emissions), business travel (ca. 24 % of Allianz CO<sub>2</sub> emissions) and paper (ca. 4 % of Allianz CO<sub>2</sub> emissions). The concept involves four major steps of reduction modes listed according to priority:

1. Avoidance of emissions
2. Reduction of emissions
3. Substitution of emissions
4. Neutralisation of emissions (only in the case not further reduction/substitution is possible).

We have defined global measures that concern real estate, procurement, travel.

Each Group company is obliged to reduce the CO<sub>2</sub> emissions by the same target and is obliged to have binding measures in place. Due to various country specific conditions, each group company can select their own measures which are most appropriate for and specific to their country out of the portfolio of measures proposed.

On group level we have a process in place to control the implementation of measures and their CO<sub>2</sub> achievements. After two years we will have a re-evaluation of the emission reduction achieved to be able to steer the process.

v) What investment has been or will be required to achieve the targets and over what time period?

The investment calculated refers to the human resources that will globally enable the system to be set up and managed. Each in the Environmental Management System participating Group Company has nominated an environmental manager for this task.

Each Group company is obliged to reduce the CO<sub>2</sub> emissions by the same target and is obliged to have binding measures in place. Due to various country specific conditions, each group company can select its own measures which are most appropriate for and specific to their country out of the portfolio of measures proposed.

On group level we have a process in place to control the implementation of measures and their CO<sub>2</sub> achievements. After two years we will have a re-evaluation of the emission reduction achieved to be able to steer the process.

vi) What emissions reductions and associated costs or savings have been achieved to date as a result of the plan?

Since we are currently rolling out our global environmental management system to reach a coverage of employees of about 80 % we are not yet able to present emission reductions and associated costs on a global basis. Recently joined group companies have started to report on their measures for 2008 and 2009 only April this year. Thus, a thorough environmental measures framework is going to be drafted for 2008 and 2009. Controlling of the achievements is foreseen in April 2009.

### Question 3(b) Emissions Intensity

i) What is the most appropriate measurement of emissions intensity for your company?

Since our industry sector is a service sector and as financial services provider we are producing contracts with clients / imaginary products instead of commodities and material goods, we decided that our output measurement are our employees and thus, we are measuring our CO<sub>2</sub> emissions per employee and not per contract produced. The number per employee is given below in kg!

However, there is a pilot study at Allianz Australia to start measuring the CO<sub>2</sub> emissions equivalent per paper used in order to set up insurance contracts. The result of this is a carbon footprint per insurance contract. This methodology needs to be analysed and its global application further assessed.

Please give your company's emissions intensity figure for the measurement given above.

4212

ii) Please state your GHG emissions intensity in terms of total tonnes of CO<sub>2</sub>-e reported under Scope 1 and Scope 2 per US \$m turnover and EBITDA for the reporting year.

Scope 1/ US\$millions turnover

0.51

Scope 2/ US\$millions turnover

2.91

Scope 1/ EBITDA

Not answered

Scope 2/ EBITDA

Not answered

iii) Has your company developed emissions intensity targets?

Yes, we have developed emission intensity targets.

a) If the answer to part (iii) above is yes, please state your emissions intensity targets

Our emission intensity target is 20 % emission reduction per employee by 2012 on a group-wide basis. This means that we want to reduce our emissions from 4198 (in 2006 base year) kg per employee to 3358 kg per employee in 2012.

b) If the answer to part (iii) above is yes, please state what reductions in emissions intensity have been achieved against targets and over what time period.

We are currently rolling out our global environmental management system to an outreach of 80 % employee coverage. Thus, in this year we will have a third wave of new accession countries/ group companies being embedded into our global system. This implies a further refinement of our data base, harmonisation of our data collection approaches. At the same time the newly joining group companies need to set up their emission reduction measures. For a group wide assessment of emission intensity reduction and environmental measures achievements we are able to analyse this in the next year.

Would you like to provide any additional information relating to this question that you have not provided elsewhere?

Footnote: The calculation of GHG emission in the attachment base on the extrapolation of collected consumption to 100% of employees of fully consolidated companies in which the environmental strategy can be fully applied.

## Question 3(c) Planning

Do you forecast your company's future emissions and/or energy use?

No, we do not.

We have set an emission target of 20 % emission reduction by 2012 on the baseline of 2006.

i) Please provide details of those forecasts, summarize the methodology used and the assumptions made.

Not answered.

ii) How do you factor the cost of future emissions into capital expenditure planning?

In order to formally set up our global environmental management system we have calculated the costs and the benefit of this programme. Thus, in the case we would need to neutralise emissions that could not be reduced we have factored this amount of money into our calculations for the "worst case scenario", however we will strengthen our efforts not to use this scenario. The cost benefit analysis was a requirement of Group Controlling and has been integrated into the planning of all global projects of Allianz.

iii) How have these considerations made an impact on your investment decisions?

Due to the relatively low amount of money involved there will not be a major impact onto our investment.

## 4 – Governance

### Question 4(a) Responsibility

Does a Board Committee or other executive body have overall responsibility for climate change? If not, please state how overall responsibility for climate change is managed. If so, please answer parts (i) and (ii) below.

Yes, an executive body does have overall responsibility for climate change.

i) Which Board Committee or executive body has overall responsibility for climate change?

**Responsibilities and Board Attention:**

- Ratification of the official Allianz Group Climate Strategy beginning of 2006 was by Michael Diekmann, CEO Allianz Group. Mr. Diekmann himself has overall responsibility for the topic Climate Change in the Board of Management transferring the responsibility for the implementation of the Allianz Climate Change Strategy to Clement Booth, Board Member Insurance.
- Responsibilities for the different business areas are allocated in the Board of Management to Dr. Joachim Faber for Allianz Asset Management, to Dr. Herbert Walter for Dresdner Bank and to Clement Booth for Insurance.
- Dr. Armin Sandhövel, CEO Allianz Climate Solutions, is managing the new business unit that coordinates the issue of climate change.
- A subunit, called 4C has been set up for the insurance sector and development of products and services as well as to conduct research on the market and evaluate opportunities for the insurance side.

ii) What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

In response to the risks and opportunities Climate change is bringing to the company a new department, Allianz Climate Solutions GmbH (ACS), has been founded under the Allianz Holding, Financial Resort, Alternative Assets unit in August 2007 with headquarter in Munich and offices in Frankfurt and Berlin (see also 1.a iv). ACS is a commercial entity responsible for coordinating climate activities across its businesses, enabling the Group to capture the full potential of climate risk mitigation, climate-driven business opportunities and group image building.

Climate Change Management and Governance is exerted by the following actions:

- Continuous controlling and further development of the Allianz Climate Change Strategy
- Preparation of regular international workshops
- Annual status report to Allianz Group Management Board
- The integration of emerging risks (e.g. climate change) as new risk factor was realised in 2004 in the Group Risk Policy and it is intended to explicitly include climate change as an individual topic into the Group Risk Policy
- Monthly newsletter on climate change within Allianz
- Enhance communication activities on climate change in employee magazines
- The new world-wide Allianz Group Code of Conduct (2005) includes a clause on the protection of natural resources
- Internet pages Allianz Sustainability Performance on challenges include Climate Change as priority topic



## Question 4(b) Individual Performance

Do you assess or provide incentive mechanisms for individual management of climate change issues including attainment of GHG targets?

Yes, we do.

Allianz is currently considering the introduction of an monetary incentive scheme for individual Allianz operating entities and executives to reduce GHG emissions. ACS is tasked to provide a proposal for the board of management of Allianz SE.

## Question 4(c) Communications

Please indicate whether you publish information about the risks and opportunities presented to your company by climate change, details of your GHG emissions and plans to reduce emissions through any of the following communications:  
i) the company's Annual Report or other statutory filings

A brief section on climate change is published in the Group Annual Report (page 27). We have a very extensive sustainable development reporting on the internet [www.allianz.com/sustainability](http://www.allianz.com/sustainability) which includes a specific chapter on climate change risks and opportunities as well as a specific chapter on our environmental management system publishing the Allianz Group carbon footprint.

ii) formal communications with shareholders or external parties

Allianz has a regular stakeholder dialogue on sustainability topics in place as an early warning system. In the annual general meeting communication on climate change is always prepared to explain our strategy and action in this area.

iii) voluntary communications such as Corporate Social Responsibility reporting

Allianz has own internet pages on sustainable development. In the section "challenges" we report on climate change and our carbon footprint: Please see internet pages: [www.allianz.com/sustainability](http://www.allianz.com/sustainability). An executive summary on major annual highlights of sustainability (PDF file) can be downloaded as well. In this year's edition we are planning an external assurance for our Group environmental data in the report.

## Question 4(d) Public Policy

Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading?

Yes. Allianz is participating in the quest to find solutions to mitigate climate change also on a policy level.

- Allianz in Germany and the UK are participating in respective national climate initiatives (2 Degree Initiative in Germany is a corporate leaders group and Climatewise in the UK is a platform by the association of insurers).
- Allianz visibly voiced support for EU and German and Australian ambitious climate targets.
- In February 2008, a group of 12 companies including Allianz, HP, Sony, Nokia and Nike have released the Tokyo Declaration, a joint call to tackle climate change.
- Allianz Holding is also participating in the EU Climate Leaders Group, a gathering of corporates that provides support and advise to EU policy makers to advance climate change policies. These groups take proactive role, such as calling for support of cap-and-trade systems and emission targets.
- In 2007 Allianz together with 22 other leading financial services companies called on the G8 “to back deep emission reduction targets in order to avoid high costs caused by global warming.”
- In December 2007, Allianz chaired the release of the United Nations Environment Program (UNEP) Finance Initiative’s latest publication "Carbon Crunch: Meeting the Cost".